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TRENDS AND OUTLOOKS

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R95 **Russian Economy in 2019. Trends and outlooks. (Issue 41)** / [V. Mau et al; scientific editing by Kudrin A.L., Doctor of sciences (economics), Radygin A.D., Doctor of sciences (economics), Sinelnikov-Murylev S.G., Doctor of sciences (economics)]; Gaidar Institute. – Moscow: Gaidar Institute Publishers, 2020. – 596 pp.: illust.

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The review "Russian Economy. Trends and Outlooks" has been published by the Gaidar Institute since 1991. This is the 41th issue. This publication provides a detailed analysis of main trends in Russian economy, global trends in social and economic development. The paper 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 paper employs a huge mass of statistical data that forms the basis of original computation and numerous charts confirming the conclusions.

By contrast to the previous publications the present issue includes also a short analysis of the first three months of 2020 from the perspective of the COVID-19 pandemic impact on the Russian economy development.

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Section 1. Economics and politics in 2019–2020

1.1. Global challenges and national responses[1]

We are witnessing the formation of a new paradigm that will dominate the socio-economic policy of the foreseeable future. This could be seen in 2019, but in 2020 led to a sharp acceleration of transformation processes. With all the differences of individual countries and regions, one can see common challenges, the answers to which will form the contours of this new paradigm. And for all the specific tasks that Russia has to solve, its development is an organic part of the global agenda and depends on the ability to find answers to common challenges.

Thirty years ago, the peoples of many developed and developing countries lived with the hope of a speedy advance of a new bright world – a world without threats and confrontations, a free and dynamically developing world.

The manifesto of those moods was the article by Francis Fukuyama on the "end of history": then it seemed that humanity had finally found its true path, was imbued with bright liberal teachings and would henceforth develop in the same impulse towards universal happiness and prosperity. The collapse of communism, Fukuyama argued, would destroy the last obstacle separating the whole world from its final goal – liberal democracy and a market economy. Many then agreed. Liberalism, democracy and the market were shrouded in the spirit of romanticism and were perceived, in essence, as synonyms of freedom and happiness.[2]

However, life has once again proved that the completion of one stage of development means only a transition to another – usually even more difficult, which also will not be final. There is no final state, eternal happiness, and ultimate truths in history.

On the threshold of a new decade, it is necessary to analyze the key challenges that it brings with it. Understand the risks and dangers faced in the future.

This will be discussed below.

1.1.1. Trends and challenges

The basis of modern economic and political discussions and problems are two factors – technological trends leading to a radical and rapid renewal of all aspects of society, as well as the socioeconomic and political discomfort they cause for various social groups.

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[1] This section (1.1–1.3) was written by *Mau V.A.*, Doctor of Sciences (Economics), Professor, Rector of the Russian Presidential Academy of National Economy and Public Administration. The author is grateful to Vedev A.L., Gurevich V.S., Drobyshevsky S.M., and Trunin P.V. for materials provided in the preparation of this section.

[2] *Fukuyama F.* (2004). The end of history and the last man / Translation from English M. B. Levin. M.: AST.

The growth of social and economic tension is primarily the result of the unprecedented speed of technology diffusion – in time and in space. So, if for automobiles it took 62 years to reach 50 million users, for electricity – 46 years, then for mobile phones it took 12 years, and for the Internet – 7 years. As a curiosity, we can add that the Pokémon GO game reached 50 million people in 19 days.

Innovations (especially domestic ones) are rapidly spreading throughout the territory, and poor countries and regions are by no means less susceptible to them than rich ones. Unlike industrialization, digitalization is spreading around the world almost simultaneously. Over 60% of the population in poor countries use mobile phones. Developing economies, unlike developed ones, began to introduce mobile Internet in parallel with the acquisition of not only smartphones, but even electricity. In other words, in poorer countries, modern technologies of different generations are simultaneously introduced, which gives a synergistic effect. Such a development of events is adequately described by the hypothesis of the advantage of backwardness – or the later development of modern technologies.[1]

The rapid spread of innovation (especially digital) has obvious positive points, as well as carries new risks. Due to the low "entry price" and a significant reduction in information costs, these technologies create opportunities for inclusive growth, allowing poorer segments of the population or regions to take advantage of new opportunities and to change their lives for the better.[2] Although the risks of abuse and loss from the careless use of these opportunities are also obvious.

But there is another side to the problem. The speed and radicality of technological changes increase the uncertainty of even the near future, which negatively affects the mood of both investors and employees. For investors, this means increasing the uncertainty of return on investment: a quick change in technological solutions reduces the possibility of implementing long-term projects and their corresponding investments. For workers, technological progress exacerbates labor market uncertainty, which in turn holds back consumer demand, which affects the education system.

The events of the beginning of 2020 demonstrated another, menacing aspect of innovation. The coronavirus that originated in China in late 2019 in the spring of 2020 became a key factor in the economic and political life of developed and leading developing countries. It can also be considered as a specific new form of globalization. And if economic globalization has caused discussion over the past decades regarding its positive and negative features, the rapid spread of the pandemic has demonstrated a new aspect of the risks of this process.

All these circumstances negatively affect economic growth and income dynamics, and lead to the transformation of political preferences. They are followed by changes in domestic politics and in geopolitical balance sheets. Moreover, it should be emphasized that many trends, which will be discussed below, were identified even before the onset of coronavirus.

Speaking about the consequences of technological challenges and increasing uncertainty, we should first of all single out a trend towards *increasing statism and the crisis of classical*

[1] Gerschenkron A. (2015). Historical backwardness in Historical Perspective. M.: Delo.

[2] "One area where the potential of digitalization is particularly promising is the pursuit of sustainable and inclusive growth. With a low threshold for development, a non-competitive nature and low information costs, digital technologies are, in essence, inclusive. The most active users of digital technology in the world are not necessarily people with a higher socio-economic status." See: Long Ch., Spence M. (2019). Mapping the digital economy in 2020. Project Syndicate, December 6. URL: https://www.project-syndicate.org/onpoint/digital-economy-analysis-management-by-chen-long-and-michael-spence-2019-11?Barrier=accesspaylog.

liberalism (or neoclassical, if we talk about economic schools). This process began a decade ago as a reaction to the global structural crisis of 2008–2009. Then began the revision of the once over-positive attitude to economic recipes at the turn of 1970–1980, concentrated in the economic policy of Margaret Thatcher and Ronald Reagan. The liberalization of that time made it possible to get out of the previous structural crisis (from the stagflation trap of the 1970s) and ensure stable economic dynamics for about a quarter of a century. The new structural crisis, which began in 2008, updated the review of many assessments of the past. Now the emphasis is not so much on economic as on the social and political results of liberalization of the last quarter of the twentieth century and the related globalization.

The key problems that critics of the previous stage pointed to were that, against the backdrop of rapid economic expansion, there was a slowdown in the growth of middle-class incomes and, consequently, increased inequality, as well as a political shift in favor of financial institutions. The result of globalization was not only unevenly distributed, but not delivered to everyone.[1]

The criticism of the political consequences of liberalization became, as it were, a mirror image of the criticism of statism fifty years ago. Then, going to power, the right-wing liberals sharply criticized primarily the trade unions, which had a very great influence, including on political decisions, including the formation of governments: it was believed that such organizations usurped the rights of voters. Now, critics emphasize that billionaires and key players in financial markets take on this political role. "How long will billionaires and their entourage be allowed to determine political life?" asks Simon Johnson, professor at MIT and formerly chief economist at the IMF.[2] In other words, large financial players can significantly influence the position of the governments of individual countries, especially developing ones, by their actions in the market.

The criticism of liberalism in terms of economic theory has once again changed attitudes towrds the works of Friedrich Hayek and Milton Friedman. As if returning to the polemic of the middle of the twentieth century, they again began to write about their excessive commitment to the market and deregulation. This trend also emphasizes the limitations of the "supply economy," that is, stimulating business development by lowering taxes, liberalizing markets (including the labor market) and encouraging competition. Under such conditions, it is proposed to pay more attention to the "demand economy" characteristic of the Keynesian model, since demand, according to some estimates, has stagnated for a long time (especially from the middle class).

Criticism of liberalism does not mean a return to traditional Keynesianism. Economists draw attention to the importance of not confining to measures of macroeconomic regulation (for example, demand management), but to develop a set of institutional and structural measures that could be similar in scale to the New Deal by Franklin Delano Roosevelt. Moreover, this

[1] Roderik D. (2016). Economics decides: the strength and weakness of "dark science." M.: Publishing house of the Gaidar Institute.

[2] "The profound structural changes caused by the Reagan revolution created the basis for the systematic manipulation of the rules governing the US economy, with results ranging from robberies (in finance) to suppression of competition (in the technology sector) and huge costs for households and small businesses (in health care). Three decades after the start of the revolution, the bill was finally presented for payment." See: Johnson S. (2019). Getting past Reagan. Project Syndicate, December 30. URL: https://www.project-syndicate.org /commentary/economic-regime-change-in-america-by-simon-johnson-2019-12.

program should include not only socio-economic, but environmental and resource constraints in general.[1]

There is a *polarization* – social and political. In the 2000s, in developed countries, one could observe the convergence of right and left political forces. Many believed that they would soon become indistinguishable from each other and a political party crisis would occur. The latter, indeed, happened, but, as often happens, for other reasons – the traditional parties ceased at some point to respond to the clearly manifested trend of demarcation. A characteristic feature of our time becomes the demarcation of social and political forces. Moreover, as at the beginning of the twentieth century, the demarcation is in the direction of capitalism or socialism. And this applies to all countries, including the United States, where socialism, even in the "socialist" twentieth century, was not popular. Moreover, these processes are observed in developing countries.[2]

Strengthening the role of the national agenda in relation to the global one is another important trend. National interests again come to the fore before global or regional, as it was at the turn of the XIX–XX centuries. The presidency of D. Tramp and Brexit are only the most striking manifestations of this process. To this can be added the political processes taking place in Poland, Hungary, Italy and in a number of other developed countries.

The slowdown of globalization is also associated with this. However, it does not collapse, but it is inhibited. Global trade accounts for about 30% of global GDP,[3] and this is a very significant parameter of the global economy.

However, a populist counterattack on globalization, international trade, migration, and technology is intensifying in many countries. Moreover, the US government is setting the tone in this rhetoric, periodically threatening trade and currency wars with China's second largest economy. Many countries are beginning to take the path of restricting the movement of goods, capital, labor, technology and data. Mass protests in Bolivia, Chile, Ecuador, France, Spain, Hong Kong, Indonesia, Iraq, Iran are caused by various reasons, but all these countries are experiencing economic difficulties, they are growing political dissatisfaction with inequality and other problems.

But one should not exaggerate the role of foreign trade conflicts, where acute political rhetoric does not yet have serious negative economic consequences. Despite the fact that the first restrictive (protectionist) measures of the United States began to be imposed in 2018, positive values of growth indicators of foreign trade in the same year were noted in all three main areas of international commodity trade – USA – China (4.2%), USA – EU (12.2%) and EU – China (10.6%). In the first three quarters of 2019, trade between the United States and China decreased by 13.6%, between the United States and the EU – increased by 6.4% compared to the same period of the previous year. The volume of foreign trade turnover of the

[1] "Instead, we need a comprehensive policy of institutional reforms aimed at changing the very structure of the economy, that is, a new "New Deal." Such a program should be designed to manage resources and environmental constraints, while maintaining social stability and focusing on improving the quality of life. It involves a smarter use of resources, as well as a general easing of international tension and conflict resolution." See: Galbraith J. K. (2019). The next Great Transformation. Project Syndicate, November 8. URL: https://www.project-syndicate.org/onpoint/the-next-great-transformation-by-james-k-galbraith-2019-11?barrier=accesspaylog.

[2] "The cause of poverty is the capitalist system in which we live. It is imposed from the outside, and not created by the people themselves. If we want to overcome poverty, we need to correct capitalism itself, which in its current form has enormous flaws. If you do not eliminate them, they will always lead to the same results," says Muhammad Yunus, an economist and Nobel laureate. URL: https://pro.rbc.ru/demo/5d1c7dce9a7947460e7380bb.

[3] IMF (WEO), UNCTAD-WTO (Trade Map).

EU and China for the 8 months of 2019 increased by 1.1% compared to the corresponding period of 2018.[1] According to the results of 2018–2019. US foreign trade and the current account remained virtually unchanged from previous years (although for a number of other countries there was a decrease in foreign trade). Therefore, while it would be an exaggeration to believe that the protectionist rhetoric of the American administration has led to a noticeable decrease in US involvement in world trade and the international division of labor, there has likely been a change in the structure of trading partners.

Conflicts in world trade are one of the main risks for Russia[2]. Protectionism, if it is consistently implemented in practice, destroys global supply chains, trade disputes lead to lower investment and business activity, which further inhibits growth and resource prices.

It seems that the political logic of the near future will be similar to the politics of the 19th century, when national interests dominated the world, and governments considered the role of the global agenda as secondary. *Realpolitik* – the agenda (or political philosophy) of Otto von Bismarck and Benjamin Disraeli is once again becoming relevant, although few recognize it out loud. But now it will significantly affect economic processes.

Against this background, the role of international institutions is weakening – both political (UN) and economic (IMF. IBRD).

One of the most important modern trends is *increasing attention to national security issues.* This circumstance has not only political, but also serious technological reasons. Modern communication technologies qualitatively change the possibilities of control and influence (manipulation). The struggle for control over 5G is not so much economic as political, although it has far-reaching consequences for economic efficiency. "The presence of a 5G chip means that any item – from a toaster to a coffee machine – can become a bug. That is, if Huawei is now considered a threat to national security, then thousands of Chinese export consumer goods can be considered the same threat. [3]" And this creates radically new problems for the interaction of the free market and political processes.

Another aspect of the same process is changing the relationship in the development of military and civilian technologies. Primary are now civilian technologies, that is, solutions for the military can grow from them in the future. This is how the work in the field of artificial intelligence or quantum computers developed. Their successful development of such technologies involves a combination of inconsistent research openness and secrecy of application for national security purposes, that is, balancing national security considerations and global scientific research. This is a very delicate topic, because the natural restrictions associated with security can significantly slow down the development of critical scientific and technological problems. It is only necessary to state that there are no simple solutions.

This is all the more difficult because, as noted above, the growth of nationalism (national isolation), based on the ideas of ensuring national security, is one of the key trends of our time.[4]

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[1] Data from UNCTAD-WTO (ITC Trade Map) // URL: https://www.trademap.org/

[2] Bank of Russia (2019). Review of financial stability. No. 2 (15). II – III quarters of 2019. M.: Bank of Russia.

[3] Roubini N. (2019a). Anatomy of the upcoming recession // Project Syndicate, August 22. URL: https://www.project-syndicate.org/commentary/global-recession-us-china-trade-war-by-nouriel-roubini-2019-08/russian

[4] "The wave of such digital nationalism could have the most negative impact on long-term economic and social well-being. Therefore, the question of how to balance the imperatives of national security with a wider public good should be prominent in any analysis of digitalization trends." See: Long Ch., Spence M. (2019). Mapping the digital economy in 2020. Project Syndicate, December 6. URL: https://www.project-syndicate.org/onpoint/digital-economy-analysis-management-by-chen-long-and-michael-spence-2019 -eleven? barrier = accesspaylog).

An increase in the significance of the factor of national security, in turn, leads to a noticeable *strengthening of the role of political processes* in relation to the economy. Political measures are increasingly trying to solve economic problems, replacing political economic competition. The most striking manifestation of this was the sanctions, which have recently been resorted to more and more often, including to limit competition. The US counteraction to Nord Stream-2, promoting its gas to Europe, is the most vivid demonstration of the problem.

There is also a powerful politicization of the internal economic problems of many countries. In this politicization, many economists see an increase in the risks of a new powerful crisis. Indeed, the governments of leading countries, predominantly engaged in the political struggle, are usually unable to make quick and effective anti-crisis decisions.[1]

Of particular note are *the socio-economic consequences of the rapid spread of the latest (especially digital) technologies*. As happened in a similar situation in the past, qualitatively new technologies bring with them new opportunities and new risks. The balance of those and others must be constantly analyzed, but it is impossible to accurately calculate. We outline only a few of these consequences, which currently appear to be the most important or controversial in their consequences. They are already making new demands on various areas of government regulation.

Antitrust policy needs rethinking. The number is becoming the most important factor in commercial success, and in 2019, the first five largest by capitalization were exclusively digital companies – Microsoft, Amazon, Apple, Alphabet (Google) and Facebook. But this was the result of not only entrepreneurial success, but also the ability of these firms to concentrate in their hands access to information about various user groups. Thus, they turn out to be new monopolists – monopolists in access to information, which already introduces and will further introduce distortions in the functioning of the market. Antitrust policy captures the problems that arise here, but so far it responds mainly with traditional methods of the twentieth century – fines for abuse of dominance. it is necessary to form new tools that can prevent market distortions, and not just respond to them.

But the issue is not only the monopolization of access to information. Digital giants are capable of traditional monopolistic abuses, especially considering the medium and long term. The extension of platform solutions to different spheres of life (a kind of "Uberization") will continue to substantially transform these spheres, leading to increased competition between old organizational forms and new ones while increasing the risks of monopolizing these areas. Already now, one can observe how platform companies, having defeated traditional firms in the competition, are able to dictate prices to consumers. Moreover, counteraction to these trends by measures of traditional antitrust is likely to be ineffective.

The tax system also needs to be reconfigured. The development of platform economics (or "cleaning up" the economy) is changing the concept of large and small businesses, and the relationship between profitability and capitalization. A company that does not have virtually

[1] "Just look at the UK, one of the world's largest financial centers, where the political elite has brought the country to the edge of a cliff called Brexit. Can one really expect competent management from it in the context of the financial crisis, which requires the adoption of tough political decisions and flexible thinking?" (Rogoff K. (2019). Modern Monetary Nonsense // Project Syndicate. March 24. URL: https://www.project-syndicate.org/commentary / federal-reserve-modern-monetary-theory-dangers-by-kenneth-rogoff-2019-03? barrier = accesspaylog). "By their nature, recessions are unpredictable, but the main immediate threat to the economy is not interest rates or various financial distortions, but the unpredictability of actions in the field of foreign trade and geopolitics" (Rajan RG (2019). Is the economic winter close? // Project Syndicate, November 12. URL: https://www.project-syndicate.org/commentary/trump-recession-risks-by-raghuram-rajan-2019-11/russian)

any tangible assets and has been showing losses for many years is able to grow rapidly in price, bringing significant returns to shareholders. Individual or small entrepreneurs connected with the platform are subject to preferential taxation, although, being united by the platform, they become part of the large and largest business.

In the near future, we can expect an active removal of the education and health care system, which will entail a significant transformation of the relevant institutions and require the state to radically rethink the policy of regulating these sectors, which are very sensitive for society.

The labor market will transform in the direction of the growing share of the self-employed with a change in the ratio between working and free time. Moreover, changes here are twofold. On the one hand, an increase in the proportion of those working outside the officially established working hours. On the other hand, the growth of digitalization and the introduction of artificial intelligence can lead to a reduction in the duration of official working hours.

Researchers and politicians see the risk of mass unemployment and even the delayed implementation of Karl Marx's pessimistic forecast of a crisis in employment as a result of the introduction of machines.[1] According to Robert Collins, this old forecast was not realized in relation to industrial workers who joined the ranks of the middle class, whose employment at the present time was just in jeopardy.[2] But for the mid-19th century, a 10-hour working day seemed natural, and the rise in unemployment (and poverty) correlated with that time. Then there was a reduction in the working day. And no one can argue that the 8-hour worker characteristic of the twentieth century is the natural limit. Official working hours can be reduced even further, and society's wealth in the future can be determined (in accordance with another forecast by Marx) with free time. Therefore, the question raised by Dmitri Medvedev in 2019 about the possibility of a transition to a 4-day work week adequately reflects the realities of our time.

We know from history that, ultimately, new technologies will ensure a qualitative increase in wealth. Humanity usually manages to cope with periodically arising structural and social challenges. However, the period of transition to new technologies and to new "rules of the game" turns out to be very painful, since it is accompanied by an aggravation of problems and contradictions of a social (and even political) nature.[3]

Significant changes are taking place in the investment sphere. New technologies require less investment (these are less capital-intensive sectors), which increases production efficiency and labor productivity. It can be assumed that the role of long investments will decrease – modern technologies not only require less capital, but also provide a faster return on investment. The latter is all the more important because the dynamism of the modern world (technologies) increases the risks from long-term investments – for the period of their development and further payback, a technological solution that was considered promising at the start of the project may not be so.

The negative side of low capital intensity is a decrease in the demand for capital, and thereby cheaper loans even at the stage of cyclical growth, which destroys traditional instruments of

[1] Marx K. (1960). Capital. Volume 1 // Marx K., Engels F. Works. 2nd ed. M.: Gospolitizdat. T. 23.

[2] Collins R. Middle class without work: exits close // Does capitalism have a future? M.: Publishing house of the Gaidar Institute, 2015.S. 64.

[3] "Although technology innovations can increase the overall size of the economic pie in the long run, artificial intelligence and automation will destroy or radically change jobs, companies and entire industries, exacerbating inequalities that are already high." (Roubini N. (2019). Anatomy of the Upcoming Recession // Project Syndicate, August 22. URL: https://www.project-syndicate.org/commentary/global-recession-us-china-trade-war-by-nouriel - roubini-2019-08/russian).

economic policy (level of rates) and at the same time reduces the demand for personnel (employment) in investment sectors. The state should find tools to solve these problems.[1]

Finally, modern technologies also influence the formation of public policy in at least two respects.

On the one hand, the role of the state is increasing with a significant transformation of its model (more precisely, the management model). It is becoming more and more noticeable that states are currently competing not so much with cheap labor or an abundance of natural resources, but with the quality of public administration.

On the other hand, the distinction between welfare and economic growth is becoming ever more distinct. For a long time, welfare and growth were regarded as synonyms, and in economic growth they saw the main (if not the only) source of wealth growth. However, over the past three decades there have been examples of the possibility of their divergence. For example, in 1986–1990, as part of the Soviet policy of accelerating, an increase in growth was accompanied by a decrease in wealth. A prolonged economic stagnation in Japan did not prevent the growth of wealth. The rapid spread of digital technology further exacerbates this discrepancy: digitalization, quickly cheapening new products and products, can negatively affect GDP statistics, while leading to a qualitative increase in welfare. In the era of digital technology, a new phenomenon appears – a kind of technological deflation. Products and services cheapen rapidly (not from generation to generation, but within the framework of one generation), new goods and services in a very short period of time become available to the mass consumer. They make life richer, better, more interesting – but their quick reduction in price *statistically (formally)* negatively affects GDP indicators.[2]

The ability to generate wealth through the introduction of new technological becomes the most important indicators of the effectiveness of public administration.

1.2. Economic growth and economic crisis

In the expert discussions of 2019–2020, *the prospects for a new economic crisis* occupy a significant place. The main issues discussed in this regard relate to the nature of the future crisis, the role of the situation in the USA and China as possible sources of global destabilization, as well as the features (and limitations) of future anti-crisis policies.

The expectation of the crisis was based on the very fact of the continued growth of leading countries, and especially the USA. This was not a very fast growth compared to the previous 25 years, but rather steady. And the longer the period of economic growth lasted, the more likely a new crisis was seen. Since only ten years ago the global economy was going through a structural transformation, experts expected that the upcoming crisis (and sooner or later it should have come) would be a regular cyclical one, i.e. not associated with major structural transformations. Indeed, based on the experience of the twentieth century, it was believed that

[1] "New technologies also save capital and, thus, reduce the share of investment in total costs. It's not bad. But this means lower investment costs, fewer jobs created by these costs, and a lower measured growth rate. This impact of new technologies on investment spending can be offset, but only by increasing government investment or household consumption, the latter fueled by either income or debt" (Galbraith JK (2019). The next Great Transformation. Project Syndicate, November 8. https://www.project-syndicate.org/onpoint/the-next-great-transformation-by-james-k-galbraith-2019-11?barrier=accesspaylog).

[2] "It is well known that economic statisticians cannot evaluate the impact of these technologies without actually registering them, although technologies and their consequences are visible to everyone." (Galbraith JK (2019). The next Great Transformation. Project Syndicate, November 8. https: // www. project-syndicate.org/onpoint/the-next-great-transformation-by-james-k-galbraith-2019-11?barrier=accesspaylog).

structural crises occur every few decades (in the 1930s and 1970s) – they lead to a radical restructuring of socio-economic and geopolitical balances, currency configurations and economic paradigms.

Economists and politicians have been actively discussing what could trigger a new crisis. As such, at the beginning of 2020, various factors appeared – from the active politicization of economic processes, through trade wars, and even then the Chinese coronavirus as a factor affecting the global economy, primarily on the dynamics of global demand and the state of raw materials markets. Now we see that the coronavirus has eclipsed all possible triggers, which seem to be minor troubles compared to it.

The rapid spread of the pandemic in 2020 led to all further economic, and in many ways, political problems. And it quickly became clear that it was again a question of a structural crisis. Until recently, it seemed that such a crisis was impossible – the structural transformation was launched in 2008–2009. and such crises do not occur every decade. Perhaps the events of a decade ago were only a forerunner, foreshadowing the vulnerability of the world order and especially the world economy. Perhaps the new structural challenges have become the flip side of a decade-long successful anti-crisis policy, when governments and central banks of leading countries were able to stop the crisis and prevent "creative destruction".

Still, do not ignore other factors that make the situation more vulnerable. The governments of leading countries, predominantly engaged in political struggle, are unable to make quick and effective anti-crisis decisions. "The implacable growth of the financial system – coupled with an increasingly toxic political climate - means that the next big financial crisis may begin earlier than you think,"[1] Kenneth Rogoff said. Rakhuram Rajan writes about the same thing: "By their nature, recessions are unpredictable, but the main immediate threat to the economy is not the increase in interest rates or various financial distortions, but the unpredictability of actions in the sphere of foreign trade and geopolitics."[2] The validity of these allegations is not canceled by a raging pandemic.

From the perspective of an economist, the upcoming time is truly unique in its complexity. We are experiencing a double shock – supply and demand. This makes the task of confronting the crisis extremely difficult – after all, countering these shocks requires opposite measures of economic policy. The key question: how to find a balance of anti-crisis measures that solve both problems at the same time?

The crisis of 2008–2009, although it was structural in nature, did not lead to a significant structural renewal of the leading economies. Governments took vigorous anti-crisis measures that did not allow catastrophic consequences, turning the economic crisis into a socio-political one. But the flip side of these successes was the rejection of "creative destruction" (Joseph Schumpeter's term), i.e., prevention of the collapse of inefficient firms. The anti-crisis policy was based on the principle of too big to fail, which was facilitated by expansionary fiscal and monetary policies.

Another problem is related to the limited tools of the traditional anti-crisis policy in the most developed countries. A high level of government debt and (or) budget deficits at ultra-low

[1] Rogoff K. (2019b). Modern Monetary Nonsense // Project Syndicate. March 24. URL: https://www.project-syndicate.org/commentary/federal-reserve-modern-monetary-theory-dangers-by-kenneth-rogoff-2019-03?barrier=accesspaylog

[2] Rajan R. G. (2019). Is economic winter close? // Project Syndicate, November 12. URL: https://www.project-syndicate.org/commentary/trump-recession-risks-by-raghuram-rajan-2019-11/en

interest rates block standard –nti-crisis regulation measures – increasing budget expenditures and lowering interest rates.

In addition to the very fact of exhausting the possibility of lowering interest rates, there are obvious negative structural consequences of such a policy. Cheap money erodes the criteria for investment efficiency and forms a self-reproducing mechanism too big to fail. Low rates hinder the exit of inefficient firms from the market, promote market concentration and monopolization, and reduce incentives to search for more efficient investment projects. If, at short time intervals, low interest rates contribute to business revitalization, then, becoming a long-term factor in economic life (the "new normality"), they negatively affect economic dynamics. Therefore, most economists conclude that fiscal policies currently have advantages over monetary ones.

However, in 2019, economists paid attention mainly to the prospects of not a structural, but a cyclical (investment) crisis. This was based on the fact that the economies of leading countries, and especially the United States, grew for a long time. This was not a very rapid growth, compared with the previous twenty years, but rather steady. The natural hypothesis was that such a situation could not last forever, and the longer the growth continued, the higher the likelihood of a new crisis. Although, as you know, forecasts of the crisis onset rarely turn out to be accurate: it is easier to predict the fact of the crisis (it will happen sooner or later) than the time of its arrival.

Stable positive growth rates of the US economy have been observed for 10 consecutive years (since 2010), which increased the likelihood of a trend change and the United States turning toward a crisis (or recession). The most important signs of such a development of the situation were: the length of the period of sustained positive growth in US GDP; significantly faster growth of stock markets compared to GDP (i.e., inflating a financial bubble); inversion of the yield curve for treasury securities; US economic and especially foreign economic policy (trade wars, especially with China and the EU, tax reforms 2017–2018).

Now it is clear that all these circumstances did not have major significance. The factor of the duration of economic growth could not be key. Experience shows that growth can go on much longer – the modern economy has left the standard economic cycle in seven to eight years. The ten-year growth period was not unique – in 1992–2007. US GDP growth rates remained positive for 16 consecutive years. If you look at the dynamics of unemployment, then in 2018–2019. its level was at an unprecedentedly low level (less than 4% of the economically active population), which testified to the maintenance of high growth rates of household incomes and consumer activity in the USA.

An inversion of the yield curve may be, but is not guaranteed to be, an indicator of an approaching crisis. Historical experience does not say that the presence of inversion clearly indicates the inevitability of a cyclical decline in the near future.

The anticipation of the crisis and the crisis itself exacerbate the discussion about the mechanisms of a possible anti-crisis policy.

Most economists were inclined to believe that fiscal policies now have advantages over monetary ones.

In this situation, the discussion about the "modern monetary theory" (MMT), whose supporters do not see any restrictions on budget expansion in countries issuing sovereign currency and placing public debt in their own currency, sharply became relevant. This concept was the basis of the economic programs of left-wing politicians, primarily among the US presidential candidates from the Democratic Party. The MMT, of course, immediately

provoked sharp criticism from economists who adhere to orthodox views on macroeconomics, who called the proposals "non-modern non-monetary non-theory".[1]

There is a radical turn in relation to monetary and, more broadly, macroeconomic policy. During the 1980–2000s, inflation was considered the main threat to the economic stability of growth as a result of fiscal and monetary populism. Around the fight against inflation, there was a sharp macroeconomic and political debate, especially in the context of transformational processes or stabilization reforms. Now everything has changed dramatically. Macroeconomic trends of the last decade, the situation in the EU and especially in Japan have changed the attitude of many experts and politicians towards inflation. Now raising, not suppressing inflation has become the most important task of the authorities. And experience shows that solving this problem is more complicated than disinflation. Over the past half century, a great deal of experience has been gained in disinflation, which is achieved by a set of standard stabilization measures. But stimulation of demand leading to economic growth (accompanied by acceptable inflation) has so far failed.

The "New Monetary Theory", being primarily the doctrine of left-wing political forces, places at the center of economic policy mechanisms for stimulating demand as a source of economic growth. In this, it is the antipode of the supply economy, which was the basis of the anti-crisis measures of the period when liberal economic doctrine dominated. That is, the doctrines that M. Thatcher and R. Reagan were guided by, solving the tasks of overcoming the previous structural crisis of the 1970s. And this is quite natural, since the key macroeconomic problems of these two periods are opposite – stagflation fifty years ago and deflation at present.

At the same time, an analysis of the possible shocks that will push the economy toward a crisis requires very careful attitude to the applicability of MMT and to the prospects of monetary easing in principle. The above shocks – trade or political conflicts of the USA and China, coronavirus, as well as the growth of geopolitical tension), lead to a double shock – of demand and supply

An analysis of the current double shock, in our opinion, will require a revision of monetary policy guidelines, especially if the demand shock dominates (whereas in 2008–2009 there was a supply shock), which, with traditional monetary stimulation, leads to stagflation. In other words, an economic crisis as a result of a pandemic can go according to a scenario (model), the opposite of that for which governments and central banks of leading countries are preparing. This is not surprising, since authorities (like generals) usually prepare for past crises (battles) already known.

The threat of global stability is now obvious – it is collapsing before our eyes as in slow motion. To overcome the growing crisis, in addition to the actions of scientists to find a vaccine, the actions of politicians to calm society, the actions of economists to prevent economic devastation, the key condition is solidarity – of people, communities, countries. Solidarity based on trust. But it was these qualities – solidarity and trust – that were the main deficit in public life in recent decades in almost all countries of the world.

These issues of monetary theory and politics will be the focus of scientific discussion and political struggle for the foreseeable future. Most likely, they will find practical implementation in individual countries, for some time they will give positive effects. But after some time, a new cycle will begin – the fight against populism and curbing inflation.

[1] Mitchell W., Wray R., Watts M. (2019). Macroeconomics. London: Macmillan Education; Connors L., Mitchell W. (2017). Framing modern monetary theory. Journal of Post Keynesian Economics, Vol. 40, No. 2, pp. 239–259.

1.3. Economic policy of Russia

The formation in January 2020 of the new Government of Russia reflected the dominant desire in society to accelerate economic development. Of course, it is not GDP growth in itself that is important, but growth that ensures an increase in wealth and technological modernization. That is how Vladimir Putin set the task before the new Cabinet, and so were the dominant expectations in society.

The economic transformation plan[1] proposed by the Government of Mikhail V. Mishustin is a set of investment, institutional and structural measures that are being formed around national goals set by the President of Russia in May 2018 and priority national projects. Naturally, the spread of the coronavirus makes its adjustments to this program, however, the key strategic guidelines at the beginning of 2020 remained unchanged. Although, perhaps, their achievement will require additional time.

The key characteristic (or main contradiction) of the socio-economic situation in Russia at present is the gap between the exceptionally favorable monetary and financial (in fact, macroeconomic) parameters and low socio-economic dynamics.

On the one hand, there is a surplus budget, unprecedented low inflation (below the target of the Central Bank), close to the historical maximum level of gold and foreign exchange reserves, extremely low government debt (with its currency component almost disappearing), and positive payment and trade balances. To this we must add low unemployment and high credit activity of the population, including the demand for mortgages.

On the other hand, low (below the global average and lower than in 2018) rates of economic growth, stagnation of living standards (after six years of decline), low investment activity. (*Table 1*).

Table 1

The Main Parameters of the Socioeconomic Development of the Russian Federation in 2013–2019

	2013	2014	2015	2016	2017	2018	2019
Macro Indicators (growth rate of physical volume, % to the previous year (unless otherwise indicated)							
1	2	3	4	5	6	7	8
GDP	1.8	0.7	-2.0	0.3	1.8	2.5	1.3
Industry	0.4	1.7	-0.8	2.2	2.1	3.5	2.3
Agriculture	5.1	4.1	2.1	4.8	2.9	-0.2	4.0
Construction	0.1	-2.3	-3.9	-2.1	-1.2	6.3	0.6
Wholesale trade	0.7	3.9	-5.5	3.1	5.7	2.4	1.9
Retail trade	3.9	2.7	-10.0	-4.6	1.3	2.8	1.6
Final consumption of households	5.2	2	-9.4	-1.9	3.2	2.8	2.3
Investments in fixed assets	0.8	-1.5	-10.1	-0.2	4.8	5.4	1.7
Share of labor remuneration in GDP, %	46.2	47.4	47.8	48.2	47.8	46.4	46.9
Share of profit and mixed income in GDP, %	40	38.7	41	40.8	41.3	42.5	41.9
Foreign direct investment in the Russian Federation, billion dollars	69.2	22.0	6.9	32.5	28.6	4.8	31.8
Foreign direct investment in the Russian Federation, except for banks, billion dollars	60.1	17.6	6.3	30.9	27.1	1.9	26.9

[1] Meeting with members of the Government. 2020.5 February. URL: http://www.kremlin.ru/events/president/news/62734

Cont'd

1	2	3	4	5	6	7	8
Government Finance and International Reserves							
Surplus ("+") / deficit ("-") of the consolidated budget, % of GDP	-1.2	-1.1	-3.4	-3.6	-1.5	3.0	1.9
Surplus ("+") / deficit ("-") of the federal budget, % of GDP	-0.4	-0.4	-2.4	-3.4	-1.4	2.6	1.8
Non-oil and gas deficit of the federal budget, % of GDP	-9.4	-9.8	-9.3	-9.0	-6.1	-5.9	-5.7
Domestic public debt of the Russian Federation, at the end of a, billion rubles	5722.2	7241.2	7307.6	8003.5	8689.6	9169.6	10171.9
External public debt, billion dollars (data from the Ministry of Finance)	55.8	54.4	50.0	51.2	49.8	49.2	54.8
Total public debt, % of GDP	10.3	13.0	13.2	12.9	12.6	12.1	13.0
Reserve Fund (before 2007 - Stabilization Fund), at the end of the year, billion dollars	87.4	87.9	50.0	16.0	0.0	0.0	0.0
National Wealth Fund, year-end, billion $	88.63	78	71.72	71.87	65.15	58.1	125.6
Bank of Russia international reserves, end of the year, billion dollars	509.6	385.5	368.4	377.7	432.7	468.5	549.8
Prices and Interest Rates							
Consumer Price Index, December to December, %	6.5	11.4	12.9	5.4	2.5	4.3	3.0
Producer Price Index, December to December, %	3.7	5.9	10.7	7.4	8.4	11.7	-4.3
Key rate of the Bank of Russia (in 2007–2013 the minimum rate on repo operations for 1 day, until 2007 - the refinancing rate), on average for the year, % per annum	5.5	7.9	12.6	10.6	9.1	7.4	7.3
The average interest rate on loans to enterprises in rubles, on average for the year, % per annum	9.5	11.1	15.7	12.6	10.6	8.9	8.8
Average interest rate on ruble deposits of individuals (except for demand deposits), on average per year, % per annum	6.5	6.7	9.7	7.3	6.0	5.5	5.5
Labor market							
General unemployment rate (ILO methodology), annual average, %	5.5	5.2	5.6	5.5	5.2	4.8	4.6
Average salary, thousand rubles / month	29.8	32.5	34.0	36.7	39.2	43.7	47.5
Salary dynamics in real terms, %	4.8	1.2	-9.0	0.8	2.9	8.5	2.9
Dynamics of real disposable income, %	4.0	-1.2	-2.4	-4.5	-0.5	0.1	0.8
The population with cash incomes below the subsistence minimum, million people	15.5	16.3	19.6	19.4	18.9	18.4	19.2
Banking system							
The number of operating credit organizations at the end of the year	923	834	733	623	561	484	442
The number of banking licenses revoked during the year	32	86	93	97	51	60	45
Bank assets, annual growth, %	14.2	18.6	-1.5	2.1	7.8	6.1	2.7
Debt of resident legal entities (except banks) for bank loans, annual growth, %	11.6	12.7	5.0	-0.1	4.6	7.8	4.4
Debt of resident individuals on bank loans, annual growth, %	27.7	11.6	-7.3	0.7	12.3	222.7	18.4
The share of overdue loans to resident legal entities, except for banks	4.1	4.1	6.0	6.1	5.9	5.7	7.1
The share of overdue loans to individuals	4.5	6.0	8.4	8.3	7.3	5.1	4.3
Profit, billion rubles	994	589	192	930	790	1345	2037

Sources: Rosstat; Ministry of Finance of Russia; Bank of Russia.

From the economic point of view, this gap is most clearly reflected in the significant excess in terms of GDP shares of savings over investments. The Russian economy now has a lot of money, including on the accounts of the population and firms, but these financial resources are not transformed into investments.

There may be several different reasons for this phenomenon. This is the uncertainty that comes from geopolitical trends, which does not create scientific and technological trends, as

well as institutional constraints that do not ensure the proper level of property security. In an unfavorable institutional environment, even low inflation can have a negative effect on economic growth, allowing you to save more than invest.

Let us also pay attention to the character of the Russian monetary and budgetary policy, which traditionally ignores the business cycle, which in modern conditions actually becomes procyclical. Such a situation has historical and, one might say, psychological roots. The Soviet economy was an object of state regulation, it was not accepted to analyze the dynamics in terms of cyclicality[1] – and, accordingly, to use the traditional methods of crisis management since the development of the Keynesian model. After the collapse of the communist system, a long – thirty-year – period of high inflation followed, when the main task was to suppress it to acceptable levels, and the government's practical measures did not involve the use of "fine tuning" tools. And only now the Russian economy is in a situation where it is possible to observe the investment cycle and use the appropriate regulatory methods.

Meanwhile, the understanding of inflation as the main macroeconomic problem remains in the minds of both society and the generation of economists who formed on the solution of this seemingly eternal problem. And it continues to dominate macroeconomic policies, which is reflected in a consistent commitment to a tight fiscal and monetary rate.

The foregoing does not mean that we are in favor of abandoning a conservative macroeconomic course. The "credit history" of the domestic macroeconomy remains rather complicated, which is reflected in maintaining high inflation expectations, thereby preventing the monetary authorities from taking the path of quantitative easing.

The weakness of existing institutions testifies in favor of maintaining a conservative budget rate, which may result in a decrease in the efficiency of budget expenditures with their substantial increase. In addition, the current geopolitical situation requires the preservation of significant reserves to reduce the vulnerability of the country's economic system from fluctuations in the external political and economic conjuncture.

However, with all these reservations, it seems necessary to gradually move to a more flexible fiscal and monetary policy that takes into account cyclical fluctuations characteristic of a market economy.

This was also reflected in the discussions of 2019–2020 about economic growth and the reasons for its slowdown. Despite the importance of institutional problems, the focus of discussion of growth problems is increasingly focused on macroeconomic factors, primarily supply and demand, that is, sources of financing for growth. In our opinion, this is partly due to the experience of the struggle for the World Bank's Doing Business rating. In 2012, the task was to take measures to radically improve the position of Russia in this rating – moving from 120th position to the first 20 in 2020. In fact, this task was solved – in the ranking compiled in 2019, Russia was quite acceptable 28th place, located between Austria and Japan and overtaking China (31st place). At the same rate of growth, these positive changes did not affect. Moreover, if you look only at the numbers, it turns out that, being in the second hundred of the rating, Russia grew much faster than having made a breakthrough to institutional well-being.[2]

[1] Some authors have raised the issue of the "Soviet investment cycle" (Ofer G. (1987). Soviet economic growth: 1928–1985. Journal of Economic Literature, Vol. 25, No. 4, pp. 1767–1833), but the question of possible countercyclical responses.

[2] World Bank. (2019). Doing business–2020. Comparing business regulation in 190 countries. Washington DC: The World Bank Group.

Of course, this is only a formal approach, and the growth rate is the result of the interaction of many factors that are not taken into account by the international index, albeit a very respected one. But at least two conclusions follow from such a situation – theoretical and practical.

First, international indices cannot be a guide (and even more so a goal) of economic policy. The real problems of the country cannot be reduced to indicators. Incidentally, this was also shown by the experience of the Soviet economy, which was all oriented towards achieving established indicators. Indicators always reflect only some, and not always the most important, factors, and their struggle to achieve them usually replaces the solution to real problems of socio-economic development.

Secondly, the hypothesis about the key role of solving institutional problems – removing barriers to the business climate in order to accelerate economic growth was actually discredited. Of course, no one speaks directly about this, but there is a formally negative correlation between the indicator reflecting the quality of institutions and economic dynamics.

As a result, in 2018–2020 acceleration of growth was considered primarily through the prism of budgetary incentives and consumer lending. The main channel for this was to be national projects. Moreover, inflation, which fell below the target 4%, and a surplus budget provide a certain room for maneuver here.

In economic policy, the issue of aggregate demand and its management capabilities has become urgent. This is reflected in the main topics of economic discussions.

First of all, the nature and volume of budget demand. In 2019, financing of national projects was carried out rather slowly and basically remained below those parameters that were laid down in the federal budget (*Table 2*). In itself, this fact cannot be unambiguously evaluated negatively. At least it indicates a fairly responsible attitude to budgetary resources and the rejection of the practice of "development" of budgetary funds at any cost. However, the shortcomings of the management system, which did not ensure a high-quality elaboration of projects, also appear here. As a result, part of the expenses was not financed, which statistically became a factor in slowing economic growth. The “signal” role of budget spending should not be neglected – in 2018, a choice was made in favor of a model that assumes the leading role of the state in launching a new growth model. In this situation, lower budget expenditures than planned, in fact, deprived the private sector of some guidelines for the growth and expansion of demand for its products during the implementation of national projects.

Another factor of inhibition was inflation, this time which turned out to be significantly lower than the target value. This can be seen a qualitatively new phenomenon in the discussion of economic policy. Throughout the postcommunist thirty years, suppression of inflation was seen as the most important source of improving the socio-economic situation and ensuring sustainable growth. Official forecasts tend to underestimate inflation. (The latter, however, was connected not so much with the quality of macroeconomic forecasts as with the possibility of obtaining additional income during the implementation of the budget).

In 2019, Russia faced the problem of lower inflation and, thus, lower incomes of the economic system. According to some economists, low inflation has underperformed the economy about 1 trillion rubles additional demand, which could affect the economic growth rate. However, in 2017, inflation also fell below the target of the Bank of Russia (2.5%), which then did not become an obstacle to accelerate growth compared to 2016. In addition, the question of the nature of this additional trillion rubles remains open. If it is formed solely due to price increases, then, obviously, the real growth rates will remain unchanged (low), and in relation to real incomes of the population, a further decrease is likely. If it is formed by

increasing real output, then in this case inflation remains at the same low level. In a word, higher inflation is not a prerequisite for output growth. Inflation itself is a source of nominal rather than real growth, although its presence at low levels usually accompanies economic growth, giving producers signals about sectors in which demand for these goods and services is growing.

Table 2

Implementation of Budget Projections to Finance National Projects in 2019

Information on the execution of expenses in terms of budgetary allocations provided for the implementation of national projects for 2019 (operational data, thousand rubles)							
No.	Name	Consolidated budget of the Russian Federation			Federal budget of the Russian Federation		
		Total expenses			Total expenses		
		Plan	Cash execution (operational data)	Reference: % of the budget allocation	CBR as of 12/31/2019	Cash execution (operational data)	Reference: % of the budget allocation
	TOTAL:	2 444 219 389.6	2 238 517 258.7	91.6	1 749 990 871.5	1 600 342 182.0	91.4
1	NATIONAL PROJECT "DEMOGRAPHY"	728 412 115.8	693 724 064.7	95.2	522 003 367.0	498 340 002.3	95.5
2	NATIONAL PROJECT "HEALTHCARE"	219 705 327.5	213 705 307.7	97.3	160 335 308.6	157 140 348.7	98.0
3	NATIONAL PROJECT "EDUCATION"	194 199 519.9	175 640 380.0	90.4	108 440 809.9	98 655 969.8	91.0
4	NATIONAL PROJECT "HOUSING AND URBAN ENVIRONMENT"	243 235 129.5	217 017 729.8	89.2	105 280 088.8	98 764 418.2	93.8
5	NATIONAL PROJECT "ECOLOGY"	69 143 982.3	49 226 688.3	71.2	55 633 653.2	36 896 799.8	66.3
6	NATIONAL PROJECT "SAFE AND QUALITATIVE ROADS"	297 469 723.5	283 415 294.3	95.3	142 338 577.3	138 241 625.1	97.1
7	NATIONAL PROJECT "LABOR PRODUCTIVITY AND SUPPORT OF EMPLOYMENT"	7 557 726.9	6 596 602.4	87.3	7 140 000.0	6 219 325.2	87.1
8	NATIONAL PROJECT "SCIENCE"	37 995 410.5	37 654 620.8	99.1	37 942 090.0	37 617 000.3	99.1
9	NATIONAL PROGRAM "DIGITAL ECONOMY"	111 160 309.0	83 503 604.4	75.1	100 666 112.7	73 816 830.6	73.3
10	NATIONAL PROJECT "CULTURE"	26 234 218.3	25 252 412.2	96.3	14 171 852.6	14 033 575.3	99.0
11	NATIONAL PROJECT "SMALL AND MEDIUM-SIZED ENTREPRENEURSHIP AND SUPPORT OF INDIVIDUAL ENTREPRENEURSHIP INITIATIVE"	68 435 754.6	64 035 600.6	93.6	60 575 293.3	56 417 184.0	93.1
12	NATIONAL PROJECT "INTERNATIONAL COOPERATION AND EXPORT"	91 280 332.3	81 668 390.6	89.5	87 654 614.6	78 098 392.6	89.1
13	INTEGRATED PLAN OF MODERNIZATION AND EXTENSION OF MAIN INFRASTRUCTURE	349 389 839.3	307 076 562.7	87.9	347 809 103.5	306 100 710.0	88.0

In 2019, a discussion began on the nature of credit activity as a factor in economic growth. The economy continued to grow in demand for consumer loans, which was considered by the Central Bank as an important source of maintaining economic dynamics – especially since the

growth in debt was not accompanied by a deterioration in debt servicing. However, from the position of the Ministry of Economic Development, such a development of the situation may negatively affect long-term growth rates, since consumer loans limit the possibilities of investment lending. True, consumer and investment lending are determined by various factors. For the latter, the entrepreneurial climate is especially important, while the former over the past two or three years was largely the result of a slowdown in real incomes, which was partially offset by consumer lending to the population.

The search for sources of activation of aggregate demand in Russia led to the increased interest of some Russian economists and politicians in the "modern monetary theory" (MMT) mentioned above. Of course, here the concept of MMT was significantly different from the discussion of this problem in the USA: in Russia there are no problems of state debt and budget deficit, but the ruble, although it is a sovereign currency, but not global at all, and economic growth remains weak. Under these conditions, the issues of applying "modern monetary theory" primarily imply the possibility of active involvement of monetary authorities in the formation of aggregate demand, and, in fact, in the Central Bank fulfilling the function of "development institute". The question immediately arises of the independent status of the Central Bank. A similar formulation of the problem was outlined in 2019, but, probably, the discussion will grow – not only in Russia, but also in other developed economies.

For Russia, this topic may turn out to be especially relevant, since a very favorable financial and monetary situation opens up wide opportunities for experimentation. But there are serious risks. On the one hand, the possibilities of expansionary fiscal policy are limited by the quality of institutions that reduce the effectiveness of budget expenditures. On the other hand, monetary stimulus will run into persistent high inflationary expectations. In addition, after a long period of high inflation, it is advisable for some time to be below the target inflation rate, which helps reduce inflation expectations.

The government formed in 2020 was to propose mechanisms to overcome stagnation in the development of the economy and welfare. Apparently, the main focus will be on the issues of stimulating demand – both consumer and investment. This is true, since it is precisely demand factors in the conditions of low inflation that become the main sources of inhibition.

Consumer demand is mainly focused on the package of social measures formulated in the Address of the President of Russia on January 15, 2020. The key here is the ability to formulate mechanisms to ensure targeted social support, which would significantly increase the effectiveness of these measures.

To give dynamism to the production of more than 6 trillion rubles, which, within the framework of national projects, should be directed to the purchase of machinery and equipment by 2024, approximately 3.2 trillion rubles. (about 600 billion rubles per year) is supposed to be placed with domestic manufacturers.

The government also lays down the buildup of non-primary and non-energy exports. First of all, we are talking about industries such as metallurgy and civil engineering, forestry, chemical, and pharmaceutical industries. It is expected that industrial exports will increase by $ 6 billion in 2020 and about $ 14 billion in 2021, which is an extremely stressful parameter.

A significant role will be given to the digitalization of economic life as the core of technological modernization. Moreover, it can be assumed that digitalization will be considered by the government not only as a factor in increasing productivity and growth, but also as a source of institutional modernization, i.e., as a technological prerequisite for improving the business climate, or even replacing this improvement.

Among the more traditional institutional measures, it was planned to finalize the draft law on the protection and promotion of investment, presented in 2019, which should guarantee stability in the implementation of large investment projects, as well as the effectiveness of investment policies of state corporations. It is assumed that investment should primarily ensure the digital transformation of Russian society as a key factor in its modernization.

Investment growth ("launching the investment cycle") is seen by the government as a key factor in increasing aggregate factor productivity and, therefore, reaching higher than the global average economic growth rate. This is natural in the face of a declining working-age population and aging production facilities. It was assumed that instead of less than 1% of investment growth in 2019, in 2020, it will achieve 5% growth and then reach the level of 6% per year, as a result of which investments in 2024 will amount to 25% of GDP. This is a normative indicator, which is based on the hypothesis that investment growth should approximately double the GDP growth, and the latter should exceed the global average, i.e. be at a level slightly higher than 3 percent.

However, by the spring of 2020 it became clear that anti-crisis policies aimed at counteracting global structural shocks were coming to the fore. And it is precisely the success of the anti-crisis policy that will determine the prospects for institutional reforms and, in general, the nature of the country's further development.

Section 2. Monetary and fiscal spheres

2.1. Monetary policy[1]

2.1.1. Monetary policy trends

In 2019, a sharp and largely unexpected slowdown in inflation led to a significant easing of monetary policy. Over the course of that year, the Bank of Russia reduced its key rate five times: four times by 0.25 percentage points on June 14, July 26, September 6, and December 13; and by 0.5 percentage points at a meeting of its Board of Directors on October 25. As a result, the key rate declined from 7.75% to 6.25% per annum, thus approaching, according to the estimates of the RF Central Bank,[2] its neutral level.[3]

Over the course of 2019, the movement pattern of the key rate was shaped, on the one hand, by the rising inflation risks in the H2 2018 and early 2019 caused by the raise of the VAT rate at the beginning of 2019, a decline of the world market for energy prices, and an increase in inflationary expectations. As a result, in January-May 2019, the regulator did not ease its monetary policy, keeping the key rate unchanged. At the same time, the RF Central Bank's rhetoric regarding future decisions began to somewhat relax in March-April 2019, as the inflation index passed a local peak (5.3% in March 2019 compared to March 2018). It was only in June 2019 that the Bank of Russia switched over to actually reducing the key rate.

However, in reality, the surge in inflation turned out to be more moderate, and its duration shorter than expected. This happened due to both an early tightening of monetary policy in 2018 and a combination of several other circumstances, in particular the ruble's strengthening as trading conditions improved and the risk of capital outflows decreased in response to monetary policy easing in a number of developed countries, as well as a slow growth demonstrated by domestic demand following fiscal policy toughening. As a result, over the course of 2019, the

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[2] Guidelines for the single state monetary policy for 2020 and the period 2021–2022, p. 38.

[3] A neutral key rate secures the achievement of an inflation target and a zero output gap. A neutral interest rate level has neither a stimulating nor a restraining effect on economic activity.

Bank of Russia repeatedly adjusted its inflation predictions. Thus, in March, the year-end inflation projection for 2019 was reduced from 5.0–5.5% to 4.7–5.2%, and in October, to 3.2–3.7%. At the end of 2019, actual inflation was below its forecast values and amounted to 3%.

As monetary policy eased, banks' lending conditions also softened. Thus, the real interest rate on newly issued corporate loans with maturities of more than three years, calculated on the basis of actual inflation movement over the previous 12 months, decreased from 5.8% per annum on average in January-November 2018 to 4.5% per annum over the corresponding period of 2019 (*Fig. 1*).

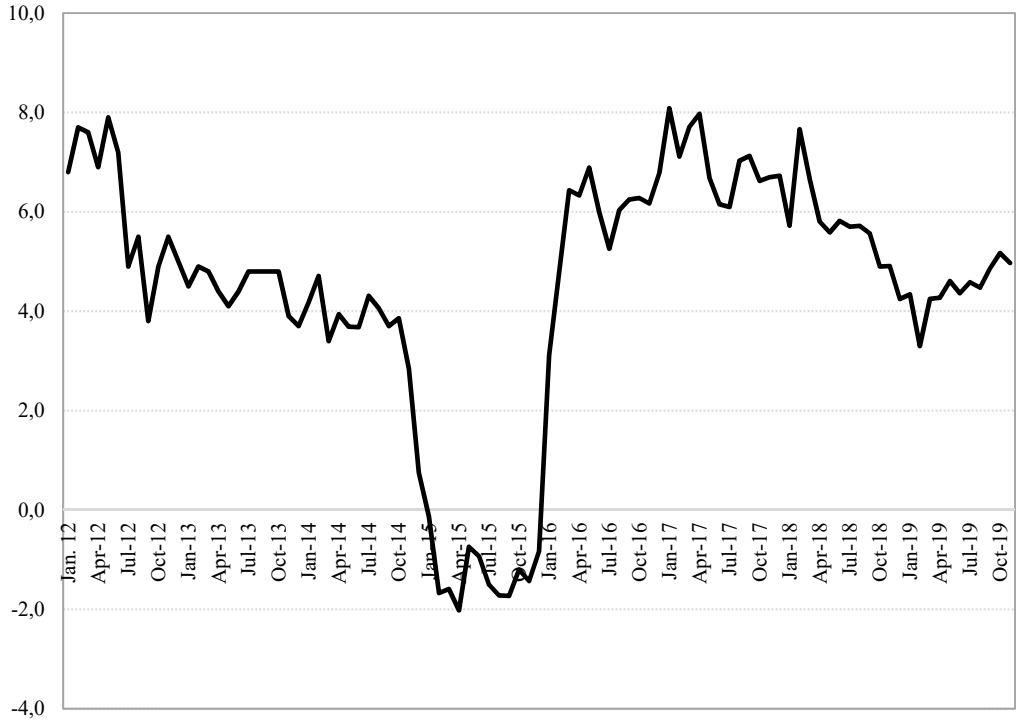


Fig. 1. Real interest rate on corporate loans with maturities of more than three years in Russia, 2011–2018 (% per annum, based on the actual inflation pattern over the previous 12 months[1])

Source: Bank of Russia; Rosstat; own calculations.

Nevertheless, in 2019, the real key interest rate remained at a relatively high level compared to the other developing countries that were implementing inflation targeting (*Fig. 2, Table 1*). At the end of 2019, the RF Central Bank's key rate exceeded inflation by 3.25 percentage points, which is lower than in Mexico (4.5 percentage points) and Kazakhstan (3.9 percentage points), but slightly higher than in the other developing countries that were targeting their inflation (for example, in the Republic of South Africa (2.5 percentage points) and Indonesia (2.3 percentage points)).

[1] The real interest rate was calculated using data on accumulated inflation over the previous 12 months (December 2019 to December 2018), based on the assumption of the adaptive nature of inflationary expectations in Russia.

Table 1

Inflation and key rates in some developed and developing countries

	Actual inflation (December 2019 to December 2018,%)	Key rate (end of year, % per annum)
Developing countries		
Peru	1.9	2.3
Indonesia	2.7	5.0
Mexico	2.8	7.3
Chile	3.0	1.8
Russia	**3.0**	**6.25**
Poland	3.2	1.5
Columbia	3.8	4.3
Hungary	4.0	0.9
RSA	4.0	6.5
Brazil	4.3	4.5
Kazakhstan	5.4	9.3
India	7.4	5.2
Turkey	11.8	12.0
Developed countries		
EU	1.3	0.0
UK	1.3	0.8
Norway	1.3	1.5
New Zealand	1.9	1.0
Australia	1.9	0.8
Iceland	2.0	3.0
Canada	2.2	1.8
USA	2.3	1.5
Czech Republic	3.2	2.0

Source: Central banks' websites.

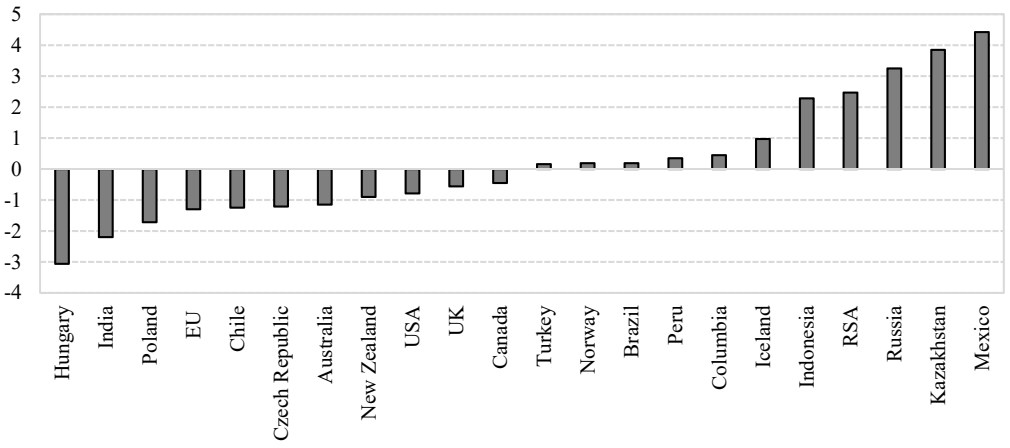


Fig. 2. The real key rate at year-end 2019 in Russia (% per annum, based on the actual inflation pattern over the previous 12 months)

Source: Central banks' websites; own calculations.

In 2020, with the global economy slowing down as a result of the coronavirus epidemic, increased global uncertainty and a sharp drop in oil prices, we can expect a temporary increase in inflation above the target level and its return to 4% in 2021. However, given the significant fall in below-target inflation in late 2019 and early 2020, as well as a possible significant slowdown in economic activity, we believe that monetary policy tightening is only possible if there is a serious threat to financial stability in Russia.

2.1.2. The money market

In 2019, the money market continued to operate in the context of a structural liquidity surplus in the banking sector,[1] which had first appeared back in 2017 as a result of spending the sovereign wealth funds and the implementation, by the Bank of Russia, of measures designed to secure the financial recovery of certain banks. In 2019, the liquidity surplus averaged RUB 3.0 trillion, remaining at the level of 2018.

In order to absorb liquidity and keep the interest rates within the established interest rate band, the RF Central Bank relied on deposit auctions and placed additional issues of Bank of Russia coupon bonds (KOBR). As a result, the amount of funds raised through the deposit auctions in 2019 averaged RUB 1.6 trillion, while in 2018 this index had reached RUB 2.2 trillion. At the same time, in 2019, the RF Central Bank slightly increased its KOBR offer for a period of 3 months. Thus, in 2019, the volume of KOBR in circulation jumped from RUB 1.4 trillion to RUB 1.9 trillion (*Table 2*).

It should be noted that, according to the forecasts released by the Bank of Russia, liquidity surplus in the banking sector can persist for the next 3 years. So, with due regard for the deferred purchases of foreign currency in the domestic market,[2] the regulator expects the structural liquidity surplus to rise to the level of RUB 5 trillion in the situation of the fiscal rule being applied under the basic scenario.

In 2019, in the context of a significant liquidity surplus, there was a slight shrinkage in the amount of debt owed by credit institutions to the Bank of Russia. At the end of 2019, the amount of loans attracted by credit institutions from the Bank of Russia decreased by 6%, to RUB 2.5 trillion (*Fig. 3*). At the same time, in 2019, in the structure of requirements established by the RF Central Bank for the banking sector, a large share was taken up by debt on loans secured by non-marketable assets (the average monthly volume of loans issued amounted to RUB 242 billion), while the average monthly volume of loans allotted through repo auctions over the same period was only RUB 1.4 billion.

Table 2

The Bank of Russia's balance sheets in 2017–2019

	01.01.2017		01.01.2018		30.11.	
	billions of rubles	% of assets / liabilities	billions of rubles	% of assets / liabilities	billions of rubles	% of assets / liabilities
1	2	3	4	5	6	7
Funds placed with non-residents and foreign issuers securities	18,878.5	61.3	24,496.1	62.2	25,500.9	59.7
Loans and deposits	3,517. 8	11.4	3,672.5	9.3	3,392.6	7.9
Precious metals	4,505.2	14.6	6,123.9	15.6	6,867.1	16.1
Securities	886.1	2.9	1,038.8	2.6	1,127.4	2.6
Other assets	1,535.7	5.0	2,286.0	5.8	4,254.8	10.0
Total assets	**30,815.1**	**100.0**	**39,368.9**	**100.0**	**42,726.0**	**100.0**

[1] The structural surplus is characterized by the formation of a steady excess of liquidity among credit institutions and the need for the Bank of Russia to carry out operations to absorb it in order to keep interest rates on the interbank lending market close to the key rate. It is measured by the difference between the requirements of the Bank of Russia for credit institutions and the requirements of credit organizations to the Bank of Russia for standard instruments for the provision and absorption of liquidity, supplemented by the balanced amount of claims of credit institutions and the Bank of Russia for specialized Bank of Russia refinancing instruments.

[2] The implementation of deferred purchases from February 2019 is associated with the suspension of the purchase by the Bank of Russia of foreign currency for the RF Ministry of Finance under the fiscal rule in the domestic foreign exchange market from August to December 2018.

Cont'd

1	2	3	4	5	6	7
Currency in circulation	9,539.4	31.0	10,312.8	26.2	10,175.9	23.8
Funds in accounts with Bank of Russia	11,003.2	35.7	14,526.6	36.9	17,732.0	41.5
including RF Government	4,565.7	14.8	7,894.7	20.1	11,154.6	26.1
resident credit institutions	4,812.4	15.6	4,381.7	11.1	4,828.6	11.3
Credit float	0.7	0.0	0.05	0.0	-	-
Securities issued	356.8	1.2	1,388.3	3.5	1,510.0	3.5
Liabilities to IMF	1,407.8	4.6	1,616.4	4.1	1,404.1	3.3
Other liabilities	120.8	0.4	130.6	0.3	514.2	1.2
Capital	8,386.5	27.2	11,394.3	28.9	11,389.8	26.7
Profit for reporting year	-	-	-	-	-	-
Total liabilities	**30,815.1**	**100.0**	**39,368.9**	**100.0**	**42,726.0**	**100.0**

Source: Bank of Russia.

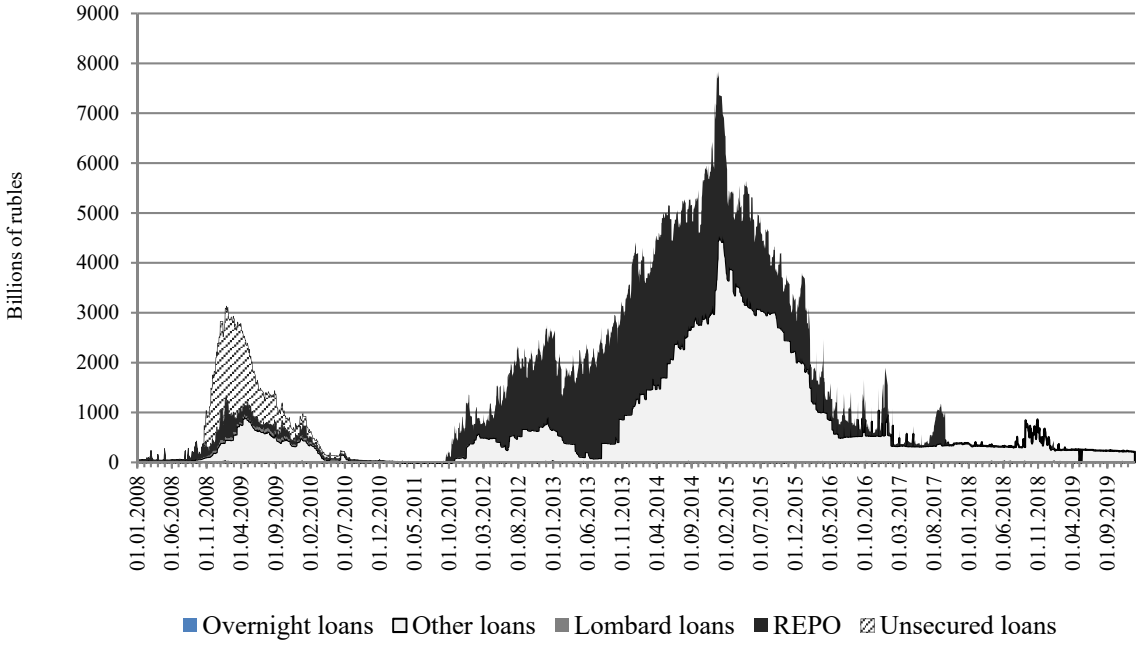


Fig. 3. Debt of commercial banks to the Bank of Russia, rubles, 2008–2019

Source: Bank of Russia.

Under the conditions of a structural liquidity surplus, the money market interest rate in 2019 stayed mainly in the lower part of the interest rate band. The interest rate on the interbank lending market[1] slid from 7.6% per annum on average in January 2019 to 6.2% per annum on average in December 2019. The dynamics of the one-day interbank rate followed the movement pattern of the Bank of Russia's key rate. In this regard, from January to May, it remained at a stable level, which then gave way to a smooth decline until the end of the year. In general, over the course of 2019, the interbank interest rate did not go beyond the boundaries of the interest rate corridor established by the RF Central Bank, which indicates that the regulator has indeed achieved the operational objective of its monetary policy. The average deviation of the one-day MIACR rate from the key rate became significantly smaller (plunging from 3.8% in 2018 to

[1] The interbank rate is the average monthly MIACR index for interbank overnight ruble loans.

1.8% in 2019). The average annual MIACR rate for interbank overnight ruble loans increased from 7.1% per annum in 2018 to 7.2% per annum in 2019, due to the continuing relatively tight lending conditions over the period January-May 2019 (*Fig. 4*).

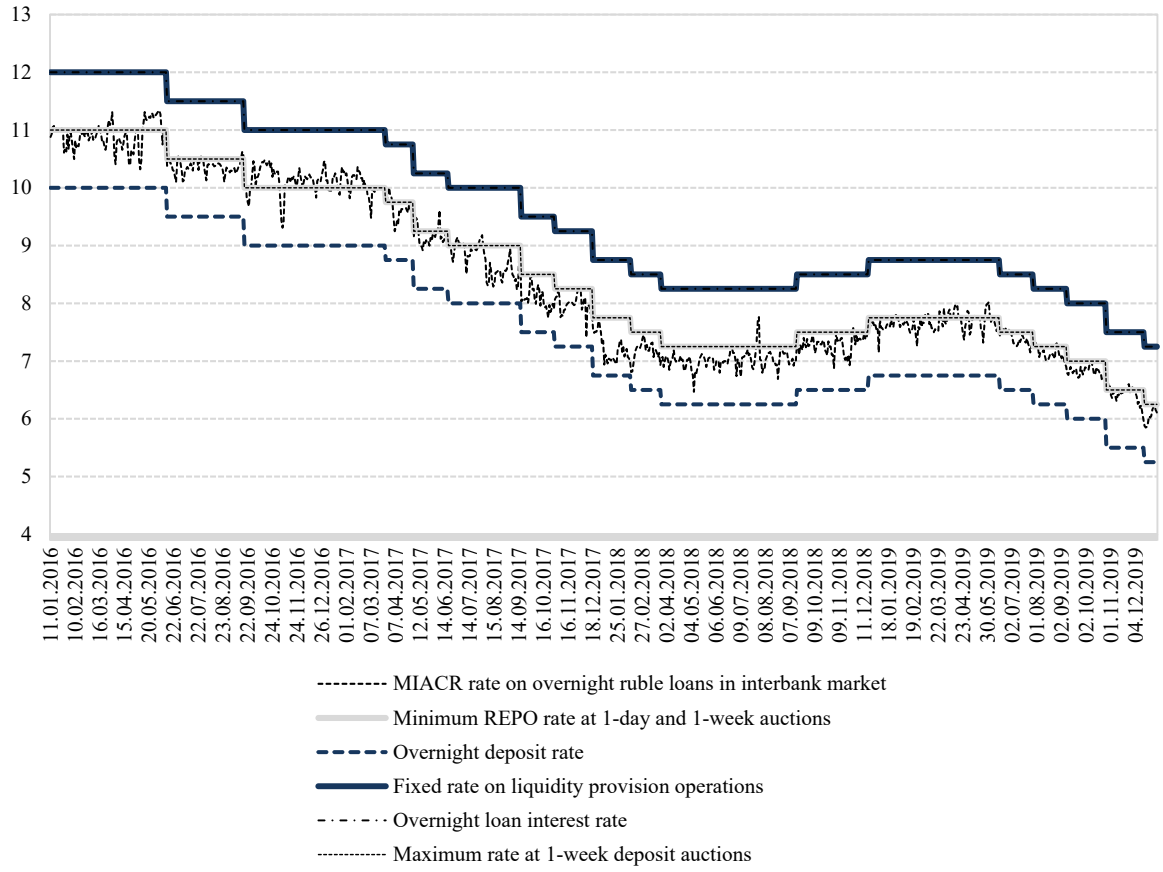


Fig. 4. The Bank of Russia interest rate band and the movement of interbank market interest rates in 2013–2019

Source: Bank of Russia; own calculations.

In 2019, broad money increased by 4.7%, to RUB 16,823.4 billion (in 2018, by 9.3% to RUB 16,063.4 billion). Among the fastest-growing components of broad money by the end of 2019, we can point out Bank of Russia bonds held by credit institutions and the correspondent accounts of credit institutions with the Bank of Russia, their volume having increased 41.0% to RUB 2,052.8 billion, and 38.3% to RUB 2,621.7 billion, respectively. The amount of required reserves increased by 7.3% to RUB 617.6 billion. Note that the growth of required reserves occurred in the main due to the Bank of Russia's decision to raise required reserve ratios on liabilities to individuals in foreign currency for banks with a universal license, banks with a basic license and non-bank credit institutions by 1 percentage point to 8.00%, effective from 1 July 2019. Also note that this decision aimed at playing down the incentives for banks to increase their foreign currency liabilities. The amount of bank deposits with the Bank of Russia decreased by 46.0%, to RUB 1,766.6 billion. The volume of cash in circulation increased by 2.9%, to RUB 10,241.5 billion. Overall, the volume of excess reserves for 2019 increased by 9.8% and amounted to RUB 5,680.8 billion (*Table 3*).

Table 3

The broad money dynamics in 2019 (billions of rubles)

	01.01.2018	01.01.2019	01.01.2020
Monetary base (broad)	14,701.5	16,063.4	16,823.4
- currency in circulation, including cash balances of credit institutions	9,539.0	10,312.5	10,616.1
- correspondent accounts of credit institutions with Bank of Russia	1,930.7	1,898.2	2,625.5
- required reserves	506.2	575.3	617.4
- deposits of credit institutions with Bank of Russia	2,373.2	1,903.5	1,027.7
- Bank of Russia bonds held by credit institutions	352.4	1,373.9	1,936.7
For reference: excess reserves	4,656.3	5,175.7	5,589.9

Source: Bank of Russia.

The structure of the money supply formation in 2019 is similar to its structure established in 2018 (*Fig. 5*). From January through November 2019, the most significant factors that shaped broad money were changes in the balances of the general government accounts with the RF Central Bank, as well as the Bank of Russia's liquidity provision/absorption operations with the banking sector. Thus, an increased money supply due to an increase in the net credit to government bodies (RF government deposits on accounts with the RF Central Bank less government bonds acquired by the Bank of Russia) over the period of January-November 2019 amounted to RUB 0.3 trillion, while as a result of a shrinkage in the net volume of liquidity provision (absorption) operations, the monetary base lost RUB 0.1 trillion. An analysis of the factors underlying the money supply formation points to neutrality of the foreign currency purchase operations in accordance with the fiscal rule established for monetary policy: the funds withdrawn by the RF Ministry of Finance in order to replenish the National Welfare Fund go back into the national economy as a result of currency purchases by the Bank of Russia.

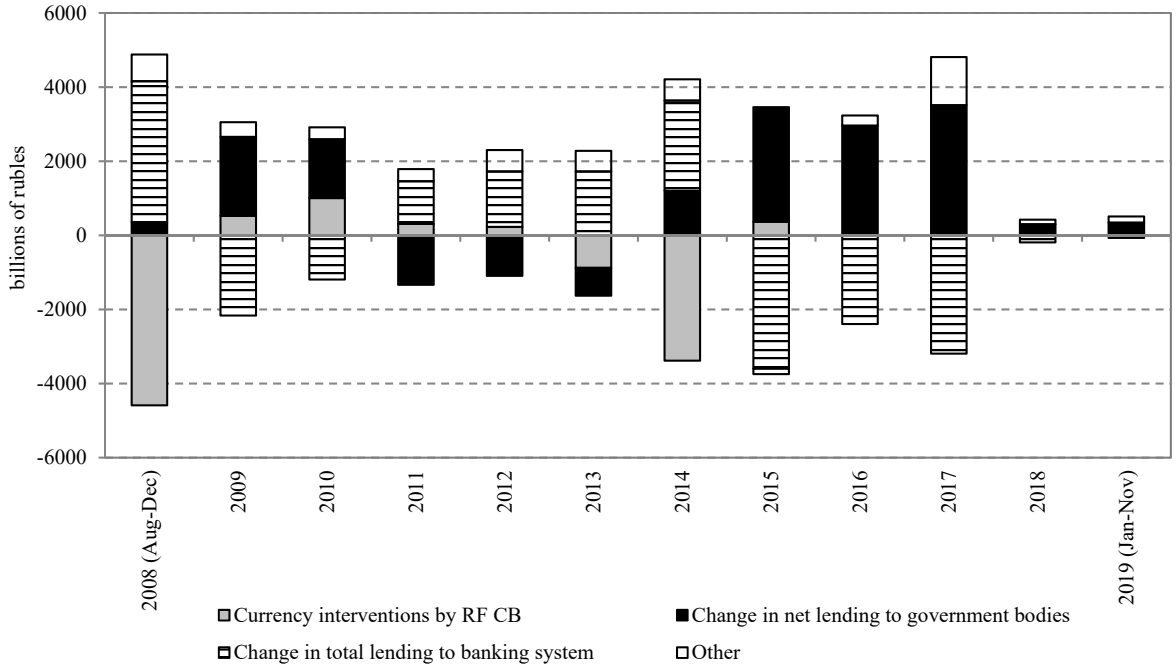


Fig. 5. The money supply formation factors

Source: Bank of Russia.

The dynamics of foreign exchange reserves in 2019 was almost totally determined by the volume of Bank of Russia's foreign currency purchases for the RF Ministry of Finance in accordance with the fiscal rule. Since the beginning of 2019, the Bank of Russia has resumed its foreign currency purchases in the domestic foreign exchange market to the value of the surplus oil and gas revenues received whenever the actual price of oil jumped above USD 41.2 per barrel. In addition, in February 2019, the regulator began making deferred purchases, which increased the daily volume of foreign currency purchases by an average of USD 2.8 billion. In 2019, the regulator acquired RUB 3.5 trillion. In 2018, the volume of the RF Central Bank's foreign currency purchases in the domestic foreign exchange market was approximately RUB 2.1 trillion. Thus, as demonstrated by the year-end result for 2019, the value of the Bank of Russia's international reserve assets gained USD 85.9 billion (18.3%), and as of January 1, 2020, it amounted to USD 554.4 billion, thus hitting its record high of the period after the global financial crisis (*Fig. 6*). It should be reminded that the historic high was reached by the volume of international reserves in August 2008, and amounted to USD 596.6 billion. It should be noted that the index of monetary gold reserves for 2019 increased by USD 23.5 billion (27.0%), due in the main for its upward revaluation in response to the rising gold prices on world markets during certain months of 2019, to the value of USD 16.5 billion. As of January 1, 2020, the share of foreign exchange reserves in the total amount of reserve assets amounted to 80.1% (vs 81.5% in 2018), and the relative share of gold was 19.9% (vs 18.5% in 2018).

It should be remembered that the year 2018 saw some significant changes in the structure of foreign exchange reserves: the relative share of assets denominated in RMB soared from 2.8% to 14.2%, while that of assets denominated in USD plummeted from 45.8% to 22.7%. Later on, according to data for H1 2019, the new structure of foreign exchange reserves remained basically unchanged (USD 24.2%, RMB 13.2%). The shift in their structure was apparently caused by the need to minimize the potential geopolitical risks. However, as a result, the monetary authorities had to sacrifice their returns on investment denominated in US dollars, because over the period 2018–2019, in response to the problems faced by the Chinese economy, the yuan was losing in value relative to the US dollar. Meanwhile, in our opinion, the medium-term prospects for the US economy look better than those for the Chinese economy. Besides, US economic policies are more consistent and predictable, making US dollars the preferred asset for investing in international reserves.

At present, the volume of reserves is sufficient to maintain the sustainability of the RF balance of payments, because it covers 16 months of imports of goods and services into the Russian Federation (vs 16 months in 2018), as well as the interest on external debt due to be paid in 2020. In view of such a high level of sufficiency of international reserves, it is doubtful that the deferred purchases indeed need to be realized under the fiscal rule, given that these operations, being neutral with respect to money supply and interest rates, would exert an additional downward pressure on the ruble exchange rate. The weakening of the ruble, in its turn, can give rise to increased inflationary risks, as well as a slowdown in the industrial production growth rate across several sectors of the Russian economy that depend on imports of investment goods.

In 2019, the average monthly growth of M2 (compared with the corresponding period of last year) was 8.7% (vs 11.0% in 2018), and that of the monetary base was – 1.9% (vs 29% in 2018). As a result, the money multiplier (the ratio between M2 and the monetary base) amounted to 3.0 (vs 2.8 in 2018). The accelerated growth of M2 relative to the monetary base occurred in the main due to an increase in the corporate lending volume in a situation of softening loan

conditions, both in terms of loan price and otherwise. It is noteworthy that the achieved money multiplier index corresponds to its average value for developing economies (Ukraine, Belarus, Kazakhstan), while in the developed countries it is usually in a range of 5 to 8. It should also be noted that over the past 20 years in the countries of Eastern Europe, as their banking systems developed, the money multiplier was demonstrating an upward movement pattern. Thus, for example, in Poland over the period 1993–2019, the money multiplier increased from 3.1 to 5.1, while in Russia over the same period it increased from 1.4 to 3.0.

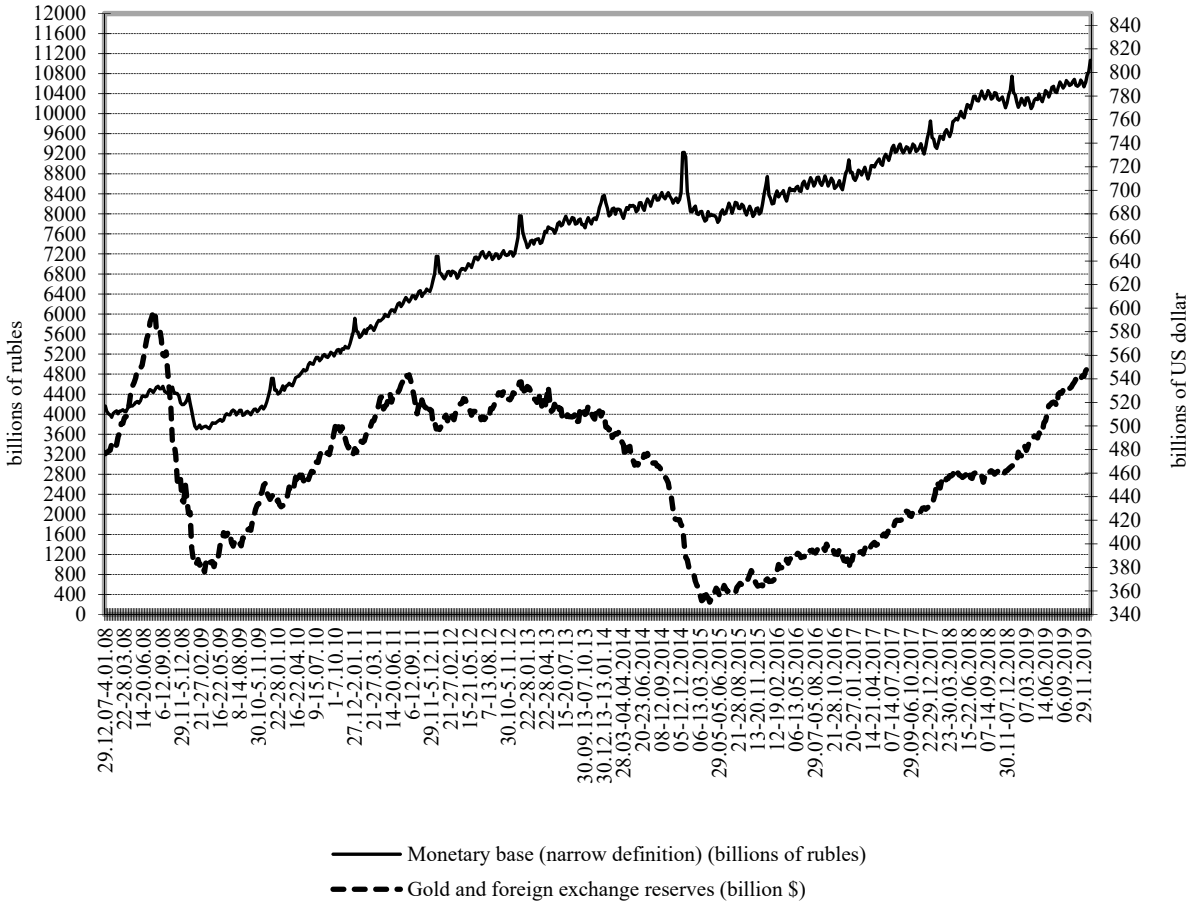


Fig. 6. The movement of the monetary base (narrow definition) and gold and foreign exchange (international) reserves in the Russian Federation, 2008-2019

Source: Bank of Russia.

According to preliminary estimates, the level of monetization in the Russian economy (the ratio of M2 to GDP) over the period 1999–2019 jumped threefold to 47.3% in 2019, almost reaching the level of the countries of Central and Eastern Europe, which have been traditionally characterized by a higher monetization level. For example, in Poland, the ratio of M2 to GDP in Q3 2019 amounted to 69.0% (vs 40.2% in 1999). For reference, in Belarus the ratio of M2 to GDP over the same period (in Q3 2019) increased 2.1 times to 35.6%, in Kazakhstan 2.6 times to 35.9%, in Ukraine 1.9 times to 35.7%. In the developed countries, the index of monetization relative to GDP is even higher, due to a higher level of the financial system's

development: for example, in the UK this indicator in Q3 2019 rose to 152.1%, and in Switzerland to 192.7%.

2.1.3. Inflationary processes

Having reached a local maximum in March 2019 (5.3%), over the period of April to December 2019 the growth rate of prices for consumer goods and services (relative to the previous 12 months) was continuously sliding. The acceleration of inflation at the beginning of 2019 was caused by the raise of VAT and the weakening of the ruble over H2 2018. Nevertheless, the proactive measures that the regulator was implementing in the fall and winter of 2018 coupled with the efforts to tighten monetary policy made it possible to minimize the upward inflation deviation from its target. Later on, a gradual decline in the rate of inflation was also facilitated by the slow growth of domestic demand in the context of a tight fiscal policy, the strengthening of the ruble, a good harvest, and a relatively stable situation in the global financial markets. At the end of 2019, annual inflation (relative to the previous 12 months) amounted to 3% (vs 4.3% at the end of 2018) (*Fig. 7*).

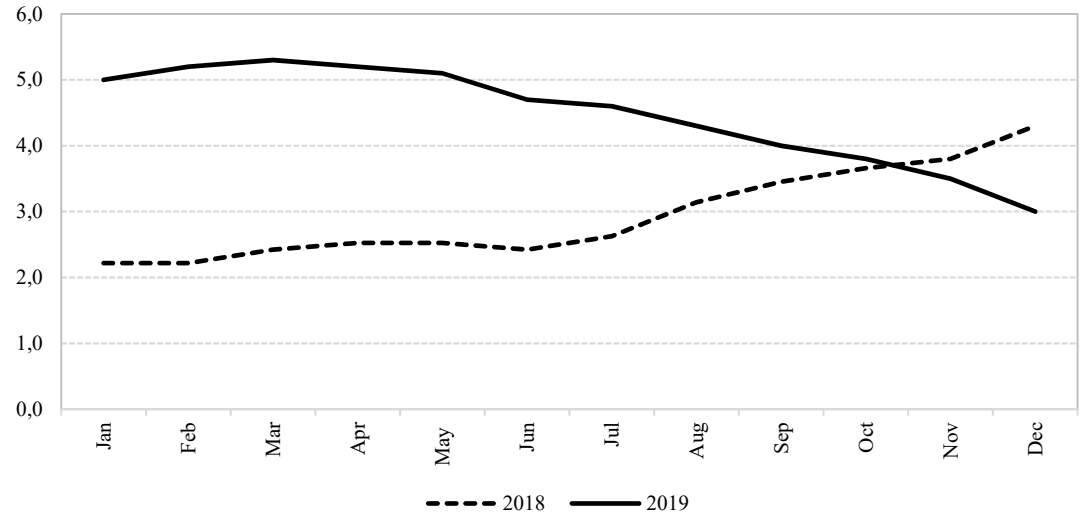


Fig. 7. The CPI growth rate in 2018–2019 (% for the previous 12 months)

Source: Rosstat; own calculations.

Food inflation accelerated from 4.7% in December 2018 to 6.4% in May 2019. Thereafter, along a slow growth of household incomes, the ruble strengthening, and a good harvest, the growth rate of food prices declined. Thus, in June-September 2019, deflation was observed in the food sector (-0.5% in June, -0.3% in July, -1% in August, -0.5% in September). It should be noted that such a long period of disinflation has been recorded for the first time since 2011. As a result, in December 2019, the growth rate of food prices in annual terms (relative to the previous 12 months) amounted to 2.6% (vs 4.7% in December 2018) (Figure 8).

Non-food inflation peaked in March (4.8% on March 2018), and then steadily declined to 3.0% in annual terms in December 2019 (vs 4.1% in December 2018). At the year end, the highest surge was demonstrated by the prices of tobacco products (11.0%), medicines (6.9%), and washing and cleaning products (4.9%).

A significant slowdown in the growth rate of gasoline prices from 9.4% (in December 2018 relative to December 2017) to 1.9% in December 2019 (in annual terms) occurred as a result of the agreement between the RF Government and a number of major oil companies, effective until July 1, 2019. It should be reminded that the surge of gasoline prices in April-June 2018 was associated with the high oil prices and the ruble's depreciation in April in response to the toughening of economic sanctions imposed on Russia.

According to the year-end results of 2019, paid services to the population rose by 3.8% (vs 3.9% in 2018). The leaders in price growth were passenger transport services (6.1%) and education services (5.6%).

Core inflation (cleared of seasonal and administrative factors), after a lengthy period of growth (throughout 2018 and the first 5 months of 2019), began to decline in June and reached 3.1% in annual terms in December 2019.

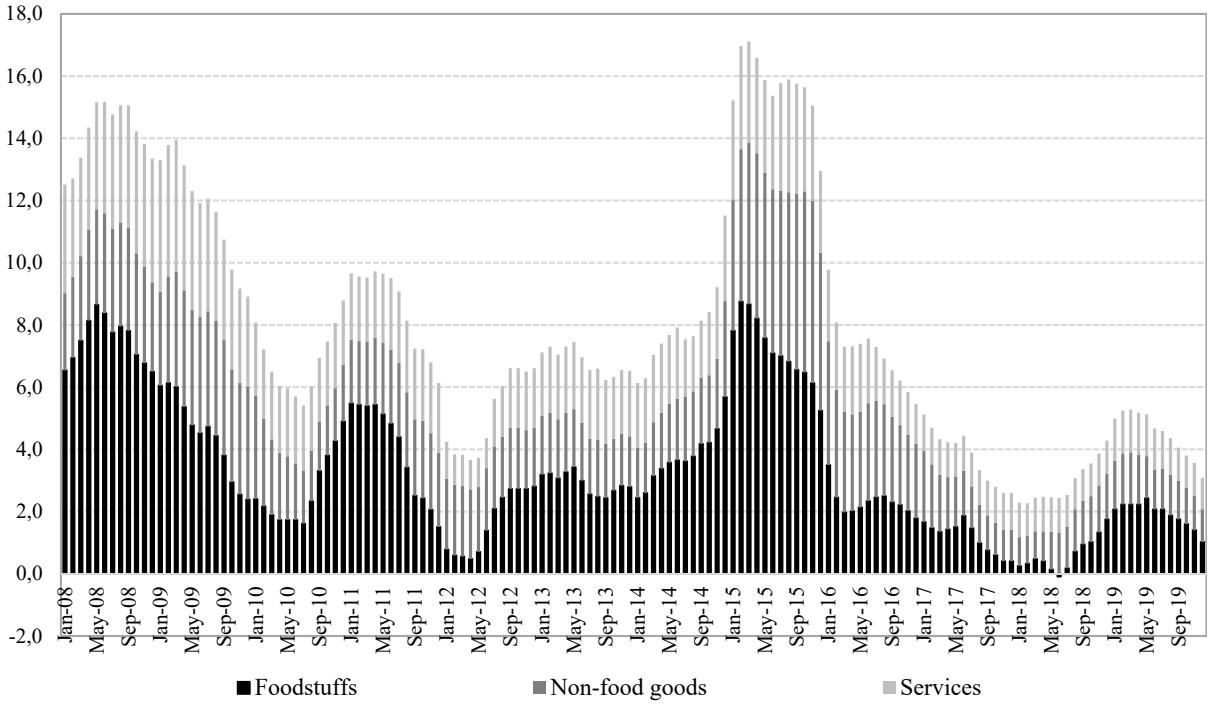


Fig. 8. The structure of inflation in 2008–2019 (%, month to the corresponding month of the previous year)

Source: Rosstat; own calculations.

The inflation slowdown was accompanied by a decrease in inflationary expectations. According to the InFOM survey results released by the Bank of Russia, the median one-year forward inflation expectation rate was 8.3% in November, down 2.1 percentage points on its year-beginning value (*Fig. 9*). In December 2019, inflationary expectations rose to 9%, but in January 2020 their index once again returned to the level of 8.3%. In general, inflationary expectations have remained quite high. However, given the adaptive nature of inflationary expectations, the observed slowdown in the current inflation index creates the conditions for their further decline.

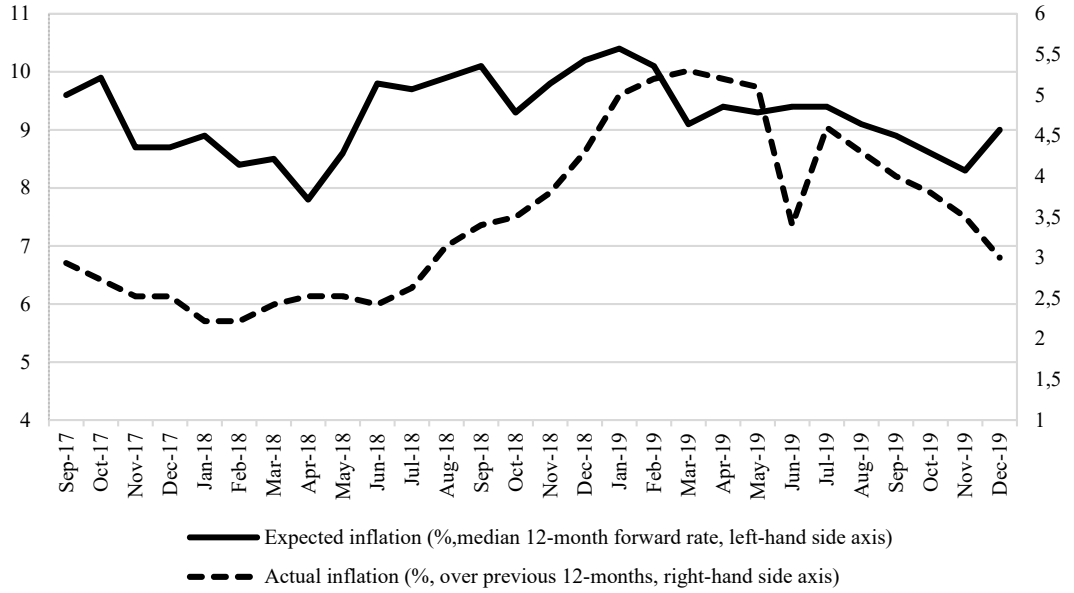


Fig. 9. Inflation and inflationary expectations

Source: Rosstat; Bank of Russia.

The movement pattern of real personal income continues to be the factor that harnesses inflation. In 2019, it gained 1.5% compared with 1.1% in 2018. At the same time, real personal income is still below its 2014 index. In 2019, the average growth rate of real wage amounted to 2.7% (vs 7.0% in 2018). Retail trade turnover is also growing at a slower rate: 1.6% in 2019 compared with 2.8% in 2018. The ruble strengthening against the US dollar, by 11% in 2019, has also contributed to a slowdown in the Consumer Price Index (CPI) growth. The temporary weakening of the ruble in August 2019 (by 4.9%), due to a plunge of oil prices coupled with capital outflows from emerging markets, did not significantly affect the CPI dynamics.

Table 4

The annual growth rate of prices for certain types of consumer goods and services in 2017–2019 (%, December relative to December of previous year)

	2017	**2018**	**2019**	**2017–2019**
1	2	3	4	5
CPI	**2.5**	**4.3**	**3.0**	**10.1**
Foodstuffs	**1.1**	**4.7**	**2.6**	8.6
Butter	9.6	3.6	10.0	24.9
Fish and seafood	3.8	3.7	5.2	13.2
Sunflower oil	-8.6	1.8	-2.9	-9.7
Milk and dairy products	5.2	2.9	6.1	14.9
Pasta	-0.7	1.4	5.7	6.4
Bread and Bakery	2.7	5.2	6.3	14.8
Alcoholic beverages	2.9	1.3	1.2	5.5
Fruits and vegetables	1.2	4.9	-2.0	4.0
Cereals and legumes	-13	1.2	15.2	1.4
Meat and poultry	-2.3	9.7	0.2	7.4
Eggs	-14.2	25.9	-5.0	2.6
Non-food goods	**2.8**	**4.1**	**3.0**	**10.2**
Gasoline	7.3	9.4	1.9	19.6
Tobacco products	8.6	10.1	11.0	32.7
Textiles	3.7	1.7	1.3	6.8
Washing and cleaning products	0.6	3.1	4.9	8.8

Cont'd

Footwear	4	1.9	1.2	7.2
Knitwear	3.3	2.5	2.4	8.4
Clothes and underwear	3	2.3	2.2	7.7
Pharmaceuticals	-3.4	4.6	6.9	8.0
Services	**4.4**	**3.9**	**3.8**	**12.6**
Preschool education services	5.2	3.8	3.8	13.3
Passenger transport services	6.8	4.3	6.1	18.2
Medical services	5	4.3	3.8	13.7
Education services	7.5	8.4	5.6	23.1
Housing and utilities	4.6	3.7	4.3	13.1
Communications	4.7	2.4	4.2	11.7

Source: Rosstat.

Let us compare the CPI growth rates in Russia and some other countries (*Table 5*).

Table 5

The movement of CPI in some countries in 2017-2019, % per annum

	2017	2018	2019	2017–2019
Azerbaijan	7.9	1.5	2.4	12.1
Armenia	2.6	1.8	0.7	5.2
Belarus	4.6	5.6	4.7	15.6
Kazakhstan	7.1	5.3	5.4	18.9
Kyrgyzstan	3.7	0.5	3.1	7.4
Moldova	7.3	0.9	7.5	16.4
Russia	*2.5*	*4.3*	*3.0*	10.1
Tajikistan	6.7	5.4	8.0	21.5
Ukraine	13.7	9.8	4.1	30.0
Germany	1.7	1.7	1.5	5.0
France	1.2	1.6	1.5	4.4
USA	2.1	1.9	2.3	6.4
Netherlands	1.3	2.0	2.7	6.1

Source: Interstate Statistical Committee of the CIS (http://www.cisstat.com/), OECD database (http://stats.oecd.org/).

Since 2017, Russia has reached a CPI growth rate comparable to that in the developed countries. In 2019, inflation in Russia amounted to 3.0%, while in the Netherlands it was 2.7%, and in the USA, 2.3%. Moreover, among the CIS members, Russia has been one of the countries with the lowest rates of inflation. According to the intermediate results for 2019, the highest CPI growth rates were typically observed in Tajikistan (8.0%) and Moldova (7.5%) (*Table 5*).

In 2019, the Producer Price Index (PPI) also demonstrated a significant decline, while deflation lasted for 7 months, which is a record of the entire observation period. The growth rate of PPI amounted to -4.3%, while in 2018 this indicator stood at 11.7%. A PPI plunge was noted in the Russian economy for the first time since 2008, when the PPI growth rate amounted to -7%. Moreover, in 2008, deflation lasted for only 4 months. The slowdown in PPI growth in 2019 will continue to exert a downward pressure on the CPI dynamics in 2020.

Thus, the Bank of Russia' policy of high interest rates and their slow decline, designed to curb inflation after its surge in 2015 (12.9%), proved to be successful. Over the past 3 years, inflation in Russia stayed either below its target or slightly above it. The temporary tightening of the monetary policy in 2018 helped minimize the risks of an accelerated inflation in 2019. However, long-term hovering of the real interest rate in positive zone is fraught with the risks of an economic growth slowdown. In addition, economic growth in 2019 was sustained by the implementation of national projects, which turned out to be slower than expected, and a tight fiscal policy imposed an additionally constraints on aggregate demand.

In the context of external shocks in 2020, the key objective of monetary policy is to ensure financial stability and keep inflation close to the target level, as well as to prevent a significant increase in inflationary and devaluation expectations of economic agents.

2.1.4. The balance of payments and the ruble exchange rate

According to the preliminary balance of payments estimates for 2019 released by the Bank of Russia, the current account balance amounted to USD 70.6 billion, which is 38% (or USD 42.9 billion) less than the corresponding figure for 2018.[1]

The goods trade balance amounted to USD 163.1 billion, which is 16% less (USD 31 billion) than in 2018 (USD 194.4 billion) (*Fig. 9*). A decisive role in this decline was played by a shrinkage of exports by 5.7% (by USD 25 billion) from USD 443.1 billion in 2018 to USD 417.9 billion in 2019.[2] This decline is primarily due to the downward movement of the average annual export prices of oil, petroleum products, natural gas, and Russia's other main exports (*Table 6*) with a stable supply volume (*Fig. 11*). One exception was liquefied natural gas, whose export price plunge by more than 12% was accompanied by a 75% increase in its physical supply volume, due to Yamal-LNG's capacities, which translated into a 58% increase in its deliveries abroad, from USD 5.3 billion to USD 8.4 billion.

The goods trade balance shrinkage, in addition to the downfall of export prices, was also contributed to by an increase in imports of 2.5% (USD 6 billion), from USD 248.7 billion in 2018 to USD 254.8 billion in 2019, which can be explained by the ruble's strengthening: according to the Bank of Russia, in 2019 the real effective exchange rate of the ruble against foreign currencies gained 2.5% on 2018.[3]

There was also a shrinkage in the balance of trade in services, which amounted to USD -34.8 billion in 2019, compared with USD -29.9 billion in 2018, i.e. the year-end negative balance increased by 16.4%. At the same time, service exports fell insignificantly, by 1.5% (or by USD 1 billion in absolute terms, from USD 64.6 billion to USD 63.6 billion), while service imports rose significantly, by 3.9%, from USD 94.6 billion to USD 98.3 billion.

Table 6

The movement of prices for Russia's main exports, in 2019 relative to 2018

Goods group	Share of in total exports, %	Average export price, USD/t		Price increase, %
		2019	2018	
1	2	3	4	5
Crude oil	28.6	454	496	-8.5
Petroleum products	15.8	468	520	-10.0
Natural gas*	9.8	189	223	-15.0
Ferrous metals	4.3	446	503	-11.2
Coal	3.8	78	85	-8.8
Mineral fertilizers	2.0	243	241	+0.5
Natural gas, liquefied **	1.9	121	144	-15.8
Wheat and meslin	1.5	201	192	+4.8
Aluminum	1.1	1,696	1,727	-1.8

[1] See Bozhechkova A., Knobel, A., Trunin, P. Russia's balance of payments 2018: current account balance hits highest // Russian Economic Developments. 2019. Vol. 26. No 2. P. 3–7.

[2] The data on exports and imports in this section, and in the section of the overview on foreign trade, differ slightly, due to the use of different sources of information. The data on the shrinkage of exports were extracted from the balance of payments of the RF Central Bank.

[3] On the effect of exchange rate dynamics on trade, see Knobel A., Firanchuk A. Foreign Trade of Russia in January-August-August 2017 // Russian Economic Developments. 2017. Vol. 24. No 11. P. 12–18.

Cont'd

1	2	3	4	5
Timber	1.1	227	234	-2.8
Copper	1.0	5,892	6,327	-6.9
Fish, fresh and frozen	0.7	1,830	1,794	+2.0
Vegetable oil	0.5	712	762	-6.5
Nickel	0.4	13,712	12,821	+6.9

* price in USD/m^3
** price in USD/thousands of m^3
Source: Federal Tax Service; own calculations.

In 2019, the balance of investment income and the balance of wages both changed very significantly. The former declined by USD 5.9 billion (from USD -38.6 billion to USD -44.5 billion), due in the main to an increase of USD 5.8 billion in incomes payable (investment income repatriation), while incomes receivable remained unchanged; and the latter lost USD 0.3 billion (from USD -3.0 billion to USD -3.3 billion).

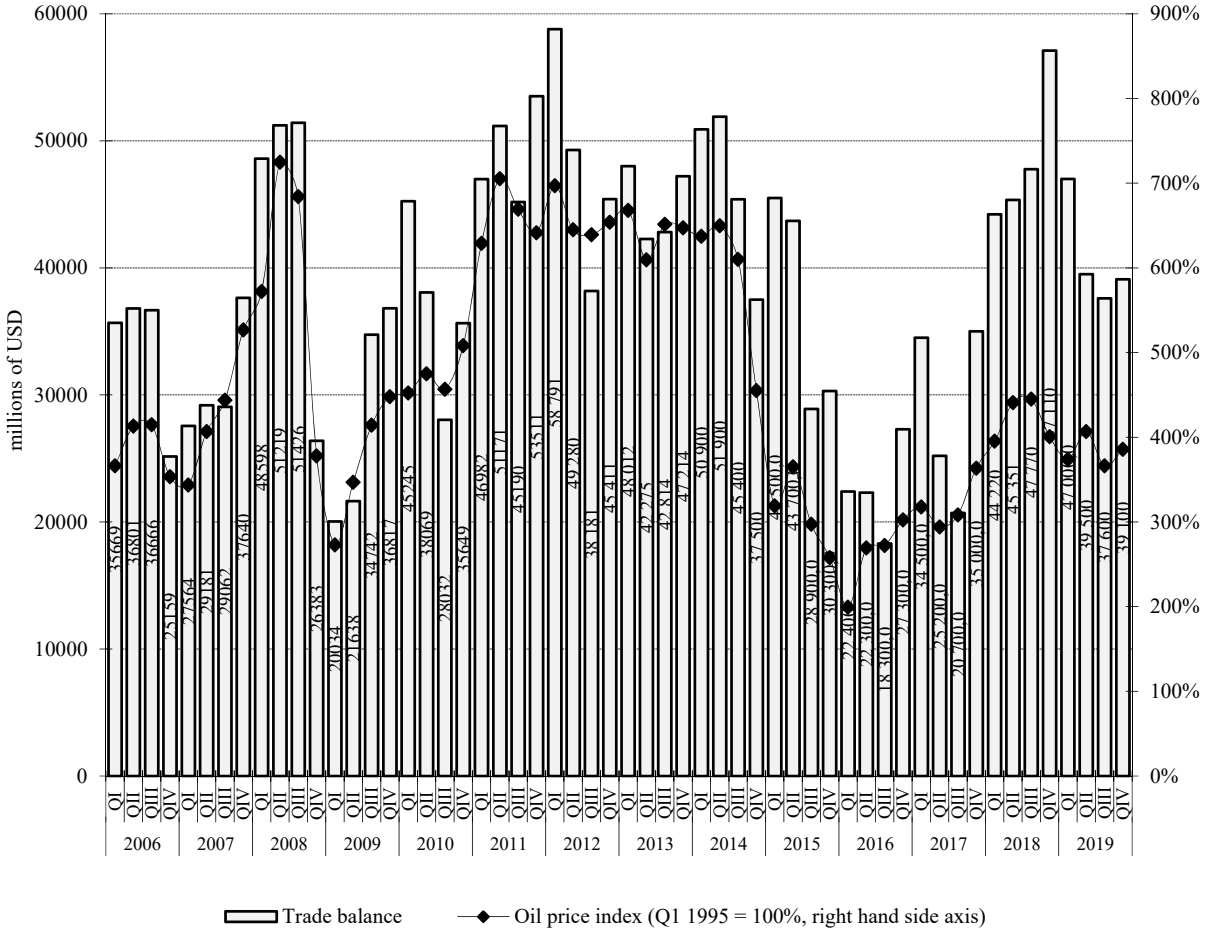


Fig. 10. Trade balance and the movement of oil prices

Source: Bank of Russia; IMF.

A significant reduction in the current account balance was in part offset by a financial account surplus, which in 2019 amounted to USD 1.8 billion, compared with a deficit of USD

76.5 billion in 2018. The net capital inflow was secured by an increase in financial liabilities by USD 28.3 billion by the year-end of 2019 (in 2018, financial liabilities lost USD 36.7 billion) coupled with a smaller increase in financial assets compared with 2018 (USD 26.5 billion in 2019 vs USD 39.8 billion in 2018).

In 2019, growth of foreign liabilities occurred in the main due to the operations in the non-banking sector (USD 25.7 billion in 2019 vs -4.2 billion in 2018) and those conducted by federal administration bodies (USD 22.0 billion in 2019 vs USD -5.5 billion in 2018). By contrast, the banking sector over the same period reduced its foreign liabilities: USD -20.1 billion in 2019 vs USD -25.0 billion in 2018.

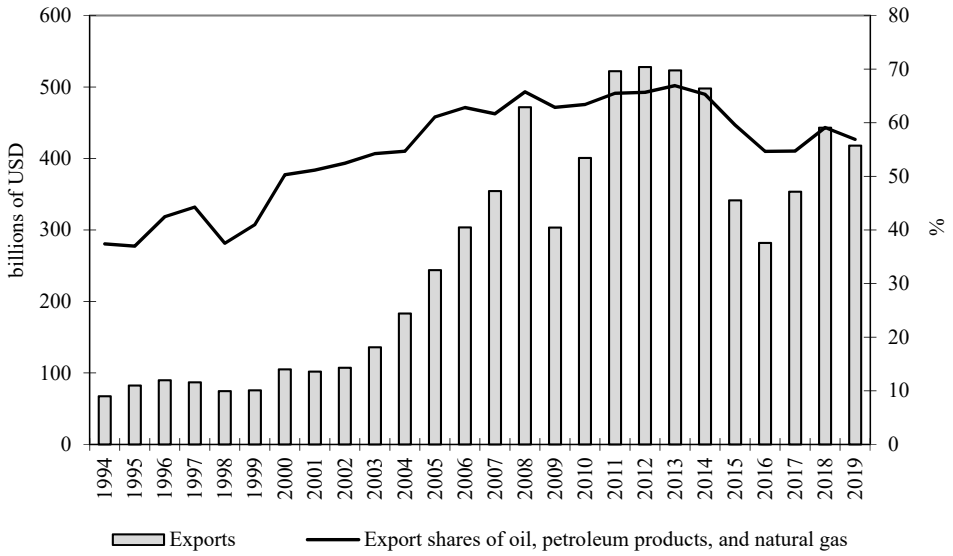


Fig. 11. The movement of goods exports and the export shares of products of the fuel and energy complex, 1994–2019

Source: Bank of Russia.

The growth of financial assets of Russian residents abroad occurred predominantly due to operations in the non-banking sector. Thus, in 2019, the foreign assets in the other sectors grew by USD 25.7 billion (in 2018, their growth amounted to USD 30.8 billion), while those held by banks gained USD 1.7 billion (vs USD 7.6 billion in 2018). The amount of foreign assets held by government administration bodies shrank by USD 0.9 billion (vs an increase by USD 1.4 billion in 2018).

In 2019, the volume of foreign direct investment inflow in the non-banking sector (USD 26.9 billion vs USD 5.9 billion in 2018) was almost completely offset by its outflow (USD 26.3 billion vs USD 29.6 billion in 2018). There was a decrease in the inflow of portfolio investment into Russia's non-banking sector in 2019 (by USD 3.2 billion vs USD 0.7 billion in 2018), which took place alongside a growth in portfolio investment outflow (by USD 2.1 billion vs USD 1.4 billion in 2018). The other liabilities of the non-banking sector increased by USD 1.9 billion (vs USD 1.3 billion in 2018), while the other assets increased by USD 3.5 billion (vs USD 10.1 billion in 2018).

As a result, net capital outflow from the private sector in 2019 fell sharply, to USD 26.7 billion (vs USD 63.0 billion in 2018) (*Fig. 12*). At the same time, in 2019, net capital

outflow from the banking sector was USD 21.8 billion (vs USD 32.6 billion in 2018). In the non-banking sector, net capital outflow plunged even deeper, to USD 4.9 billion (vs USD 30.4 billion in 2018).

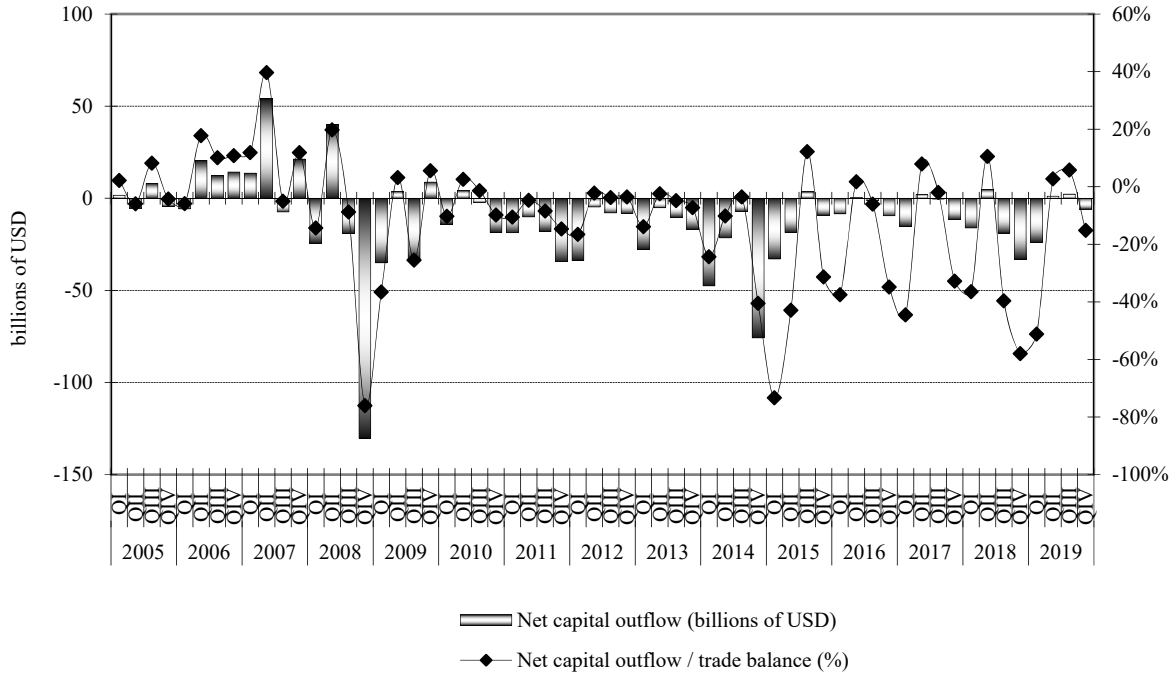


Fig. 12. Net capital outflow from the private sector in 2005–2019

Source: Bank of Russia; own calculations.

The international reserve assets over the course of 2019 gained USD 66.5 billion (vs USD 38.2 billion in 2018), thus amounting to USD 554.4 billion at the year-end – as noted earlier, this is their record high after the global financial crisis. It should be reminded that the previous record high of the international reserves index had been reached in August 2008 and amounted to USD 596.6 billion. The movement pattern of international reserves in 2019 was primarily shaped by the purchase in the domestic forex market, by the RF Ministry of Finance implementing the fiscal rule, of foreign currencies to the total value of RUB 3.5 trillion (vs RUB 2.1 trillion in 2018). The increased amount of foreign currencies purchased in the domestic forex market under the fiscal rule in 2019 can be explained by the fact that the Bank of Russia carried out not only its planned but also deferred purchases, caused by their suspension in August-December 2018.

As a result of the fiscal rule, the ruble exchange rate has become less dependent on oil prices, and is now being determined to a higher degree by capital flows. Therefore, due to an improved situation with capital inflows into the Russian Federation, in 2019 the ruble climbed 10.9% against the US dollar, to 61.9 per USD. The capital inflow into the Russian economy was facilitated by the fact that the US Federal Reserve and the ECB resorted to monetary policy easing, as well as by the positive rhetoric of trade negotiations between the USA and China since September 2019.

It should be noted that in 2019, the ruble gained more in nominal terms than the national currencies of the other developing countries where inflation is targeted. Thus, in 2019, while in Peru and Mexico the increase of the national currency's nominal effective exchange rate amounted to 2.8% and 7.3%, respectively, Russia's national currency strengthened by 10.4% *(Fig. 13*). At the same time, the national currencies of many other developing countries were weakening (-9.4% for the Turkish lira, -2.1% for the Colombian peso, -1.8% for the Brazilian real). The ruble's strengthening can be explained by the high attractiveness of the Russian OFZ market in the context of high interest rate differentials between the Russian economy and the economies of developed countries, in absence of tougher sanctions. Thus, the share of non-residents in the Russian OFZ market in 2019 increased from 24.4% to 32.2%.

In 2019, the foreign debt of the Russian Federation increased by USD 26.8 billion, amounting to USD 481.5 billion as of January 1, 2020. The foreign debt of government administration bodies grew by 58.0%, to USD 69.5 billion, as a result of foreign capital inflow into the Russian OFZ market. The foreign debt of banks and enterprises remained practically unchanged at the level of USD 399.1 billion.

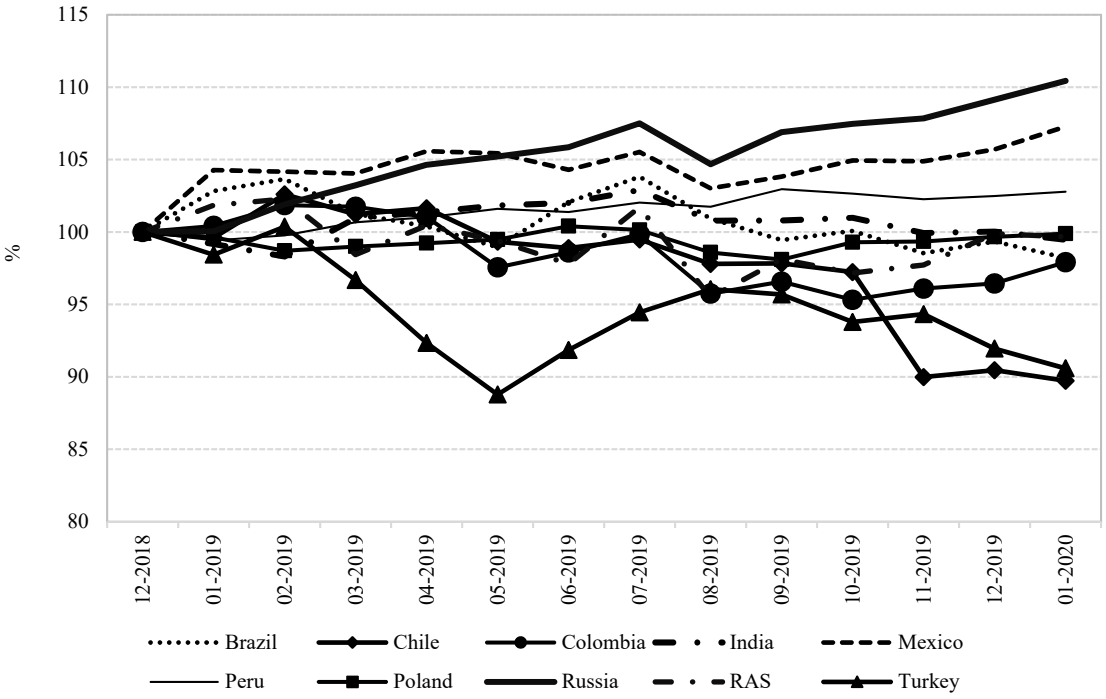


Fig. 13. The movement of nominal effective exchange rates of national currencies in the developing countries targeting inflation (December 2018 = 100%)

Source: BIS; own calculations.

Our year-end estimate of capital flight for 2019 (*Fig. 14*), which amounted to USD 7.9 billion for 2018, now shrank to USD 6.3 billion,[1] reflecting the success of Russia's authorities in blocking illegal channels of capital flight.

[1] Capital flight is calculated according to the IMF methodology; it is the sum of 'trade loans and advance payments', 'questionable deals', and 'net errors and omissions'.

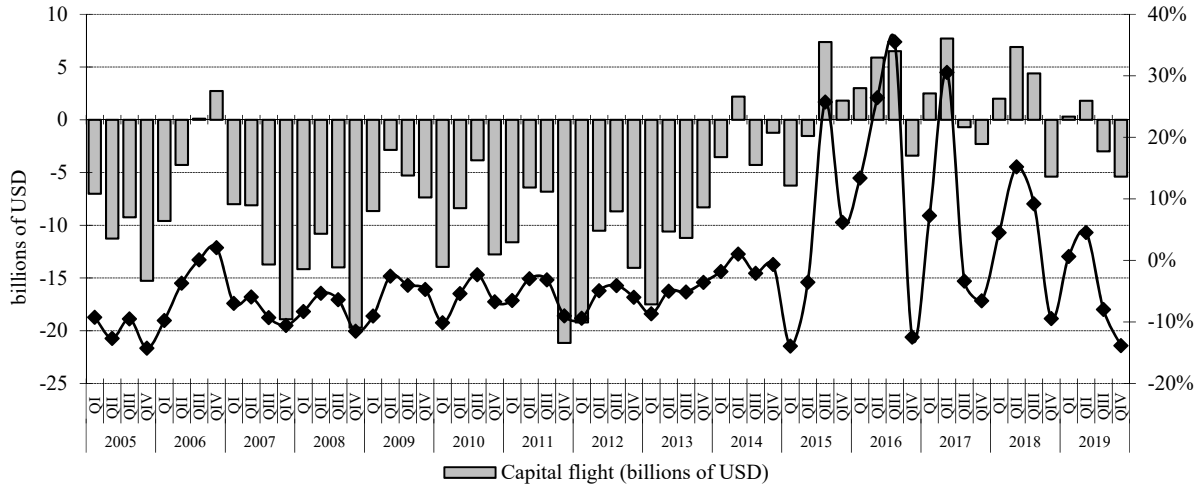


Fig. 14. Capital flight dynamics in 2005–2019.

Source: Bank of Russia; own calculations.

In 2020, in the context of a large-scale fall in oil prices and the weakening of the ruble, the current account will be significantly reduced. At the same time, the negative balance of the financial account is unlikely to reach the values of previous crises (in 2014 it was -130 billion dollars, in 2008 -140 billion dollars), given that the external debt of Russian economic agents has significantly decreased, which reduces the demand for currency for its refinancing. At the same time, the Bank of Russia, within the framework of the budget rule and the sale of a controlling stake in Sberbank to the government, will sell foreign currency, which will help stabilize the ruble exchange rate.

According to our estimates, the fundamental exchange rate of the ruble to the dollar at the price of oil is 30-35 dollars per barrel. it is 74-76 rubles / USD, and at 45-50 dollars / bbl - about 70 rubles/USD. Accordingly, monetary policy measures should be aimed at preventing significant exchange rate deviations from these levels due to the development of panic, since in the event of a sharp weakening of the ruble, the foreign exchange market may stabilize on a much weaker ruble, which will cause a strong deviation of inflation from the target level, a re-evaluation of country risks and large-scale capital outflow.

2.2. Fiscal policy[1]

2.2.1. Characteristics of budgets of the budgetary system of Russia

The basic parameters of the budgetary system of Russia

In 2019, revenues of the budgetary system of Russia according to the fresher data released by the Ministry of Finance of Russia in shares of GDP against the previous year remained flat

[1] This section was written by *Arlashkin I.Yu.*, researcher, Budget Policy Studies Department, IAES, RANEPA; *Barbashova N.E.*, candidate of science (economics), researcher, Budget Policy Studies Department, IAES, RANEPA; *Belev S.G.*, candidate of science (economics), 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; *Sokolov I.A.*, candidate of science (economics), leading researcher, Center for Macroeconomics and Finance, Gaidar Institute; Head of Budget Policy Studies Department, IAES, RANEPA; Director of Institute for Macroeconomic Studies, VAVT, Ministry of Economic Development of

amounting to 35.8 percent of GDP (*Table 7*), meanwhile in absolute terms they have increased by RUB 1,860 billion. Solely 39.4 percent of the revenues increment of the enlarged government budget (RUB 732.8 billion) have been secured by the federal budget and 62.4 percent (RUB 1,160.8 billion) by the increment of the consolidated budget of the RF subjects receipts. However, in the overall volume of the revenue part of the enlarged government budget a share of federal and subnational levels budget in 2019 against 2018 has changed insignificantly: a share of the federal budget has contracted from 52.1 to 51.5 percent and a share of the consolidated budget of the RF subjects has gone up from 33.2 to 34.6 percent.

Dynamics of oil and gas revenues of the enlarged government budget is negative: contraction of receipts in 2019 in comparison with the previous year constituted 1.1 percentage points of GDP or RUB 770 billion, meanwhile non-oil and gas revenues went up in 2019 to the maximum for the 5-year period level coming to 28.3 percent of GDP up by 1.1 percentage points of GDP against the previous year.

Table 7

The main parameters of the enlarged government budget in 2015–2019

	2015		2016		2017		2018		2019*		Dev in 2019 relative to 2018
	RUB bn	% of GDP	RUB bn	% of GDP	RUB bn	% of GDP	RUB bn	% of GDP	RUB bn	% of GDP	pp. of GDP
Revenue including:	**26 922**	**32.3**	**28 181**	**32.8**	**31 047**	**33.7**	**37 320**	**35.8**	**39 180**	**35.8**	**0.0**
- oil and gas	5 863	7.0	4 844	5.6	5972	6.5	9 018	8.6	8 248	7.5	-1.1
- non-oil and gas	21 059	25.3	23 337	27.2	25 075	27.2	28 302	27.2	30 932	28.3	1.1
Outlays	**29 741**	**35.7**	**31 324**	**36.4**	**32 396**	**35.2**	**34 285**	**32.8**	**37 115**	**33.9**	**1.1**
Deficit (-) / surplus (+)	**-2 819**	**-3.4**	**-3 143**	**-3.6**	**-1 349**	**-1.5**	**3 035**	**3.0**	**2 065**	**1.9**	**-1.1**
For reference: GDP, RUB billion	83 087		85 616		91 843		104 335		109 361**		

* Hereinafter data for 2019 is preliminary – formed on the basis of the progress report released by the Federal treasury on the execution of budgets as of January 1, 2020.
** Estimate GDP.
Sources: Ministry of Finance of Russia, Federal treasury, Rosstat.

Expenditures of the budgetary system of Russia after 3-year downturn from 36.4 percent of GDP in 2016 to 32.8 percent of GDP in 2018) moved up to 34.0 percent of GDP in 2019, which was predominantly due to allocation of additional funds for the implementation of national projects.

The budget surplus of the enlarged government for January-December 2019 amounted to 1.9 percent of GDP down 1.1 percentage points of GDP in 2018.

The main tax returns in the budgetary system of Russia

According to 2019 figures, fiscal revenues of the enlarged government budget moved up (*Table 8*) moreover the growth was reported across the majority of revenue items.

The highest growth of returns was from VAT (up by 0.7 percentage points of GDP or up by 14 percent in 2018 prices). Receipts from the profits tax up by 0.3percent of GDP or up by 7 percent in 2018 prices. Insurance contributions and PIT moved up insignificantly (up 0.1 percentage points of GDP or up by 3–4 percent in 2018 prices).

Russia; *Tischenko T.V.*, candidate of science (economics), senior researcher, Budget Policy Studies Department, IAES, RANEPA.

Returns from excises have decreased (down 0.3 percentage points of GDP or down 17 percent in 2018 prices), from MET (down 0.4 percentage points of GDP or down 4 percent in 2018 prices), from customs duties and levies (down 0.2 percentage points of GDP or down 4 percent in 2018 prices).

Table 8

The main tax returns in the enlarged government budget of the Russian Federation in 2015–2019, in percent of GDP

	2015	2016	2017	2018	2019	Dev in 2019 relative to 2018 pp. of GDP	Growth in 2019 in prices of 2018 relative to 2018, in %
Revenue* (total) including:	**32.0**	**32.0**	**32.6**	**35.3**	**35.2**	**-0.1**	**2**
Corporate income tax	3.1	3.2	3.6	3.9	4.2	0.3	7
PIT	3.4	3.5	3.5	3.5	3.6	0.1	3
Insurance contributions*	6.4	6.6	6.7	6.6	6.7	0.1	4
VAT	5.1	5.3	5.6	5.8	6.5	0.7	14
Excises	1.3	1.6	1.7	1.5	1.2	-0.3	-17
MET	3.9	3.4	4.5	5.9	5.5	-0.4	-4
Customs duties and levies	3.3	2.4	2.1	2.9	2.7	-0.2	-4

* Revenue (total) and insurance contributions without double count of insurance contributions for the non-working population, total value of receipts differ from the official one by given value.
Sources: Federal Treasury, Rosstat, own calculations.

Oil and gas revenues. The MET-oil base rate remained in place in the amount of RUB 919 per ton as it was in 2018. Dynamics of returns from MET was determined by USD exchange rate and the oil price. USD/RUB rate demonstrated a downward trend (*Fig. 15*) The price of a ton of crude on average in 2019 was down 5–6 USD than in 2018. As a result, actual ruble rate on MET-oil constituted in 2019 on average over 11,000 RUB/t, meanwhile a year earlier it was above 12,000 RUB/t.

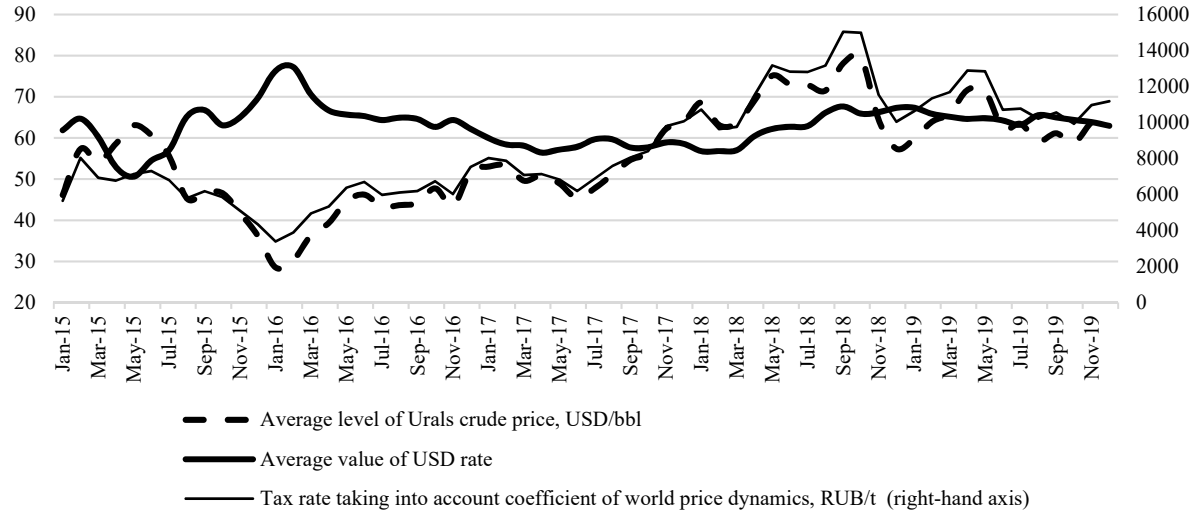


Fig. 15. Dynamics of actual MET-oil rate, Urals price and USD rate in 2015–2019

Sources: Rosstat, CB of RF, FCS of Russia, FTS of Russia.

Corporate income tax. In 2019, returns from the corporate income tax demonstrated an upward trend (up by 0.3 percentage points of GDP). As can be seen on *Fig. 16* the profit-making companies demonstrated income growth and somewhat contracted the proportion of loss-

making enterprises. This confirms that the restriction in place from 2017 regarding provision for losses carryforward accrued over the previous periods to the tune of not more than 50 percent of the taxable income continues to exert positive fiscal effect.

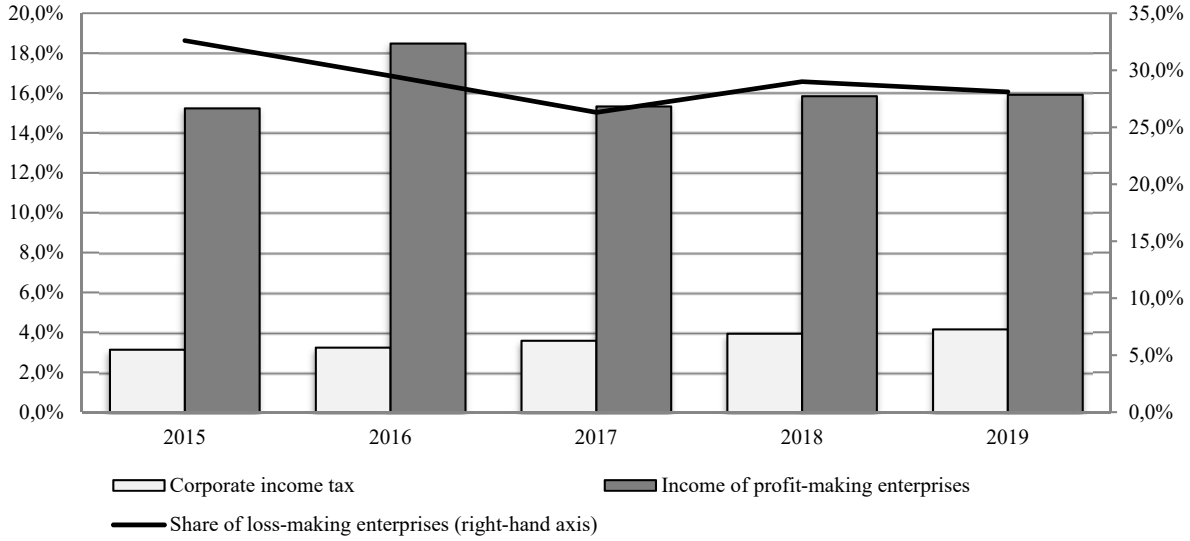


Fig. 16. Dynamics of returns from the corporate income tax to the budgetary system of the Russian Federation, income of profit-making enterprises (percent of GDP), share of loss-making enterprises in percent in 2015–2019

Sources: Federal Customs Service, Rosstat, own calculations.

Insurance contributions and PIT. In 2019, In 2018, there were no legislative changes in the rates or estimation of base of insurance contributions. According to advance data, the payroll fund on accrued wage relative GDP increased, which resulted in growing receipts from insurance contributions and PIT in shares of GDP (*Fig. 17*).

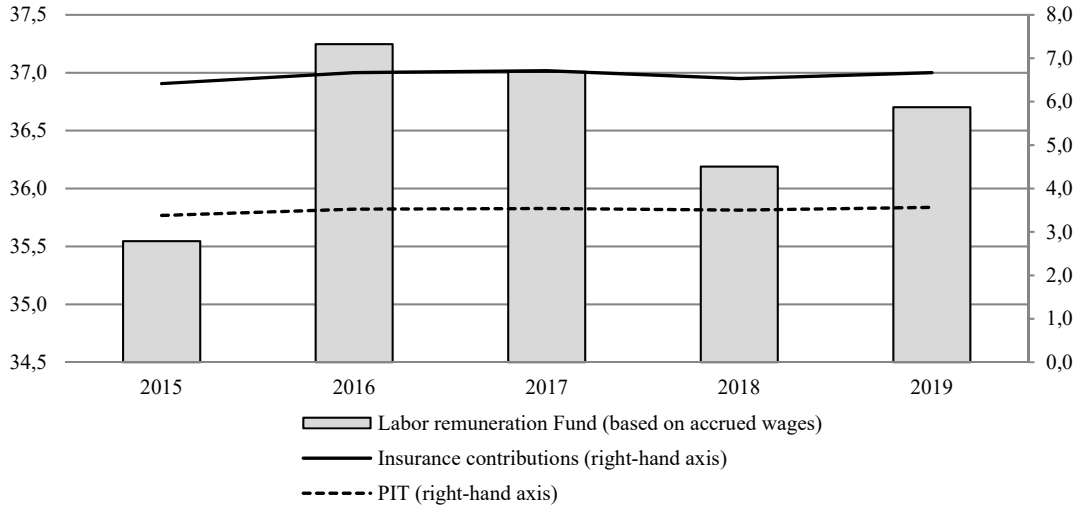


Fig. 17. Receipts from insurance contributions, PIT, and payroll fund (on accrued wages) in 2015–2019, in percent of GDP

Sources: Rosstat, Federal Treasury, own calculations.

VAT. Returns from VAT in 2019 rose by 0.7 percentage points hitting 6.5percent of GDP, which was mainly due to growth of the VAT base rate from 18 to 20 percent (*Table 9*).

Moreover, on the back of the ruble appreciation imports have grown which has also contributed to the increase of returns from VAT on imported goods (such returns have gone up by by 0.3 percentage points of GDP). It should be noted that despite the raise of the VAT base rate there was no decrease in its collection in 2019.

Table 9

Dynamics of VAT returns in the budgetary system of the Russian Federation, percent of GDP

	2015	2016	2017	2018	2019
Revenue generated by VAT	5.1	5.3	5.6	5.8	6.5
Including:					
VAT on goods sold on the RF territory	2.9	3.1	3.3	3.5	3.9
Vat on goods imported to the RF territory	2.1	2.2	2.3	2.3	2.6
Effective VAT rate, percent	7.3	7.4	7.9	8.7	10.0
Fiscal performance coefficient (C-efficiency), percent	40.4	41.4	43.8	48.2	49.9

Sources: Rosstat, Federal Treasury, own calculations.

Excises. In 2019, the main reason for the decrease of budget receipts from excises by 0.3 percentage points of GDP was the introduction of a "reverse excise, envisaged within the implementation of the tax maneuver in the oil and gas sector, which was aimed at the control over the price growth on fuel (on the back of the increase of the MET base rates) by way of actual subsidizing of the refining sector via the reduction of excise tax on petroleum products on condition of meeting certain conditions.

Returns from other excisable goods have barely changed relative to the previous year level.

Outlays of the budgetary system of the Russian Federation

According to advance data the budget system expenditure increased in 2019 by 1.1 percentage points of GDP in comparison with 2018.

For the implementation of defined in the May Executive Order of the President of Russia[1] national goals, the twelve national projects and complex plan of modernization of infrastructure have been outlined. Their specific features are the Intersectoral character and rather high proportion of investment spending. The launch of the national projects required the development of a rather large list of normative documents, and establish cooperation with the regions. As can be seen from *Table 10*, the cash execution of spending on the implementation of the national projects from the consolidated budget of the Russian Federation during 2019 according to current data constituted around 91.6 percent. A little more than RUB 200 billion remained unspent besides three quarters account for the federal budget.

The best indicators of budget discipline regarding the national projects implementation have been shown by Science (99.1 percent) and Healthcare (97.3 percent). The worst indicators have been shown by Ecology (71.2 percent) and Digital economy (75.1 percent). Undoubtedly, the cash execution should not become a goal in itself because the effectiveness of the national projects implementation is marked by delivery of results and indicators, whether life conditions of the citizens and business environment change for the better. It is also obvious that without timely financing is rather hard to deliver any positive results.

[1] Executive Order of the President of the Russian Federation of May 7, 2018 No. 204 "On National Goals and Strategic Tasks of the Russian Federation for the Period through 2024".

Table 10

Data of the execution of the expenditure regarding budget appropriations envisaged for the implementation of national projects during 2019 (current data)

No.	National projects	Consolidated budget of Russia, RUB billion		
		Plan	Cash execution (current data)	Reference: percent of budget appropriations
	Total	**2 444.2**	**2 238.5**	**91.6**
1	Demography	728.4	693.7	95.2
2	Healthcare	219.7	213.7.2	97.3
3	Education	194.2	175.6	90.4
4	Housing and urban environment	243.2	217.0	89.2
5	Ecology	69.1	49.2	71.2
6	Safe and quality roads	297.5	283.4	95.3
7	Productivity and employment support	7.6	6.6	87.3
8	Science	38.0	37.7	99.1
9	Digital economy	111.2	83.5	75.1
10	Culture	26.2	25.3	96.3
11	Small and medium-sized enterprises and support of individual entrepreneurship	68.4	64.0	93.6
12	International cooperation and exports	91.3	81.7	89.5
13	Complex plan of modernization of infrastructure	349.4	307.1	87.9

Sources: Federal treasury, own calculations.

Among the main reasons for a relatively low cash execution of expenditures on national projects are the following:

- Novelty of a number of measures envisaged within national projects, which in its turn, involves the need to develop and adopt corresponding normative and guidance documents prior to disbursement of funds;
- Sectoral specifics of the projects when dynamics of the cash execution directly depends on the demand from the part of recipients of budget support (for example, in case of requests of SME for privileged loans);
- Features of financing certain steps regarding national projects, for example, payment from budget funds only upon completion of works (which is prevailing at construction projects). However, in this case the cash execution reflects the actual dynamics of delivering project results;
- Unnecessary extended effective in 2019 procedures both in case of procurements for state and municipal needs and within preparation of necessary documents (for example, rule for the provision of intergovernmental fiscal transfers, subsidies to legal entities).

It should also be noted that the Federal Law of November 12, 2019 No. 367-FZ "On the Suspension of Certain Provisions of the Budget Code of the Russian Federation and Establishment of Specifics for the execution of the Budget Code in 2020" envisages transfer of unused in 2019 balance of budget appropriations of the federal budget to 2020 for the same purposes. Such decisions can be adopted by the Council under the President of the Russian Federation on strategic development and national projects, meanwhile reasons for incomplete disbursement of budget funds and the need of their use must be explained.

Functional breakdown of expenditure reported insignificant growth of industrial items of the enlarged government budget (*Table 11*). For example, spending grew on the items "Healthcare" by 0.2 percentage points of GDP and on "Education" – by 0.3 percentage points of GDP. The breakdown of the enlarged government budget demonstrates an upward trend regarding industrial spending on the back of national projects, which strengthens positive influence of the fiscal policy on economic growth.

Table 11

Expenditure of the enlarged government budget in 2015–2019, percent of GDP

	2015	2016	2017	2018	2019	Dev. in 2019 relative to 2018, pp. of GDP
Outlays, total	**35.7**	**36.4**	**35.2**	**32.8**	**33.9**	**1.1**
General state issues	2.2	2.2	2.1	2.0	2.0	0.0
National defense	3.8	4.4	3.1	2.7	2.7	0.0
National security and law enforcement activities	2.5	2.3	2.2	2.0	2.0	0.0
National economy	4.5	4.5	4.7	4.3	4.6	0.3
Housing and utility sector	1.2	1.2	1.3	1.3	1.3	0.0
Environmental conservation	0.1	0.1	0.1	0.1	0.2	0.1
Education	3.6	3.6	3.5	3.5	3.8	0.3
Culture, cinematography	0.5	0.5	0.5	0.5	0.5	0.0
Healthcare	3.4	3.6	3.1	3.2	3.4	0.2
Social policy	12.6	12.7	13.1	11.9	12.2	0.3
Physical fitness and sports	0.3	0.3	0.4	0.3	0.3	0.0
Mass media	0.2	0.1	0.1	0.1	0.1	0.0
Servicing state and municipal debt	0.8	0.9	0.9	0.9	0.9	0.0

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

Notable growth of spending of the enlarged government budget in 2019 against 2018 was reported in relation to items "National economy" and "Social policy" (up by 0.3 percentage points of GDP each), which can be assessed as a trend towards a proactive fiscal policy.

2.2.2. Specification of the federal budget

The basic parameters of the federal budget

In 2019, the revenues of the federal budget against the previous year increased by RUB 732.8 billion in nominal terms, but decreased in shares of GDP by 0.1 percentage point of GDP to 18.5 percent of GDP (*Table 12*) which was due to a reduction of receipts from the oil and gas component of the budget by 1.1 percentage point of GDP to 7.5 percent of GDP (Rub 8,247.7 billion). Meanwhile, non-oil and gas revenues went up by 0.9 percentage points of GDP to 10.9 percent of GDP (RUB 11,939.5 billion) which is the minimum for the last 5-year period. As a result, the share of oil and gas revenues in the overall amount of revenues in 2019 contracted to 40.8 percent against 46.2 percent seen in 2018, which speaks in favor of a reduction of budget dependence on revenues from the current economic situation. The volume of basic oil and gas revenues calculated on the basis of the fiscal rule[1] hit RUB 4,967.4 billion (RUB 4,756.3 billion in 2018) and the volume of additional oil and gas revenues hit RUB 3,280.3 billion (RUB 4,261.4 billion in 2018).

In 2019, the federal budget expenditures moved up by 0.6 percentage points of GDP to 16.6 percent of GDP or by RUB 1,500.2 billion compared to January-December 2018 hitting RUB 18,213.2 billion. The federal budget surplus has contracted to 1.8 percent of GDP against 2.6 percent of GDP in the previous year, non-oil and gas deficit demonstrated a downward trend, which commenced in 2015 hitting 5.7 percent of GDP in 2019.

In the course of the year, the original version of the Law on the federal budget was subject to changes twice – in June and December of 2019.[2] One should highlight a downward revision of the oil and gas revenues in the federal budget in late 2019 relative to the original text of the law from 7.8 to 7.2 percent of GDP, which was due to the expectations of the fall of the global prices on hydrocarbons, to the adjustment of the structure of oil production as well as to the

[1] On base oil price to the tune of 41,6 USD/bbl. for 2019.
[2] Federal Laws of July 18, 2019 No.175-FZ and December 2 2019 No. 389-FZ.

consequences from a number of tax changes adopted in 2019. The federal budget expenditures, on the contrary saw an upward revision by 2.5 percent in nominal terms in late 2019. For example, the approved federal budget expenditure moved up in July 2019 by RUB 256.5bn including on the implementation of state program "Development of transport system" – by RUB 78.0bn. In December of the same year, the amount of annual budget appropriations was increased by another RUB 195.7bn including on the state program (Management of public finances and regulation of financial markets" – by RUB 121.5bn and "Securing of national defense capability" – by RUB 36.9bn.

Table 12

The main parameters of the federal budget in 2015–2019, percent of GDP

	2015	2016	2017	2018	2019			Dev. in 2019 relative to 2018, in pp. of GDP
					Law on FB for 2019*	Law on FB for 2019 with amendments **	Actually	
Revenue including:	**16.4**	**15.7**	**16.4**	**18.6**	**18.9**	**18.4**	**18.5**	**-0.1**
Oil and gas	7.0	5.6	6.5	8.6	7.8	7.2	7.5	-1.1
Non-oil and gas	9.4	10.1	9.9	10.0	11.1	11.2	10.9	0.9
Outlays	**18.7**	**19.1**	**17.8**	**16.0**	**17.0**	**17.1**	**16.6**	**0.6**
Deficit (–) / Surplus (+)	**-2.3**	**-3.4**	**-1.4**	**2.6**	**1.9**	**1.3**	**1.8**	**-0.8**
Non-oil and gas deficit	-9.3	-9.0	-7.9	-6.0	-6.1	5.9	-5.7	0.3
GDP, RUB billion	83 387	86 010	92 089	104 335	105 820	108 414	109 361	
Urals USD per barrel.	51.2	41.9	53.0	70.0	63.4	62.2	63.6	

* Federal Law of November 29, 2018 No. 459-FZ "On the Federal Budget for 2019 and the 2020 and 2021 Planning Period"
** Federal Law of December 2, 2019 No. 389-FZ "On Amendments to the Federal Law 'On the Federal Budget for 2019 and the 2020 and 2021 Planning Period"
Sources: Finance Ministry of Russia, Federal Treasury, own calculations.

The main sources of revenue

Parameters of the federal budget revenue part execution for 2019 on volumes and structure are presented in *Table 13*. The amount of returns from the oil and gas components contracted against 2018 which was due to an adverse dynamics of receipts from MET by 0.4 percentage points and from export customs duties by 0.8 percentage points of GDP on the back of the ruble appreciation against the U.S. dollar and decrease of the average crude oil price, as well as owing to a revision commenced from July 1, 2019 of the calculation of damping component of the excise tax on crude oil supplied to refineries which was partially compensated by the rise from October 1, 2019 of the MET rate in crude extraction within the tax maneuver adjustment effective in the oil sector.[1] As a result, the share of MET in the total volume of oil and gas revenues demonstrates a sustainable upward trend from 38.3 percent in 2014 to 72.4 percent in 2019.

Table 13

The main tax returns in the federal budget in 2015–2019

	percent of GDP					Dev in 2019 relative to 2018, pp. Of GDP
	2015	2016	2017	2018	2019	
1	2	3	4	5	6	7
Revenue, total	**16.4**	**15.7**	**16.4**	**18.6**	**18.5**	**-0.1**
Oil and gas revenues	**7.0**	**5.6**	**6.5**	**8.6**	**7.5**	**-1.1**
Of which:						
MET	3.7	3.3	4.4	5.9	5.5	-0.4
Export duties	3.3	2.3	2.1	2.8	2.0	-0.8

[1] Federal Law of July 30, 2019 No. 255-FZ "On Amendments in Part II of the Tax Code of the Russian Federation."

Cont'd

1	2	3	4	5	6	7
Non-oil and gas revenues	**9.4**	**10.1**	**9.9**	**10.0**	**10.9**	**0.9**
Of which:						
Corporate income tax	0.6	0.6	0.8	0.9	1.1	0.2
VAT on goods sold on the territory of the Russian Federation	2.9	3.1	3.3	3.4	3.9	0.5
VAT on goods imported into the territory of the Russian Federation	2.1	2.2	2.2	2.3	2.6	0.3
Excises on goods produced on the RF territory	0.6	0.7	1.0	0.8	0.5	-0.3
Excises on goods imported into the RF territory	0.1	0.1	0.1	0.1	0.1	0.0
Import duties	0.7	0.7	0.6	0.6	0.7	0.1
Other revenues	2.4	2.7	1.9	1.9	2.0	0.1

Sources: Federal Treasury, own calculations.

The volume of non-oil and gas revenues of the federal budget in 2019 against the previous year rose by 0.9 percentage points of GDP on the back of total tax receipts growth except excises, which amount in share of GDP contracted by 0.3 percentage points of GDP. The highest growth of non-oil and gas revenues of the federal budget was demonstrated by VAT, which was due to an increase of the VAT base rate rise. On the whole, dynamics of the non-oil and gas revenues of the federal budget demonstrated a stable upward trend.

Federal budget expenditures

The federal budget expenditures in 2019 amounted to 16.6 percent of GDP up by 0.6 percentage points of GDP or RUB 1,500.2 billion against 2018 (*Table 14*).

Table 14

Federal budget expenditures in 2018–2019

	2018			2019			Dev in 2019 relative to 2018	
	RUB billion	**% of GDP**	**Cash execution, percent**	**RUB billion**	**% of GDP**	**Cash execution, percent**	**RUB billion**	**pp. of GDP**
Expenditure, total Including:	**16 713.0**	**16.0**	**95.5**	**18 213.2**	**16.6**	**94.2**	**1 500.2**	**0.6**
General state issues	1 257.2	1.2	89.0	1 366.3	1.2	85.6	109.1	0.0
National defense	2 827.1	2.7	92.3	2 997.2	2.7	92.7	170.1	0.0
National security and law enforcement activities	1 971.1	1.9	96.2	2 083.1	1.9	95.5	112.0	0.0
National economy	2 402.2	2.3	93.5	2 824.5	2.5	91.8	422.3	0.2
Housing and utility sector	148.8	0.1	88.1	283.7	0.3	84.2	134.9	0.2
Environmental conservation	116.0	0.1	98.8	197.5	0.2	91.7	81.5	0.1
Education	722.6	0.7	95.9	826.6	0.7	93.1	104.0	0.0
Culture, cinematography	94.8	0.1	84.3	122.4	0.1	87.8	27.6	0.0
Healthcare	537.3	0.5	96.3	713.0	0.6	95.6	175.7	0.1
Social policy	4 581.9	4.4	99.3	4 881.1	4.5	99.7	299.2	0.1
Physical fitness and sports	64.0	0.1	86.9	81.4	0.1	91.5	17.4	0.0
Mass media	88.5	0.1	99.9	103.5	0.1	99.9	15.0	0.0
Servicing state and municipal debt	806.0	0.8	99.0	730.8	0.7	94.0	-75.2	-0.1
Intergovernmental fiscal transfers	1 095.5	1.0	99.7	1 002.1	1.0	95.7	-93.4	0.0

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

Federal Budget expenditures growth in shares of GDP in 2019 relative to the previous year is registered across five functional classification sectors:

– "National economy" – up by 0.2 percentage points of GDP on the back of expenditures growth by 0.1 percentage point on agriculture, public road system and on the item "Other issues in the sphere of national economy";

– "Housing and utility sector" and "Environmental protection" – up by 0.2 and by 0.1 percentage points of GDP, respectively;

– "Healthcare" – up by 0.1 percentage point of GDP including 0.05 percentage points of GDP each on items "Inpatient care" and "Other issues in the sphere of healthcare";

– "Social policy" – up by 1.0 percentage point of GDP due to the increase of budget appropriations on the social safety net, family and childhood protection, and on other issues in the sphere of social policy.

Shrinkage of the federal budget allocations in 2019 is reported solely across expenditures on the public debt servicing by 0.1 percentage point of GDP. Regarding other functional classification sections, the federal budget expenditures remained flat in 2019 relative to 2018.

The federal budget structure across non-productive and productive expenditures was subject to certain changes in favor of the latter: the share of productive expenditures in the total volume of expenditures went up from 19.1 percent in 2018 to 20.3 percent in 2019 or from 3.0 to 3.4 percent of GDP.

There were no significant changes regarding cash execution of the federal budget outlays in 2018–2019 (94.2 percent in 2019 against 95.5 percent in 2018).

The program structure of the open part of the federal budget outlays at the year-end 2019 (*Table 15*) reports increment of the program expenditures by 1.9 percentage points of GDP relative to 2018 on the back of the expenditure growth on innovation development and modernization of economy by 0.8 percentage points of GDP and national security priorities by 1.4 percentage points of GDP amid the contraction of the budget appropriations on "New quality of life" by 0.1 percentage point of GDP and "Balanced regional development" by 0.2 percentage points of GDP.

The proportion of the federal budget expenditures has gone up to 78.5 percent against 69.9 percent a year earlier.

Table 15

Federal budget expenditures on the implementation of state programs in 2018–2019

	2018			2019			Dev in 2019 relative to 2018	
	RUB billion	% of GDP	Cash execution, percent	RUB billion	GDP, percent	Cash execution, percent	RUB billion	pp. of GDP
1	2	3	4	5	6	7	8	9
Expenditure, total	**16 713.0**	**16.0**	**95.5**	**18 213.2**	**16.6**	**94.2**	**1 500.2**	**0.6**
Including on implementation of state programs (open part)	***11 677.0***	***11.2***	***93.6***	***14 305.3***	***13.1***	***91.5***	***2 628.3***	***1.9***
Including across directions:								
I. New quality of life	5 603.9	5.4	93.0	5 739.3	5.3	90.8	135.4	-0.1
Including SP "Development of Pension System"	3 020.3	2.9	100.0	3 129.2	2.9	99.8	108.9	0.0
II. Innovative development of economic modernization	2 266.0	2.2	92.6	3 272.9	3.0	88.6	1 006.9	0.8
III. National security provision*, **	880.8	0.8	98.3	2 382.1	2.2	98.6	1 501.3	1.4

Cont'd

1	2	3	4	5	6	7	8	9
IV. Balanced regional development	1 311.7	1.3	96.2	1 172.3	1.1	90.2	-139.4	-0.2
V. Effective state	1 614.6	1.6	92.5	1 738.7	1.6	96.7	124.1	0.0

* According to Portal of state programs, "National security provision" embraces the following SP financed in 2018-2019: "National defense provision", "National security provision", "Peacekeeping and combating crime", "Protection of population and territories from emergency situations, ensuring fire safety and water safety."
** In 2018, the open part of the program structure of the federal budget excluded spending on SP "National defense provisions", and in 2019 actual spending on this program amounted to RUB 1,475.0 billion.
Sources: Finance Ministry of Russia, Federal Treasury; https://programs.gov.ru/; own calculations.

Cash execution of the program part of the federal budget expenditures constituted 91.5 percent against 93.6 percent seen in 2018. For a number of state programs the actual amount of execution relative to the approved annual volume comes to 85 percent: state programs – Environmental conservation" (74.9 percent), "Implementation of state national policy" (78.8 percent), "Development of ship building and machines for the development of the offshore fields" (56.8 percent), "Development of pharmaceutical and medical industry", "Social and economic development of the Arctic zone of the Russian Federation" (84.2 percent), "Public finance management and regulation of financial markets" (83.4 percent).

Deficit and debt at the federal level

Regarding flow of funds taken as a source of the federal budget deficit financing the following dynamic has been noted (*Table 16*):

– the amount of borrowing on the domestic market constituted in 2019 RUB 2,083 billion against 1,037 billion in 2018;

– the volume of budget funds allocated for the repayment of obligations on bonds placed on the domestic market moved up from RUB 529 billion in 2018 to RUB 705 billion in 2019;

– the volume of receipts obtained from the sale of shares and other forms of equity participation in the state ownership came to RUB 11.5 billion in 2019 (RUB 12.8 billion in 2018);

– returns from repayment of budget loans hit RUB 53 billion 2019 against RUB 70 billion in 2018;

– balanced result on the amount of placed and redeemed state bonds on the external market constituted in 2019 RUB 260 billion against the negative value seen in 2018 to the tune of (-) RUB 50 billion.

Table 16

Sources of financing the federal budget deficit in 2015–2019

	RUB billion					percent of GDP				
	2015	**2016**	**2017**	**2018**	**2019**	**2015**	**2016**	**2017**	**2018**	**2019**
Sources of financing deficit, total	**1 961**	**2 956**	**1 331**	**-2 742**	**-1 974**	**2.4**	**3.4**	**1.4**	**-2.7**	***-1.8***
Financing of deficit from internal sources	***1 242***	***-684***	***2 091***	***1 396***	***919***	***1.5***	***-0.8***	***2.3***	***1.3***	***0.8***
State securities	15	492	1 123	507	1 378	0.0	0.6	1.2	0.5	1.3
Other sources	1 227	-1 176	968	889	-459	1.5	-1.4	1.1	0.8	-0.4
Financing of deficit from external sources	***-296***	***43***	***-126***	***-135***	***289***	***-0.4***	***0.0***	***-0.1***	***-0.2***	***0.3***
State bonds	-183	110	41	-50	260	-0.2	0.1	0.0	-0.1	0.2
Other sources	-113	-67	-167	-85	29	-0.1	-0.1	-0.2	-0.1	0.1
Change in remaining balance	***1 015***	***3 597***	***-634***	***-4 003***	***-3 182***	***1.3***	***4.2***	***-0.8***	***-3.8***	***-2.9***

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

According to the information released by the Ministry of Finance of Russia, as of January 1, 2020, the volume of public debt hit RUB 14.2 trillion (or 13.0 percent of GDP against 12.0 percent seen in 2018) including domestic debt – Rub 10.2 trillion (growth over 2019 by RUB 1,002.3 billion), and external – USD 54.8 billion (up by USD 5.8 billion in 2019).

Total amount of the National Wealth Fund (NWF) in ruble terms for January-December 2019 increased from RUB 4,036.0 billion (3.9 percent of GDP) to RUB 7,773.1 billion (7.1 percent of GDP). During 2019 the following operations with NWF funds were performed:

– cash outflow to the tune of RUB 4.7 billion (RUB 5.1 billion in 2018) for co-financing of pensions savings for insured individuals who paid additional insurance contributions for funded pension;

– receipts to the tune of RUB 4,122.2 billion. (RUB 906.7 billion in 2018) within the amount of additional oil and gas revenues of the federal budget in 2018[1].

The NWF funds for securing balanced (covering deficit) budget of the Pension Fun of Russia in 2019 were untouched (in 2018 for these purposes RUB 1,108.2 billion were spent). Switch rate from the revaluation of the NWF funds hit RUB 380.4 billion in 2019.

Judging by the dynamics of the federal budget deficit, public debt, and sovereign funds (Reserve Fund and National Wealth Fund prior 2018) in shares of GDP in 2015-2019 (*Fig. 18*) we should note the return in 2019 of the public debt volume to the 2015 level and commencement of the federal budget surplus in recent two years and growth of the sovereign reserves (during 2015–2018 the volume of the sovereign funds was constantly shrinking in shares of GDP).

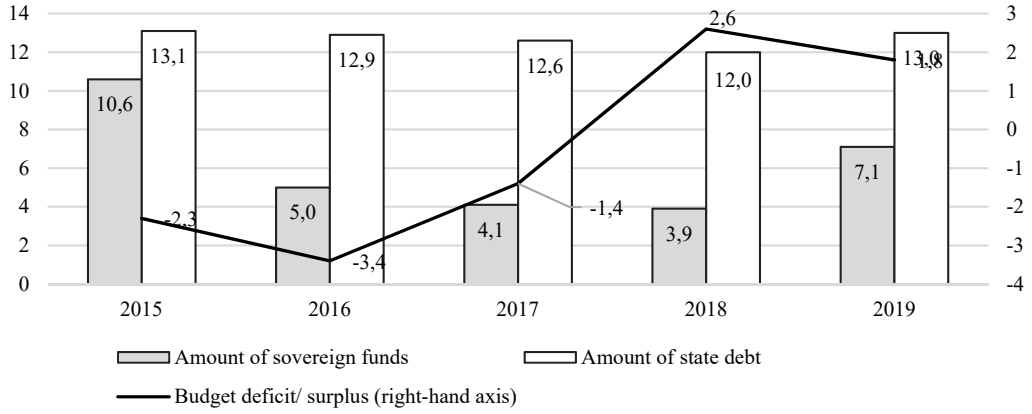


Fig. 18. Dynamics of the federal budget deficit, public, and sovereign funds in 2015–2019, percent of GDP

Sources: Federal Treasury, own calculations.

While analyzing the dynamic and the structure of the main parameters of the federal budget for 2019 both relative to the 5-year period and compared to the previous year, one should note the development of upward trends regarding increment of non-oil and gas fiscal revenues as well as keeping the public debt and the NWF volume at the level acceptable for securing budget sustainability.

[1] Order of the Finance Ministry of Russia of July 17, 2019 No. 364 "On the Use of Additional Oil and Gas Revenues of the Federal Budget appropriated in 2018 for the National Wealth Fund".

Observed from early 2020 decline of the oil prices will be some sort of a stress test for the budgetary system. Implementation of the national projects and 2020 additional long-term social obligations adopted in March have led to the fact that the federal budget can be balanced under the oil price not lower than USD 53/bbl and the exchange rate around RUB 67 per USD. Under a prolonged stay of the oil price below that target one should expect a postponement of the budget investment costs. From our point of view, it is not expedient in the short run to conduct a new expenditure consolidation ore other tightening of the fiscal policy because there will be sufficient funds in the NWF and the market capacity will suffice for offsetting the shortfall in budget revenues. However, when deterioration of macroeconomic conditions will have medium-term, it will become inevitable both to review the volumes and the structure of the federal budget expenditures.

2.2.3. Interbudgetary relations and subnational finances

Analysis of the main parameters of the consolidated budgets of the RF subjects

Primary trends in the relations between various levels of power are reflected in the structure of revenues and expenditures of the consolidated budgets of the subjects of the Russian Federation. *Fig. 19* exhibits data reflecting the share of tax and non-tax revenues and final expenditures of the consolidated budgets of the RF subjects in the overall amount of tax and non-tax revenues and final expenditures of the RF consolidated budget and state extrabudgetary funds. In order to ensure compatibility of the data for the period under review and exclude double count data on parameters of the budgetary system of the Russian Federation as well as expenditures of the consolidated budgets of the RF subjects have been adjusted taking into account insurance contributions for mandatory medical insurance of the non-working population.

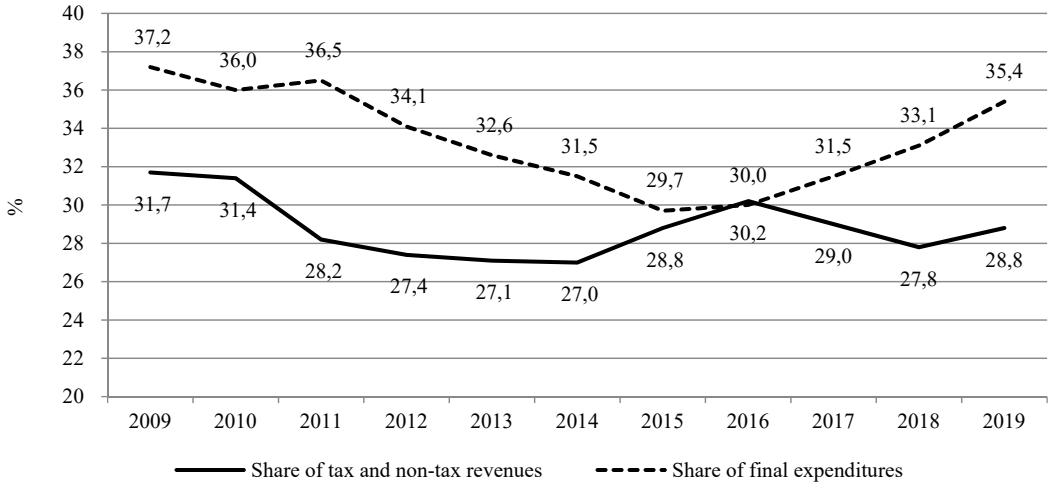


Fig. 19. Share of tax and non-tax revenues and expenditures of budgets of the budgetary system of the Russian Federation in 2009–2019, percent

Sources: Federal Treasury, own calculations.

Fig. 19 demonstrates that in 2015–2016 there was a certain decentralization of tax and non-tax revenues, which not due to the transfer of the revenue sources from the federal to the regional level, but with a lower growth rates of tax and non-tax revenues of the federal budget

compared to the regional ones. Later on trends changed: 2017–2018 saw an increase of centralization of tax revenues at the federal level with simultaneous growth of the share of regional expenditure liabilities. The share of tax and non-tax revenues of the regions' consolidated budgets in tax and non-tax revenues of the budgetary system of the Russian Federation decreased from 30.0 percent seen in 2016 to 27.8 percent in 2018 and a corresponding share of regional spending in the expenses of the budgetary system went up from 30.2 percent to 33.1 percent over the period.

2019 saw an upward trend of expenditure obligations of subnational budgets (this indicator went up by 2.3 percentage points compared to the previous year and constituted 35.4 percent), and the share of regional and local budgets in tax and non-tax revenues moved up by 1 percentage points and came to 28.8 percent. Despite a certain growth of regional share of revenues, the imbalance between the level of decentralization of revenues and expenditures of the regions' budgets in 2019 continued growing. On the whole, regions' share in the structure of revenues and expenditures of the budgetary system in 2019 is comparable to the 2011 situation.

Let's analyze in more detail the revenues part of subnational budgets. Dynamics of the main components of revenues of the consolidated budgets of the RF subjects is given in *Table 17.* The right-hand side of the table demonstrates revenues in real terms (adjusted for inflation), which according to Rosstat came to 3.0).

Table 17

Revenues of the consolidated budgets of the RF subjects in 2015–2019

	In nominal terms, RUB billion.					Real increase, percent			
	2015	2016	2017	2018	2019	2016/ 2015	2017/ 2016	2018 / 2017	2019 / 2018
Revenues, total	**9 308**	**9 924**	**10 758**	**12 392**	**13 572**	**1.2**	**5.8**	**10.5**	**6.3**
Including:									
Tax and non-tax revenues	**7 625**	**8 289**	**8 986**	**10 222**	**10 993**	**3.2**	**5.8**	**9.1**	**4.4**
Including tax revenues:	*6 925*	*7 574*	*8205*	9 429	10 103	*3.8*	*5.7*	*10.2*	*4.0*
Corporate income tax	2 108	2 279	2528	3 105	3 358	2.6	8.2	17.8	5.0
PIT	2 808	3 019	3252	3 654	3 956	2.0	5.1	7.8	5.1
Excises	487	662	612	632	755	29.1	-9.8	-0.8	16.0
Taxes on aggregate income	348	388	447	520	596	6.0	12.2	11.6	11.3
Property taxes	1 069	1 117	1 250	1 397	1 351	-0.8	9.2	7.2	-6.1
Non-tax revenues	*700*	*715*	*781*	*794*	890	*-3.0*	*6.5*	*-2.5*	*8.9*
Transfers from other budgets	**1 617**	**1 578**	**1 703**	**2 085**	**2 453**	**-7.4**	**5.3**	**17.4**	**14.2**
Other revenues	**66**	**56**	**69**	**85**	**127**	**-19.2**	**18.7**	**18.2**	**-44.5**

Sources: Federal Treasury, own calculations.

As is seen from *Table 17*, the growth of the subfederal budgets revenues in real terms observed from 2016 continued in 2019, although its rates decreased vis-à-vis 2018. The total amount of tax and non-tax revenues adjusted to CPI in 2019 went up by 4.4 percent in comparison with 2018. Furthermore, the growth rate of actual returns from the corporate income tax hit 5 percent, from PIT – 5.1 percent. One should note the increase of returns from excises by 16.0 percent and from the aggregate income tax by 11.3 percent. Returns from the property tax contracted by 6.1 percent, however, due to a small their share in the revenue structure of the regions' consolidated budgets this reduction did not reflect on the total revenue dynamic. The volume of intergovernmental fiscal transfers received by the regions has gone up by 14.2 percent, i.e. the growth rates of financial assistance have exceeded the growth rates of tax and non-tax revenues of regional and municipalities.

Let us analyze the changes which occurred in the expenditure part of the consolidated budgets of the RF subjects in 2019 (*Table 18*).

Table 18

Expenditures of the consolidated budgets of the RF subjects

	percent to total		pp. of GDP		Deviation	
					In nominal terms, %	pp. of GDP
	2018	2019	2018	2019		
Expenditures, total	**100.0**	**100.0**	**11.47**	**12.41**	**14.2**	**0.94**
General state issues	6.3	6.2	0.72	0.77	12.1	0.05
National security and law enforcement	1.2	1.1	0.13	0.14	8.7	0.01
National economy, including:	20.8	21.8	2.38	2.70	19.7	0.32
Agriculture and fisheries	2.3	1.9	0.26	0.24	-3.4	-0.02
Transport	4.7	5.1	0.54	0.63	22.7	0.09
Public road system (road funds)	8.9	9.5	1.02	1.17	21.9	0.15
Other issues in the sphere of national economy	4.9	5.3	0.56	0.66	23.7	0.10
Housing and utility sector	10.2	10.2	1.17	1.26	13.6	0.09
Environmental conservation	0.3	0.5	0.04	0.06	67.7	0.02
Education, including:	25.4	24.7	2.91	3.07	11.3	0.16
Pre-school education	7.1	7.1	0.81	0.88	14.7	0.07
General education	12.2	11.9	1.4	1.48	11.6	0.08
Second vocational education	1.9	1.8	0.21	0.22	7.7	0.01
Other issues in sphere of education	4.2	4.0	0.49	0.49	6.3	0.00
Culture, cinematography	3.7	3.5	0.43	0.44	8.8	0.01
Healthcare	8.0	8.6	0.92	1.07	22.8	0.15
Social policy	20.3	19.8	2.33	2.46	11.2	0.13
Physical fitness and sports	2.4	2.4	0.27	0.29	13.2	0.02
Mass media	0.4	0.4	0.05	0.05	9.5	0.00
Servicing state and municipal debt	0.9	0.8	0.11	0.10	-5.1	-0.01

Sources: Federal Treasury, own calculations.

Table 18 exhibits that the functional structure of the regional expenditure in 2019 changed slightly compared to the previous year. Among major structural changes, one should note an increase of spending on national economy (by 1.0 percentage points mainly due to increased spending on transportation and public road system), as well as on healthcare (up by 0.6 percentage points). This being said, a reduction of spending on social policy by 0.5 percentage points and education by 0.7 percentage points.

Practically all functional components of regional expenses increased in 2019 in nominal terms except expenses o assistance to agriculture and servicing of public and municipal debt. The same conclusion can be made regarding expenses in shares of GDP: the highest rates of spending accounted for assistance to the economy (except agriculture) and healthcare.

The total share of expenditure of the consolidated budgets of RF subjects in GDP in 2019 increased by 0.94 percentage points of GDP in comparison with 2018 and constituted 12.41 percent of GDP, which was the highest indicator since 2012.

Let us analyze dynamics of the main parameters of the consolidated budgets of the RF subjects in shares of GDP (*Table 19*).

Table 19 exhibits that 2019 demonstrated an ongoing upward trend of the real revenues of the regions' consolidated budgets. Increased both the total amount of revenues and the main components – returns from the corporate income tax and PIT. Having said that, the volume of transfers from the federal budget was growing at outstripping rates in comparison with the tax revenues of the subjects, which to a large extent was due to provision of additional financial assistance allocated on the implementation of national projects. The real level of regions' expenditure in 2019 also increased in a greater degree than the revenues. Summarizing the results of the budget execution a small surplus has popped up to the tune of 0.004 percentage points of GDP (a year earlier surplus amounted to 0.49 percentage points of GDP).

Table 19

Dynamics of revenues and expenditures of the consolidated budget of the RF subjects, percent of GDP

	2015	2016	2017	2018	2019
Revenues	**11.16**	**11.54**	**11.68**	**11.96**	**12.41**
including:					
Corporate income tax	2.53	2.65	2.74	3.00	3.07
PIT	3.37	3.51	3.53	3.53	3.62
Transfers from Federal budget	1.94	1.83	1.85	2.01	2.18
Expenditures	**11.37**	**11.55**	**11.74**	**11.47**	**12.41**
Deficit (-) / Surplus (+), pp. of GDP	**-0.21**	**-0.01**	**-0.06**	**0.49**	**0.004**

Sources: Federal Treasury, own calculations.

Therefore, the sphere of interbudgetary relations, on one side, demonstrated rise of proportion of the regions in the structure of the budgetary system and growth of real revenues, and on the other – outstripping growth of budget expenses. In the event, when external shocks (fall of oil prices, coronavirus pandemic) result in the contraction of financial backstop from the federal budget, these trends can adverselyimpact the regions' budgets sustainability in the medium term.

Financial assistance from the federal budget

The total amount of intergovernmental fiscal transfers from the federal budget significantly increased in 2019 in comparison with 2018 both in nominal terms (16.7 percent) and in shares of GDP (2.2 percentage points of GDP) (*Table 20*). The increment was, first of all, due to an increase on other intergovernmental fiscal transfers (+1.8 percentage points of GDP) and subsidies (+1.4 percentage points of GDP, which was due to the need of the implementation of national projects at the regional and municipal levels by way of granting to corresponding budgets of federal targeted transfers.

Changes related to grants for securing balance: their sharp rise in 2018 relative to 2017 (2.2 percentage points of GDP) was offset by a notable contraction seen in 2019–1.5 percentage points of GDP relative to 2018. Change in the transfers amount has led to a change in the structure of financial assistance from the federal budget: the share of subventions (non-target financial assistance) in 2019 decreased by 1.5 percentage points of GDP in comparison with 2018 and amounted to 38.7 percent which is below the 2017 level.

Table 20

Fiscal transfers to the budgets of the subjects of the Russian Federation from the federal budget

	2017		2018		2019		Increment in 2019 to 2018	
	RUB bn.	%to total	RUB bn.	%to total	RUB bn.	%to total	Nominal, %	pp. of GDP
1	2	3	4	5	6	7	8	9
Transfers to regions, total	**1 690.1**	**100.0**	**2 044.8**	**100.0**	**2 387.2**	**100.0**	**16.7**	**2.2**
Grants	**759.0**	**44.9**	**1 035.5**	**50.6**	**924.0**	**38.7**	**-10.8**	**-1.5**
Including:								
Grants for equalization of fiscal capacity	614.5	36.4	644.5	31.5	675.3	28.3	4.8	0.0
Grants for ensuring fiscal balance	133.8	7.9	380.4	18.6	237.6	10.0	-37.5	-1.5

Cont'd

Subsidies	**419.8**	**24.8**	**381.8**	**18.7**	**556.6**	**23.3**	**45.8**	**1.4**
Including:								
Subsidies for development of national economy	242.4	14.3	190.0	9.3	209.9	8.8	10.5	0.1
Subventions	**326.1**	**19.3**	**331.7**	**16.2**	**396.6**	**16.6**	**19.6**	**0.4**
Other intergovernmental fiscal transfers	**185.1**	**11.0**	**295.8**	**14.5**	**510.0**	**21.4**	**72.4**	**1.8**

Sources: Federal Treasury, Rosstat, own calculations.

The amount of subventions has gone up (by 0.4 percentage points of GDP) together with their number[1]: from 32 seen in 2018 to 37 in 2019. This can demonstrate somewhat growth of dependence of subnational budgets from the federal budget regarding the execution of delegated powers.

As was already mentioned, increment of subsidies volume amounted 1.4 percentage points of GDP. Alongside this their number sharply increased: from 74 seen in 2018 to 113 in 2019. Without subsidies diverted for the implementation of priority programs, national and (or) federal projects, the number of subsidies hit 70, meanwhile the state program "Development of the Federative Relations and Creation of Conditions for Effective and Responsible Management of Regional and Municipal Finances" (hereinafter – SP "Development of the Federative Relations…") envisages a reduction of the number of subsidies in 2019 down to 55. Thus, plans for optimization of the number of subsidies were unfulfilled.

The real volume of other intergovernmental fiscal transfers seen in 2019 went up by 1.8 percentage points of GDP in comparison with 2018 (up by 2.6 percentage points of GDP in comparison with 2017), meanwhile their number was increasing: 77 in 2017, 93 in 2018, and 108 in 2019. At end-2019 other intergovernmental fiscal transfers accounted for a fifth of the total amount of fiscal transfers from the federal budget diverted to regions.

The increment of targeted fiscal transfers is partly due to the implementation of national projects at the regional and municipal levels. For example, the share of subsidies allocated for the implementation of national projects comes to 53.1 percent and other intergovernmental fiscal transfers – 42.4 percent (*Table 21*). Without fiscal transfers diverted for the implementation of national projects, the structure of financial assistance in 2019 is as follows: grants – 50.9 percent,[2] subsidies – 14.4 percent, subventions – 18.5 percent, and other intergovernmental fiscal transfers – 16.2 percent. Proportion of other intergovernmental fiscal transfers exceeds the proportion of subsidies, which suggests the imbalance of interbudgetary policy to the reduction of the least formalized and transparent (i.e. other intergovernmental) fiscal transfers.

Table 21

Transfers from the federal budget to the budgets of the RF subjects for the implementation of national projects

	Amount in 2019	
	RUB bn	**% to total amount of transfers of this type**
1	2	3
Total	**572.2**	**24.0**
Grants	**295.7**	**53.1**
Including:		
Current grants	91.9	59.3

[1] The number of transfers is determined by the number of unique items of expenditure (13-16 code positions in the classification of budget expenditure), envisaged in the report on the federal budget execution.

[2] This corresponds targeted value of corresponding indicator of SP "Development of federative relations…"

Cont'd

1	2	3
Investment grants	16.4	12.0
Consolidated grants	187.4	70.7
Subventions	**60.1**	**15.2**
Other intergovernmental fiscal transfers	**216.4**	**42.4**

Sources: Federal Treasury, own calculations.

The effectiveness of transfers assigned for the implementation of national projects as a separate instrument can indirectly be assessed according to regularity of provision of corresponding funds in the course of the financial year, i.e. according to the ratio of the amount of funds assigned for the first three months to the annual amount of allocated funds (*Table 22*).

On the whole, transfers assigned for the implementation of national projects were allocated in the course of the year less regularly than other transfers, which can partly be explained by the novelty of this instrument and the need to the tuning of interaction procedures between the stakeholders of the interbudgetary relations.

Table 22

Regularity of transfers allocation on the implementation 0f national projects

Transfers	Regularity, percent
All transfers	**61.9**
Transfers on the implementation of national projects	**49.8**
Including:	
"Culture"»	55.7
"Digital economy of the Russian Federation"	0.0
"Education"	54.1
"Housing and urban environment"	37.0
"Ecology"	28.3
"Small and medium-sized enterprises and support of individual entrepreneurship"	58.4
"Productivity and employment support"	35.3
"Healthcare"	37.2
"Demography"	56.6
"Sage and quality roads"	56.4
"International cooperation and exports"	23.8
Complex plan "Modernization of infrastructure"	38.3
Other transfers	**65.7**

Sources: Federal Treasury, own calculations.

From 2016 onwards, the interregional inequality of tax returns has been gradually increasing (*Table 23).* In this regard, 2019 saw a stronger income spread on the back of receiving transfers than it was in 2016–2018. However, equalization effect obtained from these types of transfers remains. For example, against the backdrop of equalization seen in 2019, inequality contracted by 23 percent (in 2018 – by 24 percent), and on the back of grants and subsidies it fell by 35 percent (in 2018 – by 34 percent).

Table 23

Coefficient of income inequality of the regions' consolidated budgets (per capita inclusive index of budget expenditure)

Year	Tax revenues	Tax revenues and grants for equalization of fiscal capacity	Tax revenues, 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

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

Regional deficit and debt

In 2019, the consolidated budgets of the RF subjects were executed with a surplus to the tune of RUB 4.7 billion (in 2018 with a surplus to the tune of RUB 510.3 billion). This being said, the number of regions boasting of the budget surplus against 2018 has decreased 1.4-fold and has come to 50 (*Table 24*). Thus, the fiscal balance of the regions' consolidated budgets somewhat decreased during 2019.

Table 24

Execution (deficit/surplus) of the consolidated budgets of the RF subjects in 2014–2019

Year	Number of RF subjects which executed budget with	
	deficit	surplus
2014	74	11
2015	76	9
2016	56	29
2017	47	38
2018	15	70
2019	35	50

Sources: Federal Treasury, own calculations.

The nominal amount of public debt of the RF subjects at end-2019 contracted from RUB 2.21 to 2.11 trillion. It contracted during the year from 25.3 to 19.2 percent in relation to the amount of tax and non-tax revenues of the RF subjects.

Budgets of certain regions exhibited a reduction of debt burden: at end-2018 forty-two regions reported debt exceeding 50 percent of tax and non-tax revenues of their budgets, and at end-2019 the number of such regions hit 26 (i.e. the number of regions with conditionally safe level of the debt burden went up from 43 to 59). By the period-end results for 2019, solely Republic of Mordovia reported public debt in the amount exceeding 100 percent of tax and non-tax revenues (in 2018 such situation was typical for the Kostroma regions).

The structure of the regions' public debt somewhat changed during the year: the share of budget loans by the end of the year amounted to 41.9 percent falling against late 2018 by 0.7 percentage points (*Fig. 20*).

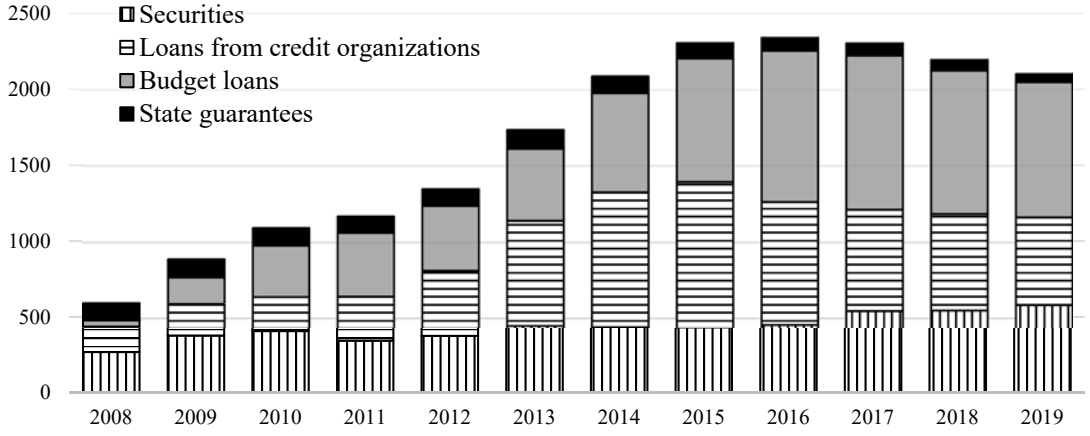


Fig. 20. Nominal amount (RUB billion) and structure (percent) of public debt of RF subjects in 2008–2019

Sources: Finance Ministry of Russia, own calculations.

The proportion of loans from the credit institutions has also decreased by 1.6 percentage points and the amount of securities has gone up by 2.9 percentage points. At the same time, the nominal amount of securities has increased by 6.7 percent, budget loans have decreased by 5.7 percent, and credit institutions loans contracted by 9.5 percent against the 2018 amount. Thus, the regions' public debt demonstrates a downward trend across all sources minus securities.

However, taking into account the reduction of oil prices amid coronavirus pandemic, one should expect a significant contraction of revenues and expenditures of the regions (first of all for the assistance to economy and social expenses) in 2020, which finally will end up to increasing budget imbalance and growth of public debt. At the same time, the high current level of regional fiscal sustainability will allow (at least, in the short-run) to avoid a critical situation with the budgets of the subjects of the Federation.

Section 3. Financial markets and financial institutions

3.1. The Russian financial market[1]

3.1.1. The stock market in 2019 and Q1 2020

The year 2019 was one of the luckiest periods in the history of Russia's stock market. On a 10-year time horizon (2010–2019), the geometric mean return on investment in Russian ruble-denominated stocks amounted to 8.3% per annum, which was below the corresponding indices of only a few markets like the USA, the Scandinavian economies, Japan, India, the Philippines, and Argentina (*Fig. 1*). The average annual return on investment in Russian stocks denominated in US dollars stood at 0.7%, which was significantly below the ruble-denominated return on investment in those same stocks due to the ruble weakening in the post-crisis period.

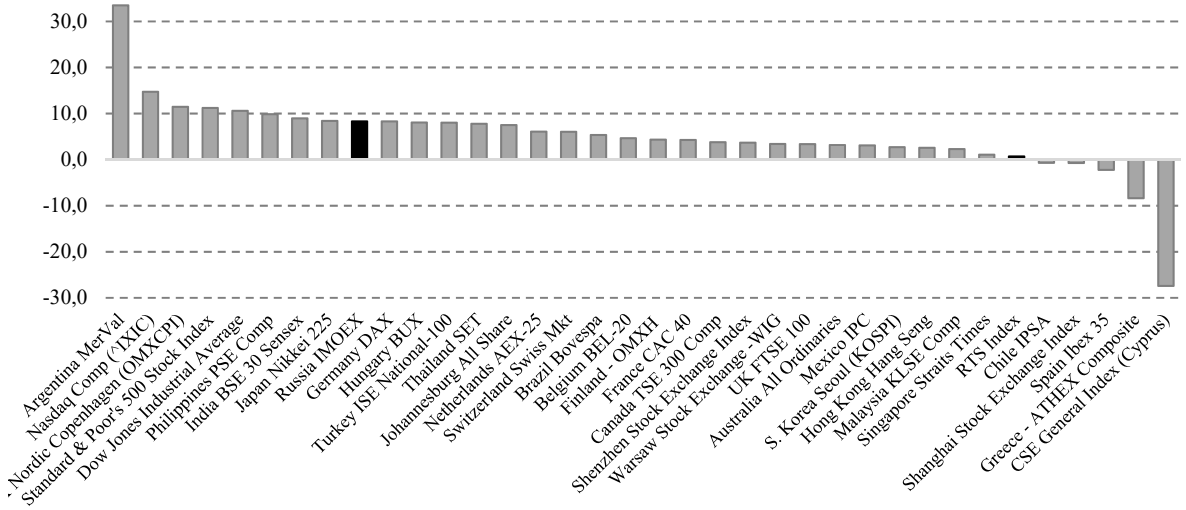


Fig. 1. The geometric mean return of 36 world stock indexes on major stock exchanges over the period 2010–2019, % per annum

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

[1] This section was written by *Abramov A. E.,* Candidate of Economic Sciences, Director of the Center for Institutions Analysis and Financial Markets, IAES, RANEPA; *Chernova M. I.,* researcher at the Center for Institutions Analysis and Financial Markets, IAES, RANEPA.

In 2019, the returns on Russian stocks were among the highest, compared with the other stock indexes around the world (*Fig. 2*), rising to 44.9% (RTS Index) and to 28.6% (MICEX Index). Among the 36 indexes of the world's largest stock exchange markets, the RTS Index was behind only ATHEX Composite (the Greek stock market indicator), which gained 49.5%. It was also unusual that the RTS Index, which is denominated in US dollars, significantly outperformed IMOEX, which has the same constituents, only they are denominated in rubles. This happened because the high returns on Russian stocks in 2019 were concurrent with the ruble strengthening against the US dollar, which created some additional incentives for foreign investors to invest in shares issued by Russian companies.

However, the events that followed in Q1 2020 and led to the collapse of stock markets in Russia and around the world, were yet another reminder of the fact that rapid growth in stock prices cannot continue over a long period of time, and the years of high dividend yields usually give way to periods of severe recession. As of March 20, 2020, Russian stocks became the world leaders in falling stock quotes: since the beginning of 2020, the RTS Index had lost 40.3%, and the MOEX Index, 23.5%. Out of the 36 stock indexes shown in *Fig. 2*, only those of Thailand, Argentina and Brazil plunged deeper than the RTS Index. This time, the more impressive downfall of the RTS Index compared to the MOEX Index was caused by the stock market adjustment on the back of the ruble weakening against the US dollar.

The main factor behind the stock and forex market crisis at the beginning of 2020 was the combination of two unexpected events: the onset of a pandemic of coronavirus infection (COVID-19) and the breakup of the oil price deal between OPEC and Russia on March 6, 2020, which unleashed a price war and the collapse of oil prices in the market.

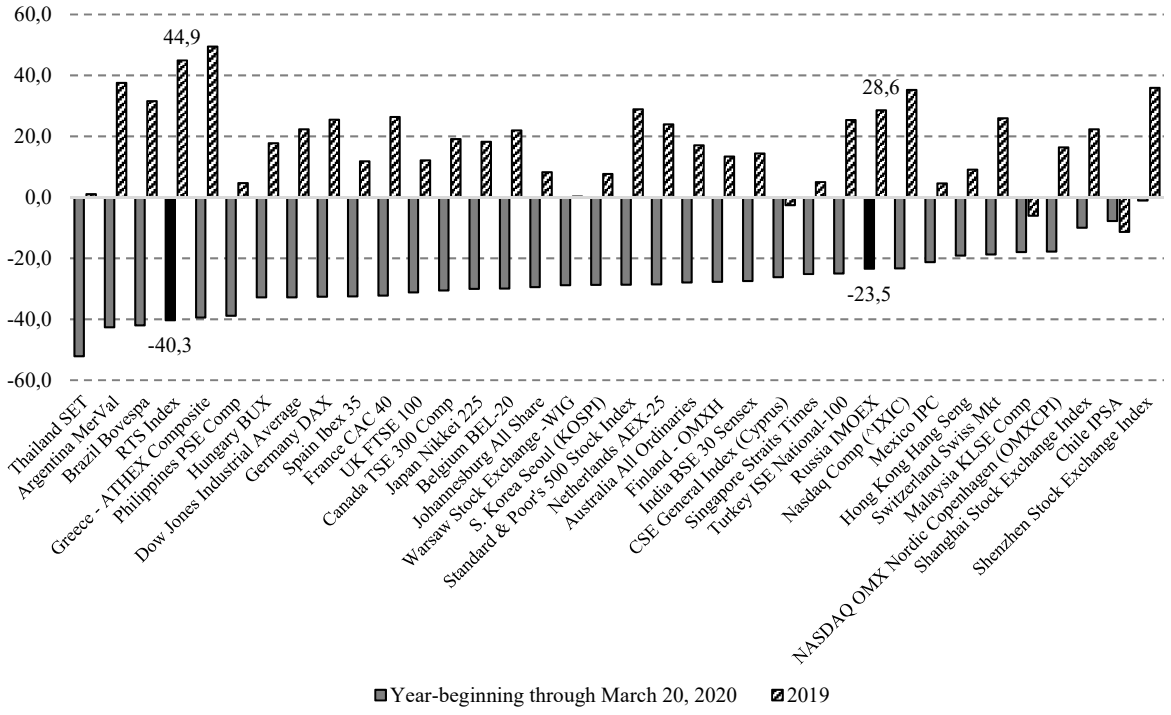


Fig. 2. The returns of 36 world stock indexes on major exchanges in 2019 and Q1 2020 (as of March 20), % per annum

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

As shown in *Fig. 3*, in 2019, Russia nearly topped the list of 27 countries in terms of national currency strengthening against the US dollar, as the ruble exchange rate climbed by 12.1% over that period. Among the other national currencies, the ruble fell behind only the Ukrainian hryvnia, which gained 17%. At that time, the ruble's exchange rate was being sustained by comfortably high oil prices, the fiscal rule effects on the budget, and the macroeconomic stabilization measures that contributed to the inflow of foreign investment into the government debt market.

However, in Q1 2020, the situation in the foreign exchange market changed dramatically. From the start of the year through March 20, 2020, the ruble exchange rate against the US dollar fell by 22.4%. The ruble depreciation rate was nearly the highest among the corresponding indices demonstrated by the 27 major world currencies. Only the Mexican and Argentinean pesos and the Norwegian krone experienced a steeper downfall, plungng by 22.5%, 25.5%, and 36.9%, respectively. As can be seen in *Fig. 3*, the impact of the March 2020 shock was felt most strongly by the national currencies of those countries that depended heavily on their oil export revenues (Norway, Mexico, Russia, Brazil, Kazakhstan, etc.), as well as those that largely depended on external financing to maintain their financial sustainability (Argentina and Ukraine).

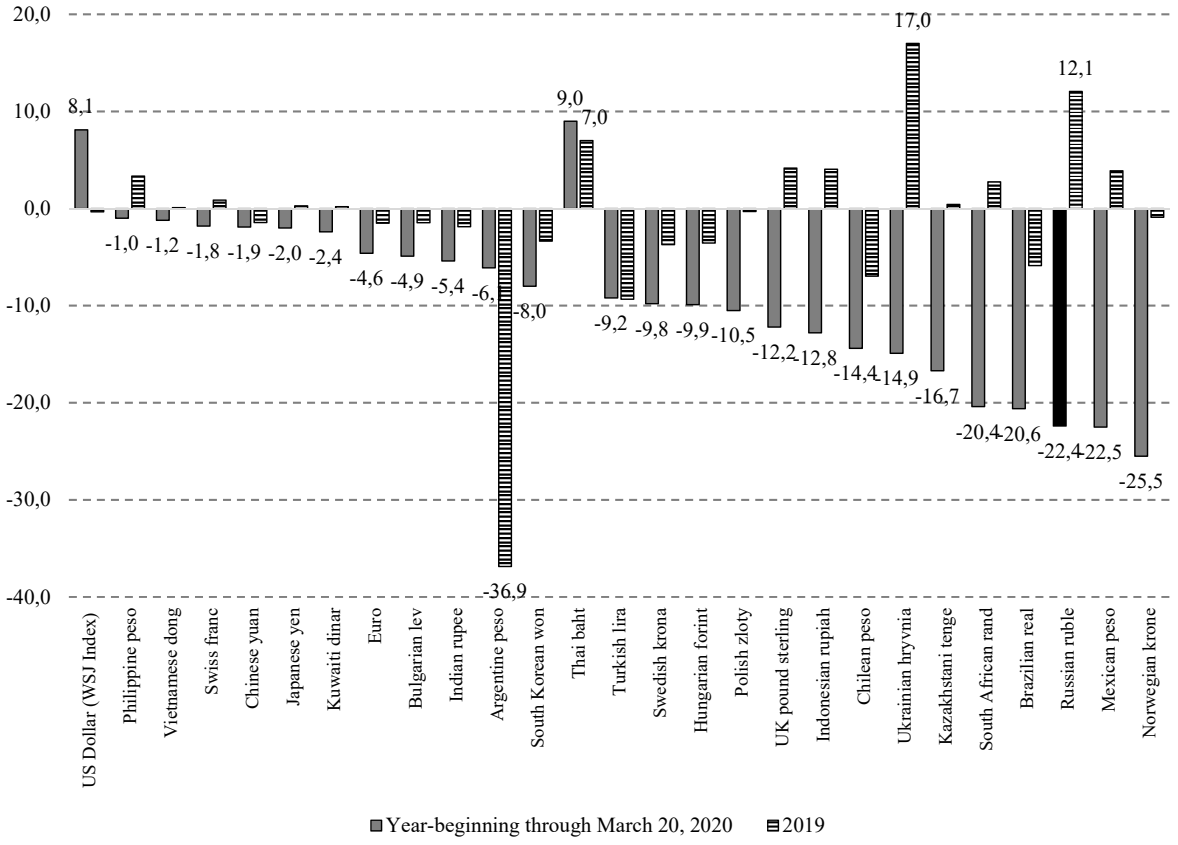


Fig. 3. Changes in the value of 27 national currencies in 2019 and Q1 2020 (as of March 20), %

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

The behavior of financial markets in 2019 cannot be discussed separately from the shocks that occurred in investment asset markets in Q1 2020. Unlike many previous crises, the developments in the financial markets at the beginning of 2020 were caused by unexpected external shocks: a pandemic and the price war between oil-exporting countries. The current crisis was triggered not by the debt crises experienced by certain companies or countries, but by falling prices in the markets for certain assets, such as stocks, oil and other raw materials, and some national currencies. At the time of writing this review, the shock that originated in the markets for these assets has not yet penetrated the debt markets and become manifest in the form of a recession officially recognized by major economies.

An analysis of the development trends in Russia's financial market in Q1 2020 can be based on the generally accepted criteria for financial crises. The estimates presented in one of the most authoritative works on financial crises in the world written by US economists Carmen Reinhart and Kenneth Rogoff, released in 2009 and published in Russian in 2011, can be applied here as such criteria (*Table 1*).

Table 1

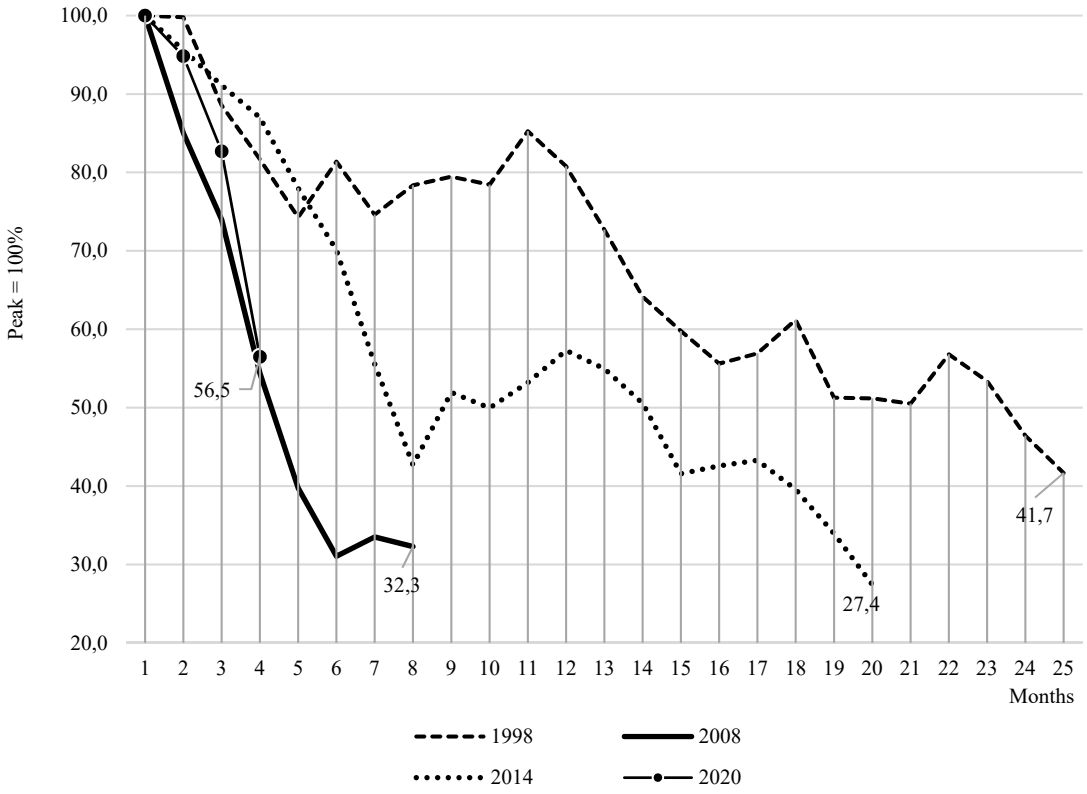
The quantitative criteria of financial crises, according to Carmen Reinhart and Kenneth Rogoff

Type of crisis	Crisis criteria
Inflationary crises	Threshold inflation of 20% per annum
Currency crises	Annual depreciation rate above 15%
Banking crises	Presence of at least one of two events: 1) bank insolvency caused by massive withdrawal of deposits, resulting in closure, takeover or nationalization of one or more financial institutions; 2) closure, takeover, nationalization, or large-scale state support of important financial institution (or group of institutions).
External debt crisis	Sovereign (state) default, as inability of government to make principal debt or interest payments as of specified date.
Debt crisis	Same definition as that of external debt crisis also applies here. Additionally, it includes freeze on bank deposits and/or forced conversion of dollar deposits into national currency.
Corporate defaults	Due to limited availability of historical statistics, there is no strict definition of signs of such crisis. However, corporate defaults and banking crises correlate in many of their aspects.
Stock market crash	Criterion by Barro and Ursua was applied, whereby stock market crash is understood as cumulative decline in real stock prices by 25% or more.

Source: own compilation based on data from the monograph by Reinhart and Rogoff. [1]

The main channel of influence on the ruble weakening and the plunging market for Russian stocks in early 2020 was the onset of a price war in the oil market between the OPEC countries and Russia against the backdrop of falling demand for oil produced by a slowdown of global economies in response to the coronavirus pandemic. Formally, this happened when Russia walked out of the agreement at a joint meeting on March 6, 2020. As shown in *Fig. 4*, over the period from December 2019 to March 20, 2020, the average monthly price of Brent oil decreased by 45.5%. Reinhart and Rogoff, in their monograph, do not consider crises in commodity markets, and therefore we do not define this event as an oil crisis. However, compared with the previous three oil price shocks in 1998, 2008 and 2014, the downward trajectory of oil prices during the first three months of 2020 was almost as steep as during the 1998 crisis.

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



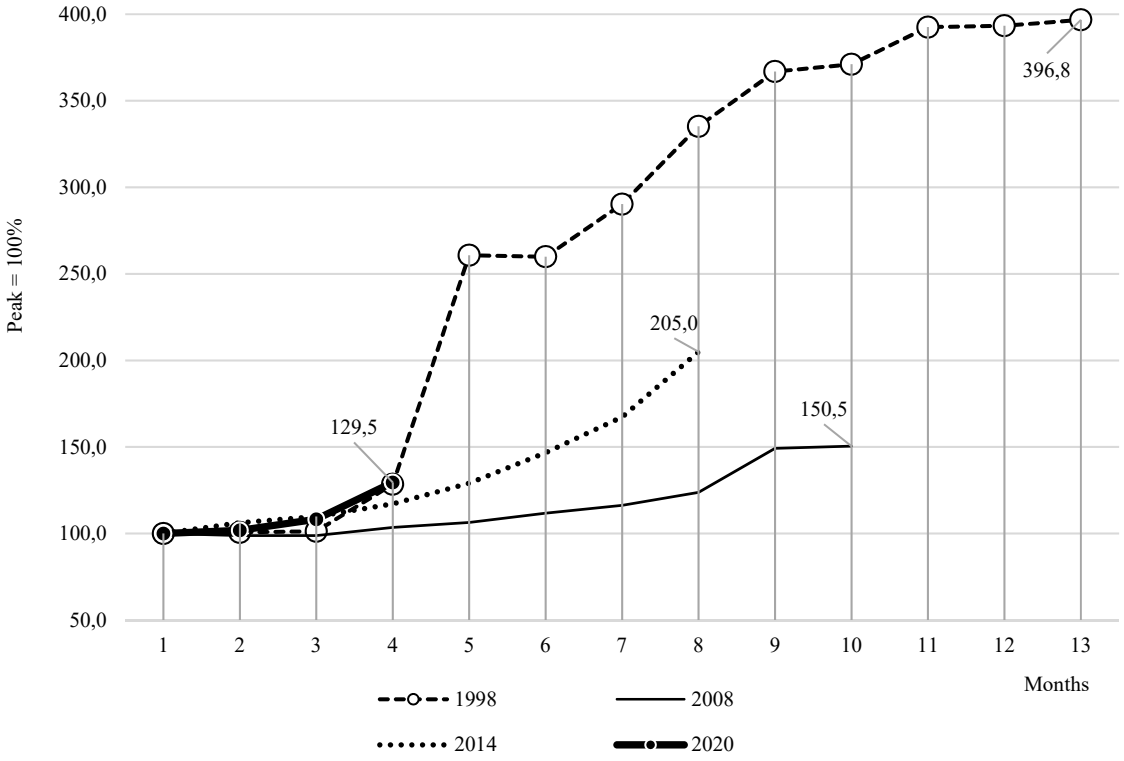
Note. The average monthly price of Brent crude oil in March 2020 was calculated for the period from March 1 to March 20, 2020.

Fig. 4. The average monthly decline of the price of Brent crude oil relative to its peaks of December 1996, July 2008, June 2014, and December 2019, as % (peak value = 100%)

Source: own calculations based on data released by Thomson Reuter and Finam (URL: https://www.finam.ru/profile/moex–akcii/gazprom/export/).

Over the period from December 2019 to March 20, 2020, the ruble plunged by 29.5%, while Reinhart and Rogoff define a currency crisis as the national currency weakening by 15% against the US dollar over the course of one year. As shown in *Fig. 5*, compared with the crisis scenarios of 1998, 2008, and 2014, the ruble's weakening in early 2020 in response to the movement of oil prices followed a very steep trajectory, although, of course, it can hardly replicate that of its downfall in August 1998. Under the present circumstances, the ruble depreciation was contributed to by the fact that oil prices were plummeting against the background of an almost complete liberalization of the exchange rate regime, as a result of which the exchange rate mechanism had become much more transparent even in such a troublesome situation. At the same time, at the time of writing this review, it is not yet clear whether the ruble will remain at its current depreciated level in face of the inevitable recovery of oil prices in the future. Judging by the previous experiences, we know that because of the Russian economy's high dependency on the prices of its exports, even a relatively short-term weakening of the ruble can translate into its long-term depreciation, if the average price of oil, after it has

experienced price shocks in commodity markets, over the next few years stays at a lower level compared with the pre-crisis period.



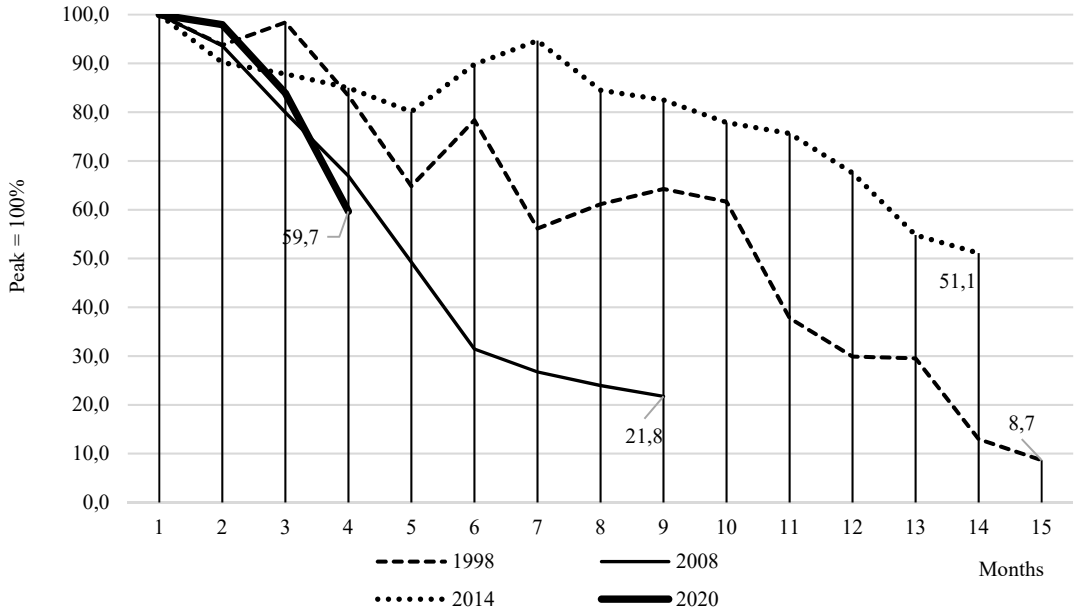
Note. The USD-to-ruble exchange rate in March 2020, as of March 20, 2020.

Fig. 5. The average monthly movement of the USD-to-ruble exchange rate relative to its peaks of May 1998, May 2008, July 2014, and December 2019, as % (peak value = 100%)

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

As shown in *Fig. 6*, over the period from December 2019 to March 20, 2020, the RTS Index lost 40.3%, its plunge translating into the deepest market decline compared with the acute phases of the crises of 1998, 2008 and 2014. According to the classification of Reinhart and Rogoff, Barro and Ursua, if this decline pattern is confirmed by the year-end results of 2020, the current developments in the stock market will be defined as a fully fledged financial crisis. However, it is important to note that the sharp decline of stock quotes both in the Russian and global financial markets in response to the economic recession threats so far has not given rise to crises in the financial debt markets.[1]

[1] For more details on the impending financial crisis and the financial market prospects, see Sukhova, S. (2020). 'We got a strange crisis'; economist A. Abramov on the economic turbulence against the background of the coronavirus pandemic. Ogonyok, No 12, March 30. URL: https://www.kommersant.ru/doc/4299705?from=vybor



Note. The movement of the RTS Index in March 2020, as of March 20, 2020.

Fig. 6. The movement of the RTS Index relative to its peaks of July 1997, May 2008, February 2014, and December 2019, as %
(peak value = 100%)

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

However, even despite its fall in early 2020, the Russian stock market retained its investment attractiveness for a number of foreign investors, as evidenced by the publication in Barron's,[1] a leading source of business news. It cites the opinion of Justin Leverenz, Senior Portfolio Manager for the OFI Emerging Markets Equity team at Invesco Ltd. (an American independent investment management company), who believes that 'Russia at a headline level is one of the most attractive places on the planet to invest now.' But 'there's just one problem: it may take a year or two to come to pass.' David Aserkoff, J.P. Morgan's chief of equity strategy for emerging Europe, notes that 'Russian companies have also been swept by a quiet governance revolution that has transformed them into some of the better dividend payers in emerging markets.' Aaron Hurd, senior currency portfolio manager at State Street Global Advisors, sees the ruble bouncing from its current level near 80 to the US dollar to 60 or 65 over the next two years, driving returns of up to 40% in local bond markets.

The onset of a new wave of falling stock indices in Russia occurred at a time when they had not yet completed their full recovery to the levels prior to the 2008 crisis (*Fig. 7*).[2] According to the year-end results of 2019, the ruble-denominated MOEX Index surged to 158.5% of its value as of May 2008, while the RTS Index denominated in US dollars amounted to only 63.0% of its level as of the same date. The recovery of the same stock portfolio in ruble terms was faster than that of its value in US dollars, because over that period the ruble fell 160.8% against the US dollar.

[1] *Mellow C.* (2020). Russia's Stocks Are a Buy Only for Very Patient Investors. Barron's, online. March 27.
[2] The fact of the stock indexes recovering to their pre-crisis level is purely symbolic, but it is still important for investors as a sign that the stock market has overcome the issues that led to its decline during the crisis.

However, the partially successful recovery of stock prices in 2019 gave way to a recoil in Q1 of 2020. As of March 20, 2020, the RTS Index fell to 37.6% of its peak value of May 2008. The MOEX Index was still considered to have recovered, but it had declined to 121.1% of its peak value of May 2008, in spite of the ruble's highly noticeable weakening in Q1 2020.

The rate of stock market recovery after the 2008 crisis differed significantly from its movement pattern after the previous crisis of 1998, when the ruble-denominated MICEX Index recovered in just 8 months, while the RTS Index took almost 5 years (58 months) to do so.

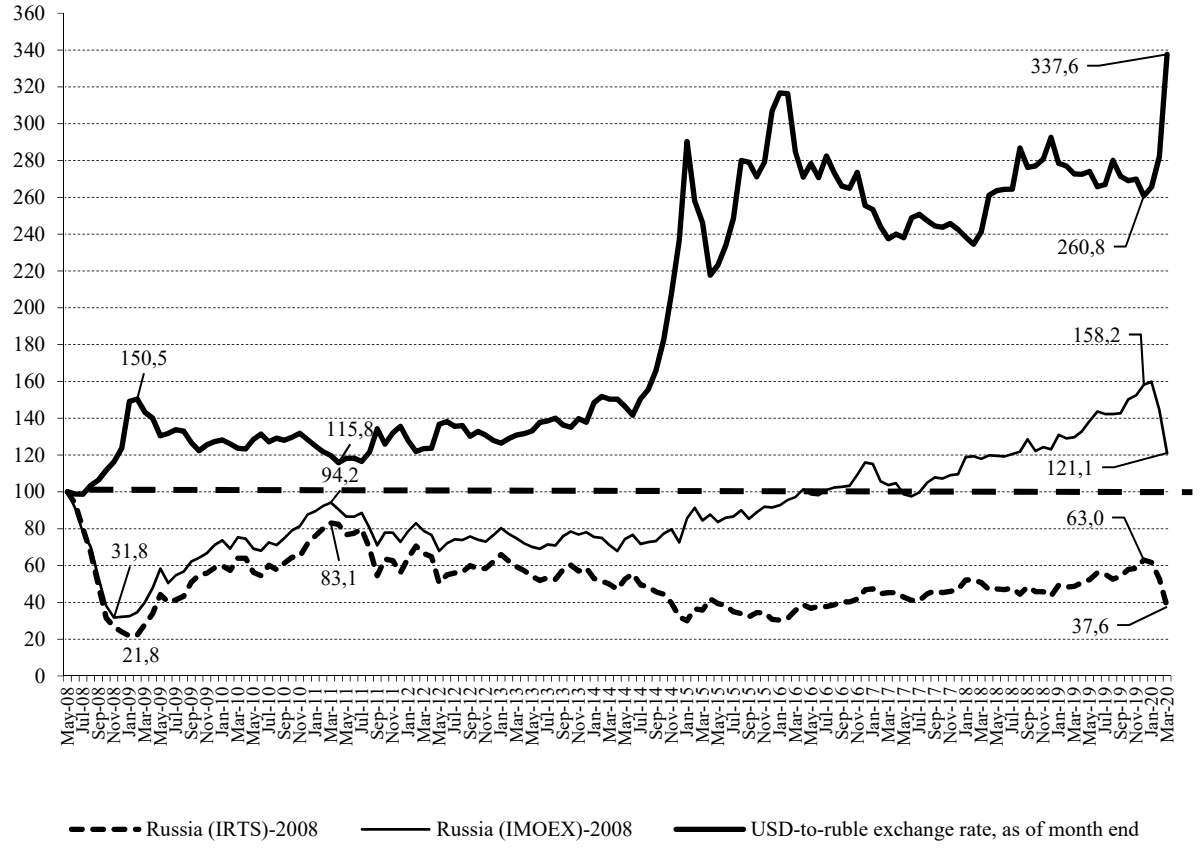


Fig. 7. The movement of the USD-to-ruble exchange rate, the RTS Index, and the MOEX Index from May 2008 through March 20, 2020 (May 2008 = 100%)

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

At present, similarly to the situation in the aftermath of the 1998 financial crisis, a key factor that influenced the recovery speed of Russian stock indices is the level of oil prices. As shown in *Fig. 8*, after the crisis period 1997–1998, when the price of oil plummeted to 31.1% of its pre-crisis peak in December 1996, the period of its full recovery lasted 3 years, or 36 months. As of March 20, 2020, over the 140 months that had elapsed since the price of Brent crude oil peaked at USD 133.9 per barrel in July 2008, its current price amounted to only 28.4% of its peak value. Moreover, the year 2020 saw a third wave of oil price decline to 56.5% of its December 2019 level.

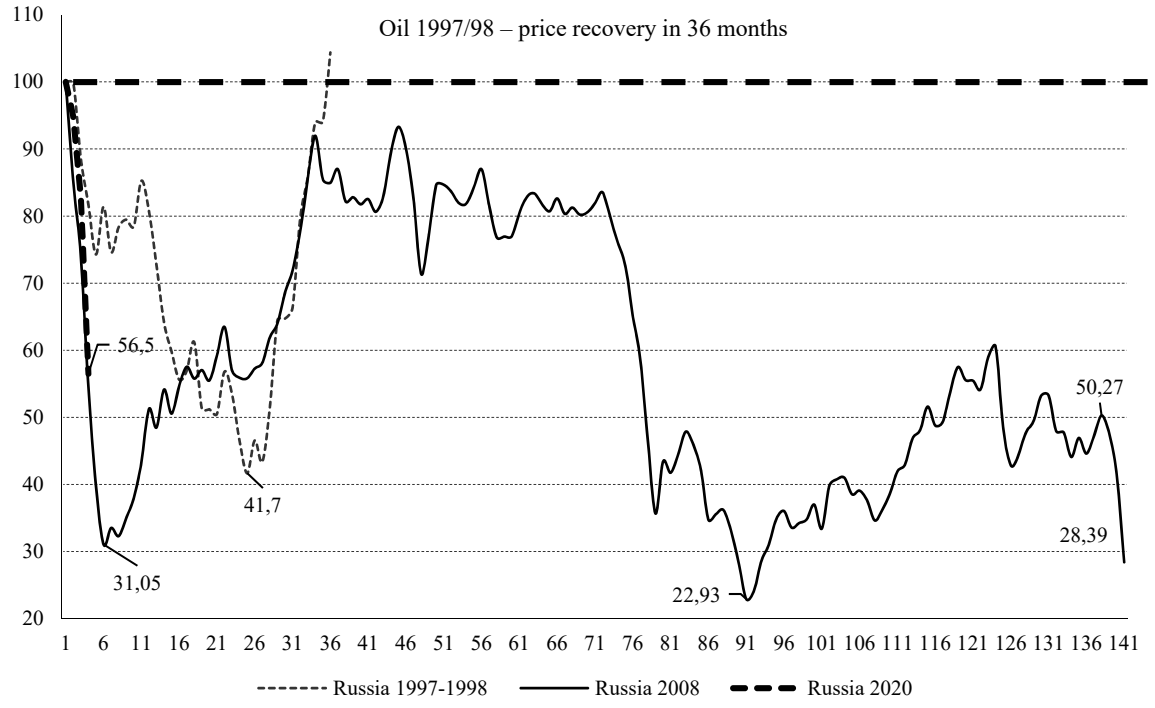


Fig. 8. Brent crude oil price growth during the financial crises in Russia (pre-crisis peak price = 100%), as of March 2020

Source: own calculations based on data released by the International Monetary Fund and the International Energy Agency.

Fig. 9 and *Table 2* show the recovery process of stock indices in the BRICS countries. For comparability of data, the country indices of the MSCI family, calculated in dollar terms, were used as indicators. Assessment of changes in the Russian market was carried out using the RTS currency index, including a similar index that takes into account the dividend yield of its share issues.

As of March 20, 2020, out of the five BRICS members, the stock indices after the 2008 crisis did not recover in Russia and Brazil, where the long-term stagnation of stock markets has been of the most chronic nature. Over the 142 months that had passed since May 2008, the RTS Index recovered to only 37.6% of its pre-crisis level, and the MSCI Brazil Index, to only 24.1%. In 2019, due to the high dividend yield on Russian stocks, the RTS index fully recovered, demonstrating a dividend yield of 102.5% relative to its May 2008 value; however, as a result of the plunging stock prices in early 2020, that index recoiled to the level of 61.3% of its value in May 2008.

The MSCI indexes for India, South Africa and China recovered to their pre-crisis levels over the periods of 22, 28, and 82 months after May 2008, respectively. However, by March 20, 2020, the stock indices of South Africa and India had slid to 53.0% and 84.0% of their pre-crisis peaks of May 2008. The economies of BRICS members differ significantly in their structure; thus, India and South Africa do not depend on oil prices, in contrast to Russia and Brazil. The simultaneous downfall of large emerging markets in early 2020 was caused by factors that they all share, namely the forced shutdown of companies under the quarantine

measures and foreign capital outflow from their markets in the direction of the developed markets with safer investment conditions.

Out of all the BRICS stock markets, only the Chinese stock market turned out to be the most sustainable one. As of March 20, 2020, the MSCI China A Index stood at 102.2% of its May 2008 value. The stability of this index relative to the ongoing decline in the stock markets, although China was the first country to come to grips with the threat of coronavirus, for the most part was ensured by the secure position of the yuan against the US dollar due to the forex interventions undertaken by the People's Bank of China.

Table 2

The recovery of BRICS stock indices denominated in US dollars after the 2008 crisis, as of March 20, 2020

Index	Index recovery period from May 2008, months	End of recovery	Current index value, % (May 2008 = 100%)
RTS	142	No	37.6
RTS Total Return	140	Yes	61.3
MSCI Brazil	142	No	24.1
MSCI South Africa	28	Yes	53.0
MSCI India	22	Yes	84.0
MSCI China	82	Yes	102.2

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

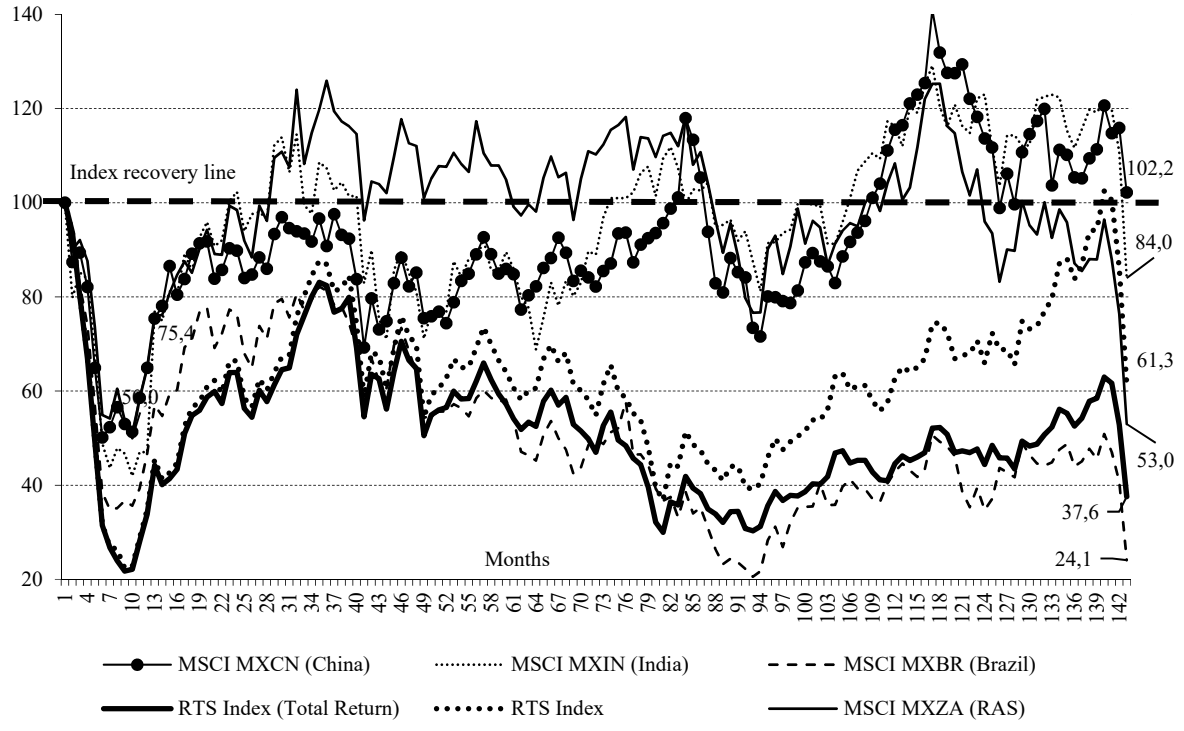


Fig. 9. The depth and duration of the impact of the 2008 financial crisis on BRICS stock indices denominated in US dollars, as of March 20, 2020 (peak in May 2008 = 100%)

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

The most protracted crises in the modern history of stock markets were 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* and *Table 3*). In 2015, this record was broken by the Japanese NIKKEI-225 index, which as of March 20, 2020, had failed to recover in 363 months, i.e. more than 30 years. Its value in March 2019 amounted to only 42.5% of its peak achieved in 1989. The crises followed by such lengthy periods of stock price recovery are unique; they are caused not just by some deeply rooted structural problems of the economy, but by a combination of these problems with some serious economic and monetary policy mistakes.

The markets where financial crises were of medium-term duration and were brought about by structural imbalances in the economy, such as the recession in South Korea in 1989 and the dotcom bubble burst in the USA in 2000, typically demonstrated a W-shaped index recovery trajectory (*Fig. 10*). These two crises lasted 183 and 177 months, respectively.

Against the backdrop of these crises, the recovery of the Russian RTS Index and MSCI Brazil to the levels of 37.6% and 24.1%, respectively, which has lasted 142 months, has not yet formally exceeded the time horizon of a typical medium-term crisis. However, as can be seen in *Fig. 10*, the recovery pattern currently displayed by RTSI and MSCI Brazil has begun to follow the trajectory of a long-term crisis rather than a medium-term one, which is usually a characteristic feature of the stock markets of those countries where structural problems coincide with unresolved economic and monetary policy challenges.

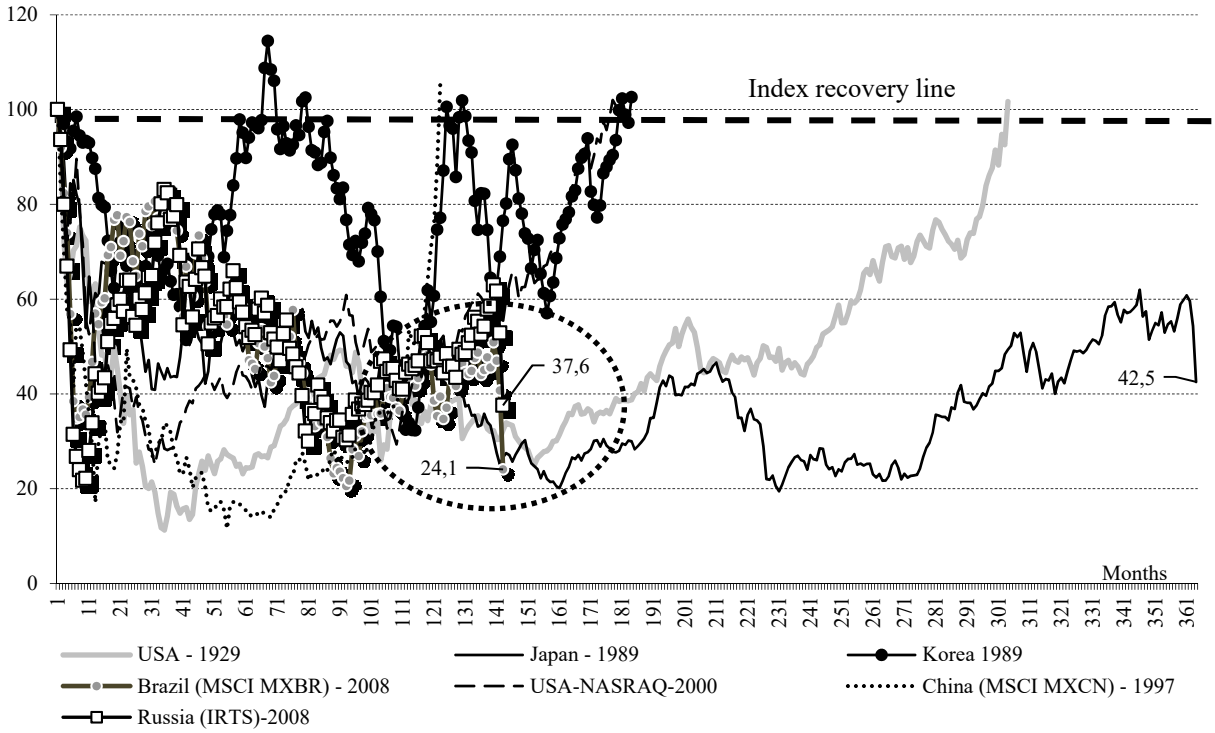


Fig. 10. The depth and duration of the recoveries of stock indexes after the longest crises of the 20th and 21st centuries, as of March 20, 2020 (pre-crisis peak = 100%)

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

Table 3

The longest recovery periods of stock indexes after the major crises of the 20th and 21st centuries

Country (index - year of crisis onset)	Period of index recovery from its peak value, moths	End of recovery	Current value of unrecovered index, % (peak = 100%)
Japan (Nikkei – 1989)	363	No	42.5
USA (DJIA – 1929)	303	Yes	
South Korea (KOSPI – 1989)	183	Yes	
USA (NASDAQ – 2000)	177	Yes	
Russia (RTS (USD) – 2008)	142	No	37.6
Brazil (MSCI (USD) 2008)	142	No	24.1
China (MSCI-Shanghai (USD) – 1997)	122	Yes	
Japan (Nikkei – 1989)	82	Yes	
USA (DJIA – 1907)	64	Yes	

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

The lengthy recovery period of the Russian stock index, even by the standards of the global stock market, has demonstrated that the causes of its stagnation have more to do with the internal situation in the Russian economy than with the volatility effects of the global financial system.

3.1.2. Equity risk premium

For domestic and foreign investors, the equity risk premium is one of the key characteristics of a country's stock market. It is the main component of the cost of capital to be considered when assessing investment projects, it also serves as a universal corporate governance performance indicator and as a benchmark of a stock's attractiveness for foreign investors. The essence of the problem is that there exist several different equity risk premium indicators of Russian stocks, and the relevant information concerning these indicators is provided by foreign agencies. Our review relies on our own estimates of these indicators.

We can point out several most popular approaches to assessing the market risk premium of Russian stocks (*Fig. 11*). Fernandez et al. estimate the average equity risk premium based on opinion polls of scientists and businessmen in different countries. Dimson, Marsh, and Stainton, in their book 'Triumph of the Optimists'[1] and their investment return reports released by Credit Suisse,[2] calculate the long-term equity risk premiums for different countries, including Russia,

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

[2] *Dimson E., Marsh P., Stainton M., Wilmot J.* Credit Suisse Global Investment Returns Yearbook 2009 // Credit Suisse Research Institute, Switzerland. – 2009; *Dimson E., Marsh P., Stainton M., Wilmot J.* Credit Suisse Global Investment Returns Yearbook 2010 // Credit Suisse Research Institute, Switzerland. – 2010; *Dimson E., Marsh P., Stainton M., Holland D., Matthews B.* Credit Suisse Global Investment Returns Yearbook 2011 // Credit Suisse Research Institute, Switzerland. – 2011; *Dimson E., Marsh P., Stainton M., Wilmot J., McGinnie P.* Credit Suisse Global Investment Returns Yearbook 2012 // Credit Suisse Research Institute, Switzerland. – 2012; *Dimson E., Marsh P., Stainton M., Garthwaite A.* Credit Suisse Global Investment Returns Yearbook 2013 // Credit Suisse Research Institute, Switzerland. – 2013; *Dimson E., Marsh P., Stainton M., Mauboussin M.* Credit Suisse Global Investment Returns Yearbook 2014 // Credit Suisse Research Institute, Switzerland. – 2014; *Dimson E., Marsh P., Stainton M., Holland D., Mattenws B., Rath P.* Credit Suisse Global Investment Returns Yearbook 2015 // Credit Suisse Research Institute, Switzerland. – 2015; *Dimson E., Marsh P., Stainton M., Wilmot J.* Credit Suisse Global Investment Returns Yearbook 2016 // Credit Suisse Research Institute, Switzerland. – 2016; *Dimson E., Marsh P., Stainton M.* Credit Suisse Global Investment Returns Yearbook 2017 (Summary Edition) // Credit Suisse Research Institute, Switzerland. – 2017; *Dimson E., Marsh P., Stainton M.* Credit Suisse Global Investment Returns Yearbook 2018 (Summary Edition) // Credit Suisse Research Institute, Switzerland. – 2018; *Dimson E., Marsh P.,*

as the difference between the estimated real return on stocks and the estimated real return on safe (government) bonds. 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.

Fernandez, with a team of co-authors whose composition has been changing from year to year, conducts annual surveys of experts, asking them which premium values and risk-free rates they used in their reviews for the previous year.[1] The experts are grouped into university professors and analysts employed by companies and financial organizations. The data summary published by Fernandez offers a sociological picture of how different specialists perceive the equity risk premiums in one or other country.

The information on Russia is included in the surveys for the period from 2012 through 2019, thus making it possible to obtain a certain historical perspective and follow the changes in the researchers' assessments. It is noteworthy that according to the surveys, in almost every country the premium varies very broadly. Thus, for example, in 2012, according to a survey of 70 experts, the average equity risk premium on Russian stocks was 7.6%, the estimates falling within a range of 2.7% to 25.0%. In 2019, according to 30 experts' answers, the average premium was 8.5%, and the range narrowed to 5% to 10.1%. This result indicates that, in spite of the current trend in the scientific/academic and business communities towards a more uniform assessment of the size of equity risk premiums, there is still no common understanding of their size and calculation methods.

Dimson, Marsh and Staunton, in their book 'Triumph of the Optimists'[2] and subsequent investment return reports published by Credit Suisse[3], calculate the historical stock premium for the majority of developed markets and selected developing countries. Their data have made it possible to compare the long-term returns on investment in stocks and government bonds. The interest rate spreads that they assess can be regarded as performance indicators of public companies in comparison with the returns on government securities.

Stainton M. Credit Suisse Global Investment Returns Yearbook 2019 (Summary Edition) // Credit Suisse Research Institute, Switzerland. – 2019.

[1] *Fernandez P., Aguirreamalloa J., CorresL.* Market Risk Premium Used in 56 Countries in 2011: A Survey with 6,014 Answers. Downloadable in http://ssrn.com/abstract=1822182. – 2011; *Fernandez P., Aguirreamalloa J., Corres, L.* Market Risk Premium Used in 82 Countries in 2012: A Survey. Downloadable in http://ssrn.com/abstract=2084213. – 2012; *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. Downloadable in http://ssrn.com/abstract=914160. – 2014; *Fernandez P., Linares P., Fernandez A. I.* Market Risk Premium Used in 88 Countries in 2014: A Survey with 8,228 Answers. Downloadable in http://ssrn.com/abstract=2450452. – 2014; *Fernandez P., Pershin V., Fernandez A. I.* Discount Rate (Risk-Free Rate and Market Risk Premium) Used for 41 Countries in 2015: A Survey. Available at: https://ssrn.com/abstract=2598104. – 2015. *Fernandez P., Ortiz A., Fernandez A. I.* Market Risk Premium Used in 71 Countries in 2016: A Survey with 6,932 Answers. Available at: https://ssrn.com/abstract=2776636. – 2016; *Fernandez P., Pershin V., Fernandez A. I.* Discount Rate (Risk-Free Rate and Market Risk Premium) Used for 41 Countries in 2017: A Survey. Available at: https://ssrn.com/abstract=2954142. – 2017; *Fernandez P., Pershin V., Fernandez A. I.* Market Risk Premium and Risk-Free Rate used for 59 Countries in 2018: A Survey. Available at SSRN: https://ssrn.com/abstract=3155709. – 2018; *Fernandez P., Martinez M., Fernandez A. I.* Market Risk Premium and Risk-Free Rate Used for 69 Countries in 2019: A Survey. Available at SSRN: https://ssrn.com/abstract=3358901. – 2019.

[2] *Dimson* et al. 2002.

[3] *Dimsom* et al. 2009–2019.

According to their methodology, the equity risk premium is calculated as a geometric[1] mean 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. Dimson et al. disclose the data for Russia only in the reports published by Credit Suisse from 2014 to 2018; for other years, no data is available. The equity risk premium for Russia is available for two periods: the longer one from 1995 to the year of publication of each of the reports, and the shorter one starting from 2000, which does not include the crisis period 1998–1999. The equity risk premium for Russian stocks vs. long-term government bonds, calculated from 2000 onwards, turns out to be negative: for the period 2000 to 2016, it amounts to -3.7%, and for the period 2000 to 2012, to just -6.7%. When compared with short-term government bonds, the premium is positive, amounting to 3.2% in 2000–2016, and to 5.1% in 2000–2012. Thus, we can conclude that long term government bond yields in Russia are significantly higher than short-term government bond yields.

In the analysis of investment projects, the most popular approach to estimating equity risk premiums is that suggested by Damodaran.[2] The equity risk premiums calculated using his method are based on forecasts of future returns and estimated market expectations. These indicators are most often used by investors in calculating the cost of capital and predicting the cost-effectiveness of future investment projects. The resulting estimates, as a rule, are customized depending on the specific method applied in the calculations; moreover, the method itself is never fully disclosed.

The equity risk premium, according to Damodaran, is made up by a 'base premium for mature equity market' plus the cost of 'country risk' for the stocks issued in a given country. The base premium is calculated as the discount rate for cash payments to shareholders in the form of dividends and share buybacks that grow over the medium term of 3–5 years according to market expectations (based on the consensus forecasts data services, e.g., Bloomberg, Thomson Reuters, etc.), and thereafter, at a growth rate equal to the current risk-free rate on 10-year government bonds in the base country. The country risk premium in this approach is determined by using the spreads between 10-year government eurobonds issued in a given country and the bonds denominated in the same currency issued in the base country, or by using CDS spreads. Additionally, the methodology is further optimized by the inclusion of the coefficient of relative volatility of stocks compared with that of bonds traded in the domestic market of a given country, whereby the country risk premium can be adjusted by the relative risk of a given stock.

Fig. 11 presents summary data on all the equity risk premiums in the studies and reviews discussed here. Besides, the chart is augmented by data published by Bloomberg, where the premium is calculated as the difference between the return of a stocks index and the yield to maturity of 10-year ruble-denominated government bonds. Such a benchmark is extremely simple to build; it does not fully explain the premiums, but is often used in practice as a guide for investors.

The data of Dimson et al. represent the geometric mean of the return on stocks over the period 2012–2016 for the time horizon from 2000 to each reporting date: compared with the

[1] (1+Premium)=(1+return on shares)/(1+bond Yield) in annual terms.
[2] *Damodaran A.* (2019). Equity Risk Premiums (ERP): Determinants, Estimation and Implications – The 2019 Edition. Available at SSRN. URL: https://ssrn.com/abstract=3378246.

return on long-term bonds, it is negative, i.e. the average stock market return for that period is less than that on government bonds, and it is positive compared with that on short-term government securities. For the period after 2017, the data is no longer publicly available. The equity risk premiums based on the other four indicators (by Damodaran, Fernandez and Bloomberg), as a rule, differ little from one another. Thus, for example, in 2019, the equity risk premiums declined on 2018: Damodaran's indicators based on bond spreads – from 9.4% to 7.4%, and those based on premiums on credit default swaps (CDS) – from 8.1% to 6.2%; the geometric mean based on expert surveys by Fernandez declined from 8.7% to 8.5%; and those based on Bloomberg estimates – from 9.3% to 6.3%.

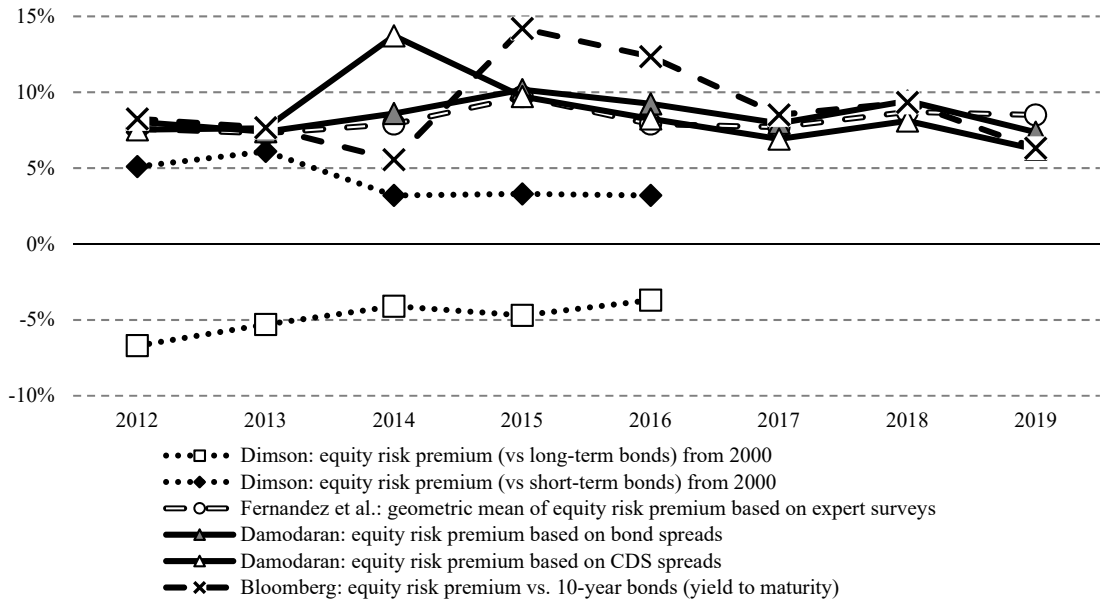


Fig. 11. The equity risk premiums on Russian stocks, based on the most cited international sources, %, 2012–2019.

Source: own compilation based on data from the studies by Dimson et al., Fernandez et al., Damodaran and Bloomberg.

When the relationship between the equity risk premium indicators shown in *Fig. 11* and the cash flows of private investors in foreign investment funds specializing in Russian stocks was tested throughout the period 2012–2019, no significant or interesting dependencies were found, except that the changes in the equity risk premium assessed on the basis of CDS spreads according to Damodaran turned out to be directly proportional to the changes in the relative size of cash flows of private investors in foreign equity funds (*Fig. 12*). The counter-cyclical strategy of these portfolio investors produces a situation where an increased equity risk premium, as a rule, boosts an inflow of investor funds, while a reduced equity risk premium prompts the withdrawal of investor funds.

Considering that foreign sources do not always promptly disclose their assessments of Russian stock risks and do not publish in full their calculation methodology, we decided to publish our own equity risk premium estimates, with due regard for Damodaran and Dimson's methods, but based on our own time data on the movement of financial instruments and their portfolios.

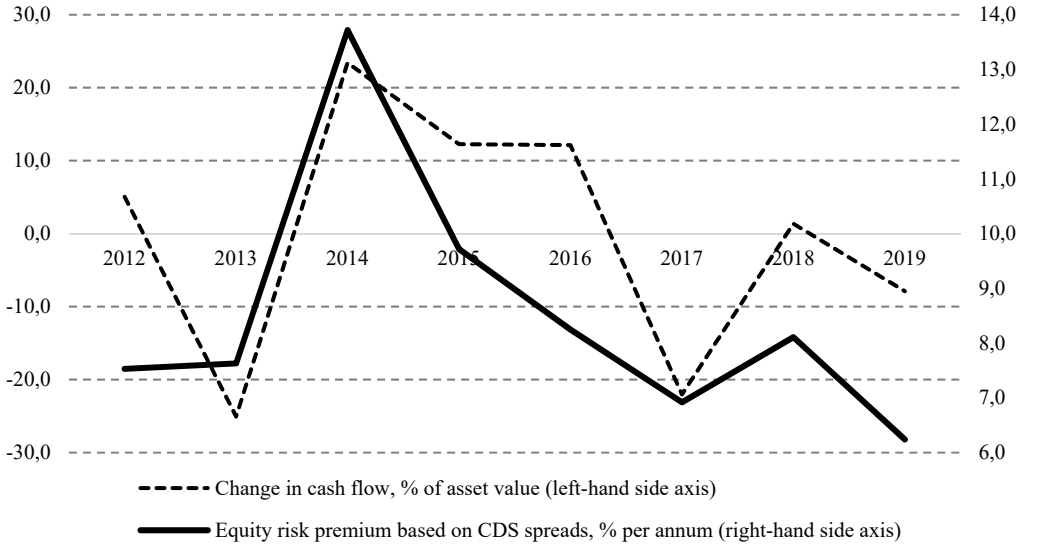


Fig. 12. The equity risk premium based on CDS spreads according to Damodaran (%) and changes in the cash flows of private investors in foreign investment funds specializing in Russian stocks, relative to the asset value of those funds at the start of a reporting year (%), in 2012–2019

Source: own calculations based on data published by Damodaran and Emerging Market Portfolio Research (EMPR).

The first group of consists of new indicators (**projected risk premiums, or PRP)** calculated as suggested by Damodaran.[1] There are four indicators in the group: PRP1 is country risk premium, determined on the basis of yield spreads of RF and US sovereign bonds denominated in US dollars; PRP2 is country risk premium calculated on the basis of credit default swap (CDS) premiums on RF sovereign bonds denominated in US dollars; PRP3 is country risk premium estimated by adjusting PRP1 for the volatility of Russian stocks; PRP4 is country risk premium calculated by adjusting PRP2 for the volatility of Russian stocks. PRP3 and PRP4 are

[1] According to Damodaran (2019), the forecast risk premium for Russian stocks is calculated as the sum of the current default spread and the implied risk premium for the base country. The implied premium for the base country (USA) is calculated as the rate of return in a two-stage growth model of dividend payouts to investors (dividends + share buybacks), where the first stage lasts 5 years with volatile growth rates adjusted by data in the current consensus forecasts and S & P500 Earnings, and the second stage lasts 'indefinitely' for a long time, with income growth rates equal to the current risk-free rate. Thus, predictive power becomes part of the calculation of the equity risk premium components. The default spread (or country risk premium) can be calculated as the spread between Russian and US 10-year government bonds, or Russia CDS.
The disadvantage of this method of assessing risk premiums and country risks is its reliance on the assumption that country risk premium can be reduced to the differences in government bonds yields, or CDS, relative to a mature equity market. In this connection, the specific stock market properties are not taken into account. Therefore, in our calculations, we introduced the factor of relative volatility of stock returns compared to bond returns. One example of this factor is the ratio between the standard deviations of stocks and bonds. However, the standard deviation of bond returns is not comparable with the standard ratio of annual stock returns. Therefore, a coefficient of variation can be calculated for bonds (normalized standard deviation). After that, relative stock volatility can be calculated as the ratio between the standard deviation of stocks and the coefficient of variation of government bonds. The country risk premium value, calculated on the basis of default spreads, is multiplied by their calculated coefficient of volatility, and then added to the equity risk premium in a mature equity market. Thus, the premium accounts for the additional risk associated not only with the risk of stocks compared with that of bonds in a 'base' developed country, or with country risk, but also with stock volatility in a given financial market.

the indicators that most adequately determine the forecasted value of equity risk premium on Russian stocks.

As shown in *Fig. 13*, during the periods of relative stability in the stock market, the values of all the four indicators of forecasted equity risk premium on Russian stocks become close to each other. In 2019, the equity risk premium estimates shrank on 2018 as follows: PRP1 from 9.43% to 6.65%, PRP2 from 8.95% to 6.68%, PRP3 from 11.38% to 6.95%, and PRP4 from 10.48% to 6.99%. As can be seen from these data, the spreads of all four risk indicators fell within the range of 6.65% to 6.99%, i.e. they were negligible.

However, during crisis periods, the equity risk premium spreads, especially those based on indicators that take into account stock volatility, become quite significant. In December 2018, PRP1 and PRP2 amounted to 19.05% and 19.25%, respectively, while those indicators that were adjusted by stock volatility (PRP3 and PRP4) increased to 33.83% and 34.52%. During another crisis period with an increased ruble volatility (January 2015), while PRP1 and PRP2 stood at 12.39% and 13.11%, respectively, PRP3 and PRP4 rose to 15.34% and 16.46%, respectively.

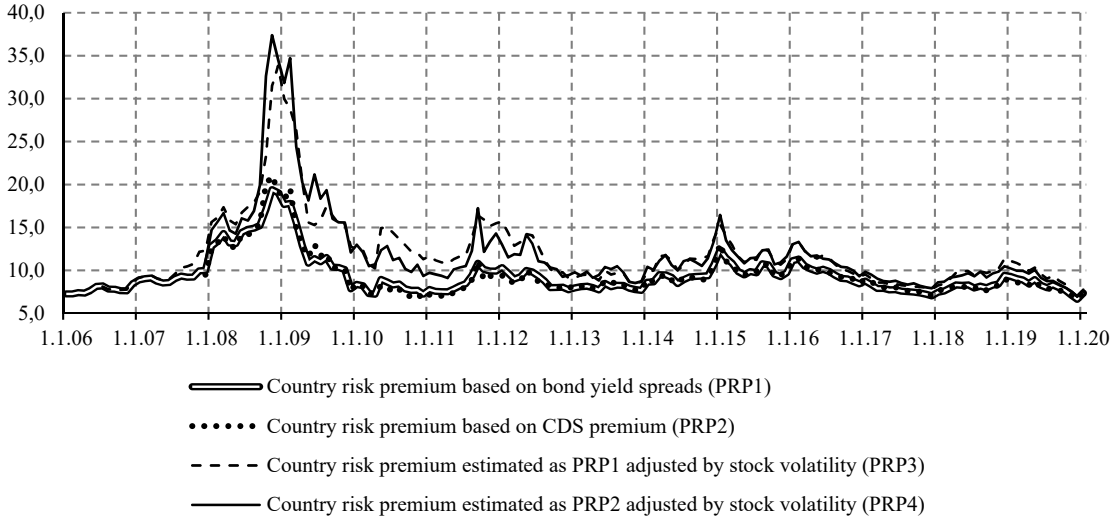


Fig. 13. The current and historical equity risk premiums on Russian stocks, adjusted for their relative volatility in the domestic market, %, 2006 - January 2020

Source: own calculations based on data released by Bloomberg.

The second group of equity risk premium indicators consists of the **historical risk premiums (HRP) on Russian stocks** denominated in US dollars relative to short- and long-term portfolio yields of RF eurobonds. The methodology applied in calculating these spreads, without much detail, was described in the book 'Triumph of the Optimists', and later in the reviews released by Credit Suisse and authored by the same team. The problem with the data for Russia applied by Dimson et al. is that they are publicly available only for a limited number of years, and rely on a calculation methodology that is not entirely transparent. For these reasons, we decided to calculate HRP1 and HRP2 on our own; these are the historical risk

premiums that we calculated on a longer time horizon relative to the long- and short-term yields of RF eurobond portfolios, respectively, and reviewed on a monthly basis (*Fig. 14*).[1]

The calculation of historical equity risk premiums is of practical importance for forecasting the movement of premiums and stock returns, evaluating the cost of capital for companies, as well as using it as a benchmark for the required rate of return on investments. A positive long-term equity risk premium is indicative of the relative safety of long-term investments in stocks compared with a risk-free rate (in practice, the authors have come to the conclusion that stocks most stably outperform bonds over at least a 40-year horizon). A comparison of premiums across many countries makes it possible to draw reliable conclusions as to the feasibility of global or regional portfolio diversification.

Fig. 14 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 risk-free rate) and long-term eurobonds (the most commonly used proxy for the risk-free rate). The premium on short-term bonds is positive and amounts to 5.6% over the 20-year period from 2000 through 2019. Over the shorter periods in 2016–2018, it hovered around 3.5–3.8%, and its surge to the 2019 level was caused by the sharp increase in the stock returns in that year. The premium on long-term bonds has

[1] Essentially, the method developed by Dimson et al. aims at comparing long series of historical data on the returns on stocks and two types (short- and long-term) of government bonds, which are used to calculate their geometric mean for a certain period. 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. It describes the aggregate behavior of markets and the success of long-term investment in stocks over a long period of time (30 years or more). Nevertheless, the authors of the book believe that the expert forecasts of future stock returns and risk premiums rely to a greater degree on exactly such historical estimates, and that the calculations based on empirical data have confirmed the existence of some connections between the historical and future equity risk premiums.

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 of different countries, for example, in US dollar terms. Next, the cumulative return of that stock index is calculated from the start of its monitoring period until the present. One example of such an index is MSCI Russia, which has been followed since December 1994. Accordingly, to calculate the equity risk premium of that index for 2019, its cumulative return for the period 1995-2019 was used, and the premium for 2013 was based on data for 1995–2013.

As a proxy for the risk-free rate, Dimson et al. used both short-term and long-term government bonds. Both approaches have their advantages and disadvantages. 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 (*Dimson et al., 2001, p. 74*). Thus, the authors insist that it is important to calculate equity risk premiums relative to both instruments, because they represent two key alternatives for investors. The benchmark in this case should be the yield of the national eurobond price index denominated in US dollars. After compiling or selecting such an index, the calculation algorithm is similar to that applied to stocks: their effective yield for the longest period is calculated.

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. Probably, for Russia, Dimson used the eurobond index that he had compiled himself, and he does not disclose its composition. In our calculations, we relied on a similar approach and compiled our own short-term and long-term indexes for RF eurobonds, and thus also calculated our own values of historical risk premium for Russian stocks (HRP1 and HRP2).

been negative since 2008 and reflects the fact that after the 2008–2009 crisis, the Russian stock market has never fully recovered. Since 2017, Credit Suisse has removed Russia from its reviews, and so for that period, we replaced the classical calculations by Dimson et al. by our own data. For the period 2000–2019, the premium relative to long-term bonds amounted to -1.2%, which points to a higher investment attractiveness of RF government bonds compared with Russian stocks.

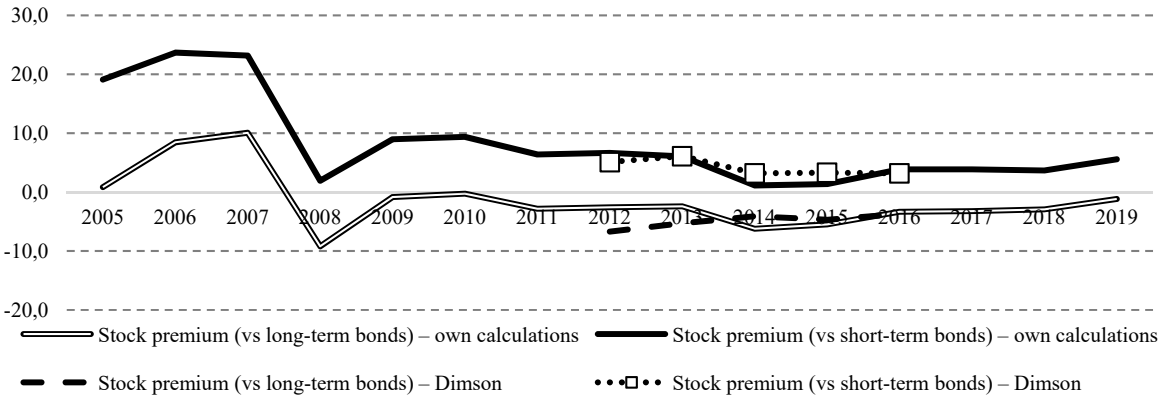


Fig. 14. The long-term historical equity risk premiums
vs short-and long-term eurobonds (in US dollars), 2000–2019

Source: own calculations based on data released by Bloomberg.

As can be gleaned from 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 stock market problems that prevent investors from receiving their expected amount of equity risk premium on their investments in more risky assets.

3.1.3. The fundamental characteristics of the stock market

Fig. 15 shows data on the parameters of returns and risks of 31 stock indexes from 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 2019, the 5-year period from 2015 through 2019, and the 12-year period from 2007 through 2019.

In 2019, the dividend yield on the RTS Index was 44.9%, second only to the Greece stock market index, and several times higher than the average return of 16.5% for a sample of country indexes (*Fig. 15a*). The risk index (standard deviation) of the RTS Index amounted to 17.6%, which was below the sample's average of 22.0%. However, the risk score of approximately 2/3 of all the indexes included in the sample was still lower than that of the RTS Index.

On a 5-year time horizon (2015–2019), the RTS Index also demonstrated some decent results by its return-risk ratio (*Fig. 15b*). Its dividend yield of 14.4% per annum was the highest among all the stock indexes included in the sample; the average return for that group of countries barely reached 2.2% per annum. The risk of the RTS Index for the period under study amounted to 22.5%, which was lower than the sample's average standard deviation of 25.6%. However, 3/4 of all country indexes had a lower risk indicator than the Russian stock index.

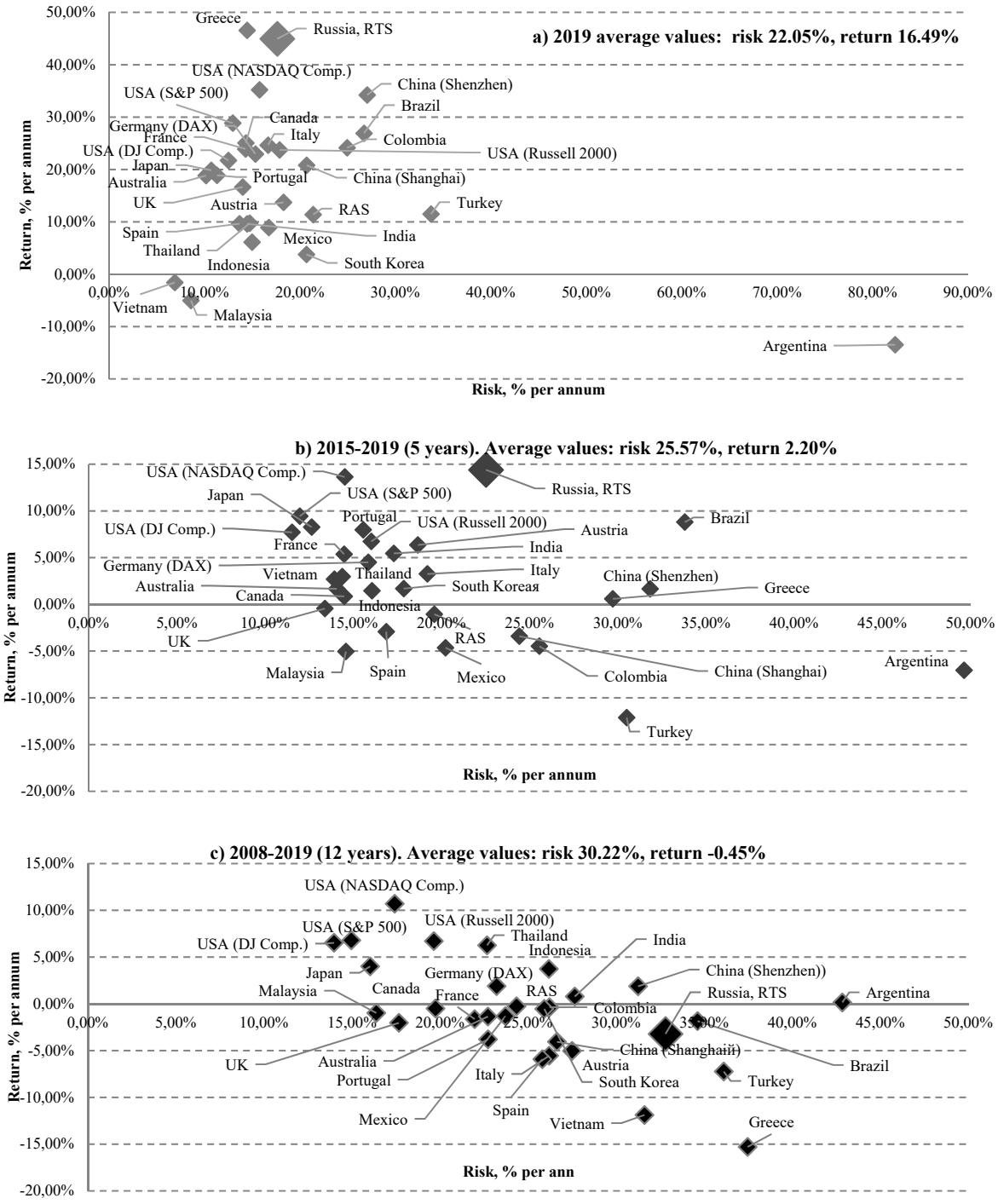


Fig. 15. The geometric mean values of return and risk parameters of 31 national stock indexes for the period from January 2008 through December 2019, in US dollars, on time horizons of 1, 5, and 12 years, % per annum[1]

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

[1] The values of Venezuela's stock index are not shown on the chart due to the scaling limitations of the X and Y axes.

On the 12-year horizon from 2008 through 2019, which encompasses the global financial crisis of 2008, the return-risk indicators of the RTS Index were among the worst in the group of stock indexes included in the sample (*Fig. 15c*). While the sample's average return was 0.4% per annum, that of the RTS Index amounted to -3.2%; the risk ratio of Russian stock portfolio was 32.8%, while the sample's average stood at 30.2%.

Thus, by comparison with the other competing countries, Russian stocks and their index offer the investors higher returns at a moderate risk. However, during global crises, Russian companies 'spoil' their track record for many years by creating, in the eyes of investors, the image of their stocks as a highly speculative asset, suitable only for relatively short-term investment.

All other conditions being equal, Russian stocks are priced lower than their foreign counterparts, and this underestimation has become a persistent phenomenon. The low price-earnings multiples on Russian equities are not an upshot of some temporary market factors; their causes are rooted deeper and have to do with their inadequate investment attractiveness. As shown in *Fig. 16*, out of the 26 national stock indexes,[1] the price-to-book (P/BV) ratio[2] of the constituent companies of the RTS Index was among the lowest in the world. Although, in 2019, this indicator of Russian companies increased to 1.0, over the 5-year period from 2015 through 2019 its average value was 0.8. According to the period-end results, only companies from Greece demonstrated a lower P/BV ratio.

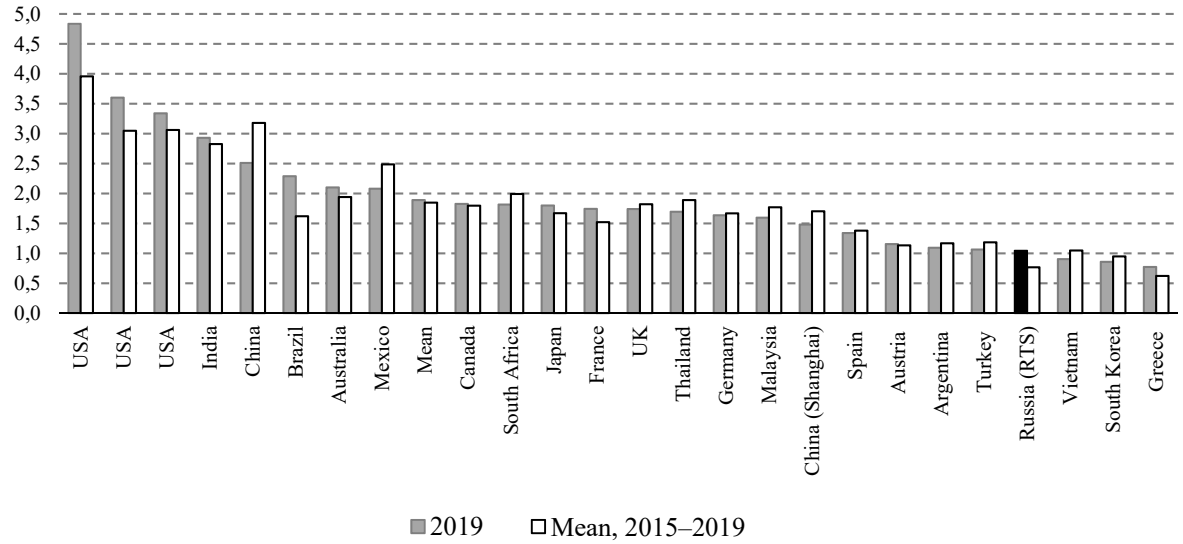


Fig. 16. The financial indicator 'price-to-book per share ratio' as of December 31, 2019 and its mean value for the period 2015–2019 based on 26 national stock indexes

Source: own calculations based on data released by Bloomberg.

[1] In comparison with the sample of 31 stock indexes in the calculations to Fig. 15, the stock indexes of Venezuela, Indonesia, Italy, Colombia, Portugal and the Russell 2000 index of American companies are excluded here and further due to abnormal values of their financial coefficients.

[2] 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, including charter capital, reserves and retained earnings.

The stock prices of Russian PJSCs are underestimated compared to 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. 17*, in 2019, among the 26 national stock indexes, the ROE of 15.3% for the RTS Index was among the highest in the world, second only to the Argentina Stock Market index and the Dow Jones Composite Average. The average ROE of Russian companies in a 5-year time horizon (2015–2019) stood at 11.5%, which was above the mean value of 9.5% in the sample of 26 stock indexes and below that of only 6 stock indexes.

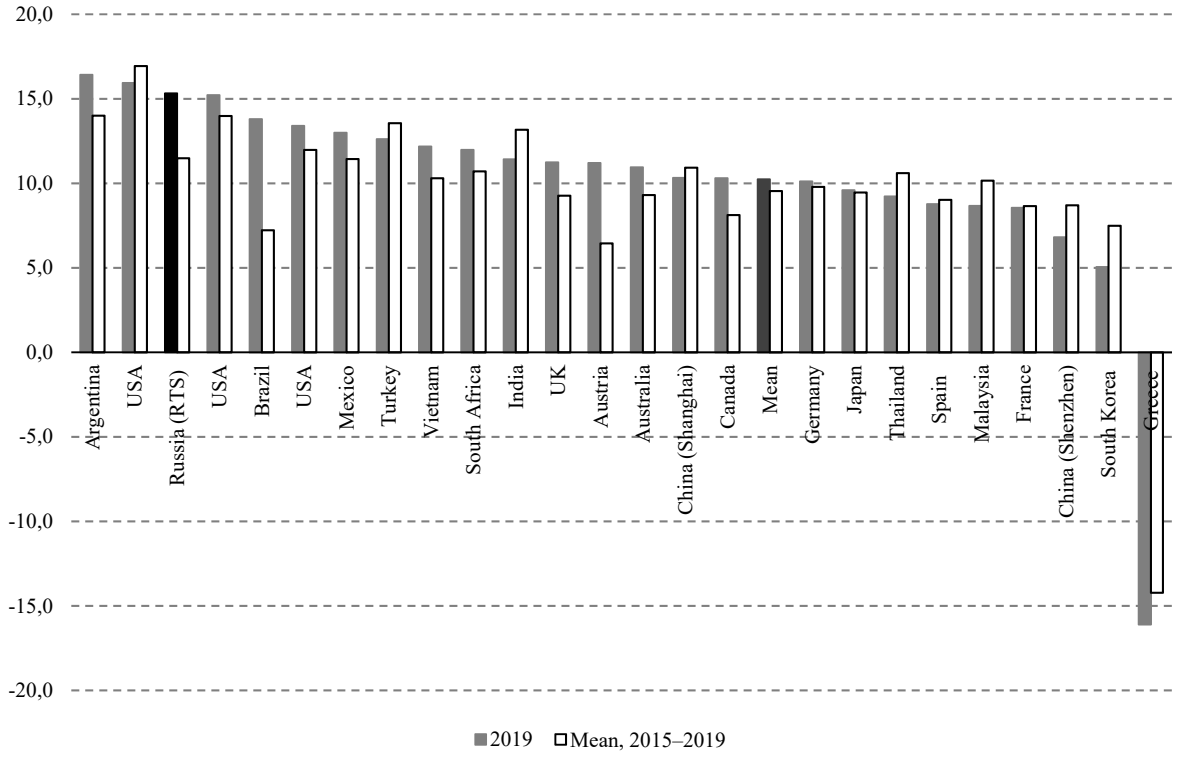


Fig. 17. The financial indicator 'return on equity' (ROE) as of December 31, 2019 and its mean value for the period 2015–2019 based on 26 national stock indexes, %

Source: own calculations based on data released by Bloomberg.

Under the conditions of economic sanctions that restrict a capital inflow from external sources and the relatively high domestic key rate compared with the other economies, the characteristic feature of Russia's biggest public companies is their low debt burden, which has been shrinking over the past 5 years. As shown in *Fig. 18*, in 2019, among the 26 national stock indexes, Russia's RTS index constituent companies had the lowest D/EBITDA ratio of 0.3, compared with the sample's mean value of 3.4. On average over the period 2015–2019, that constituent of the RTS index was also the lowest in the sample, amounting to 0.7 vs the sample's mean of 3.4.

[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.

Thus, the persistently underpriced Russian stocks over the past 5 years alongside their higher returns on equity compared with those observed in many other stock markets, and their lower debt load according to the D/EBITDA ratio, have led us to the assumption that the main factors responsible for the lower prices of shares in Russian PJSC are exogenous and have to do with the general investment climate and some other risks typical of the Russian economy.

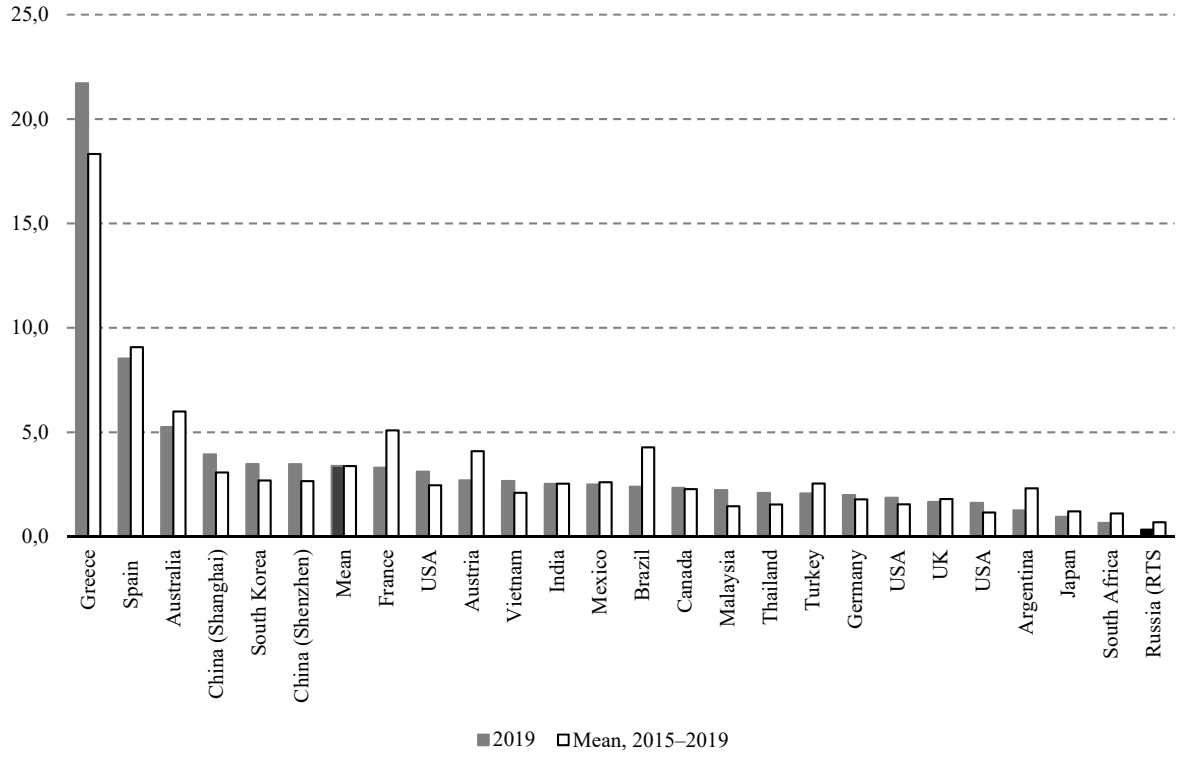


Fig. 18. The financial indicator 'Debt/EBITDA' as of December 31, 2019 and its mean value for the period 2015–2019 based on 26 national stock indexes

Source: own calculations based on data released by Bloomberg.

A positive trend in the domestic stock market observed after the 2008 crisis has been a significant growth of dividend yield on Russian stocks. The dividend yield on the RTS Index increased from 1.5% in Q1 2010 to 6.5% in Q4 2019, or 4.3 times (*Fig. 19a*). In 2019, as well as on average over the 5-year period from 2015 through 2019, the dividend yields on the RTS Index of 6.5% and 5.2%, respectively, turned out to be the highest among all the 26 stock indexes included in the sample (*Fig. 19b*). Over the same periods, the mean dividend yields on those indices were 3.0 and 2.8%, respectively.

According to some studies (see Abramov et al.[1]), the main factors that were pushing up the dividend yields during these 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 (SOE) to make them pay at least 50% of their

[1] *Abramov, A.E., Radygin, A.D., Chernova, M.I., Entov, R.M.* The 'dividend puzzle' and the Russian stock market. Part 2 // Voprosy Ekonomiki. 2020. No 1. P. 66–92; Part 2. // Voprosy Ekonomiki. 2020. No 2. P. 89–85.

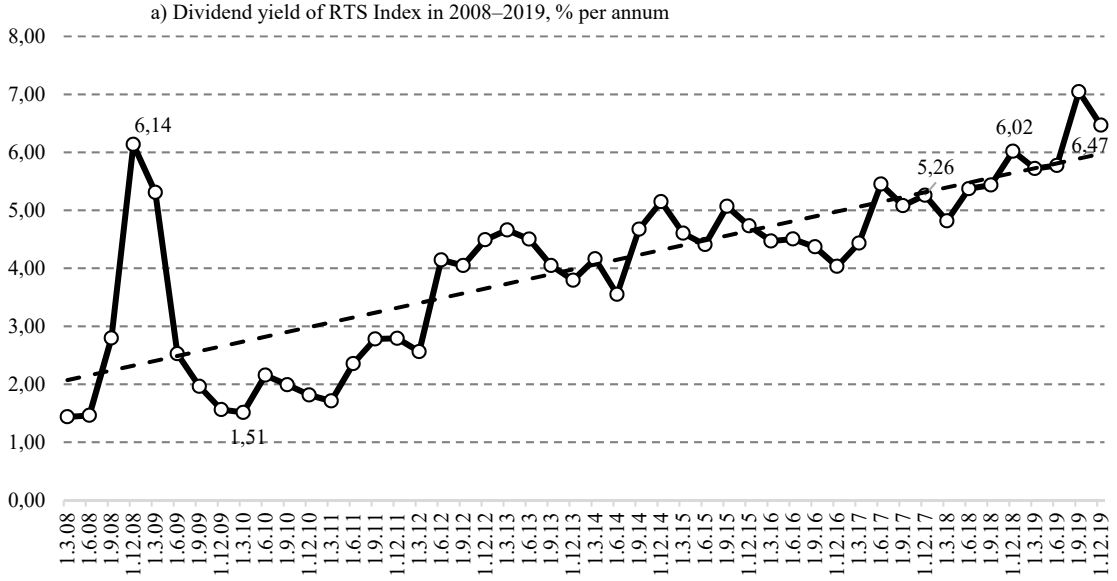
net profit in the form of dividends; and in part, the desire of major stakeholders to receive additional payments from companies in the form of money that they had not invested.

In theory, the dividend yield is considered as the quotient of the dividend payout ratio (as a percentage of net profit) divided by the price-to-earnings (P/E) ratio.[1] This means, for example, that the growth of dividend yield can 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 points to negative consequences for investors.

As shown in *Fig. 19c*, during the 12-year period from 2008 through 2019, the increasing dividend yield on the RTS Index noted in *Fig. 19a* resulted from the combined effects of two trends: growth of the amount of net profit paid out as dividends from 11.6% in Q1 2008 to 34.7% in Q4 2019, and shrinkage of the P/E ratio over the same period from 9.6 to 6.8. Meanwhile, the behavior of these two indicators in 2008-2019 was highly volatile. Thus, the accelerated growth in the dividend yield on the RTS Index on the said 12-year horizon was caused not only by a factor that was positive for investors – an increase in the share of companies' net profit earmarked for dividends, but also by a downward trend in the intrinsic value of their stocks, which was a negative factor.

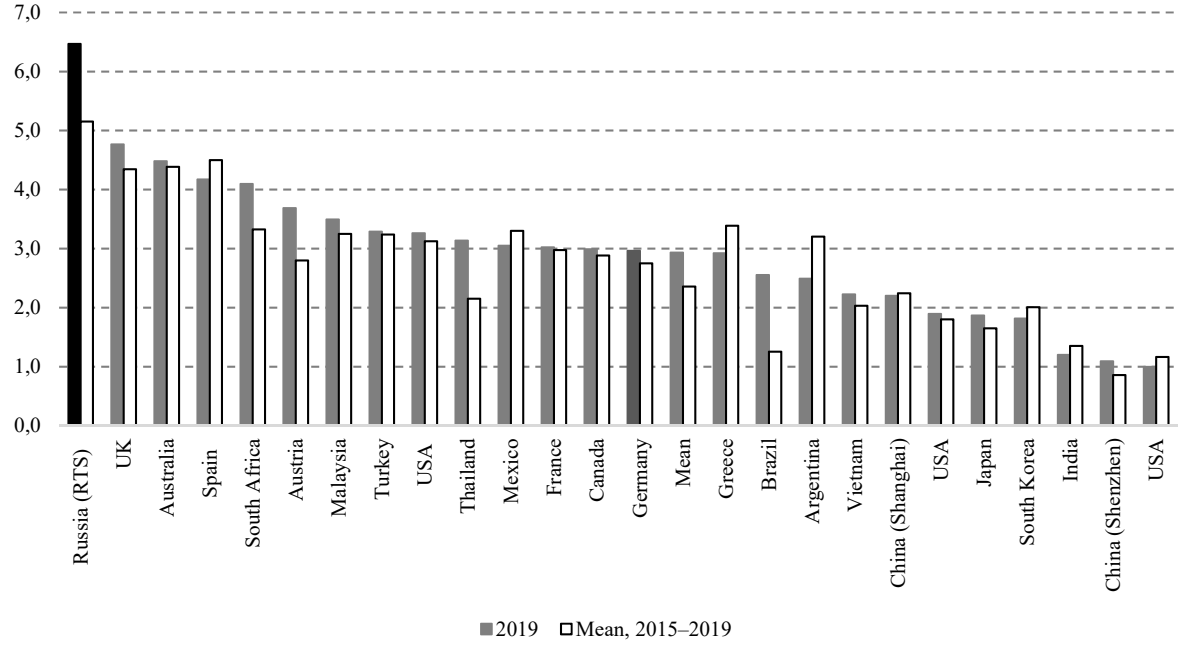
Although over the period 2015–2019, the average annual dividend yield on stocks issued by Russian PJSCs was the highest among the 26 stock indexes around the world (*Fig. 19a*), this was achieved, as shown in *Fig. 19d*, primarily due to the extremely low value of the P/E ratio constituent of the RTS Index relative to the other stock indexes. Over the 5-year period under consideration, the average annual P/E ratio of the RTS Index was the sample's lowest, at 6.6 vs the mean P/E ratio of 20.9 of the other 26 stock indices. At the same time, the RTS average annual dividend payout ratio amounted to 34.7%, which was below 19 out of the other 26 stock indexes, while the sample's mean stood at 50.9%.

a) Dividend yield of RTS Index in 2008–2019, % per annum

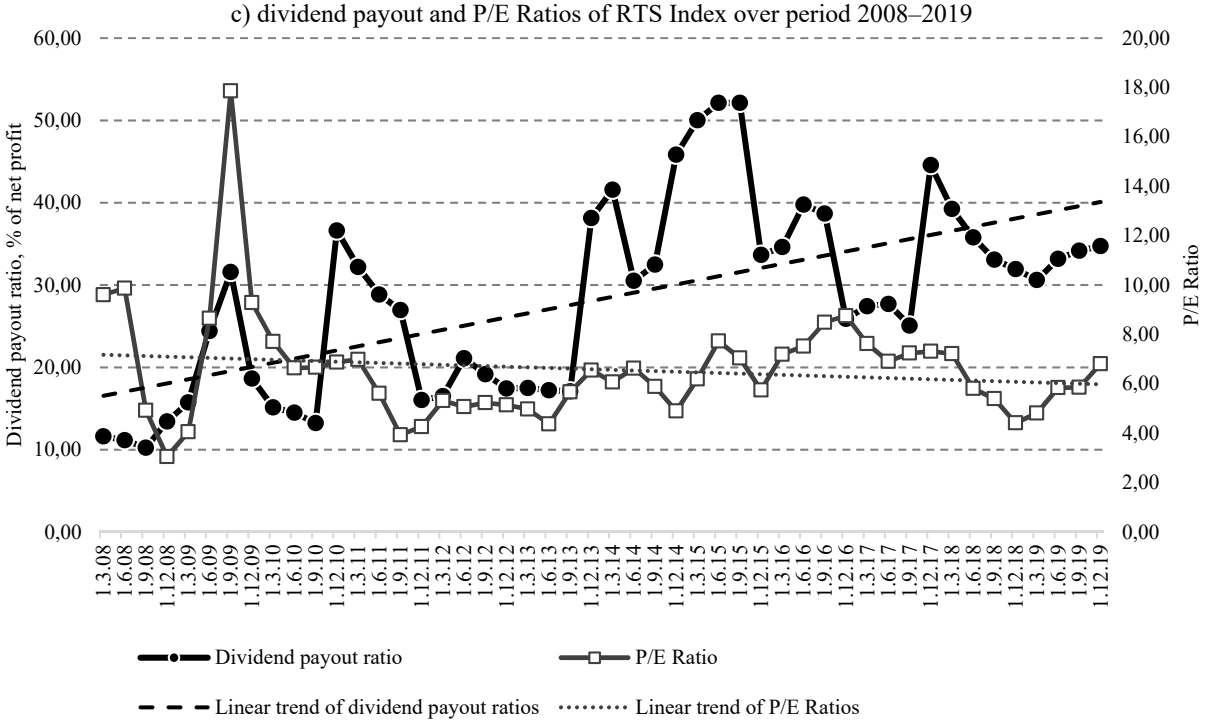


[1] This financial ratio describes the relative amount of companies' capitalization, i.e., for how many years the amount of net profit per share pays off its market price.

b) dividend yields of broad stock market indexes of different countries in 2019 and their mean value over 2015—2019 (5 years), % per annum



c) dividend payout and P/E Ratios of RTS Index over period 2008–2019



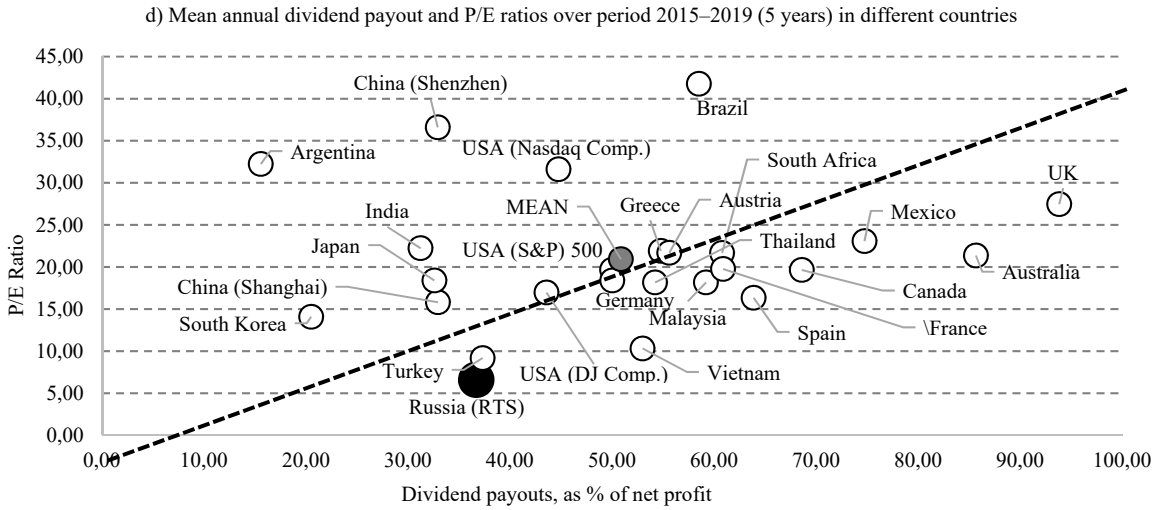


Fig. 19. Analysis of dividend yield on the RTS Index, as % of market stock price, as of December 31, 2019

Source: own calculations based on data released by Bloomberg.

Over the period 2008–2019, the cumulative equity risk premium on Russian stocks[1] amounted to only 9.5% for the MOEX Total Return Index[2], and to 51.5% for our calculated broad market portfolio index (RMRF) (*Fig. 20*). As a risk-free return, we applied the monthly rate of return on individual bank deposits of 181 days to 1 year.

The issues of tradable Russian stocks are definitely non-homogeneous, because they differ by certain criteria that are typical of their issuers. In our classification of stocks, we applied the following criteria: capitalization index; liquidity on the secondary market; P/BV ratio; dividend yield; the size of state-owned stakes; and stock returns over the previous period. A separate stock portfolio was compiled for each of these criteria, to be reviewed once a year. 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 investing strategies, which are widely used by institutional investors all over the world.[4]

[1] The difference between the yield 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) that we compiled using 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 Center for Institutions Analysis and Financial Markets (RANEPA IAES) at https://ipei.ranepa.ru/en/capm–ru. Similar calculations for US stocks are available on the resource supported by US economist Kenneth French, at: https://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html

[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.

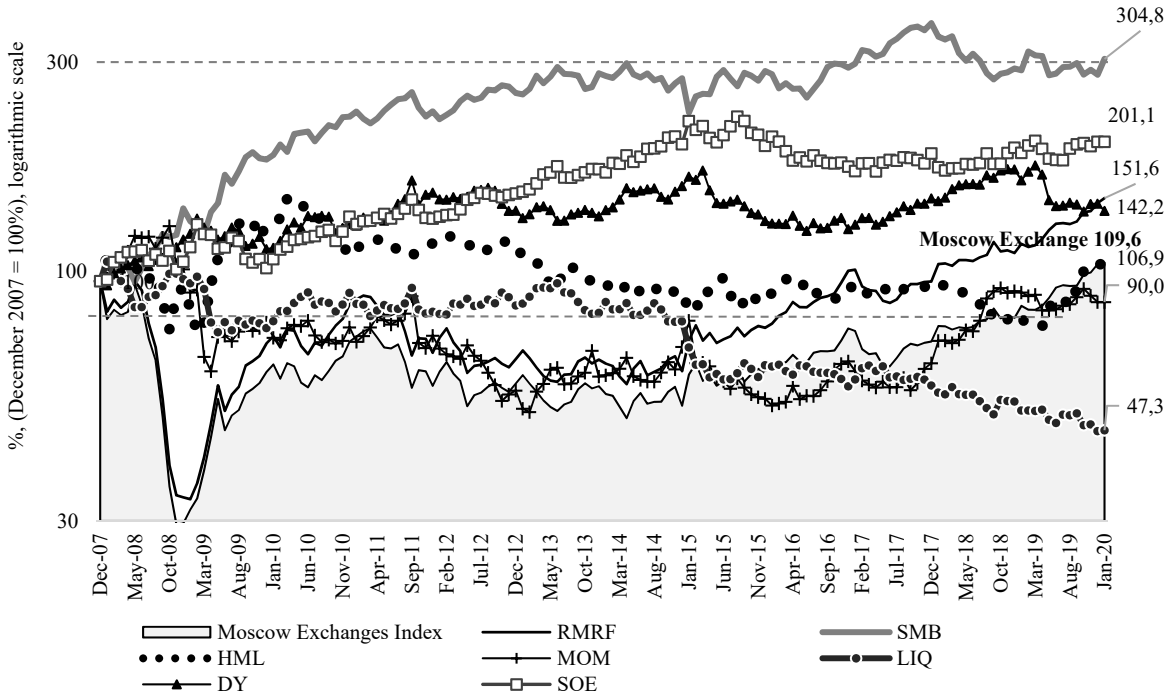


Fig. 20. The cumulative returns on the MOEX Index, the broad market portfolio index (RMRF), and the investment factors that were influencing them from December 2007 through January 2020[1]

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

[1] The MOEX Index: 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: 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). 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. SOE 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 (SOE). 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 charter capital.
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 data in the graph (*Fig. 20*) show that the use of three out of seven criteria for selecting stock issues – the company capitalization index, the presence of the State as a shareholder, and the dividend yield for the previous period – makes it possible for investors to increase the returns on their stock portfolios. Over the period from December 2007 through January 2020, as a result of their orientation to stocks issued by smaller companies and by joint-stock companies with smaller state stakes in their charter capital, as well as to stocks with higher dividend yields, investors received 12-year accrued premiums of 204.8%, 101.1%, and 42.2%, respectively, compared with the premiums on stocks issued by big companies, companies with large stakes held by the State, and stocks with low dividend yields.

At the same time, in 2019, when investing in less liquid stocks and stocks with higher returns, the investors were not compensated with premiums in an amount that they usually expected to receive on low-liquidity financial instruments and when they relied on an 'inertial' investment strategy. No obvious benefits could be derived from investment in value stocks or growth stocks, either.

Thus, the fundamental internal factors that influence the return on investment in stocks placed by specific groups of issuers are beginning to play an increasingly important role in the domestic stock market, which may be a sigh of a transition of this market segment to a higher level of development, more typical of mature capital markets.

3.1.4. The stock market organization

In response to rising stock prices, the capitalization index of Russian companies increased from USD 576 billion in 2018 to USD 792 billion in 2019, or by 37.5%[1] (*Fig. 21*). By this indicator, the Russian market had rebounded to its level of 2013, when it was operating prior to the introduction of economic sanctions. However, the volume of market transactions, on the basis of which the market value of stocks is calculated, is still growing at a slow pace. In 2019, it reached the level of USD 180 billion, which represents an increase of 7.8% on the previous year, but only 74.4% of its 2013 level. This means that a moderate capitalization growth occurred against the backdrop of liquidity stagnation in the stock exchange market in response to an insufficient activity there of non-residents and institutional investors, alongside a freeze of the domestic pension savings system.

For more than 7 years already, starting from 2013, there has been a trend towards reducing the number of listed issuers on the Moscow Exchange (*Fig. 22*). Their number shrunk from 225 in 2018 to 217 in 2019, or by 3.6%. The problem is not that one or other issuer is struck off the exchange lists, which may happen as a result of a natural process of company reorganization or tightened requirements to listed companies, but that the exchange market is not being entered by new medium-sized and small businesses, and the process of emergence of new national business champions in is not properly realized.[2]

[1] The quantitative parameters of the Russian stock market were evaluated in dollars in order to make it comparable with similar statistics of other countries.

[2] In Q1 2020, in the framework of business support measures, the government compiled a list of 646 system-forming enterprises, which it would be ready to help in the first place. The support of such companies is a timely and important step; however, interestingly, 66% of those companies were not listed on the Moscow Exchange, which points to difficulties in assessing their performance and transparency. Probably, in the future, the condition for placing big companies on a government support list could be their listing on the stock exchange, because then it would be easier to monitor in a transparent and efficient manner the government support measures provided to them.

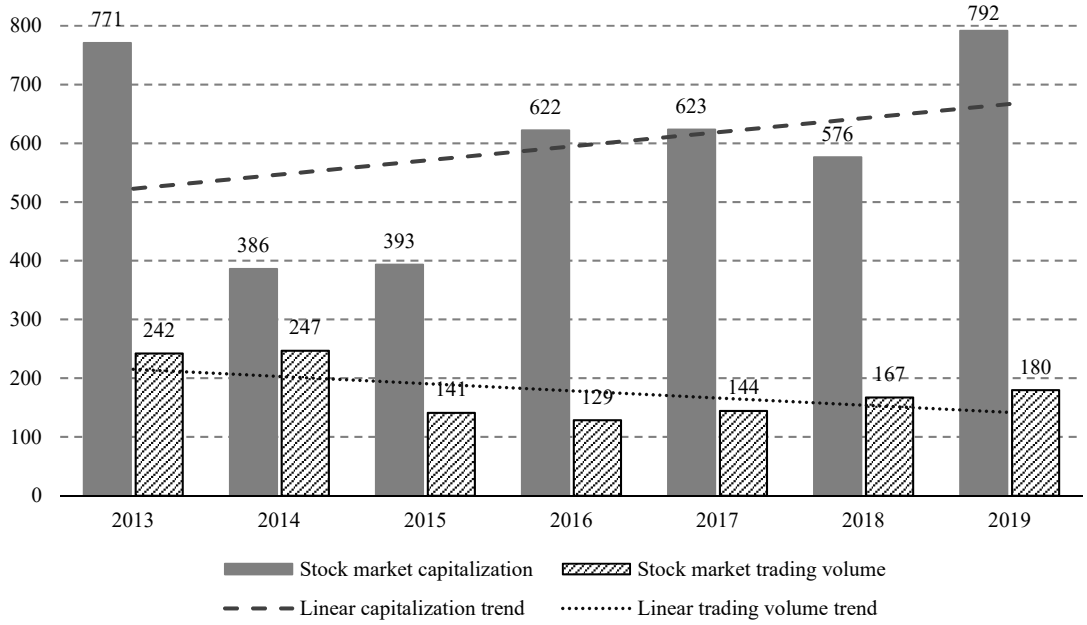


Fig. 21. The capitalization and volume of market stock transactions[1] on the Moscow Exchange in 2013–2019, billions of USD

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

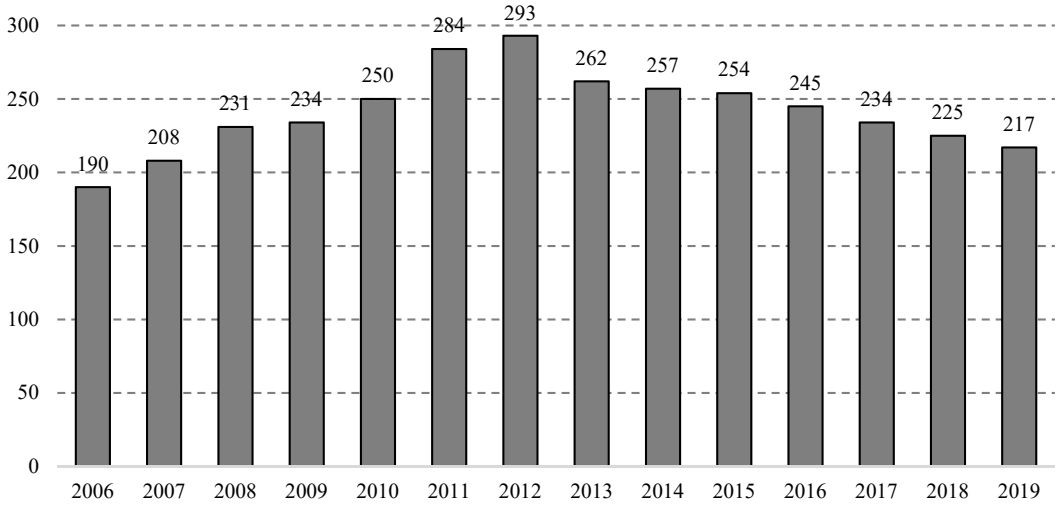


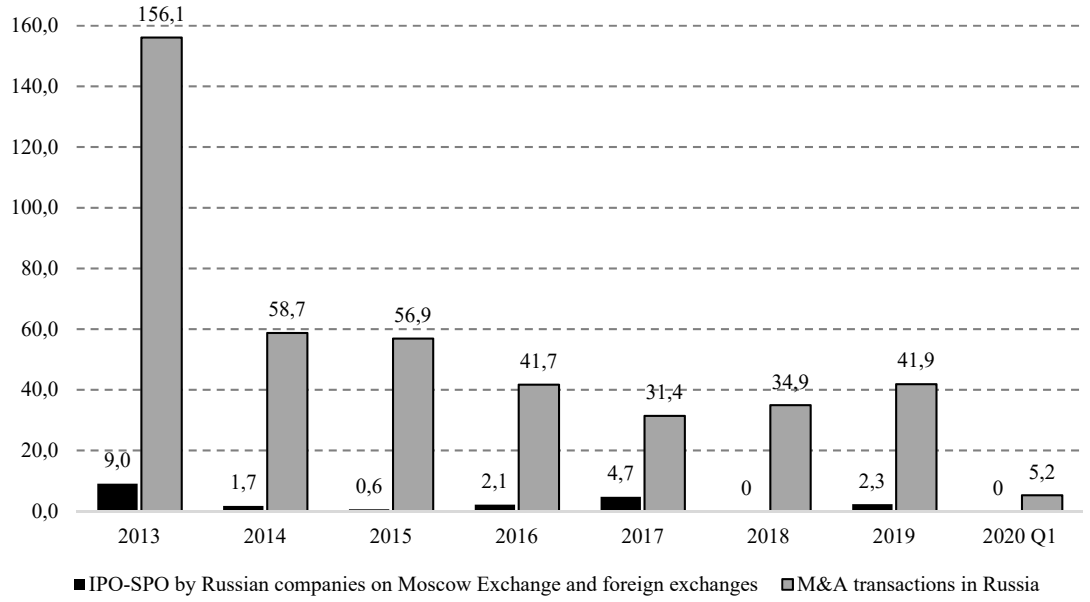
Fig. 22. The number of companies listed on the Moscow Exchange in 2006–2019[2]

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 2009–2019 released by the World Federation of Exchanges (WFE).

[1] Market transactions are understood as the transactions concluded during an anonymous auction on the Moscow Exchange.
[2] The figures for the period 2006–2011 are based on the listing data released by the MICEX; for the period 2012–2019, on the listing data released by the Moscow Exchange PJSC.

In 2019, the statistics on public stock offers and M&A transactions participated by Russian companies, i.e., the indicators of the domestic stock market performance in terms of attracting investment and redistributing the ownership of stakes in companies, somewhat improved (*Fig. 23*). While in 2018 no IPO-SPO stock market transactions[1] with the participation of Russian companies took place on the Moscow Exchange or foreign exchanges, in 2019 several such deals were closed, mainly in the form of SPOs on foreign exchanges, to the total value of USD 2.3 billion. The only classic IPO in 2019 was the initial public offering, on the Nasdaq stock market in the USA, of shares in HeadHunter, a Cyprus company registered in Cyprus, which carried out the bulk of its activities in the Russian Federation, to the value USD 220 million. The total volume of IPO-SPO transactions in 2019 was 3.9 times lower than the corresponding index for 2013, which stood at USD 9.0 billion.

The value of completed M&A transactions increased from USD 34.9 billion in 2018 to USD 41.9 billion in 2019, or by 20.0%. However, in spite of this growth, the current volume of mergers and acquisitions is still significantly below its 2013 level, when it amounted to USD 156.1 billion, or 3.7 times more than in 2019.



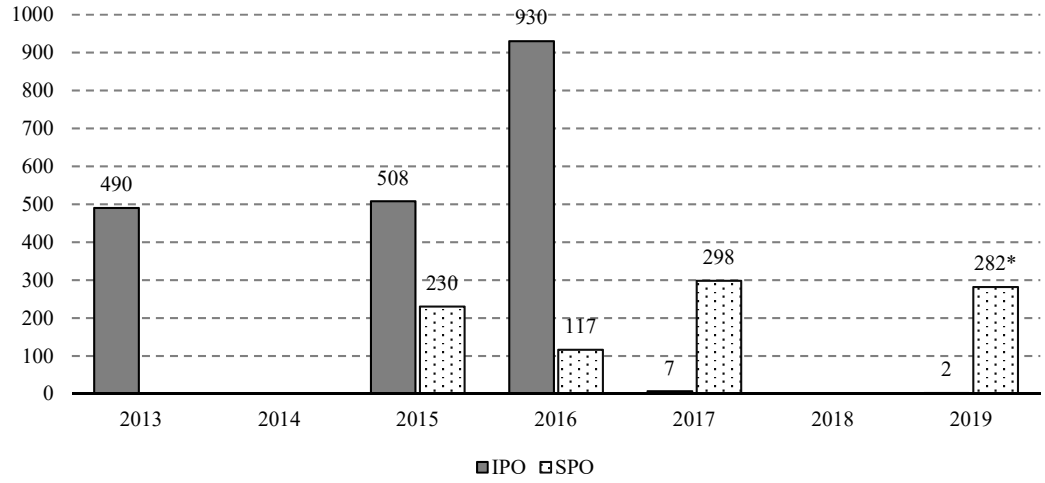
* Russian legal entities and public companies registered in foreign jurisdictions and operating in the Russian Federation.

Fig. 23. The value of IPOs and SPOs by Russian companies on the Moscow Exchange and on foreign exchanges, and the value of mergers and acquisitions participated by Russian companies from 2013 through Q1 2020, billion USD

Source: own calculations based on data released by the World Federation of Exchanges (WFE); Merger.ru (http://mergers.ru/) and Preqveca (http://preqveca.ru/placements/) (sources owned by Cbonds Group).

[1] 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.

Over the past three years, the bulk of IPO-SPOs by companies operating in the territory of the Russian Federation took place on foreign exchanges. According to the World Federation of Exchanges, only IPOs to the total value of about USD 2 million and SPOs (less the sale of two blocks of shares in Gazprom to an unknown buyer) to the value of USD 282 million went directly to the Moscow Exchange in 2019 (*Fig. 24*). In 2018, there were no such stock market transactions at all. Thus, for a variety reasons, which primarily had to do with the unstable investment climate and the lack of market financing sources on the stock exchange, for three straight years from 2017 to 2019, the domestic stock market was not performing one of its key functions – the attraction of additional investment by company through public offering of their stocks.



* In our calculations, the WSE's data on the total value of SPO deals on the Moscow Exchange in 2019 (USD 5,329.7 million) were reduced by the amount equal to the value of big stakes in Gazprom PJSC (USD 5,048 million) sold on March 25, 2019 and November 21, 2019, because of the insufficient transparency of those transactions.

Fig. 24. The value of IPO and SPO transactions on the Moscow Exchange in 2013–2019, million USD

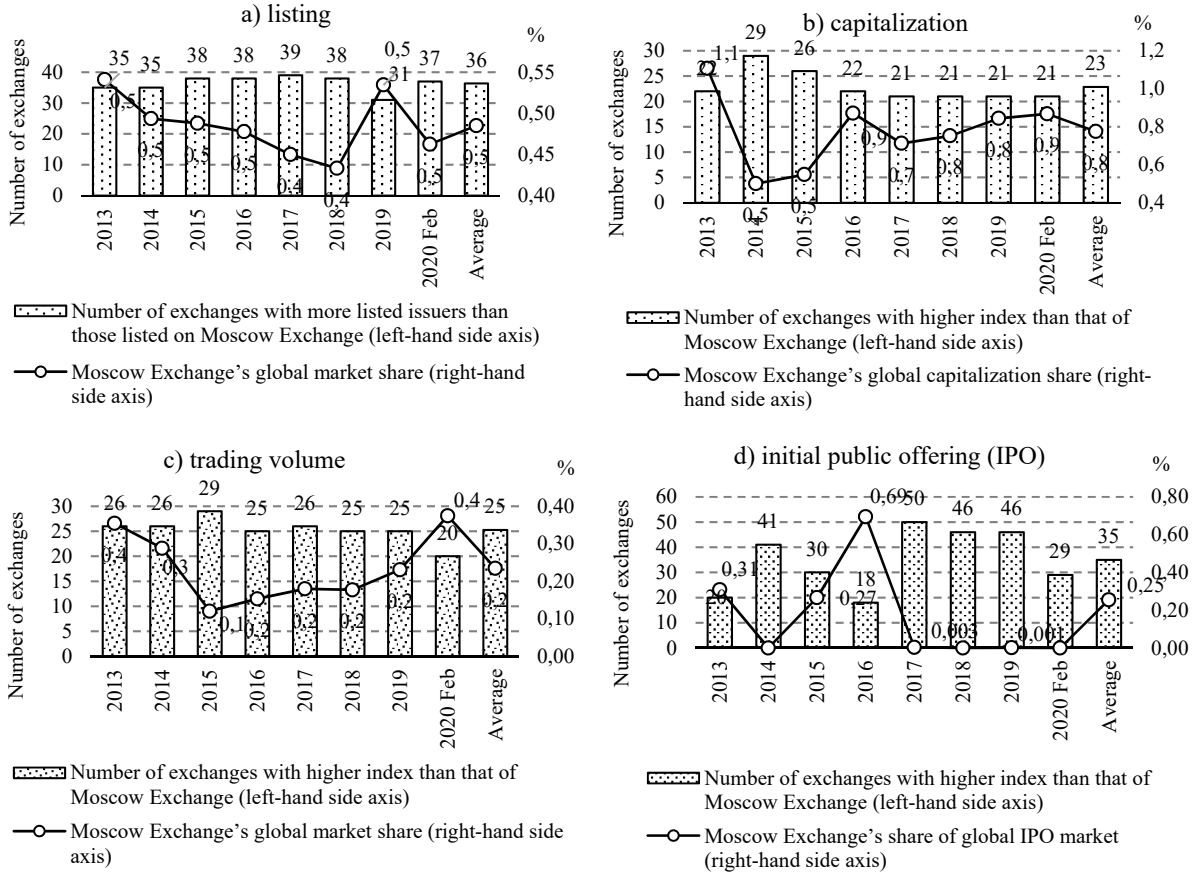
Source: own calculations based on data released by the WSE and Preqveca (URL: http://preqveca.ru/placements/) (Cbonds Group).

A comparative analysis of the Russian stock market's competitiveness has revealed that its scale and performance, expressed as the sum of foreign investment attracted through stock issuance and the value of mergers and acquisitions with the participation of national companies, do not match the size of the Russian economy and the complexity of its goals. Executive Order of the President of the Russian Federation No. 2014 dated May 7, 2018 'On National Goals and Strategic Objectives of the Russian Federation through to 2024', outlined, as one of the national development goals, that of taking Russia into the top five largest economies. In order to achieve this goal in a situation of economic sanctions restricting the attraction of external financing, it will be necessary to mobilize massive sources of domestic savings, including market-based mechanisms for transforming savings into investment resources.

However, the data presented in *Fig. 25* demonstrate that the domestic stock market is unlikely to help significantly in providing solutions to these problems, because it is rather small

compared with the stock markets of many other countries. While Russia seeks to become fifth largest economy in the world, the Moscow Exchange, an average over the period 2013–2019, was behind 36 foreign stock exchanges by the number of listed companies; 23 foreign stock exchanges by the capitalization index of listed companies; 25 foreign stock exchanges by its stock market liquidity; and 35 and 40 foreign stock exchanges by the number of IPOs and SPOs, respectively. On average over the same period, Russia's share in the total global number of listed companies was 0.5%; in the global capitalization index, 0.8%; in the global stock exchange trading volume, 0.2%; in the global value volume of IPOs and SPOs, 0.001% and 0.04%, respectively; and in the global value volume of mergers and acquisitions, 1.25%. In 2019, there were some minor improvements in terms of listing, capitalization, stock market liquidity, and the volume of SPO and M&A transactions. However, these improvements are purely cosmetic, and they do not change the general trends of the domestic stock market's low competitiveness on a global scale and the inadequacy of its potential to Russia's economic goals.

Some serious measures are needed to reform the domestic stock market and to reverse its development and competitiveness trends that prevailed over the period from 2013 through Q1 2020. These measures should be consistent with Russia's strategic economic and social goals outlined in the national projects and other strategic planning documents.



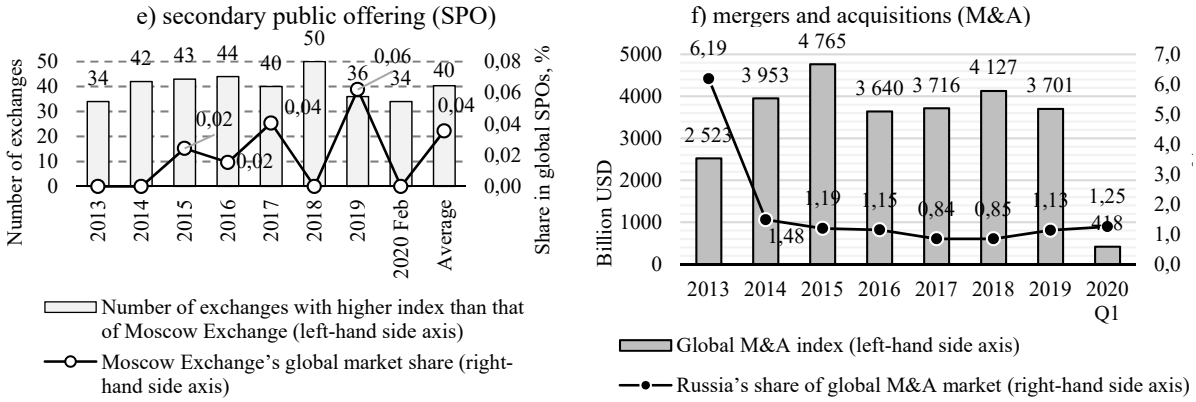


Fig. 25. The competitiveness indicators of the Russian stock market in 2006–2019

Source: own calculations based on data released by the WSE, Merger.ru (URL:http://mergers.ru/) (Cbonds Group), and the Institute of Mergers, Acquisitions and Alliances (IMAA). URL: https://imaa–institute.org/mergers–and–acquisitions–statistics/

The domestic stock market liquidity is mainly sustained by shares in a limited number of companies, and the market cap concentration index, which is already quite high, is still on the rise. The stocks of the top 5 issuers (Gazprom, Sberbank, Rosneft, LUKoil and Novatek) in 2019 accounted for 50.6% of the total combined market cap, compared with 48.7% in 2018; the combined market cap share of the top 10 PJSCs increased from 66.8% in 2018 to 70.1% in 2019; and that of the top 20 issuers – from 80.6 to 82.9%, respectively (*Fig. 26, Table 4*). Unlike other countries where companies belonging to the new economy often become leaders in capitalization, in Russia it is the companies operating in the fuel and energy complex, extractive industries, and Sberbank that continue to be the top ten largest issuers.

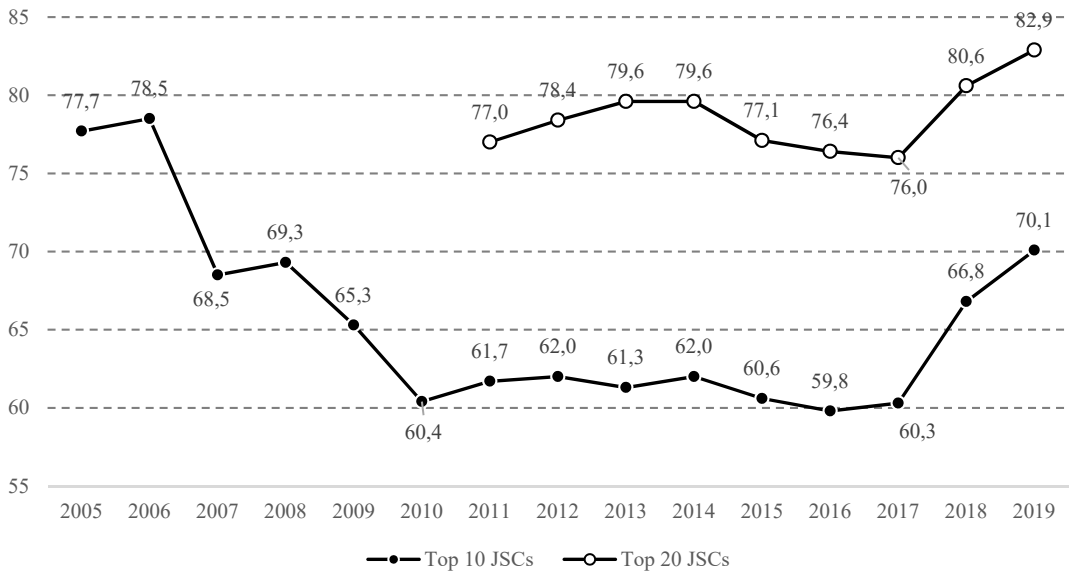


Fig. 26. The domestic stock market cap share of biggest PJSCs, %

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

Table 4

The market cap indices of Russia's top 10 public joint-stock companies (PJSCs) in 2017–2019

	2017			2018			2019		
	Issuer	**Capitalization, billions of rubles**	**Market share, %**	**Issuer**	**Capitalization, billions of rubles**	**Market share, %**	**Issuer**	**Capitalization, billions of rubles.**	**Market share, %**
1	2	3	4	6	7	8	10	11	12
1	Sberbank PJSC	4,859	13.5	Sberbank PJSC	4,535	11.4	Gazprom PJSC	6,077	12.5
2	Gazprom PJSC	3,074	8.6	LUKoil PJSC	4,017	10.1	Sberbank PJSC	5,482	11.3
3	Rosneft PJSC	3,072	8.6	Gazprom PJSC	3,739	9.4	Rosneft PJSC	4,776	9.8
4	LUKoil PJSC	2,823	7.9	Rosneft PJSC	3,629	9.1	LUKoil PJSC "	4,405	9.1
5	NOVATEK PJSC	2,048	5.7	NOVATEK PJSC	3,431	8.6	NOVATEK PJSC	3,834	7.9
6	Norilsk Nickel PJSC	1,701	4.7	Norilsk Nickel PJSC	2,059	5.2	Norilsk Nickel PJSC	3,050	6.3
7	Gazprom Neft PJSC	1,162	3.2	Gazprom Neft PJSC	1,639	4.1	Gazprom Neft PJSC	1,995	4.1
8	Tatneft PJSC	1,035	2.9	Tatneft PJSC	1,588	4	Surgutneftegas OJSC	1,814	3.7
9	Surgutneftegas OJSC	991	2.8	Surgutneftegas OJSC "	959	2.4	Tatneft PJSC	1,668	3.4
10	NLMK PJSC	885	2.5	NLMK PJSC	944	2.4	Polyus PJSC	945	1.9
	Combined cap of all issuers on Moscow Exchange	**35,896**	**100**	**Combined cap of all issuers on Moscow Exchange**	**39,716**	**100**	**Combined cap of all issuers on Moscow Exchange**	48,579	**100**
	Combined cap of Top 5 issuers	**15,876**	**44.2**	**Combined cap of Top 5 issuers**	**19,351**	**48.7**	**Combined cap of Top 5 issuers**	**24,574**	**50.6**
	Combined cap of Top 10 issuers	**21,650**	**60.3**	**Combined cap of Top 10 issuers**	**26,541**	**66.8**	**Combined cap of Top 10 issuers**	**34,047**	**70.1**

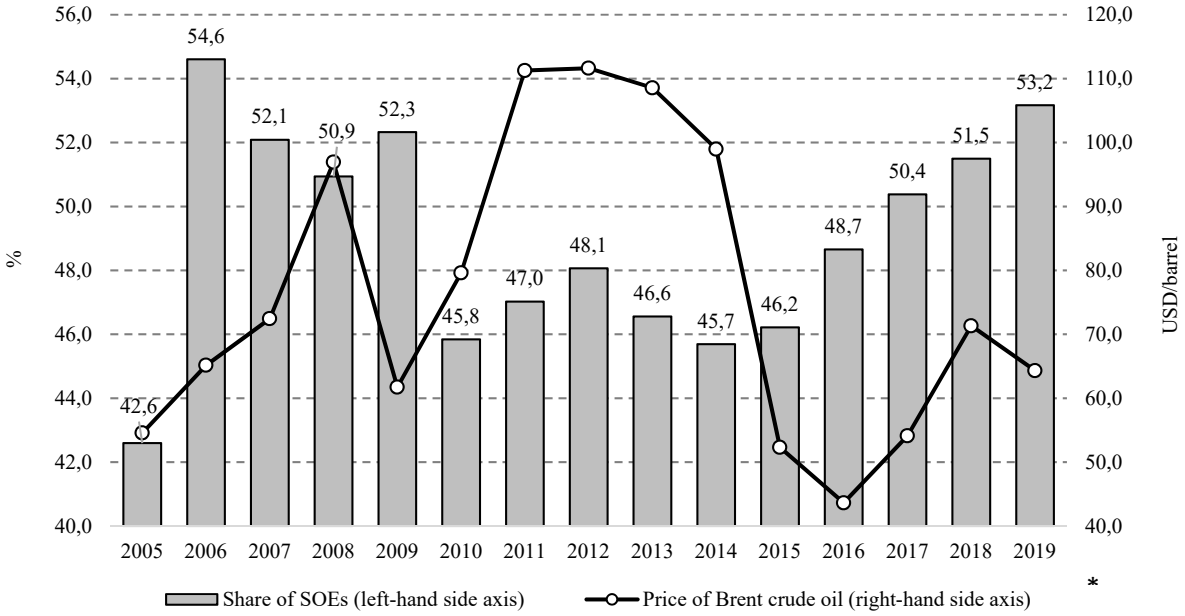
Source: own calculations based on data released by the Moscow Exchange.

Another notable trend of the period 2014–2019 was a steady increase in the market cap index of state-owned companies (SOE)[1], from 45.7% in 2014 to 53.2% in 2019 (*Fig. 25*). This trend was associated with an accelerated market cap growth demonstrated by energy companies, where SOEs prevail, as oil prices rebounded in 2017–2018 after their collapse in 2015–2016, as well as with the favorable situation in the European natural gas market. Besides, there were the factors of increasing attractiveness of shares in Sberbank of Russia for foreign investors and the effect of the acquisition, by the private company TNK-BP, of the state-owned oil company Rosneft (in 2013), as well as the transition of the formerly private companies Bashneft PJSC (in 2014) and Magnit PJSC (in 2018) into the category of SOE. [2] The dwindling share of private companies in the combined market cap may be an indirect sign of a worsening investment climate and a limited access to financing in the banking system, as well as to other sources.

As shown in *Fig. 28*, in the structure of all stock exchange transactions in stocks in 2019, market transactions accounted for only 19.9%, repos – for 79.3%, and the remaining share of 0.8% was taken up by negotiated deals. The economic scheme behind repo transactions in

[1] A company with state participation (SOE) is an organization controlled by the state, acting as the sole owner, owner of a majority or significant minority stake (share in the authorized capital) in the amount of at least 10%.
[2] For further details concerning the role of SOEs in stock market capitalization, see *Radygin M.I.* et al. Privatization 30 years later: the scale and performance of the public sector / *A.D. Radygin, R.M. Entov, A.E. Abramov, M.I. Chernova, G.N. Malginov*. - M.: Delo Publishing House, RANEPA, 2019.

stocks is that brokers use the assets of some of their clients for short-term lending to their other clients, the loans being secured by stocks or money, i.e. short sales[1] or margin transactions.[2] With the help of this market segment, individuals (brokers' clients) can also receive additional short-term loans from the broker and other legal entities. Repo transactions can boost stock liquidity by attracting additional money loans, while at the same time shifting the increased credit risks onto the multitude of private clients-intermediaries, who are not prepared to shoulder these risks. For brokers, the virtually free use of their clients' assets through repo transactions and the possibility to lend these assets to other clients is one of their key sources of income, which accounts for 27% of their revenue base, while their brokerage and other commissions bring only about 16 % of their income.[3]



* The data for 2019 on the market cap share of SOEs are preliminary.

Fig. 27. The relative share of state-owned companies (SOE) in the domestic stock market cap and the per barrel price of Brent crude oil in 2005–2019

Source: own calculations. URL: https://ipei.ranepa.ru/kgu

After the crisis of 2008, the brokerage business model in the domestic stock market, which implied that a traditional intermediary carried on market asset transactions for a commission on behalf of a client, underwent some profound changes, giving way to a new business model that closely resembles the activities of banks in the money market, when an intermediary, on its own behalf and on an ongoing basis, uses the assets of some its clients for lending cash and securities to other clients, its income generated by the spread between the interest paid to the former for the use of their assets and the interest on loans paid by the latter. However, unlike the banking

[1] The sale of unsecured stocks in the hope of making a profit as a result of their reduced market price.
[2] The purchase of securities using borrowed funds in the expectation of an increase in their market price.
[3] Bank of Russia. Brokerage industry. Analytical review, 2017 and Q1 2018 (in Russian). Available at URL: http://www.cbr.ru/finmarkets/files/supervision/broker_18–01.pdf. In its report for Q4 2019, the Bank of Russia, unfortunately, does not disclose the year-end data for 2018 and 2019.

sector, the new brokerage business model and its specific systemic risks have effectively remained outside of the existing special regulation and supervision system. Although the number of individual clients of brokers is approaching 5 million, this system so far has not become subject to state guarantees as a mechanism of protecting client assets, and the discussion of existing proposals on this topic is being held up by the regulator and lawmakers.

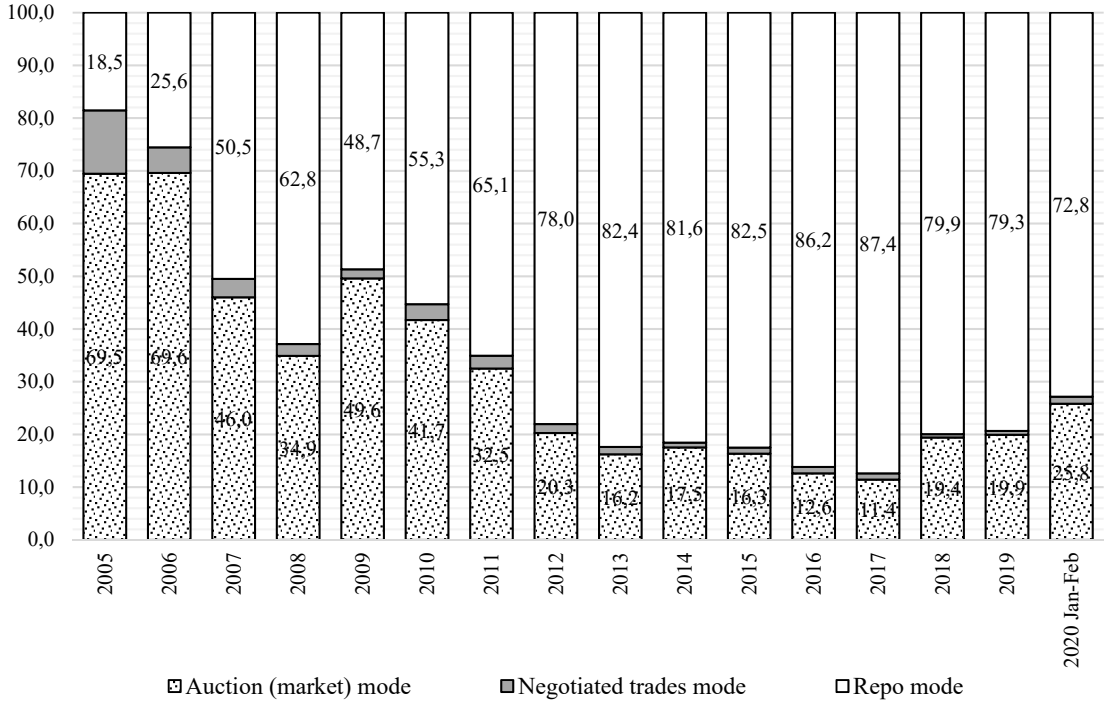


Fig. 28. The structure of trades in shares on the Moscow Exchange's Main Market from 2005 through February 2020, %

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

As shown in *Table 5*, non-residents (foreign investment funds and banks) and resident individuals were the main liquidity drivers in the trades in shares segment on the Moscow Exchange over the period from 2017 through February 2020. The relative share of non-residents in the trades volume increased from 47.5% in 2017 to 48.6% in February 2020; the share of individuals also increased, from 35.3 to 38.0%, respectively. The year 2019 saw a massive inflow of individual traders into the stock market. According to data released by the Bank of Russia, the number of broker's clients increased from 2.2 million in 2018 to 4.3 million in 2019, i.e. almost 2 times.

However, as shown earlier in the comments to *Fig. 25*, the Moscow Exchange by its volume of trades in shares falls behind 25 other stock exchanges in different countries of the world. This can largely be explained by the lower level of development of domestic institutional investors in Russia (private pension funds, administrators of private retirement plans and other savings programs, mutual funds, and other structures) compared with other developed and developing economies. According to data presented in *Table 5*, these institutions currently

account for only 2.0% of the total volume of trades in shares; their tiny market share shrank further, from 3.2% in 2017 to 2.0% in February 2020.

Table 5

The structure of investors participating in trades in shares on the Moscow Exchange's Main Market from 2017 through February 2020

	2017	2018	2019	Feb 2020
Non-residents	47.5	51.2	47.5	48.6
Individuals	35.3	34.7	36.7	38.0
Dealers	8.9	8.2	8.1	6.6
Legal entities	5.1	3.8	4.7	4.8
Trust Managers	3.2	2.1	3.0	2.0

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

3.1.5. The general characteristics of the domestic bond market

In contrast to stocks, bonds played a more significant role as a means of saving,[2] as well as in financing the needs of business and the State. In 2019, the cost of bond loans in Russia was still on the rise, reaching the level of RUB 25.6 trillion, which represents an increase of 16.9% on 2018 (*Fig. 29*). The Bank of Russia bonds (OBRs), issued for the purpose of managing the liquidity level in the banking system, began to play an important role, their outstanding volume in 2019 amounting to RUB 1.9 trillion. Over the year, the value of corporate bonds, including non-market issues, increased from RUB 11.9 trillion to RUB 13.6 trillion, or 14.2%; that of federal bonds (OFZ, GSO, etc.), from RUB 7.7 trillion to RUB 9.3 trillion, or 20.8%. The volume of outstanding regional bonds in 2019 remained practically unchanged relative to the previous year, remaining at the level of RUB 0.7 trillion.

In 2019, the volume of bond placements once again increased after its decline in the previous year (*Fig. 30*). The volume of corporate bond placements sharply increased from RUB 1.6 trillion in 2018 to RUB 2.7 trillion in 2010, or by 68.7%. According to experts, the three key factors behind the growth of new corporate bond issues in 2019 and in January 2020, when companies placed their bonds to the total value of RUB 140 billion, were the reduced Bank of Russia's key rate, lower inflation, and a stronger ruble.[3] Throughout the year 2019, the Bank of Russia reduced the key rate 5 times in a row; as a result, it dropped from 7.75% to 6.25% per annum. In February 2020, the key rate was reduced further, to 6.00%. In December 2019 - January 2020, for the first time in 23 months, there was a shrinkage in the total portfolio of bank loans to the corporate sector, by RUB 180 billion, which some experts explained by the banks' switchover to corporate bonds as their principal mechanism of providing companies with borrowed funds, instead of bank loans.[4] Besides, as bank deposits were becoming less attractive as a result of declining interest rates, biggest banks were trying to keep their hold on their clients' assets by channeling part of their savings kept with banks as deposits into ordinary and structural bonds. The bonds issued by banks and non-banking financial institutions accounted

[1] URL: https://www.moex.com/s2184?fbclid=IwAR1Xl1wazyliXc5_77Q7usAilbS4BwecrqBWQ8XtdlHJ78fvoc0bej FDTLA

[2] According to NAUFOR, the share of assets in brokerage accounts other than individual investment accounts (IIAs) invested in stocks was 28%, and that invested in bonds was 59%; out of the total assets kept in IIAs, the investments in stocks and bonds amounted to 34% each. NAUFOR (2020). Annual study of individual investor activity in the stock market. February.

[3] *Brzezinski D.* (2020). Repayment beautifies debt. RBC+ (thematic supplement to the RBC weekly business newspaper). February 26, No. 17 (3184).

[4] *Builov M. (2020).* Debt goes public: companies replace loans with bonds. The Kommersant. March 2.

for more than half of all corporate bonds placed in 2019.[1] In one of its market reviews for 2019, the Bank of Russia referred to bank bonds as a driver of the development of brokerage services.[2]

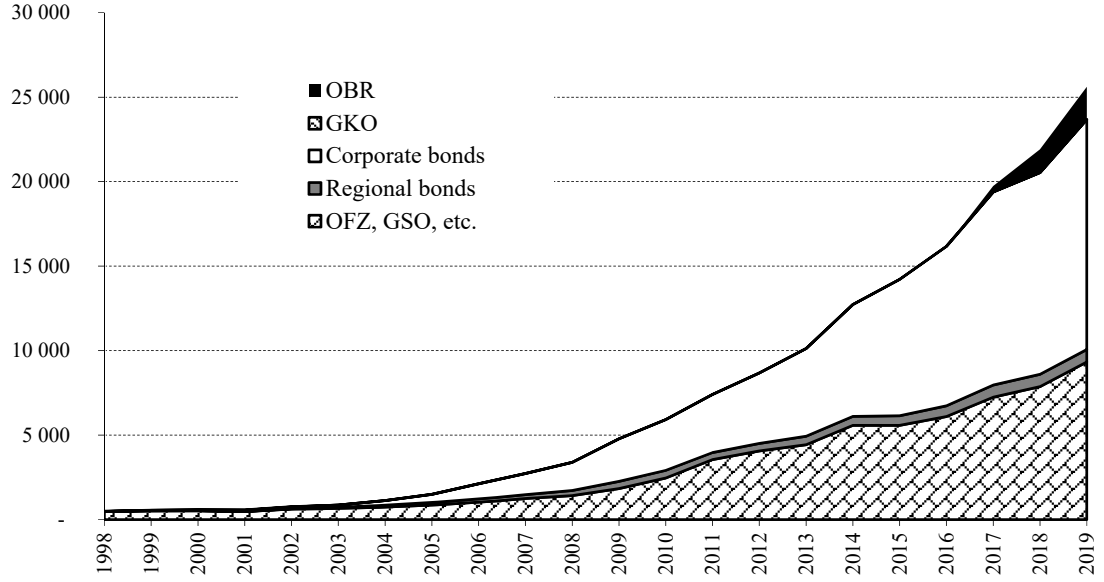


Fig. 29. The outstanding volume of ruble bonds, billion of rubles

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

The volume of federal loan bond (OFZ) issues increased from RUB 1.1 trillion in 2018 to RUB 2.1 trillion in 2019, or by 90.9%. The increasing attractiveness of OFZ to global investors had to do in the main with the reduced country risk premium[3] and the rising yields of ruble bonds on the back of the ruble strengthening against the US dollar.[4] In the situation of a stable reduction in the key rate, the interest of foreign investors was whipped up by OFZ issues with maturities of more than 7 years, because their yield grows faster than that of short-term bonds when the Bank of Russia key rate is reduced. Over the same period, the volume of regional bond issues increased from RUB 84.6 billion to RUB 111.8 billion, or 32.0%. The volume of short-term OBRs issued over the same period increased from RUB 7.0 trillion to RUB 7.9 billion, or 12.9%.

As shown in *Fig. 31*, in 2019, the ruble bond issues were bought in the main by non-residents, who accounted for 28% of their total value. Next came credit institutions (25%), followed by non-governmental pension funds (NPFs) (15%); individuals (11%); insurance companies (7%); non-financial organizations (3%); professional securities market participants and the Pension Fund of the Russian Federation (PFR) (1% each).

[1] *Brzezinski D.* (2020). Repayment beautifies debt. RBC+ (thematic supplement to the RBC weekly business newspaper). February 26, No. 17 (3184).
[2] Bank of Russia (2020). Review of Key Indicators of Professional Securities Market Participants. 2019. P.7.
[3] As stated in the comment to *Figure 13,* in 2019, the amount of the equity risk premium decreased compared to 2018, from 9.43 to 6.65% in terms of PRP1, and from 8.95 to 6.68% in terms of PRP2.
[4] *Lomskaya, T. (2019).* Foreigners once again take their share. The RBC newspaper. November 8, No. 177 (3132).

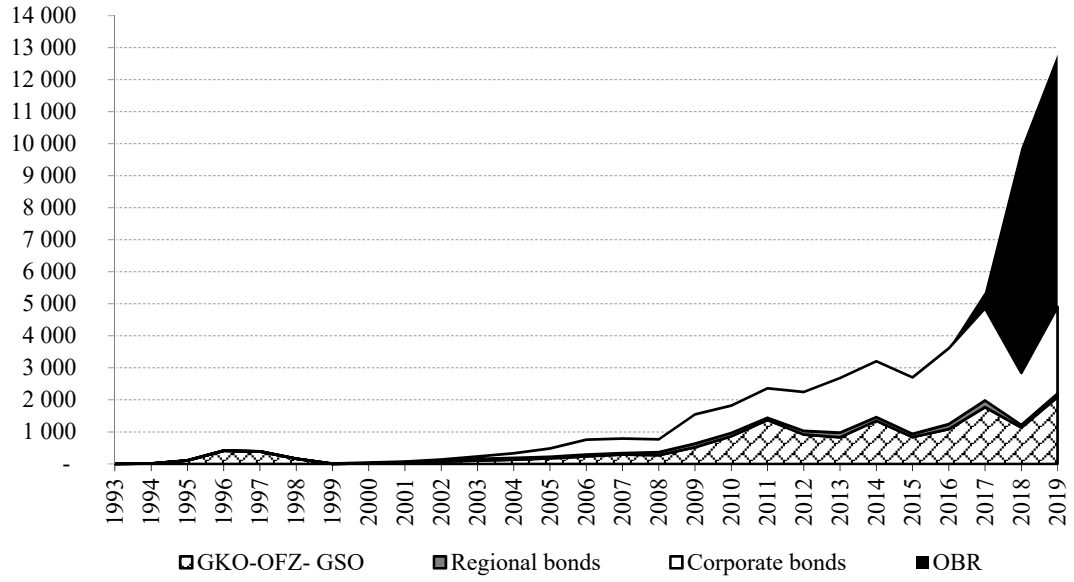


Fig. 30. The value volume of ruble bond issues placed in 1993–2019, billions of rubles

Source: own calculations based on data released by the RF Ministry of Finance and the Moscow Exchange.

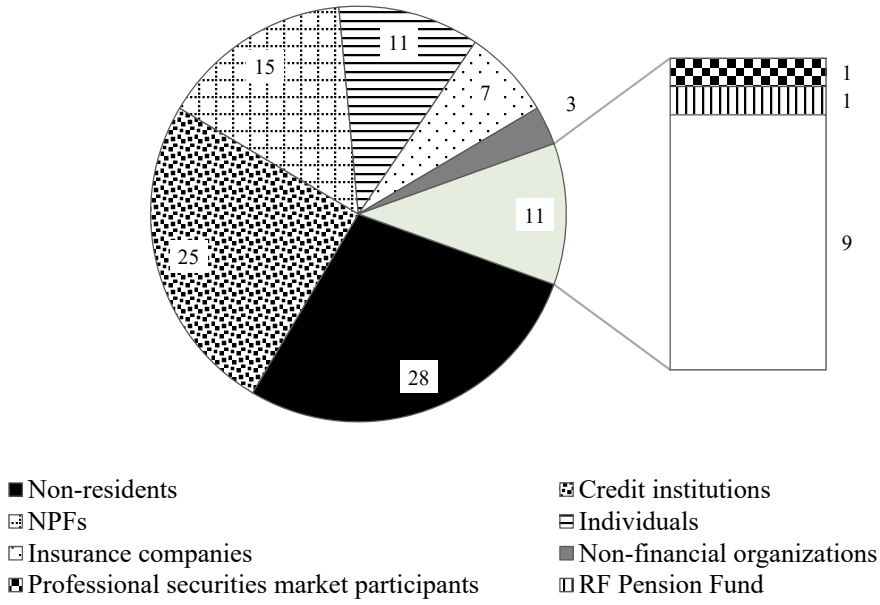


Fig. 31. The structure of buyers of ruble debt securities issued in the domestic market in 2019, %

Source: own compilation based on data released by the Bank of Russia (2020).[1]

[1] Bank of Russia (2020). Financial Market Risks Review. February. P.15.

In 2019, growth in the ruble debt market was taking place against the backdrop of aggravating liquidity problems, created in the main by the inadequately developed domestic institutional investors and major market makers trading in this particular market segment, including the subsidiaries of large foreign financial organizations. The secondary government and corporate bond market in Russia functions primarily as a money market for repurchase transactions, and not as a stock market where long-term investors can rely on various portfolio strategies. In 2019, repos accounted for 94.8% of the value volume of trades in bonds on the exchange, and that index has remained practically unchanged over the past 6 years (*Fig. 32*). In 2019, trades in bonds accounted for only 2.1% of the total trading volume. For reference: in 2005, the relative share of repos was 28.0%, and that of market transactions – 12.8%; the rest (59.2%) was taken up by negotiated trades. The low liquidity of trades in bonds on the exchange makes it difficult to determine their fair market value, without which the risks reflected in the records of bond owners are distorted, and investors are prevented from promptly withdrawing their investments from these assets when they need to adjust their portfolios. All other conditions being equal, the low liquidity of financial instruments makes them less attractive in the eyes of investors and pushes up the equity risk premium.

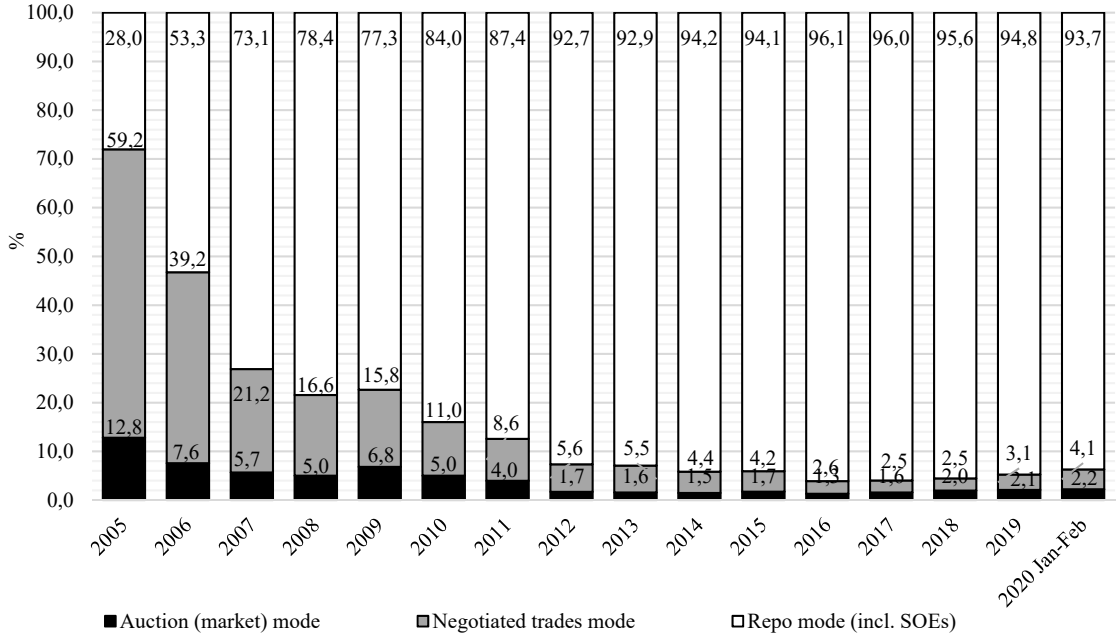


Fig. 32. The structure of trades in bonds on the Moscow Exchange from 2005 through February 2020, %

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

As shown in Fig. 33, the year 2019 saw a continuation of the downward trend in the bond market's value volume that had emerged in the previous year and was not followed by an increase in the market transactions segment's liquidity. The shrinkage of the bond segment in the repo market from RUB 219.9 trillion in 2018 to RUB 192.6 trillion in 2019, or by 12.4%, was not offset by a 15% increase in the volume of trades in clearing participation certificates (CPC) from RUB 46.9 trillion to RUB 54.1 trillion, or by a 14.2% increase in over-the-counter repo transactions with the participation of the RF Treasury and the Bank of Russia through the

National Settlement Depository (NSD) from RUB 17.6 trillion to RUB 20.1 trillion. A likely reason for the shrinkage of the bond segment of the money market in 2019 was the reduction of the programs of bank refinancing through repurchase agreements launched by the Bank of Russia and the RF Ministry of Finance.

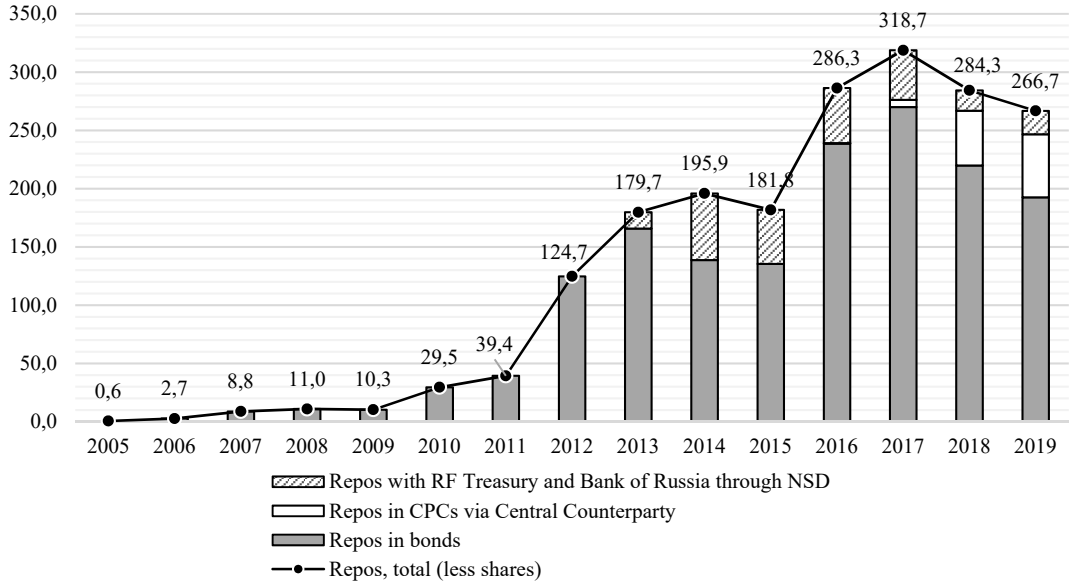


Fig. 33. The value of repos in bonds and clearing participation certificates (CPCs) on the Moscow Exchange in 2005–2019, trillions of rubles

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

3.1.6. The fundamental characteristics of corporate bonds

At the end of 2019, the euphoria of success reigned supreme in the domestic corporate bond market. At the beginning of 2020, the journal 'Expert' described it as follows: 'At the annual Russian Bond Congress, which is traditionally held by Cbonds in December, the managers of the industry's major operators did not bother to hide their high-spirited mood and hinted at the sizable year-end bonuses they were going to receive as a result of fruitful work in 2019.'[1] However, as early as the end of March 2020, Moody's warned that the oil price collapse and a weakening ruble could have a negative effect on the capital of those Russian banks that display high numbers of debt securities on their balance sheets.[2] This situation is a good illustration of the high volatility of corporate bonds and the associated risks for investors.

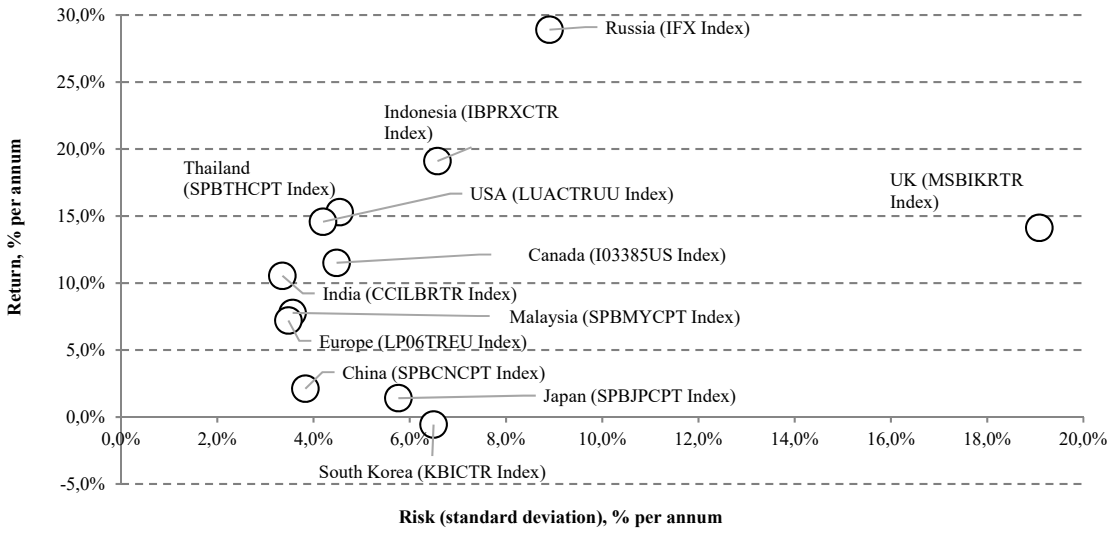
In *Fig. 34*, the return and risk (standard deviation) parameters of the corporate bond indexes of 12 countries, including the Russian IFX Index,[3] were compared on the time horizons of 1, 5, and 12 years over the period 2008–2019. For the sake of data comparability, the historical series

[1] *Remizov, M.* (2020). One wants to get a higher interest. Expert, February 24 – March 1, No 9.
[2] *Kazarnovskiy, P., Koshkina, Yu.* (2020). Securities add to insecurity. The RBC newspaper. March 20. No 33 (3200).
[3] The relatively limited sample size can be explained by the fact that Bloomberg publishes the historical data series of corporate bond indexes only for a rather limited number of countries.

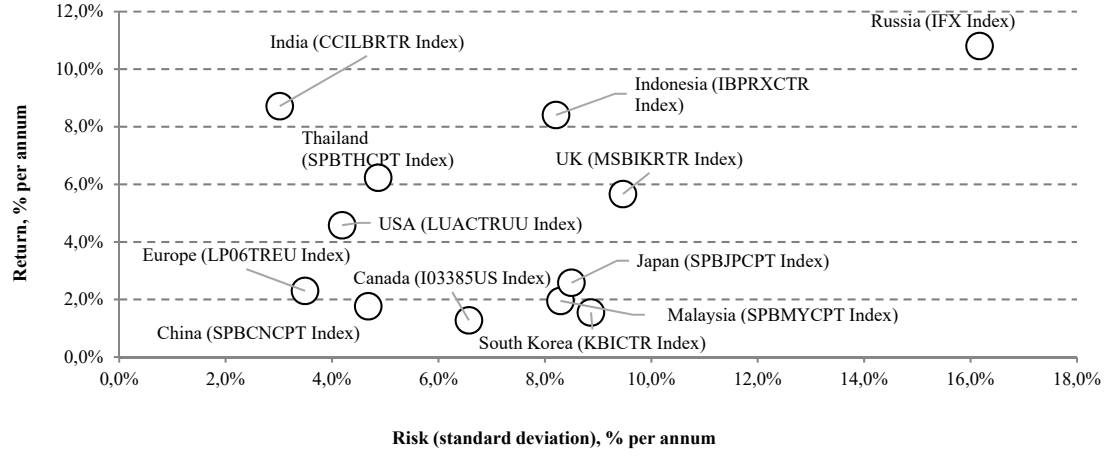
of returns and, consequently, also the risks are adjusted by the movement of the US dollar exchange rate.

On all the time horizons considered in this study, the IFX Index was demonstrating, as a rule, the highest risk level, and the return indicator varied depending on a time horizon, declining as they lengthened. In 2019, the return of the IFX Index was 28.9% per annum, while the sample geometric mean stood at 11.0%; the standard deviation on the Russian bond portfolio was 8.9% vs the sample mean of 6.2%. On the 5-year horizon from 2015 through 2019, the mean return of 10.8% per annum on the IFX Index was also above the sample mean of 4.6%, but the risk index of the Russian bond portfolio was 16.2%, or more than twice the sample mean of 7.1%. On the 12-year horizon from 2008 to 2019, the return of the IFX Index was 1.9% per annum, i.e., significantly lower than the sample mean of 4.3%, and the risk indicator was once again almost 2 times higher than the sample mean – 15.9% vs 7.5%.

a) 2019: mean return 11.00%, risk 6.19%



b) 2015-2019 (5 years): mean return 4.65%, risk 7.19%



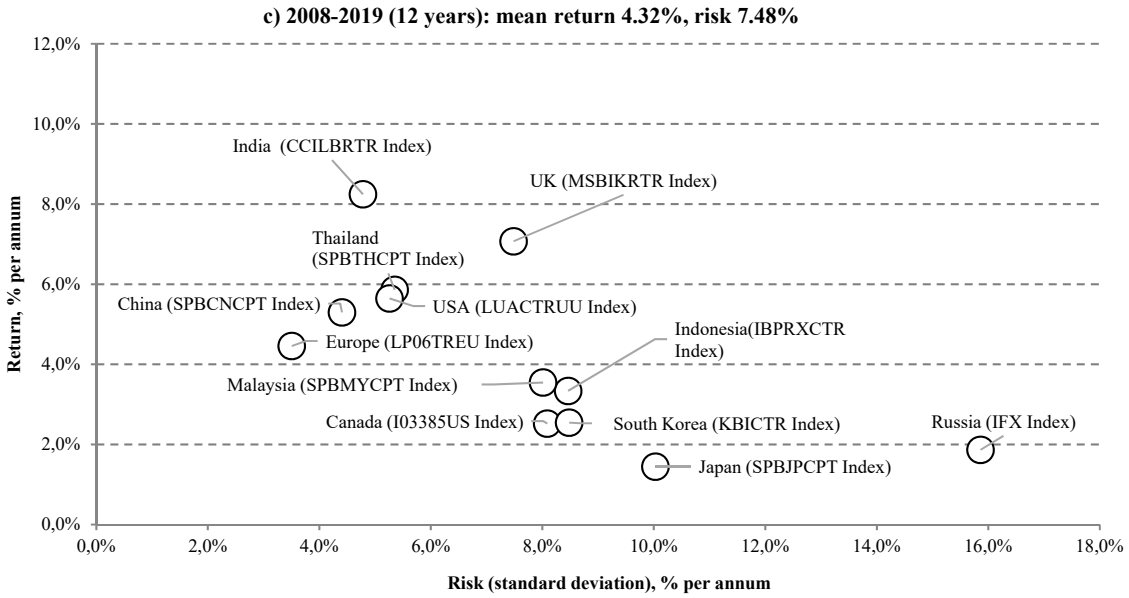


Fig. 34. The geometric mean returns and risks of 12 corporate bonds indexes of different countries[1] from January 2008 to December 2019, on time horizons of 1, 5, and 12 years, % per annum

Source: own calculations based on data released by Bloomberg and Cbonds.

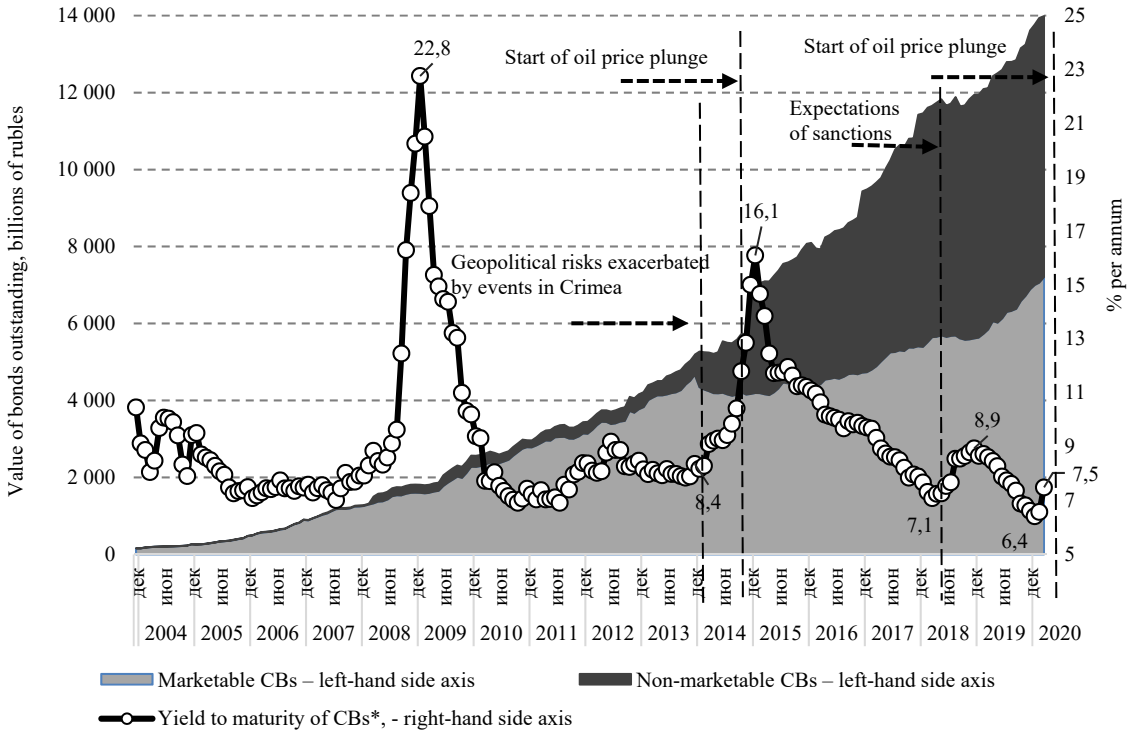
These observations indicate that, in terms of their risk-return tradeoff denominated in foreign currency, long-term investments in Russian ruble bonds are significantly less attractive than their competitors from other countries, both developed and developing ones. The main problem of investing in ruble bonds is the lack of stability in the ruble exchange rate movement, because its frequent downturns reduce the attractiveness of these investments for investors. This also explains why global investors prefer to make short-term investments in ruble bonds, in expectation of snatching an additional yield through the use of a speculative carry trade strategy during the periods of a climbing ruble.

As shown in *Fig. 35*, after the 2008 crisis, the return on the IFX-Cbonds index of ruble corporate bonds was periodically on the rise on the back of oil price downturns and investor fears amid geopolitical risks and international economic sanctions.

Meanwhile, from 2014 onwards, growth in the corporate bond market was sustained mostly by non-marketable bond issues that do not have stock quotes. Against this background, the situation in 2019 appeared to be favorable for growth in this market segment. The average yield to maturity of the IFX-Cbonds index plunged from 8.90% in 2018 to its post-crisis record low of 6.42% in January 2020. Over the same year, marketable bond issues were increasing at a fast rate, and their share in the total market capitalization of corporate bonds rose from 47.0% in 2018 to 50.8% in January 2020.

With the onset of a new wave of financial crisis, the average bond yield increased from 6.42 to 7.49% in March 2020. However, the first few weeks of the crisis have not yet led to any defaults in the corporate debt market.

[1] For the sake of data comparability, the historical data series of returns of each country index were recalculated in US dollars.



* Yield to maturity of IFX-Cbonds portfolio.

Fig. 35. The value of ruble corporate bonds outstanding and the yield to maturity of IFX-Cbonds portfolio from December 2003 to March 2020

Source: own calculations based on data released by Cbonds.

As shown in *Fig. 36*, the yield to maturity of corporate bonds is closely linked to their duration, calculated with due regard for the terms of their offers. As a rule, declining rates of return translate into a faster growth of prices on the bond market, and thus into the shrinking yields to maturity of bonds with longer durations, which serves as an incentive for issuers to more actively offer bonds with long duration. This trend is clearly visible in *Fig. 36* over the period 2015–2018, when declining bond yields were accompanied by a sharp increase in their average market duration. However, this trend demonstrated some significant changes in 2019, when a decrease in the average yield to maturity of the IFX-Cbonds portfolio unexpectedly gave rise to a shrinkage in its duration index from 3.22 years to 2.86 years. Probably, this was a manifestation of another corporate debt market trend that coexisted with the latter: the massive market entry of issuers of bonds with high return and risk levels and no credit history, issued, as a rule, for a short period of time; this resulted in a shrinkage in the average bond duration index, which ran contrary to the market expectations against the backdrop of sliding interest rates. At the same time, an increase in the IFX-Cbonds duration index to 3.15 years in March 2020 was a manifestation of a declining inflow into the market of more risky bonds.

One of the important trends observed in the corporate bond markets in Russia and elsewhere has been an accelerated growth of the so-called high-yield or junk bonds (JB), which are understood as bonds rated below the investment-grade level of BBB, or without any rating at all. According to data released by SIFMA, in 2019 the total value volume of junk bonds issued in the USA amounted to USD 278.3 billion, which represented a 64.3% rise on 2018. The

relative corporate bond market share of junk bonds increased from 12.7% in 2018 to 19.7% in 2019. Throughout the year 2019 and in early 2020, prior to the price volatility surge in the stock and oil markets in March, the US corporate bond market had been demonstrating noticeable downward trends in the yields of junk bonds and BBB-rated bonds towards their record lows of the entire period after the 2008 crisis, as well as an almost zero yield spread of these bond groups (FRB, 2020).[1] All these developments point to an underestimation by market participants of the credit risks of corporate bonds, their current volume of the USA amounting to nearly USD 10 trillion.

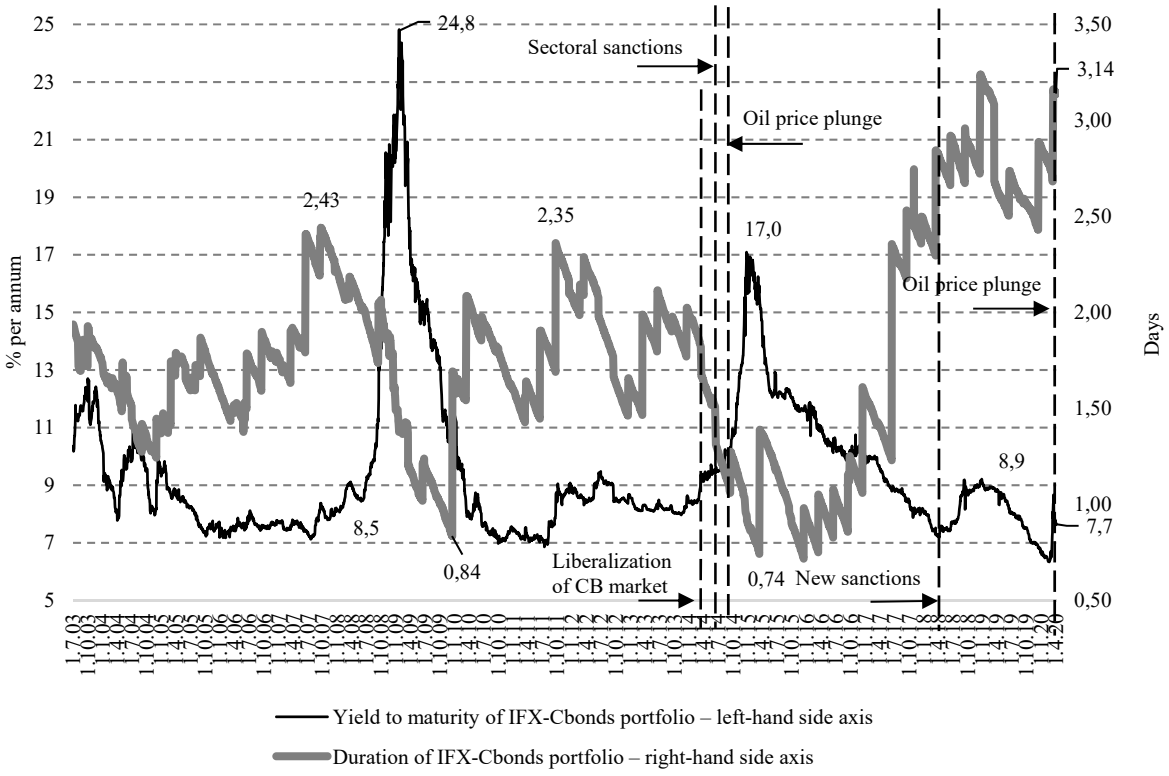


Fig. 36. The yield to maturity and duration indices of IFX-Cbonds portfolio over the period from July 1, 2003 to April 3, 2020

Source: own calculations based on data released by Cbonds.

The factor responsible for this state of affairs is believed to be the oppositely directed movement of the duration induces of junk and BBB-rated bond issues; more particularly, in 2019, the average duration index of investment grade corporate bonds increased by 13.0%, to 8.02 years, while that of junk bonds, on the contrary, plunged by 24.0%, to 2.98 years.[2] This means that a higher duration of investment grade long-term bonds translated into an increase in their average yield, and a shorter duration of junk bonds pushed down their average yield, thus for the most part distorting the overall picture of yield spreads of corporate bonds with different credit risk levels. Another factor that boosted the demand for junk bonds was the activity of

[1] Monetary Policy Report. February 7, 2020. Board of Governors of the Federal Reserve System. PP. 22, 24.
[2] *Goldfarb S.* (2020). The Hidden Factor Making Junk Bonds Less Risky. The Wall Street Journal – online. Jan. 26.

pension funds, mutual funds and other institutional investors, who strove to achieve higher returns on their total investment portfolios by increasing the investments in these types of bonds in face of the key rate being reduced by the US Federal Reserve from 2.25–2.50 % to 1.5–1.75% in 2019, and then to 0–0.25% as of March 16, 2020, as well as the reduction of long-term government bond yields to levels below 1%.[1]

In March 2020, the junk bond market in the USA became one of the most dangerous segments that was generating credit risks for the entire financial market. The ICE BofA US High Yield Index Option-Adjusted Spread,[2] which reflects the yield spread between issues of junk bonds and treasury bonds of a similar duration, increased from 3.57% as of February 19, 2020 to 7.42% as of March 12, 2020; this level was significantly below its peak of 19.88% observed in late November 2008, but nevertheless, the index doubled over the course of just one month. Over the period from February 19 to March 12, 2020, the yield spreads of BBB-rated corporate bond issues (lowest investment grade), as demonstrated by the ICE BofA BBB US Corporate Index Option-Adjusted Spread, also jumped from 1.31% to 2.77%, despite the fact that at the peak of the crisis, in December 2008, they stood on average at 7.84%.

A sharp increase in the yield of junk and lowest investment grade bonds heralds the start of withdrawal of investor funds from these bonds, which in an unfavorable situation may give rise to massive sales of bonds, an even steeper yield growth and, as a result, financial problems for their issuers, because the latter will be unable to refinance their corporate debts. An additional risk associated with BBB-rated bonds may be their downgrading by the rating agencies to the level of junk bonds, which will inevitably lead to sales of such bonds by conservative institutional investors, because the law does not allow them to keep in their portfolios the bonds with a credit rating below investment grade. As of mid-March 2020, although the rating agencies have so far been refraining from a large-scale revision of the investment ratings of corporate bonds, the data released by Credit Benchmark indicated that a number of major financial institutions that conduct own internal ratings of bonds in their portfolios had already begun to downgrade some bond issuers to a junk level.[3]

In the domestic Russian stock market, the junk bond segment is becoming one of the fastest-growing market segments, because it is considered to be an important source of financing by small and medium-sized businesses. However, in spite of the aggressive promotion of these financial instruments among domestic private investors, no reliable statistics on the issuance of junk bonds have been available so far. According to the estimates released by Forbes, the volume of the ruble junk bond market soared from RUB 8 billion in 2018 to RUB 20 billion in 2019; at the beginning of 2020, about 60 issuers of junk bonds had a second- and third-level listing on the Moscow Exchange. The average coupon yield of junk bonds was 14% per annum, which roughly corresponded to the average interest rates on bank loans issued to small and medium-sized businesses.[4]

It is rather difficult to analyze the risks in this segment of the financial market for lack of comparable historical data on the credit ratings of all corporate bonds issues, adjusted for their

[1] *Wirz M., Danies P., Goldfarb S.* (2020). The Market Meltdown Has a Surprising Survivor: Junk Bonds. The Wall Street Journal – online. March 4.
[2] Federal Reserve Bank of St. Louise https://fred.stlouisfed.org/series/BAMLH0A0HYM2
[3] *Wirz M.* (2020). Investment-Grade Bonds Could Turn to Junk Amid Global Rout. The Wall Street Journal – online. March 13.
[4] *Samiev, P.* (2020). No need to escalate. How to avoid a bubble in the high yield bond market. Forbes. January 28. URL: https://www.forbes.ru/finansy–i–investicii/391875–ne–nado–nagnetat–kak–izbezhat–puzyrya–na–rynke–vysokodohodnyh–obligaciy.

specific duration indices. Our calculations based on the maximum available statistical data concerning liquid marketable corporate bond issues released by Cbonds for the period from 2010 through February 2020 have revealed certain specific movement patterns of the various segments of the ruble corporate bond market, which point to their general similarity to the current situation in the US corporate debt market.[1]

The data on the value of corporate bonds outstanding over the period from 2010 to February 2020, presented in *Fig. 37*, indicate that in the corporate debt structure, high-risk investment-grade bonds and junk bonds clearly predominated; however, in 2019, there was an increase in the relative share of minimum-risk investment grade bonds and junk bonds. In 2018, in our sample with the total bond value of RUB 3.5 trillion, high-risk investment grade bonds accounted for RUB 1.9 trillion rubles, junk bonds – for RUB 0.7 trillion. By the end of 2019, out of a total bond value of RUB 4.3 trillion, high-risk investment grade bonds and junk bonds had already taken up RUB 1.7 trillion and RUB 0.5 trillion, that is, 39.5% and 11.6%, respectively. The value volume of minimum risk investment grade bond issues in 2019 reached RUB 2.1 trillion. At the same time, there was a notable upward trend in the reliability of corporate debt issuers: the relative share of minimum risk investment grade bonds in the total value of bonds in the sample increased from 19.1% in 2017, to 31.4% in 2018, and to 48.6% in 2019, while the share of high risk investment grade bonds shrank from 70.4% in 2017 to 39.0% in 2019. The relative share of junk bonds did not change, in 2017 it was 10.2%, in 2018 – 15.4%, and in 2019 – 12.3%. At the beginning of 2020, there existed a trend towards an increase in the relative share of high risk investment grade bonds and a shrinkage in that of minimum-risk investment grade bonds, but the data available so far are preliminary.

From December 2015 through January 2017, there was a sharp surge in the issuance of speculative grade bonds. This happened because a rather large number of issuers (22 issuers of 114 bonds outstanding at that time) in late November – early December 2015 switched over to the speculative grade. Among these, we may point out Russian Railways, VTB, Russian Agricultural Bank, Russian Post, Aeroflot, the Auction House of the Russian Federation, and some other joint-stock companies.

After 2015, as the volatility indices of the forex market and financial market were on the decline, alongside the shrinking yields of ruble corporate bonds, there also emerged a general trend of the effective yields of junk and investment grade bonds to move nearer to one and the same level (*Fig. 38*). From January 2015 onwards, the yields of junk and investment grade bonds displayed a continuously downward movement, from 26.7 and 17.8%, respectively, to 8.9 and 7.1% at year-end 2019. The data for the first 2 months of 2020 demonstrate that this

[1] In absence of comprehensive historical rating time series for a wide range of corporate bond issuers, we relied on an alternative credit risk assessment model for calculating the probability of a bond default over the next year or another period. The ranking of companies by their default probability can replace credit ratings and generate daily updated estimates. This model is used by Bloomberg in its credit risk assessments, where a sample of companies is subdivided into 21 groups: 10 investment grade groups (IG1 – IG10), 6 speculative grade groups (HY1 – HY6), and 5 defaulted investment grade groups (DS1– DS5). The IG1 group consists of companies with probability of default over the next year in the range of 0 to 0.002%, the HY1 group in the range of 0.52% to 0.88%, and the DS1 group in the range of 10% to 15%. The higher the group number, the greater the probability of default. Groups IG1 – IG5 roughly correspond to credit rating grades of AAA+ to A (however, the comparison just arbitrary, there is no direct correspondence between the two scales). Groups IG5 – IG10 roughly correspond to credit rating grades of A– to BBB–, and groups HY1 – HY6 - to credit rating grades of BB + to B–. For the period 2010–2018, bond issues were subdivided into three groups according to their credit risk level: investment grade level with minimal risk (groups IG1 – IG5), investment grade level with increased risk (groups IG6 – IG10), and speculative grade level (HY1 – HY6). Defaulted investment grade groups not included in the study.

downward trend in bond yields did not disappear, but do not reflect an increasing market uncertainty. Since 2016, the yield spread between the two classes of bonds has been steadily narrowing, never increasing beyond 2 percentage points, and sometimes it moved into negative zone.

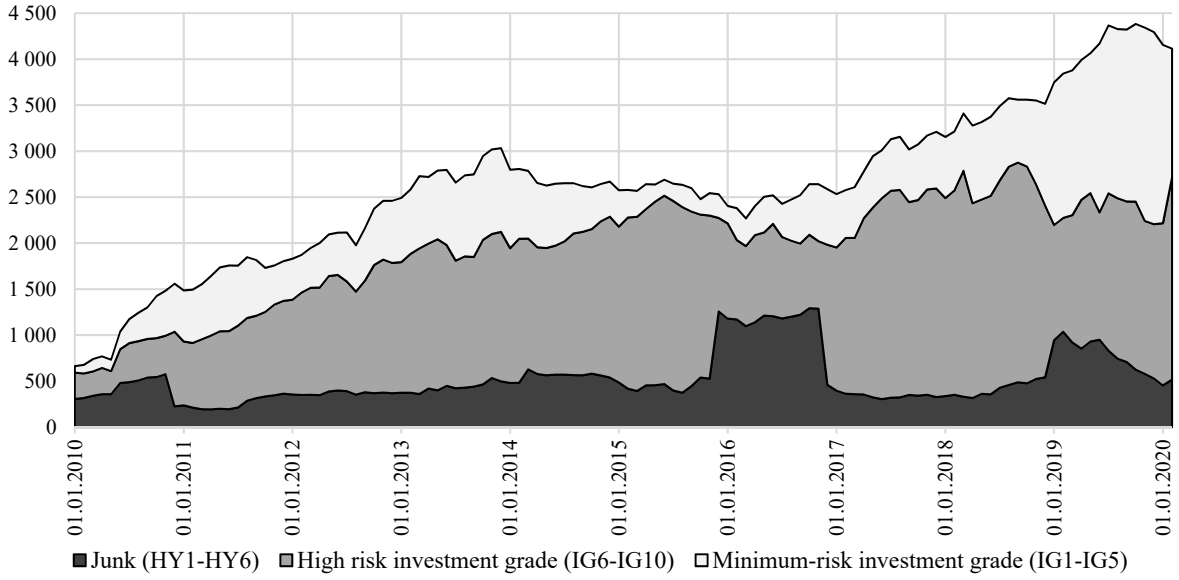


Fig. 37. The value of corporate bonds outstanding, by grade group, billions of rubles, from 2010 through February 2020

Source: own calculations based on data released by Cbonds and Bloomberg.

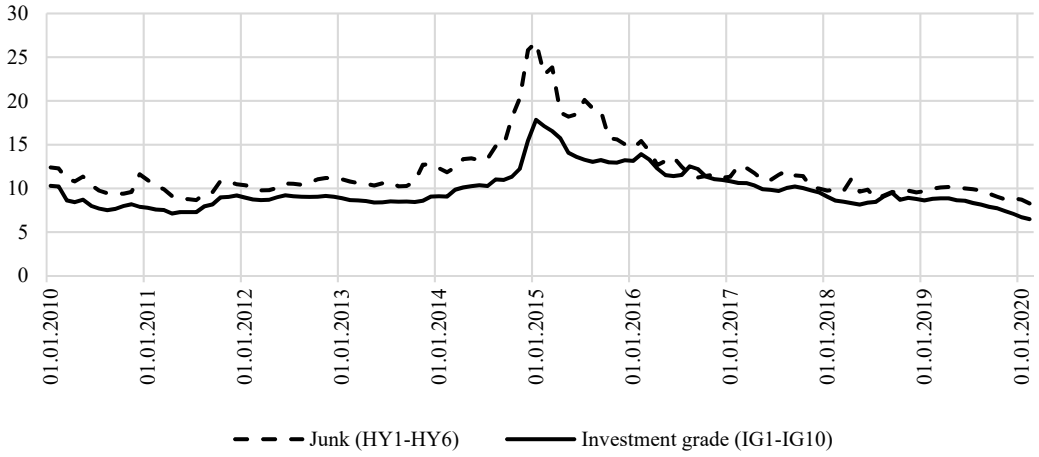


Fig. 38. The mean effective yield of junk bond and investment grade corporate bonds outstanding,[1] %, from 2010 through February 2020

Source: own calculations based on data released by Cbonds and Bloomberg.

[1] The yield is calculated as the arithmetic mean of all bond classes with equal weights, with no consideration for issue volumes or the relative share of each issuer in the total volume.

The very narrow yield spread of corporate bonds with very different risk levels observed over the period 2016–2019 in the domestic financial market closely resembled what was happening over the same period in the US debt market. This phenomenon in both countries was caused by approximately the same factors, namely the increasingly reckless attitude of investors to the credit risks associated with corporate bonds in their pursuit of higher returns in a situation of declining interest rates on bank deposits and the yields of government securities, as well as the somewhat biased estimates of spreads between junk and investment grade bonds, which were influenced by the multi-vectored duration trends in these debt classes.

As shown in *Fig. 39*, from H2 2016 onwards, the duration of investment grade corporate bonds in the domestic financial market was notably on the rise, while that of junk bonds remained at approximately the same level as in 2017, in spite of the increasingly volatile behavior of this particular market indicator in general. In 2018, the average duration of investment grade bonds increased to 2 years, while that of junk bonds – to 1.7 years. By the end of 2019, the duration index began to demonstrate a sharp decline, to 1.8 years for investment grade bonds and to 1.4 years for junk bonds, with a tendency for a further decline alongside an increasing duration spread in 2020. Because a higher duration of investment grade bond issues usually translates into their higher returns, this effect, in face of the unchanging average duration of junk bonds, also contributed to a narrowing average yield spread of the two classes of debt instruments.

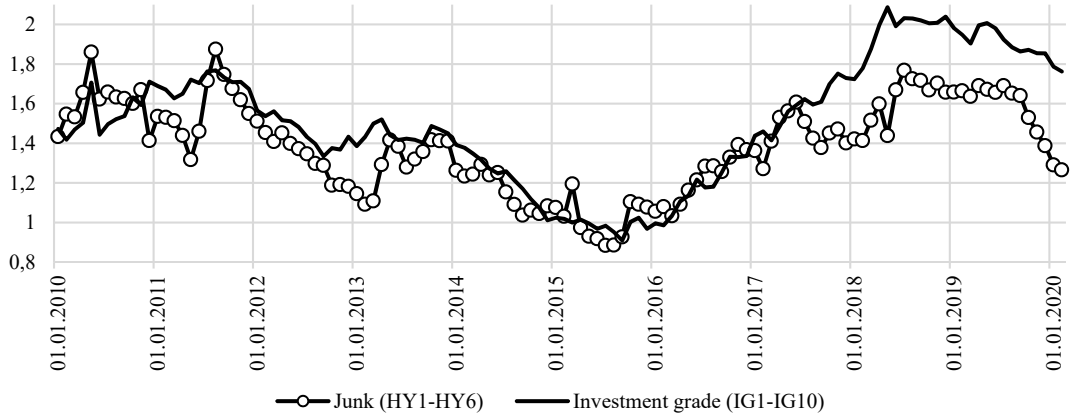


Fig. 39. The average duration[1] of junk and investment grade corporate bonds outstanding, %, from 2010 through February 2020

Source: own calculations based on data released by Cbonds and Bloomberg.

Duration is a measure of interest rate risks of debt financial instruments: bonds with longer terms to maturity are more sensitive than short-term bonds to the changing key rates in the financial market. All other things being equal, a reduced central bank key rate usually triggers a faster price growth, and consequently, a decline in the yield of long-term bonds relative to that of short-term bonds.[2] If the majority of debt market participants display a surge of

[1] If the corporate bond terms define that the bonds can be redeemed before the maturity date, their duration is calculated based on their redemption date, and not the maturity date.

[2] In the USA, when centralized interest rates lose 1 percentage point, the price of 25-year government bonds gains 25 percentage points, and that of 6-year bonds gains 6 percentage points. *Pellejero, S.* (2020). Long-Duration Bond Funds Thrive Amid Market Carnage. The Wall Street Journal - online. March 16.

uncertainty as to the future economic growth prospects, then, even if the central bank begins to gradually reduce its centralized rates, the yield spreads between long-term and short-term bonds can narrow, and in the end the yields of the former may even exceed those of the latter. This means that the bond yield curve becomes inverted, when the yields of short-term bond issues of a certain issuer rise above those of bonds with longer terms.

A negative yield spread between long-term and short-term bonds is often considered to be a harbinger of recession. However, this is truer of government bonds rather than corporate bonds.[1]

In order to better understand the relevant changes in the average duration of junk and investment grade corporate bonds issued from 2017 onwards, we relied on an aggregate data analysis of bonds grouped depending on their duration. Duration in this case is understood to be modified duration, i.e., period to maturity or coupon period, as applicable. In most cases, it is significantly shorter than the period to maturity of the majority of coupon bonds. As shown in *Fig. 40*, in spite of the positive growth dynamics in the groups of bonds with longer duration (1 to 3 years and more than 3 years), the bond issues with relatively short duration maturing not later than 2018 made up the bulk of corporate bonds outstanding. In 2019, there was an increase in the relative share of bonds with duration of 1 to 3 years, to 52.6% at yearend 2019 vs 43.7% in 2018. The bonds with duration of less than 1 year accounted for 26.6% of the total value of bonds outstanding, and those with duration of more than 3 years – for 20.2%. Corporate bonds, being a relatively short-term debt instrument, cannot function as a fully fledged source of financing for companies that invest in their real capital, because this type of investment required a longer period to generate an adequate return.

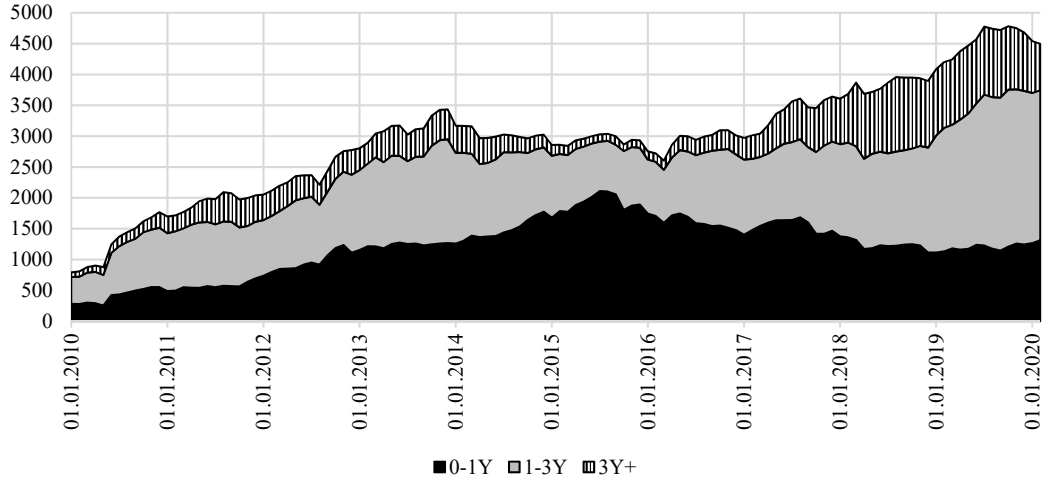


Fig. 40. The total volume of bonds (fixed at the time of offer), by grade group, billions of rubles, from 2010 through February 2020

Source: own calculations based on data released by Cbonds and Bloomberg.

[1] For example, as one of the 'signals' built into the Financial Condition Index, NBER experts use the yield spread between 10-year US government bonds and the Federal Fund Rate. See *Hatzius J., Hooper P., Mishkin F., Schoenholtz K., Watson M.* (2010). Financial Condition Index: A Fresh Look after the Financial Crisis. NBER Working Paper Series No 16150. July. URL: http://www.nber.org/papers/w16150

For 2010 and early 2020, the calculated mean effective yields in the groups of corporate bonds with durations of 1 year or less, 1 to 3 years, and 3 to 5 years turned out to be rather unexpected (*Fig. 41*). Contrary to the classical notion that there exists a bond risk premium on bonds with longer duration, the average yield of bonds with duration of 1 year or less was found to be the highest over the entire period under review, and the bond issues with the longest duration of 3 years or more demonstrated the lowest effective yield. At the same time, the yield spreads of bonds with different duration narrowed almost to zero in 2019 and early 2020, which means that at that time, investors no longer made any distinction between bonds with different duration from the point of view of bond risk premium.

In our opinion, this can in part be explained by the data presented in *Fig. 39*, from which it follows that corporate bonds with a higher credit risk had a higher average duration. This also explains why the yield of bonds with longer duration turned out to be lower than that of bonds with lower duration and a high credit risk. However, this does not rule out the possibility that the persistently higher yields of short-term corporate bonds compared with long-term debt instruments, coupled with the limited number of bond issues with really long durations of 5 or more years,[1] may be an indication of a certain lack of investor confidence in the long-term prospects of the Russian financial market and their desire to receive an additional compensation for sustaining the liquidity of Russian bonds.

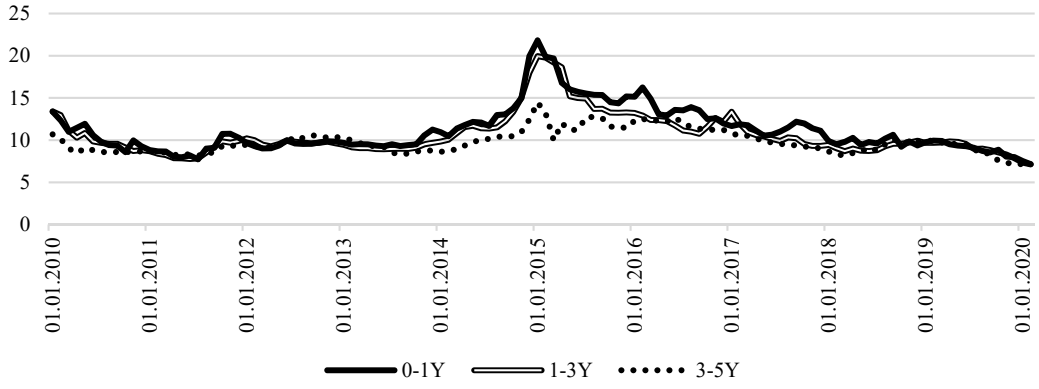


Fig. 41. The mean effective yield of corporate bonds outstanding with different duration, %, from 2010 through February 2020

Source: own calculations based on data released by Cbonds and Bloomberg.

3.1.7. The corporate bond market organization

As of April 1, 2020, 360 corporate bond issues of 141 issuers were listed on the Moscow Exchange; a year earlier, there were 412 issues of 181 issuers. This means that over the year, the number of listed issues shrank by 12.6%, and that of issuers, by 22.1%.

As shown in *Fig. 42* and *Table 6*, the primary corporate borrowing market, similarly to the domestic stock market, is highly concentrated, although in 2019 its concentration level markedly decreased. The market share of the top 10 corporate bond issuers shrank from 58.5%

[1] According to our calculations, in 2019, bond issues with duration of more than 5 years accounted for only 3.6% of the total corporate bond issue volume.

in 2018 to 53.5%, and that of the top 20 issuers over the same period from 78.8 to 68.3%, respectively. The corporate bond market boom observed in 2019 created more opportunities for bond offer by various types of issuers.

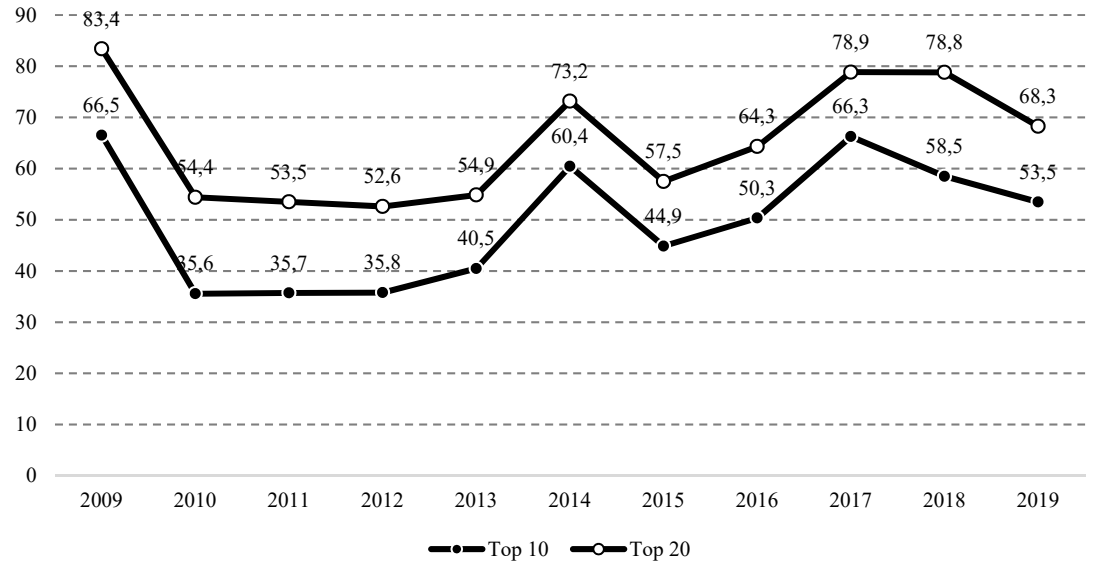


Fig. 42. The relative market shares of the top 10 and top 20 issuers of ruble corporate bonds in 2000–2019, %

Source: own calculations based on data released by Cbonds.

Table 6

The top ten corporate bond (CB) issuers and their share in the total value volume of CB issues

	2017				2018				2019		
	Bond issuers	**billions of rubles**	**%**		**Bond issuers**	**billions of rubles**	**%**		**Bond issuers**	**billions of rubles**	**%**
1	Rosneft PJSC	1,051	36.8	1	Sberbank PJSC	301	17.9	1	Sberbank PJSC	465	16.1
2	VEB.RF (State Development Corporation)	126	4.4	2	DOM.RF LLC	137	8.2	2	DOM.RF JSC	253	8.7
3	AKB Peresvet (JSC)	125	4.4	3	Russian Railways	85	5.1	3	VTB Bank (PJSC)	172	5.9
4	MBS Factory	109	3.8	4	Russian Agricultural Bank	78	4.7	4	VEB.RF (State Development Corporation)	170	5.9
5	Transneft PJSC	107	3.8	5	Residential urban settlement LLC	76	4.6	5	Russian Railways	106	3.7
6	O1 Group Finance LLC	88	3.1	6	Rosneft PJSC	70	4.2	6	Gazprombank (JSC)	95	3.3
7	Russian Railways	85	3.0	7	Gazprombank (JSC)	67	4.0	7	Rosneft PJSC	80	2.8
8	Gazprom Neft PJSC	70	2.5	8	VTB Bank (PJSC)	59	3.5	8	MTS	78	2.7
9	Gazprombank (JSC)	65	2.3	9	DOM.RF JSC	55	3.3	9	Avtodor State Company	69	2.4
10	Otkritie Holding JSC	65	2.3	10	Avtodor State Company	52	3.1	10	RUSAL Bratsk OJSC	60	2.1
	Total corporate bond market cap	**2,852**	**100**		**Total corporate bond market cap**	**1,674**	**100**		**Total corporate bond market cap**	**2,893**	**100**
	Market cap of top 10 corporate bond issuers	**1,890**	**66.3**		**Market cap of top 10 corporate bond issuers**	**979**	**58.5**		**Market cap of top 10 corporate bond issuers**	**1,547**	**53.5**

Source: own calculations based on data released by Cbonds.

Our calculations based on data for a large sample of corporate bonds provided by Cbonds show a steady increase in the share of state-owned companies in the total value of corporate bonds outstanding (*Fig. 43*). While in January 2003, during the early phase of the corporate bond market's development, SOEs accounted only for 22.2% of the total market cap, by December 2019 it had increased to 71.8%, which clearly points to the specific evolution of the domestic stock market into a mechanism for the support of primarily state-owned companies, ill-suited for performing one of its avowed primary functions – the provision of financing for accelerated development of private companies and the business community as a whole. Over the past year, the corporate bond market cap share of SOEs increased from 70.0% in 2018 to 71.8% in 2019.

A steady growth of the corporate bond market cap share of SOEs testifies to the fact that it is easier for state-owned companies to build trust in their relationships with investors, domestic banks and private pension funds, among which state-controlled entities prevail.

In 2019, Russian companies were not very actively involved in the eurobond market, and the total value of their borrowing there in the amount of USD 103 billion remained approximately at the same level as in 2018 (*Fig. 44*). Meanwhile, the domestic ruble corporate bond market, the effects of the ruble's plunge against the US dollar notwithstanding, demonstrated growth from USD 191 billion in 2018 to USD 210 billion in 2019, or by 9.9%. At present, the domestic ruble corporate borrowing market is about twice as big as the corporate eurobond market.

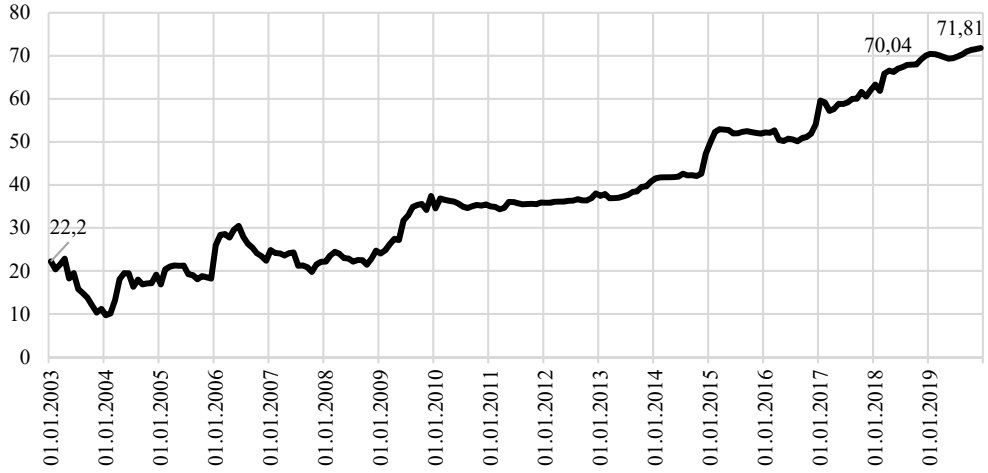


Fig. 43. The relative share of SOEs in the total value of ruble corporate bonds outstanding, %

Source: own calculations based on data released by Cbonds.

In 2019, new instruments appeared on the corporate bond market, and private investors were aggressively encouraged to buy them.

For example, this was true of junk bonds, i.e. debt instruments that were rated below an investment grade level, but offered higher returns. The market placements of junk bonds were organized by relatively small investment companies like Ivolga Capital, Unicervice Capital LLC, and BCS Global Markets. Surprisingly, despite the high risks and the low transparency of issuers, 60–70% of these junk bonds were bought by individuals who did not always

understand the risks associated with such investments.[1] The market promotion of junk bonds was facilitated by the support mechanisms launched by government agencies like the Russian Bank for Small and Medium Enterprises Support (SME Bank), which provided guarantees in the amount of up to RUB 500 million. Another mechanism was represented by subsidies of the RF Ministry of Economic Development earmarked for covering the coupon rate of the bonds with the support of the SME Corporation, as well as subsidies to cover the cost of listing preparation, which involved reimbursement of the bond issuers for up to 2% of the bond issue value, but in an amount not more than RUB 1.5 million.[2] Strangely, these programs did not require that in order to qualify for government support, the bond issuers should have a rating grade and demonstrate the transparency of their financial statements, and that no reasonable restrictions were imposed on the offer of such instruments mostly to inexperienced private investors.

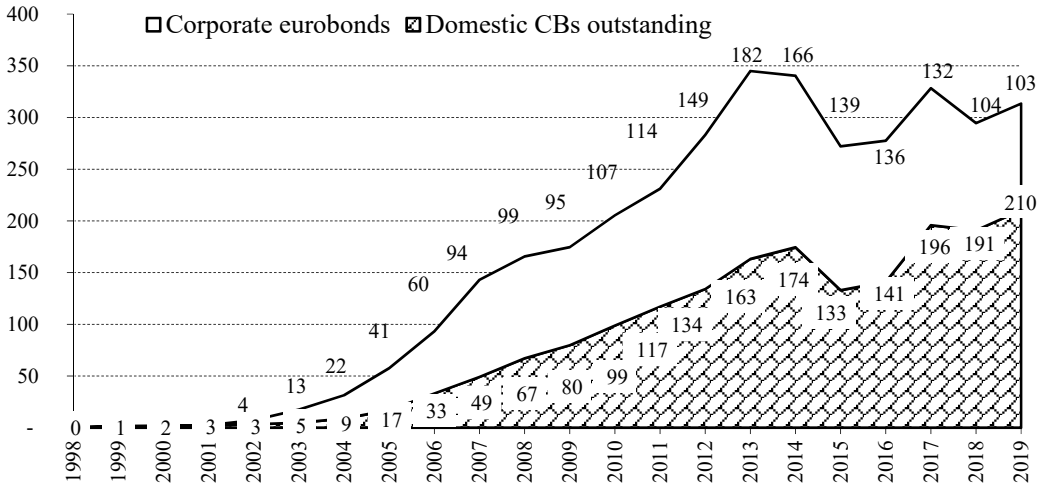


Fig. 44. The volume of Russian corporate bonds outstanding in 1998–2019, billions of US dollars

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

From October 16, 2018, amendments to the Russian legislation on securities came into force, whereby companies were allowed to issue so-called structural bonds, the payments on which are tied to the events or conditions previously agreed upon at the time of their issue. The income on such bonds is usually tied to changes in the value of stocks, stock indexes, commodities and other investment assets. According to *The Kommersant*, in 2019, about 158 structural bond issues were placed to the total value of RUB 145.5 billion.[3] The leaders in bond issuance were major banks like Sberbank of Russia, VTB, Alfa Bank, and Gazprombank. The main buyers of structural bonds were solvent private investors, who were accredited under financial regulation laws. The investment strategies realized through the placement of structural bonds are not transparent, which in itself is fraught with significant risks for investors. According to *The Kommersant*'s data on the already redeemed bond issues of several major banks, their yields

[1] *Remizov, M.* (2020). A desire to earn higher interest. The Expert, February 24 – March 1, No 9.
[2] Ibid.
[3] *Smorodskaya, P.* (2020) Risk is structural business. The Kommersant. February 7. No 22.

turned out to be at the same level as the yields on similar issues of classic bonds, and frequently even lower.[1]

3.1.8. The government bond market

In 2019, the RF Ministry of Finance raised net borrowing in the amount of RUB 1,394 billion in the OFZ market, which was a record high of several previous years. It turned out to be significantly above the net borrowing indicators for 2016, 2017, and 2018, which were RUB 547 billion, RUB 1,270 billion, and RUB 670 billion, respectively. Only as late as March 2020, the previously successful OFZ mechanism began to run out of steam: over January – February, net borrowing amounted to RUB 251 billion, but in March, the RF Ministry of Finance was no longer able to offer OFZs on the market on the same terms. On March 4, 2020, a few days before the massive downfall of stock prices, the RF Ministry of Finance had to cancel the auction for placement of OFZs, and one week before this event, the yields of OFZ issues jumped 0.5–0.7 percentage points.[2]

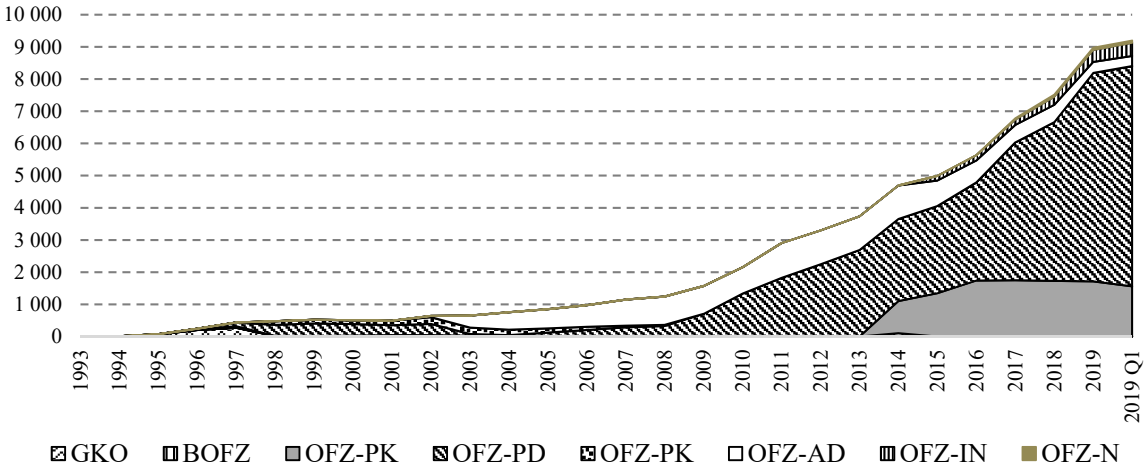
In 2019, the policy of reducing the Bank of Russia discount rate contributed to growth in the domestic government securities market; the ruble strengthening, which stimulated an inflow of foreign portfolio investment; and a decline in government bond yields, which forced the RF Ministry of Finance to resort to record-high borrowing. As shown in *Fig. 45*, the total volume of federal loan bonds in Q1 2020 reached the level of RUB 9.2 trillion, which represents an increase of 22.7% relative to RUB 7.5 trillion in 2018.

The structure of OFZ issues on this time horizon, in many of its aspects, reflected the group composition of the key investors in this financial market segment during each phase of its development.[3] Federal loan bonds with debt amortization (OFZ-AD), which accounted for 3.4% of the total OFZ value in 2019, are a convenient tool for investing pension savings in a volatile market, but they create difficulties for the RF Ministry of Finance in its public debt management. Over the period 2002–2014, NPFs acted as the growth driver in this segment of the government bond market, primarily due to investment of pension savings. However, from 2014 onwards, their popularity began to wane after the 'pension saving freeze'. Besides, in 2016, the RF Ministry of Finance exchanged OFZ-AD with face value of RUB 63.7 billion, on favorable terms, for OFZ-PD with face value of RUB 56.4 billion.

The largest segment of the OFZ market is taken up by OFZ-PDs with constant coupon income, which in 2019 accounted for 72.4% of the total OFZ market value; meanwhile, over the period from 2014 through March 2020, this segment was steadily on the rise. The coupon payments of these bonds are fixed in advance for the entire period until their maturity date, and so they are convenient and predictable instruments for different categories of investors. From 2009 to mid-2011, by way of financing the budget deficit, the RF Ministry of Finance placed OFZ-PD issues with the banks with excess liquidity, offering an additional premium above the market rate in the amount of 5–10 basis points.[4] From early 2012 onwards, non-residents became the main source of liquidity in the OFZ market, and they found OFZ-PDs to be a more

[1] *Smorodskaya, P*. (2020) Risk is structural business. The Kommersant. February 7. No 22.
[2] *Tretyak, A., Mikheeva, A*. (2020). Government debt on a sick leave. Vedomosti. March 4.
[3] For an analysis of the OFZ market's evolution, see *Lu Y., Yakovlev D*. Exploring the Role of Foreign Investors in Russia's Local Currency Government Bond (OFZ) Market. IMF Working Paper, No WP/17/28, February 2017.
[4] *Lu Y., Yakovlev D.* Exploring the Role of Foreign Investors in Russia's Local Currency Government Bond (OFZ) Market. IMF Working Paper, No WP/17/28, February 2017, p.10.

convenient instrument.[1] In later years, changes in the market share of these OFZ issues were mainly brought about by the activity of non-resident investors.



Note. Hereinafter, the following abbreviations are used: BOFZ – zero-coupon federal loan bonds; GKO – short-term zero-coupon government bonds; OFZ – federal loan bonds; OFZ-AD – debt amortization federal loan bonds; OFZ-IN – federal loan bonds with a face value tied to the Russian Federation's official inflation rate; OFZ-PD – constant coupon income federal loan bonds; OFZ-PK – federal loan bonds with a floating coupon tied to the RUONIA rate; OFZ-N – federal loan bonds for retail investors ('people's bonds').

Fig. 45. The value volume of GKO-OFZ offering over the period from 1993 through March 2020, billions of rubles.

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

In 2019, OFZ-PKs with a variable coupon accounted for 19.1% of the total OFZ market value, and their market share, which stood at 30.9% in 2016, was on the decline. The coupon rate of these bonds is tied to RUONIA (interbank benchmark), which is largely determined by the Bank of Russia's key rate. Since 2015, OFZ-PKs have been popular with non-residents due to the situation of general financial instability and the rising key rate. However, as the key rate was reduced from 11% in 2016 to its current level of 6% and the inflation rate declined, OFZ-PKs have been losing their popularity, because their coupon yield basically depends on the key rate level.

A promising segment of the government securities market is that of OFZ-INs due to the indexation of their face value depending on the level of inflation, as measured by the consumer price index (CPI). In 2019, they accounted for 4.1% of the total OFZ market value. Their market share increased from 2.8% in 2015[2] to 4.5% in Q1 2020. Due to their protection against inflation, OFZ-INs are in demand among domestic institutional and individual investors.

In 2019, the smallest OFZ market share of 0.7% was taken up by OFZ-N, often referred to as 'people's bonds' because they target individuals and are promoted by the RF Ministry of Finance mostly as an over-the-counter instrument designed to improve the financial literacy of the general population.[3] On September 2, 2019, investors were offered a new issue of OFZ-N

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

[2] The first OFZ-IN issue appeared in 2015 during a period of high ruble volatility.

[3] *Butrin, D., Kassin, P*. (2019). To buy an experience: the RF Ministry of Finance has made OFZ-N part of the family financial planning system. Kommersant Money. September 25, No 39.

to the total value of RUB 15.0 billion, which should be placed within 6 months. The distinctive features of this issue, in which it differed from the previous ones, were the absence of a commission charged by the agent banks, their lower minimum purchase amount set at RUB 10,000, and the active advertising campaign. In addition to Sberbank and VTB, the new bonds were made available for purchase through Promsvyazbank and Post Bank.[1] However, because of the fierce competition with bank bonds, the placement OFZ-N was proceeding at a fairly moderate pace: according to media reports, as of the end of February 2020, out of the total issue value of RUB 15.0 billion, only bonds to the value of RUB 8.8 billion,[2] or 58.7%, had been sold. Meanwhile, that according to the Bank of Russia, the value volume of bank bonds issued in 2019 was RUB 0.6 trillion.[3]

In 2019, one of the main growth factors in the OFZ market were the declining yields of government bonds against the backdrop of a stable macroeconomic situation in this country (*Fig. 46*). The yield to maturity of government bonds (OFZ Cbonds-GBI portfolio index) dropped from 8.53% per annum in December 2018 to 6.21% per annum in December 2019, and to 6.09% per annum in January 2020, thus hitting its record low on the time horizon under consideration (since January 2010). However, from February 2020, the OFZ yield began to rise significantly, to 6.38% in February and to 6.71% in March, which is why the RF Ministry of Finance was forced to cancel its OFZ auctions to be held in March 2020.

From 2016 through February 2020, with some rare exceptions, the OFZ yields were staying above the inflation rate (CPI), thus increasing the attractiveness of government securities in the eyes of domestic investors.

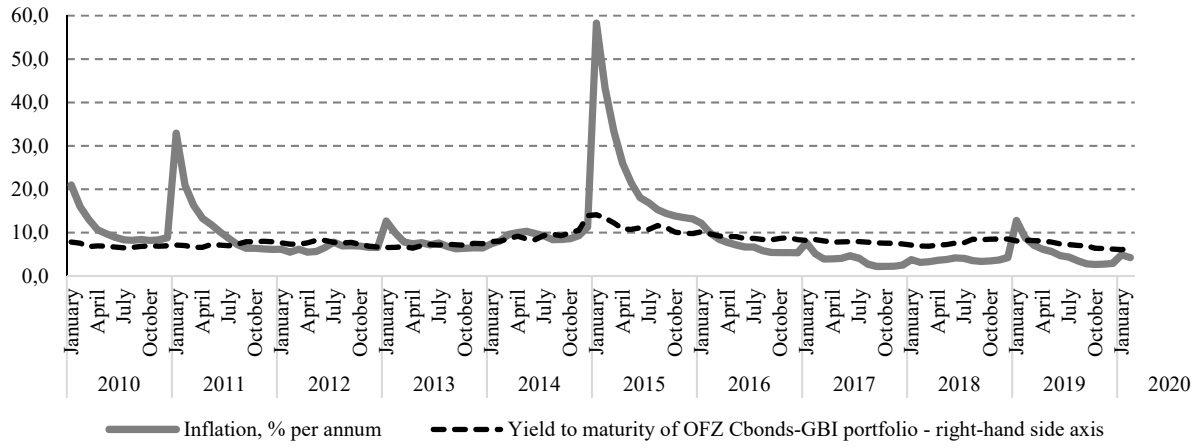


Fig. 46. Inflation (CPI) and yield to maturity of OFZ Cbonds-GBI portfolio over the period from January 11, 2010 through February 28, 2020, % per annum[4]

Source: own calculations based on data released by Rosstat and CBonds.

[1] *Gaidaev, V.* (2019). People's OFZ for wealthy clients. The Kommersant. December 17.
[2] *Smorodskaya, P., Ladygin, D.* (2020). Government bonds will be turned towards the people by the marketplace. It is suggested that OFZ-N should be placed through the Central Bank platform. The Kommersant. February 20.
[3] Bank of Russia. (2020). Review of Key Indicators of Professional Securities Market Participants. 2019. No 4. Moscow. P.8.
[4] The high inflation rate in January 2015, which stood at 58.3% per annum, can be explained by the specificity of the chain method of calculating the CPI, based on the month-to-month price growth in a current year. In January 2015, in response to the forex market shock, price growth jumped to 103.9% of its level in December 2014, which amounts to 58.3% when recalculated in per annum terms.

The opening, by Russia's central depository in February 2013, of nominal holder accounts for foreign clearing and settlement systems triggered an inflow of foreign investment into the domestic government debt market. The relative share of non-residents in the secondary market for OFZ increased from 6.5 percent in July 2012 to 28.1 percent in May 2013 (*Fig. 47*). [1] Later on, about a quarter of OFZs on average was held by non-residents; however, this indicator was changing significantly in response to the cash flows of non-residents, with due regard for the financial and geopolitical risks. Thus, for example, on the back of fears of possible sanctions to be imposed in April 2018 on those global investors who purchased Russian government bonds, the OFZ market share of non-residents shrank from 33.1% in 2017 to 24.4% in 2018. However, in absence of any sanctions against OFZ buyers and in view of the favorable market conditions in 2019, foreign investors returned into this market segment, and their relative share in the structure of OFZ holders in February 2020 rose to its historic peak of 34, 9%.

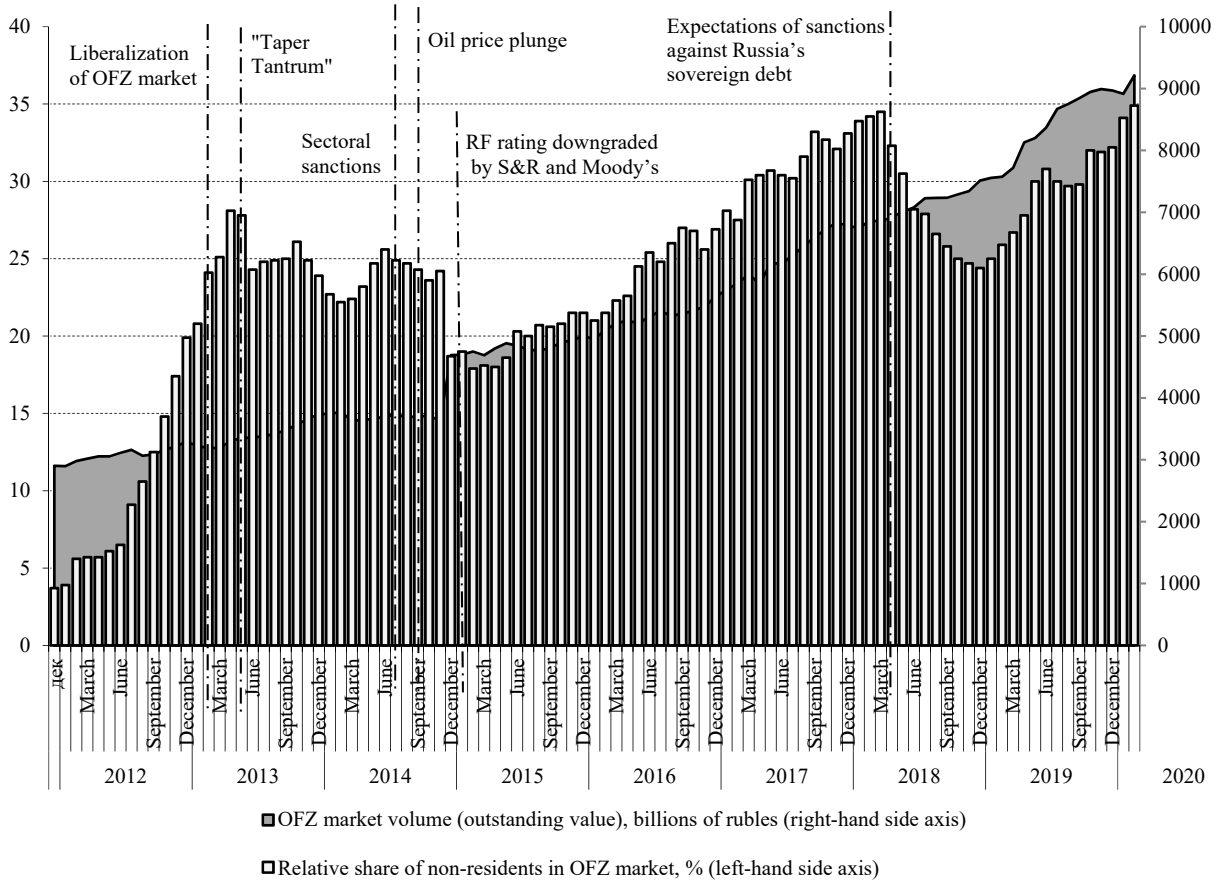


Fig. 47. The OFZ market share of non-residents from February 2012 through February 2020

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

[1] Based on expert estimates, one cannot rule out the fact that prior to the liberalization of the OFZ market in February 2013, the real OFZs market share of non-residents was higher than the official figure of 6.5%. The problem is that before correspondent deposit accounts of Clearstream and Euroclir were opened with the National Settlement Depository (NSD), the depository accounting system existing at that time did not allow the disclosure of information on the non-resident investments in OFZs carried out via depository banks servicing foreign investors.

Thus, so far the OFZ market has been one of the most dynamically growing segments of the domestic financial market, through which the RF Ministry of Finance has been successfully attracting a significant amount of net financing needed to replenish the budget. The existence of diverse OFZ issues coupled with financial stability made government bonds attractive for a wide range of domestic and foreign investors. As before, there were some problems with the investor base, which had to do with the freeze on pension savings, the inadequately developed collective investment schemes targeting government bonds, and the low share of individual investors willing to buy them. In the context of the 2020 crisis, the RF Ministry of Finance may be faced with a surge in interest rates for government securities.

3.1.9. The derivatives market

The economic role of the derivatives market is to increase the transparency of forecasts and investment asset pricing, as well as to provide market participants with opportunities of hedging against sharp fluctuations in asset prices in the future. A surge in derivatives market liquidity is often observed during the periods of increased volatility of investment asset prices. As shown in *Fig. 48*, the monthly volumes of futures transactions in 2017, 2018, and 2019 were displaying a volatile pattern; however, the average volumes of transactions closed over one month remained almost stable, amounting to RUB 6.5 trillion, RUB 6.9 trillion, and RUB 6.4 trillion, respectively. However, in March 2020, in response to signs of an impending financial crisis, the volume of futures transactions increased to RUB 15.2 trillion, which is 2.4 times higher than the average monthly index for 2019. Most of this growth was accounted for by forex and stock index futures.

The options market in 2017–2020 was demonstrating a slow decline, as the average monthly transaction volume in 2017 amounted to RUB 573 billion, in 2018 to RUB 572 billion, and in 2019 to only RUB 416 billion. In March 2020, the value volume of options on the exchange rose to USD 479 billion, which is 15.1% above its average level in 2019, but is still incomparable with the growth rate of futures transactions.

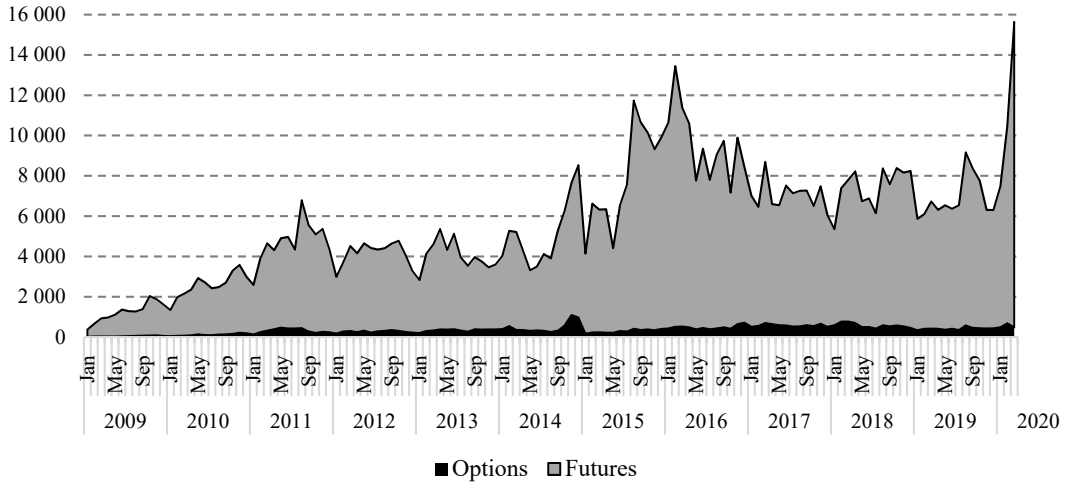


Fig. 48. The value volume of futures and options transactions on the Moscow Exchange from January 2009 through March 2020, billions of rubles

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

In 2019, no major breakthroughs were observed in the futures exchange. As before, the major role in this segment of the derivatives market was played by forex futures; the financial situation in 2019 was relatively stable, and so the share of forex futures in the total value volume of exchange transactions shrank from 42.6% in December 2018 to 40.1% at year-end 2019, and then jumped to 49.5% in March 2020 (*Fig. 49*). The market share of stock index futures increased from 21.9% in 2018 to 24.2% in 2019, and to 24.3% in March 2020. The market share of transactions in stock market instruments over the same period increased from 4.2% to 5.8%, and then in March 2020 it plunged to 3.7%. In 2019, the growth of commodity-based futures (secured by assets like oil, gold, etc.) slowed down; their share in the overall structure of transactions shrank from 31.3% in 2018 to 29.9% in 2019, and to 22.6% in March 2020.

In 2019, similarly to the situation in the previous years, in spite of the increasingly significant interest-rate risks in the financial markets, no progress could be achieved in the sector of interest rate futures and options. The main obstacles to their development had to do with the absence of reliable indicators of the movement of interest rates in the interbank market, as well as of large investors who would be ready to accept the risks associated with changing interest rates. Although many financial and non-financial organizations strongly need to hedge their contracts against the rising interest rates, there are practically no market participants willing to buy these risks.

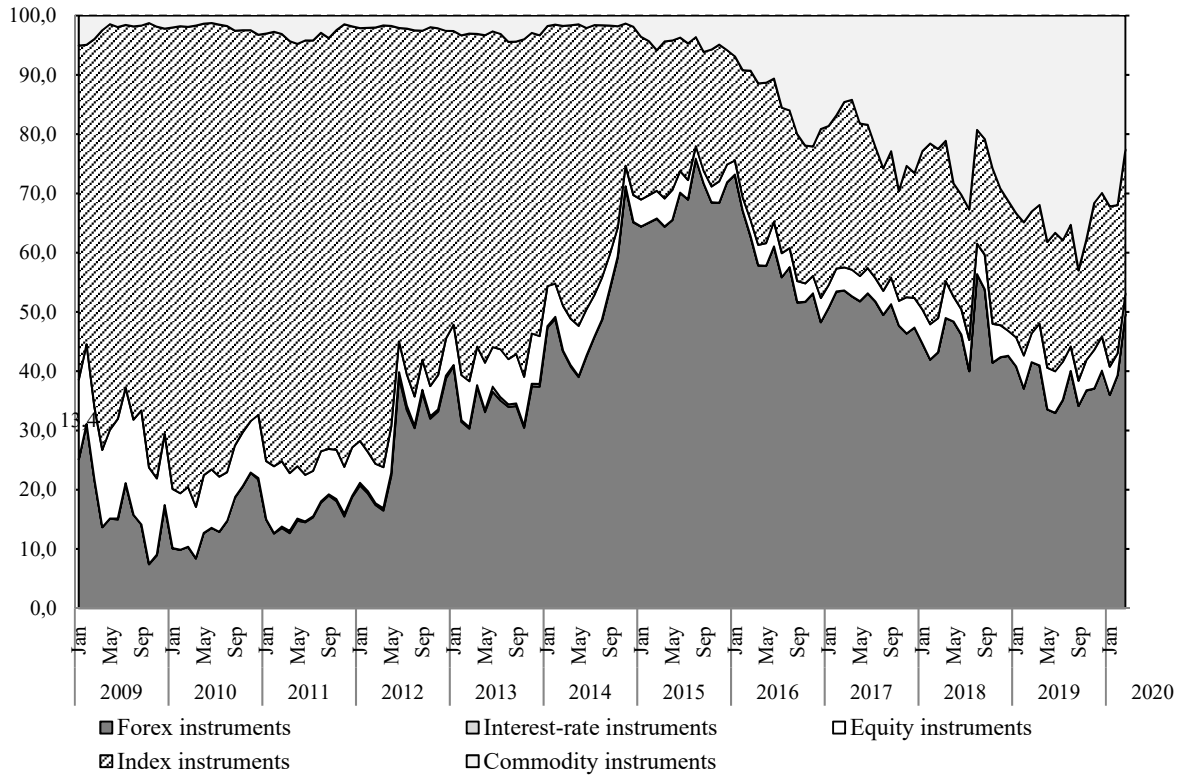


Fig. 49. The futures market structure on the Moscow Exchange over the period from January 2009 through March 2020, % of value volume

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

The options market was probably used to a lesser degree for hedging against investment risks, which was the reason for its relatively moderate liquidity on the stock exchange. The

structure of the Moscow Exchange options market in 2019 demonstrated an increase in the relative share of stock index options: from 53.0% in 2018 to 57.2% in 2019, and then to 58.7% in March 2020 (*Fig. 50*). The relative share of commodity transactions shrank from 7.2% in 2018 to 6.9% in 2019, and then in March 2020 it increased to 10.3%. The share of forex transactions shrank from 39.4% in 2018 to 34.7% in 2019, and to 30.7% in March 2020.

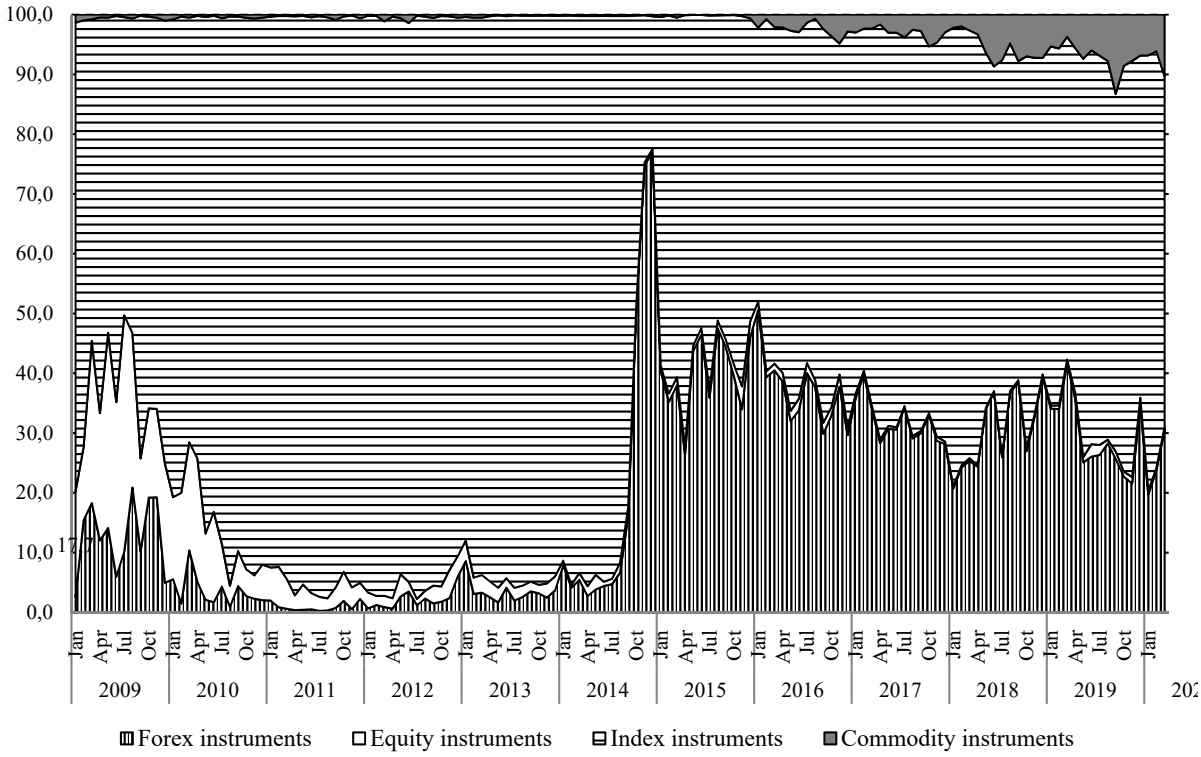


Fig. 50. The options market structure on the Moscow Exchange over the period from January 2009 through March 2020, % of value volume

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

3.1.10. Financial intermediaries and exchange infrastructure

In 2019 and early 2020, the number of professional securities market participants and that of licenses for various types of professional activities continued their decline (*Fig. 51*). The number of brokerage license holders shrank by 12.4% – from 331 in 2018 to 290 in 2019, and then to 284 in Q1 2020. The number of dealer licenses in 2019 decreased by 12.8% – from 366 to 319, and then to 312; that of equity trust management licenses – by 12.6%, from 230 to 201, and then to 200.

A long-term downward trend in the number of licenses of professional securities market participants has been observed since the 2008 crisis, reflecting the general slowdown in the Russian economy and the shrinking role of the stock market. The creation of a financial mega-regulator in September 2013 slightly sped up this natural process by increasing the administrative costs incurred by market participants. As before, the main reason for the revocation or annulment of professional licenses has remained the licensee's application with

a statement of their desire to discontinue their business activity, and not the prudential measures enforced by the regulator.

A more serious problem has to do not with the revocation of expired licenses of professional securities market (PSM) participants, but a sharp reduction in the number of new PSM participants entering the market, because they exert a positive competitive pressure on the financial services market and its performance level. As shown in *Fig. 51*, since 2012 there has been a significant slowdown in the entry of new players onto the market, the reason being the creation and operation of the mega-regulator. The number of newly issued licenses to PSM participants in 2017, 2018 and 2019 was 33, 22 and 12, respectively; in other words, in 2018, it decreased by a third, and in 2019 – by another 45.4%. The existence of such statistics may point to barriers imposed on the fintech sector, where new technologies and business models are being developed.

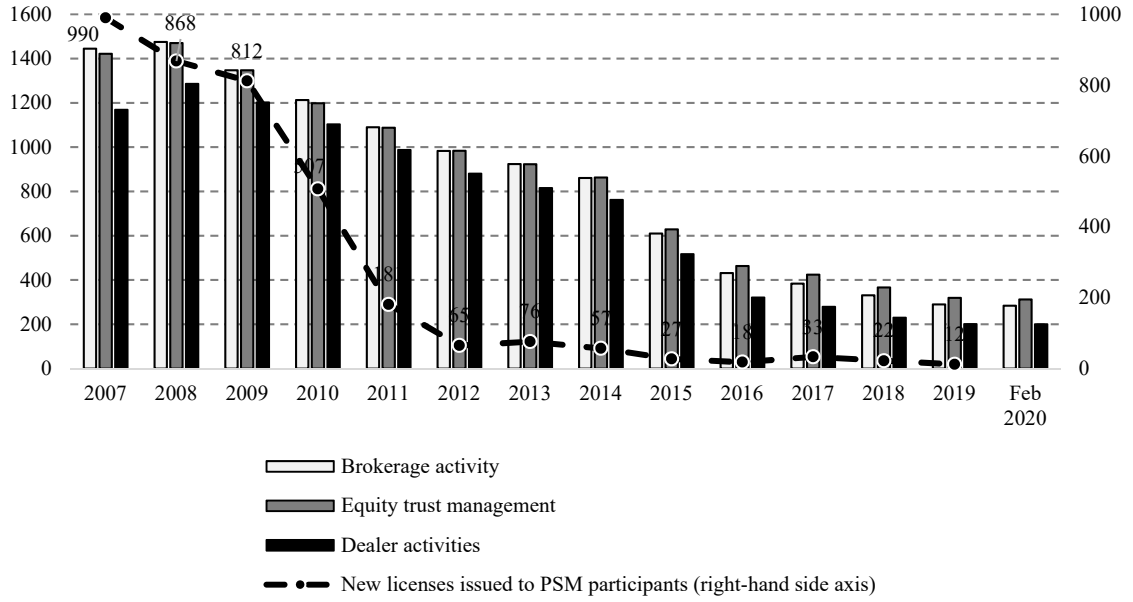


Fig. 51. The number of brokerage, dealer, equity trust management, and professional securities market participant licenses over the period from 2007 through February 2020

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

Alongside the meagre inflow of new market players, there was a noticeably higher concentration of brokerage and equity trust management activities in the major banks and non-bank financial institutions. The relative share of the top 5 brokers in the total number of individual clients increased from 57.2% in 2018 to 60.8% in Q1 2020, while for the top 10 brokers this index slightly declined from 70.5 to 68.1% (*Table 7*).

In the total number of active clients of brokers, i.e. individuals who effect at least one transaction per month on the exchange, the relative share of top 5 brokers over the same period increased from 70.5% to 83.6%, and that of the top 10, from 93.3 to 96,5%. The relative share of brokerage accounts in the total number individual investment accounts (IIAs) also increased sharply from 84.6% in 2018 to 88.8% for the top 5 brokers, and from 94.4% to 96.3% for the top 10 brokers.

Table 7

The relative shares of top 5 and top 10 brokers in the total number of client accounts, %

	2007	2012	2013	2014	2015	2016	2017	2018	2019	Q1 2020
1. Share in the total number of brokers' clients, %										
Top 5 brokers	41.6	62.2	62.3	61.0	58.8	59.1	58.3	57.2	60.2	60.8
Top 10 brokers	51.0	78.5	78.2	76.3	72.3	71.4	68.6	70.5	68.3	68.1
2. Share in the number of active clients, %										
Top 5 brokers	41.9	66.8	69.1	66.0	67.6	65.9	76.7	70.5	80.1	83.6
Top 10 brokers	57.9	84.1	85.8	80.0	79.9	76.5	88.5	93.3	95.8	96.5
3. Share in the total number of individual investment accounts (IIAs), %										
Top 5 brokers					84.2	82.3	84.0	84.6	87.5	88.8
Top 10 brokers					91.2	92.2	95.9	94.4	96.0	96.3

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

In 2019, the Bank of Russia published a draft framework for public consultations titled 'The Bank of Russia Approaches to the Development of Competition in the Financial Market"[1], which included a set of measures designed to promote competition in the financial market. In our opinion, this document does not provide a comprehensive solution to the competition issue. The main problem with the measures proposed by the Bank of Russia was that they were not oriented to maintaining a competitive environment that could move ahead of the development of fintech and the modern methods of selling financial products by intermediaries based on competing investment platforms with an open architecture of sales.[2] Instead, the proposed measures had more to do with the implementation, by the Bank of Russia, of its own commercial infrastructure projects in the form of online marketplace, digital citizen profile, and quick payment system.[3]

Competition in the financial market could be boosted by legislative measures aimed at promoting competition between investment platforms; by creating favorable conditions for the implementation of private fintech projects; by reducing the administrative barriers that make it more difficult for new companies to enter the market; by introducing fiduciary standards for the sale of investment financial products;[4] and by a more distinct orientation of significant infrastructure development projects to the needs of financial intermediaries and their clients.[5]

In early 2020, the Audit Chamber of the Russian Federation published a report on the results of its expert-analytical study 'Analysis of the implementation of the Guidelines for the development of the Russian financial market in 2016–2018 and assessment of the Guidelines

[1] Bank of Russia. (2019). Approaches of the Bank of Russia to the development of competition in the financial market. Report for public consultations. November. Moscow. URL: https://www.cbr.ru/Content/Document/File/90556/Consultation_
Paper_191125.pdf

[2] An open architecture for sales of financial products means that financial products of various manufacturers are sold through a financial intermediary and its information platform, with due regard for the needs of each consumer of financial services.

[3] For more detailed comments on the Bank of Russia Report (2019) prepared by the Center for Institutions Analysis and Financial Markets (IAES RANEPA), see URL: https://ipei.ranepa. ru/images/2019/FR/komentarii–_k_CBR_o_konk.pdf.

[4] These standards imply imposing restrictions on the conflicts of interest that arise between financial intermediaries when they sell financial products to their clients.

[5] For further details concerning the development of investment platforms and fintech, see *Abramov, A.* (2019). To stake out the platform. The Expert, No 44, October 28 – November 3, pp. 64–68.

for the development of the Russian financial market in 2019–2021'.[1] The main problems of the domestic market and its regulation outlined in the report were as follows: inadequate level of cooperation between the RF Government and the Bank of Russia in elaborating and implementing the policy for developing and ensuring the stability of the performance of financial markets; a significant decrease in the level of competition in the financial market, in combination with a 1.5–2 times shrinkage of financial market institutions in certain sectors; the low growth rate in the banking sector; an accelerated growth of capitalization due to the secondary market growth, and not that of public offers of new stocks; the level of insurance sector development that was inadequate to the needs of the economy. The provision of proper solutions to these problems could greatly contribute to the development of the domestic financial market and boost competition between its participants.

In 2011, the two largest Moscow-based exchanges – MICEX and RTS – were merged, and this had some important positive consequences for the development of Russia's stock market. After the merger, the transactions on the stock and futures markets became easier, and all the liquidity necessary for carrying on exchange trade could now be concentrated in the accounts of participants in trading in the exchange's single clearing and settlement system. The diversification of the new Moscow Exchange in servicing transactions in different types of monetary and investment assets improved its financial sustainability. Alongside these positive changes, the merger of MICEX and RTS also has some controversial consequences. First of all, now there was no competition between the two exchanges, whilst previously this competition had been a powerful incentive for developing exchange activities in the interests of domestic investors and financial intermediaries.

In 2019, the downward trend in the total volume of trading in various financial instruments (securities, forex and money market instruments, derivatives, commodity instruments) that had first emerged on the Moscow Exchange in 2018, became even more obvious. The total exchange trading volume in 2017, 2018 and 2019 amounted to RUB 888 trillion, RUB 861 trillion, and RUB 798 trillion, respectively; its shrinkage in 2018 amounted to 3.0, and in 2019, to 7.3% (*Fig. 52*).

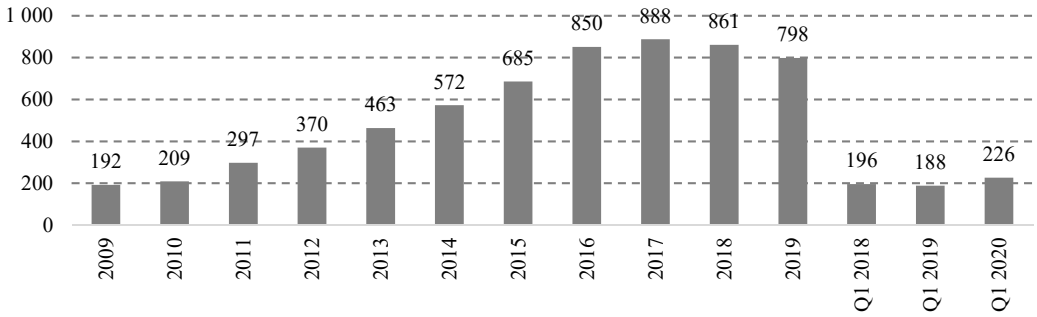


Fig. 52. The volume of trading in all instruments on the Moscow Exchange from 2009 through March 2020, trillions of rubles

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

[1] The Audit Chamber of the Russian Federation (2020). 'Analysis of the implementation of the Guidelines for the development of the Russian financial market in 2016–2018 and assessment of the Guidelines for the development of the Russian financial market in 2019–2021'. Approved by the Collegium of the RF Audit Chamber on December 10, 2019. URL: http://audit.gov.ru/checks/9603

One of the advantages of the Moscow Exchange over its global competitors is the diversification of its market segments. However, this business model also gives rise to additional risks, namely lower market incentives for the development of less marginal trading segments. At present, this is manifest in the decreasing importance of the stock and derivatives market in the total volume of exchange turnover. As shown in *Table 8*, starting from 2012, when the combined exchange was launched, the stock market share in the overall structure of exchange transactions shrank from 6.5% to 5.1% in 2019, including that of transactions in shares from 3.1% to 1.6%; over that period, the derivatives market share also shrank, from 13.5% to 10.3% in 2019.

The share of the forex market, on the contrary, increased from 31.6% in 2012 to 38.6% in 2019; that of lending market – from 2.5 to 6.7%. The growth of the foreign exchange segment was facilitated by the instability of the ruble exchange rate and the access to operations on the forex market granted to individual clients of brokers and banks. The money market share over the period under consideration shrank from 48.3% to 45.9%, which was probably due to some reduction in the scale of refinancing of the banking system by the monetary authorities.

With the growing volatility in the domestic financial market in March 2020, the share of transactions in stocks and derivatives (mainly currency and stock index futures) in the overall structure of transactions on the Moscow Exchange also increased.

Table 8

The market structure on the Moscow Exchange from 2010 through March 2020, %

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Q1 2020
Stock market,	13.2	10.3	6.5	5.2	3.6	3.0	2.8	4.0	4.7	5.1	6.1
including:											
Shares, Russian depository receipts (RDR), investment fund units	8.0	6.6	3.1	1.9	1.8	1.4	1.1	1.0	1.3	1.6	2.8
Bonds	5.2	3.7	3.4	3.3	1.9	1.6	1.7	3.0	3.5	3.5	3.4
Secondary turnover	3.4	2.9	2.8	2.7	1.5	1.2	1.1	1.2	1.2	1.3	1.5
New offering	1.8	0.8	0.6	0.6	0.3	0.4	0.6	1.7	2.3	2.2	1.9
Forex market,	72.0	70.6	80.0	84.3	85.6	83.3	83.6	86.5	84.8	84.5	79.0
including:											
Money market	33.9	41.3	48.3	50.7	45.7	38.0	44.8	47.3	44.3	45.9	43.2
REPO operations	31.5	38.3	45.8	44.8	32.0	26.4	34.8	38.3	36.0	36.7	35.7
Lending market	2.4	3.1	2.5	2.8	3.7	4.8	4.4	4.2	6.3	6.7	6.4
Forex market	38.1	29.3	31.6	33.7	39.9	45.4	38.8	39.2	40.5	38.6	35.8
Spot trades	18.0	15.8	16.6	12.4	13.6	15.1	12.6	8.8	10.1	8.4	10.8
Swap trades	20.1	13.4	15.0	21.3	26.3	30.3	26.2	30.3	30.4	30.2	25.0
Derivatives market	14.8	19.1	13.5	10.5	10.7	13.7	13.6	9.5	10.4	10.3	14.8
OTC	0.0	0.0	0.0	0.0003	0.0002	0.001	0.002	0.01	0.1	0.1	0.0
Commodity market	0.001	0.003	0.006	0.005	0.003	0.02	0.02	0.01	0.02	0.01	0.00
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

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

Thus, in 2019 and early 2020, the financial market continued to display a trend towards a reduction in the number of intermediaries and a higher concentration of brokerage services. The ongoing discussions of possible approaches to regulating competition in the financial markets have not yet produced any valid results. With the exception of some short-term upsurges in Q1 2020, the stock and derivatives markets continued to play a secondary role in the structure of exchange transactions, while their share in the structure of exchange transactions was on the decline. There was also an adverse downward trend in the total volume of trading on the Moscow Exchange.

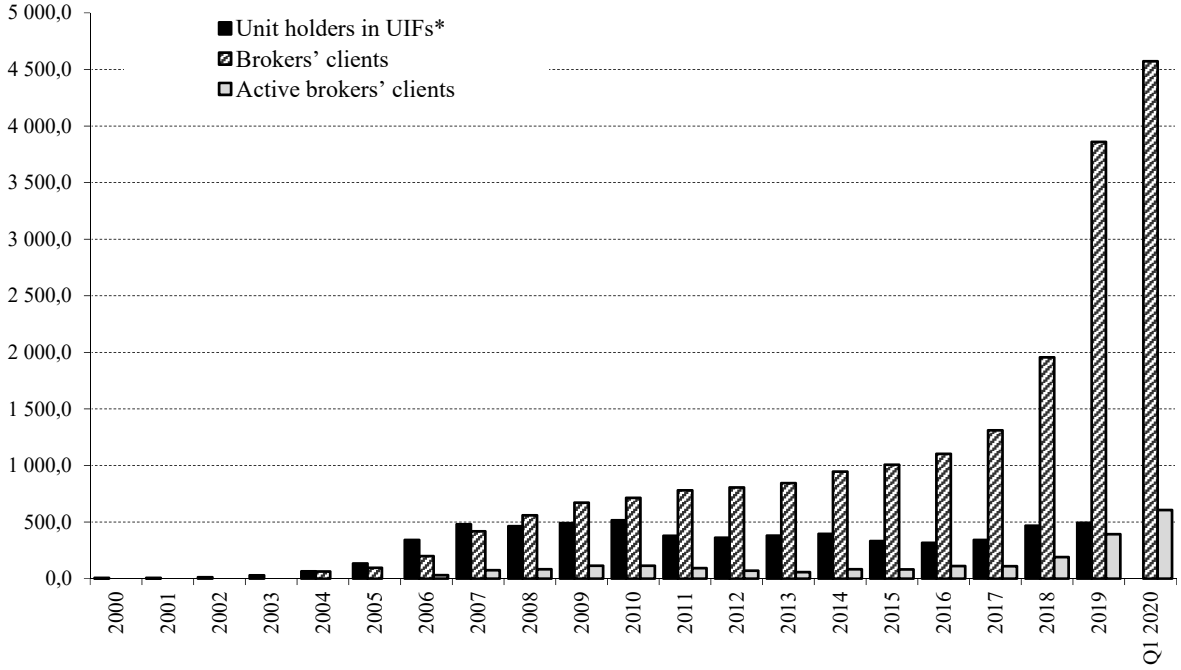
3.1.11. Investors

Private investors

The main event of the financial market in 2019 and early 2020 was a massive inflow of individual investors. As shown in *Fig. 53*, the total number of brokerage accounts of registered investors on the Moscow Exchange increased from 2.0 million in 2018 to 3.9 million in 2019, or 95.0%, and to 4.6 million in March 2020, which represents an increase of 18.0% on December 2019. The number of active individual investment accounts, where the clients effected at least one transaction per month, over the same periods increased from 190,000 to 392,000, or 2.2 times, and then to 607,000, jumping 1.5 times over the course of just one quarter. In Q1 2020, the inflow of new clients into the market accelerated in spite of the falling stock and oil prices, a weakening ruble, and other risks.

The growth in the number of unit holders in open-end mutual funds was more moderate: from 467,000 in 2018 to 493,000 in 2019, or by only 5.6%.

As shown in *Fig. 54*, the competition in the brokerage services market between biggest retail banks for attracting individual clients on a massive scale began to surge in May 2018, when Tinkoff Bank entered this market segment as an independent player. The aggressive marketing methods of the new broker, in combination with the latest click-through technologies for dealing in securities by simply pushing a button on a smartphone, which provide any client with opportunities of buying small blocks of shares in foreign companies, triggered an explosive growth in its client base. The other competing banks (Sberbank, VTB, Otkritie) quickly adopted the new technologies to attract their clients into the stock market, thus further spurring the growth of their respective active client base.



* No data on the number of retail unit holders in UIFs are available for Q1 2020.

Fig. 53. The number of retail clients of trust managers and brokers

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

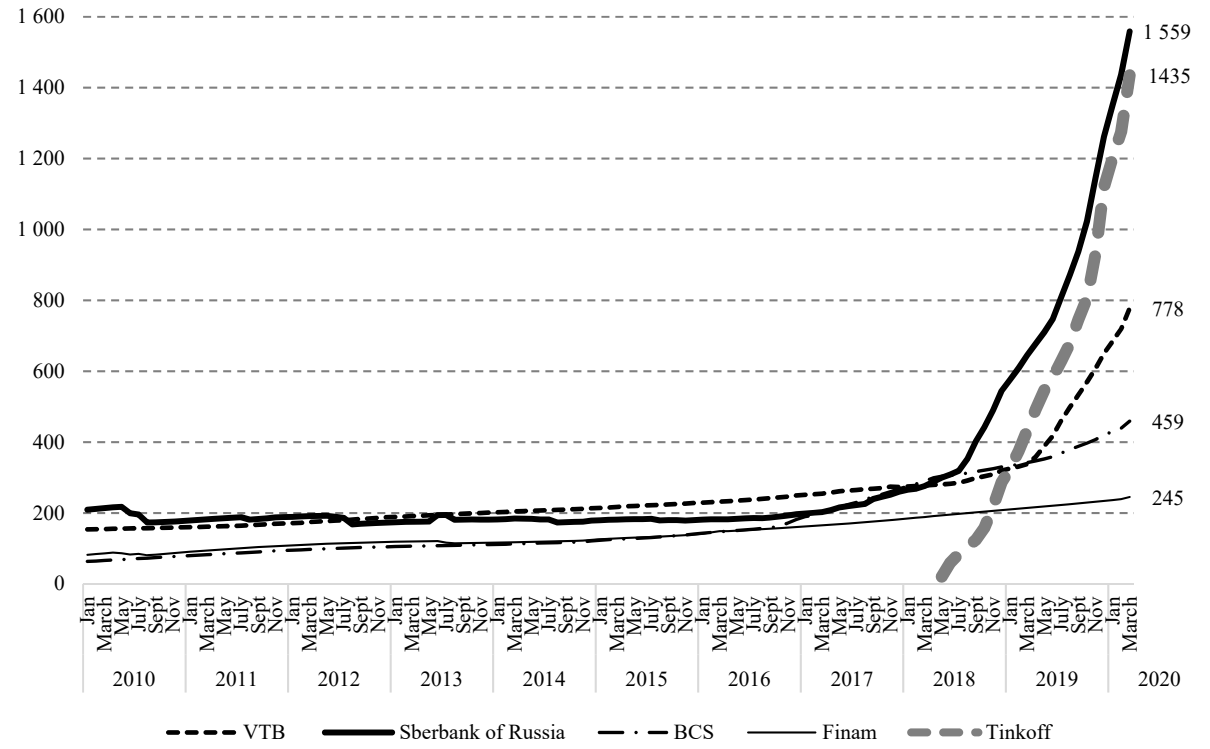


Fig. 54. The number of registered brokerage accounts of the top 5 brokers on the Moscow Exchange, thousands

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

The economic factor behind this phenomenon was the desire of banks, in the situation of a reduced key rate, to offset their lost income generated by deposits by selling to their traditional customers some products with a good profit margin, such as classic bank bonds, structural and insurance products, unit investment funds, and other financial instruments and services.

The number of registered brokerage accounts with Sberbank increased from 544,000 in 2018 to 1,262,000 in 2019, and 1,559,000 in March 2020, with a 2.9-times increase over the period from December 2018 through March 2020. The corresponding indicators for Tinkoff Bank amounted to 286,000, 1,120,000, and 1,435,000, respectively, which represents an increase of 5.0 times over the same period. The third top bank, VTB, had 319,000, 650,000, and 778,000 accounts, respectively, and a 2.4-times increase.

For big non-bank brokerage companies, the movement pattern of brokerage accounts was different. The total number of accounts with BCS was 330,000 in 2018, 420,000 in 2019, and 459,000 in March 2020; thus, over 15 months, their number jumped 39.0%. The corresponding Fig.s for Finam Investment Company were 208,000, 234,000, and 245,000, respectively, with an increase of only 4.7%.

A roughly similar picture was observed with regard to the accounts of active investors, the only difference being that in this segment, it was Tinkoff Bank that held the uppermost position (*Fig. 55*). The number of accounts of active investors with Sberbank rose from 38,000 in 2018 to 97,000 in 2019, and 171,000 in March 2020, thus increasing 4.5 times over the period from December 2018 through March 2020. The corresponding indicators for Tinkoff Bank were

33,000, 118,000, and 196,000, respectively, with overall growth by 5.9 times. VTB has 21,000, 58,000, and 109,000 accounts, and a total increase by 5.2 times.

The number of accounts of active investors with BCS was 23,000 in 2018, 32,000 in 2019, and 45,000 in March 2020, with an increase of 96.0% over the course of 15 months. The corresponding indicators for Finam Investment Company were 22,000, 29,000, and 38,000, with a total increase of 73.0%.

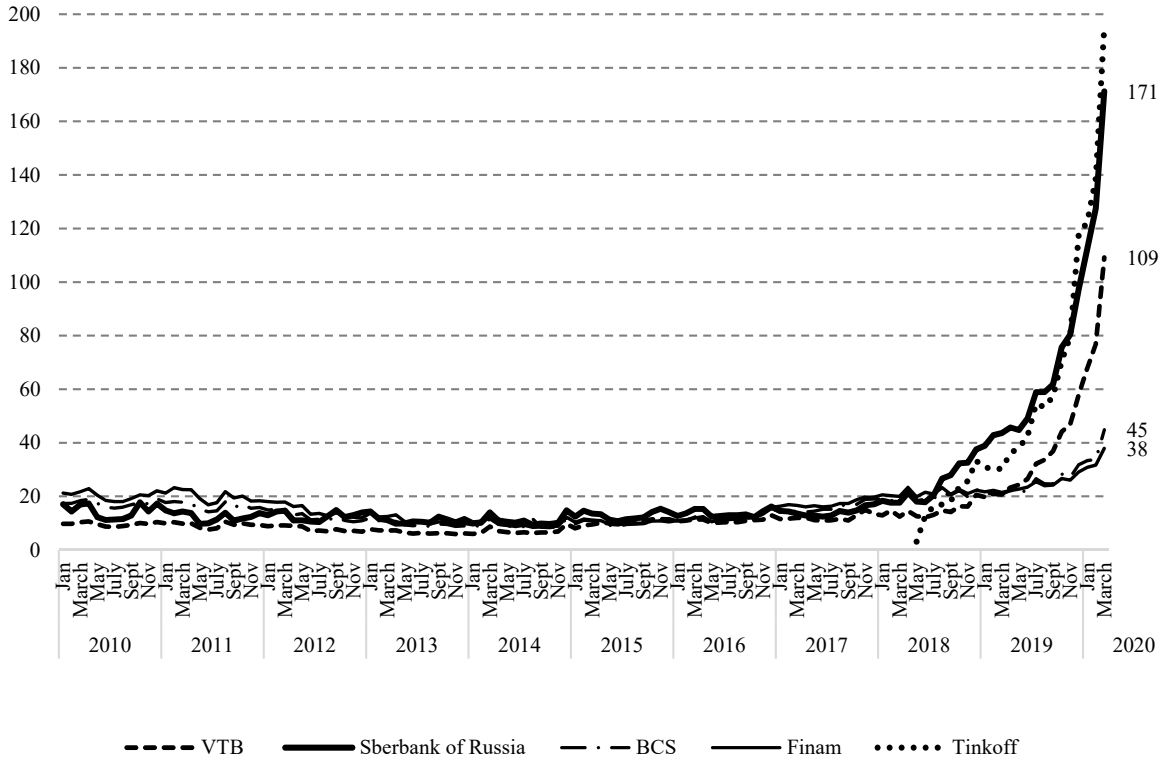


Fig. 55. The number of the registered brokerage accounts of active clients of the top 5 brokers on the Moscow Exchange, thousands

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

The most remarkable event in the segment of private savings over the past 5 years was the introduction of individual investment accounts (IIAs), with some personal income tax exemptions and no serious restrictions on investing the monies kept in these accounts. According to data released by the Moscow Exchange, the number of IIAs in 2018 was 598,000, in 2019, 1,650,000, and in March 2020, 2,060,000, thus increasing 3.4 times over the period from December 2018 through March 2020. Over the same period, the number of IIAs opened in the form of individual trust accounts totaled 84,000 (as of January 2018), 222,000, and 269,000, respectively, with an increase of 3.2 times over the period from January 2018 through March 2020 (*Fig. 56*).

The principal factor pushing up the number of IIAs was the activity of banks engaged in brokerage activities. Over the said 15-month period alone, from December 2018 through March 2020, their relative share in the total number of these IIAs increased from 73.9% to 86.7%, while that of non-bank financial institutions providing brokerage services plunged from 24.8% to 12.9%.

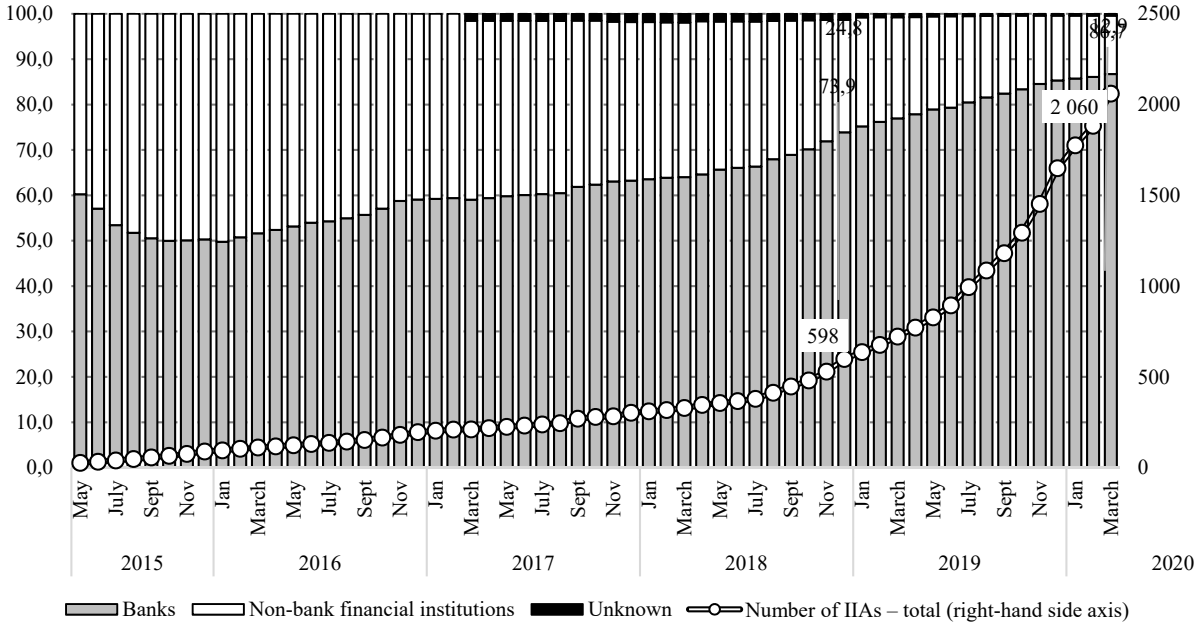


Fig. 56. The movement of the number of individual investment accounts (IIAs) over the period from May 2015 through January 2019, thousands

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

The indisputable leader in competition in the IIA market segment has been Sberbank (*Fig. 57*). The number of IIAs opened with Sberbank soared from 291,000 in 2018 to 827,000 in 2019, and 1,034,000 in March 2020, with a 3.5-fold increase over the period from December 2018 through March 2020.

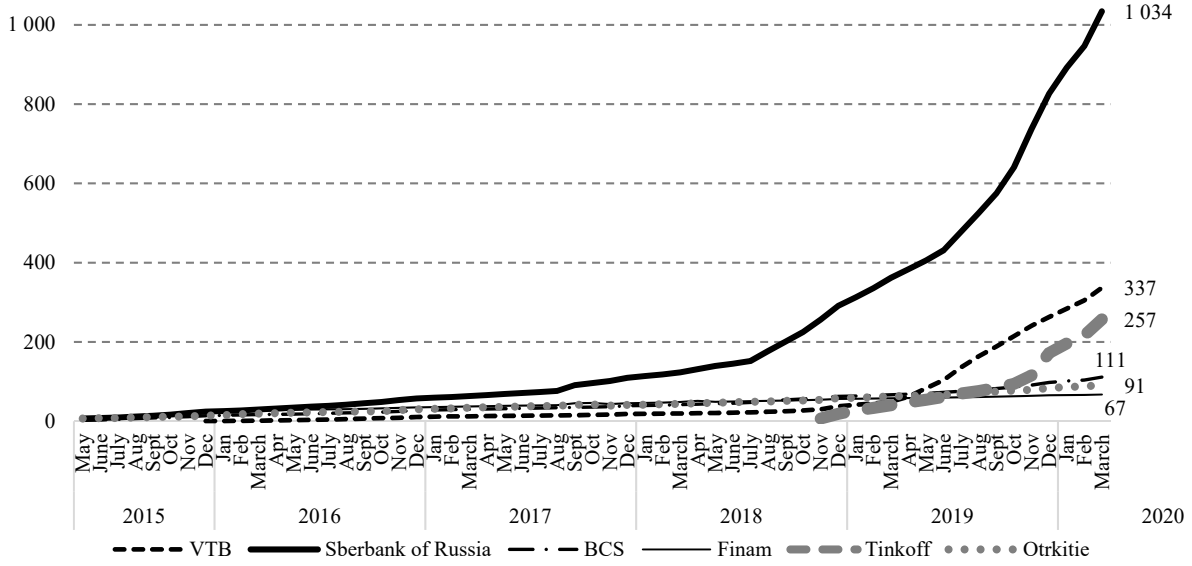


Fig. 57. The number of IIAs with the top 6 brockers, thousands

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

The corresponding indicators for VTB were 38,000, 263,000, and 337,000, respectively, with a 8.9-times rise. The number of IIAs with Tinkoff Bank was 19,000, 172,000, and 257,000, increasing by 13.5 times due to the low starting base; for Otkritie Bank, the corresponding Fig.s were 59,000, 84,000, and 91,000, which represents a 1.5 times increase.

The number of IIAs with BCS was 63,000 in 2018, 98,000 in 2019, and 111,000 in March 2020, with growth by 1.8 times over 15 months. For Finam Investment Company, the corresponding indicators were 56,000, 66,000, and 67,000, with an increase of 19.6%.

The experience of involving individuals in trading on the stock exchange and the movement of IIAs point to the willingness of individual investors to more actively enter the stock market. According to the Bank of Russia, in 2019 the volume of assets kept in IIAs doubled to RUB 197.3 billion, of which RUB 131.1 billion was held in IIAs, and RUB 66.2 billion in individual trust accounts. The average volume of assets held in an IIA shrank from RUB 127,000 in 2018 to RUB 92,000 in 2019, and that held in an individual trust account, from RUB 409,000 to RUB 301,000.[1] This means that against the backdrop of a rapid rise in the number of IIAs, these accounts are being opened to an increasingly small investor category.

According to the same data source of data provided by the Bank of Russia, the structure of IIAs (of both types) in 2019 was demonstrating a shift from government bonds towards corporate bonds, and particularly bank bonds. The relative share of government securities in the structure of assets held in IIAs shrank from 21% in 2018 to 15% in 2019; that of investments in corporate bonds, on the contrary, increased from 13% to 21%, respectively. The relative share of stocks in the structure of assets kept by clients in their IIAs remained stable, at about 23% both in 2018 and 2019. The biggest category of investments kept in IIAs was represented by units in UIFs; however, their share slightly decreased from 27% in 2018 to 25% in 2019. The asset structure in IIAs demonstrated a more noticeable shift towards stocks by comparison with individual trust accounts, where the shift was in favor of bonds.

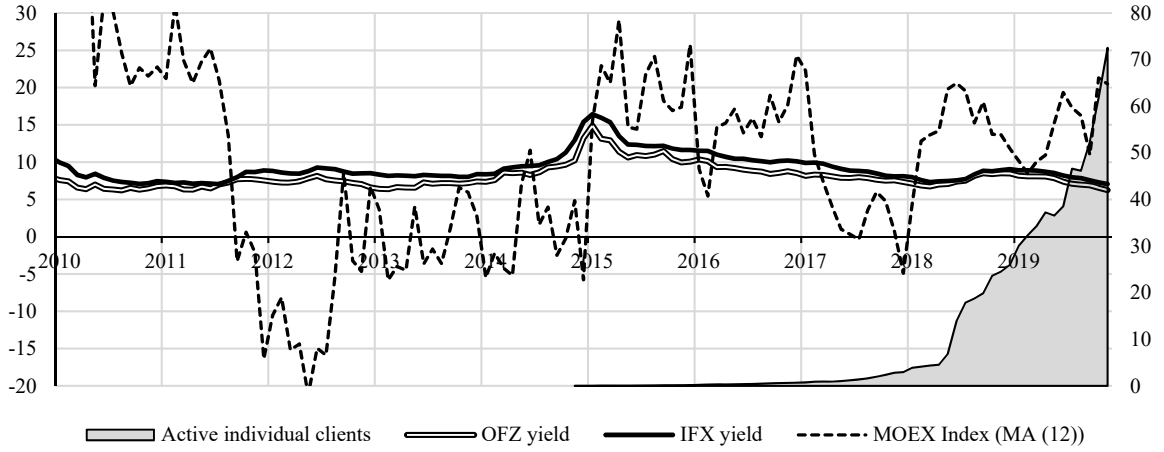
A new trend that emerged in the domestic stock market in 2018–2019 was the rapid increase in the number of investors who traded on the St. Petersburg Exchange (SPB Exchange), specializing in listed securities of reliable foreign issuers. By purchasing, on the SPB Exchange, the stocks issued by major US and European companies, individuals can improve the diversification of their portfolios at moderate transaction costs. The number of active clients of brokers on the SPB Exchange increased from 3,000 in 2017 to 26,000 in 2018, or 8.7 times; in 2019, it reached the level of 72.500, which represents an increase of 2.8 times over the past year (*Fig. 58*).

In early 2020, the Center for Institutions Analysis and Financial Markets (RANEPA IAES) examined[2] the economic and financial factors influencing the movement patterns of the numbers of individual investors trading on Russian exchanges. There were 4 categories of individual investors: passive investors on the Moscow Exchange, determined on the basis of the total number of client accounts opened by individuals with brokers over the period from December 2006 through December 2019; active investors on the Moscow Exchange, determined on the basis of the total number of individual accounts of active clients of brokers opened over the period from May 2007 through December 2019; the owners of IIAs with the Moscow Exchange in the category of passive investors with a longer horizon for making their investment decisions thanks to their individual income tax exemptions,

[1] Bank of Russia (2020). Review of Key Indicators of Professional Securities Market Participants. 2019. No 4. Moscow.

[2] The results of the research are scheduled to be published.

determined for the period from May 2015 through December 2019; and the active individual investors on the St. Petersburg Exchange (SPB Exchange) targeting the securities of foreign issuers, determined for the period from November 2014 through December 2019.



Note. The corporate bond yield is the effective yield of the IFX Cbonds index; the government bond yield is the effective yield of the Moscow Exchange's RGBI index; the stock yield is a 12-month moving average of the MOEX Russia Index.

Fig. 58. The number of active clients trading on the St. Petersburg Exchange (thousands) and the stock and bond yield on the domestic stock market (%), 2010–2019

Source: own calculations based on data released by Bloomberg, Cbonds, and the St. Petersburg Exchange.

Table 9 demonstrates an example of a simple model that reflects the dependence of the monthly growth rate of the total number of registered investors on the Moscow Exchange on several variables, such as real personal income growth, volatility of the ruble exchange rate, the dividend and forex constituents of the MOEX Index, its volatility, the risk premium on domestic bonds,[1] the interest rate on individual deposits,[2] the dividend yield of foreign stocks, and the entry of Tinkoff Bank[3] on the brokerage services market in May 2018.

Based on the data shown in *Table 9* and similar models built for the other indicators that influence the number of individual investors in the stock market, we came to the following conclusions.

The movement of the total number of accounts opened by brokers' clients on the Moscow Stock Exchange was more strongly influenced by those factors that created the potential for deriving passive income in rubles (the ruble deposit interest rates offered by banks and the size of bond risk premiums, the dividend yields on Russian stocks, the ruble exchange rate volatility), the personal income level, and the surge in brokerage activity that coincided with the entry of Tinkoff Bank into the brokerage services market. The changes in the number of investors in this category did not significantly depend on factors like the returns of Russian and foreign stocks as estimated by the S&P 500.

[1] The yield spread of government bonds and interest rates on bank deposits.
[2] The average interest rates on bank deposits of 181 days to a year, calculated by the Bank of Russia.
[3] The launch of brokerage services by Tinkoff Bank in May 2018 sharply increased the competition between biggest retail banks for new clients in the brokerage services market.

Table 9

Models for the growth in the number of individual clients of brokers on the Moscow Exchange

	Dependent variable: growth in number of individual clients of brokers on Moscow Exchange		
	(1)	(2)	(3)
Constant	1.963**	-1.067**	0.938***
	(0.847)	(0.533)	(0.258)
Real income growth (3 month lag)	0.106***	0.115***	
	(0.026)	(0.026)	
Dividend yield of MOEX Index		0.655***	
		(0.103)	
MOEX Index volatility	0.276**	0.267*	0.414***
	(0.125)	(0.149)	(0.103)
Premium on bonds (1 month lag)	0.228*		
	(0.128)		
Deposit interest rate (12 month lag)	-0.156*		
	(0.093)		
MOEX Index, change of last year		0.022	
		(0.023)	
Dummy (Tinkoff)			4.306***
			(0.359)
Ruble exchange rate volatility		-0.613*	-0.518**
		(0.323)	(0.223)
Observations	152	155	155
R^2	0.168	0.292	0.508

Note. The standard deviation of the coefficients is shown in brackets. The significance levels are as follows: * - p <0.1, ** - p <0.05, *** - p <0.01.

The behavior of holders of *individual investment accounts (IIAs)* could be explained by similar motives, which are typical of passive investors. The movement pattern of IIAs was shaped by the factors associated with passive income, like the ruble deposit interest rates, government bond yields, dividend yields of Russian stocks, and real personal income growth. Some of these variables had a 12-month lag, which reflects the more inert nature of decision-making by the owners of IIAs compared to that of ordinary passive clients of brokers. The movement pattern of IIAs was not influenced by the return on investments in foreign stocks. The tax exemptions granted to IIAs translated into a higher propensity of their holders to invest in risky assets, which was manifest in the way that the size of stock premiums was influencing the movement pattern of IIAs, in contrast to government bond yields.

Private investors with active portfolio strategies, which are estimated using the movement of the number of active accounts of *brokers' clients on the Moscow Exchange*, are prone to resort to speculative forms of income. The number of these accounts grew in proportion to the variables describing a higher propensity to take risks, namely the size of equity risk premium and the volatility of the MOEX Index, the prices of foreign stock and the ruble exchange rate. At the same time, the dividend yield of the MOEX Index and the fact of Tinkoff Bank obtaining a brokerage license were the only two factors that uniformly influenced the movement patterns of both passive and active private investors on the Moscow Exchange.

The movement pattern of the number of *accounts held by active clients of brokers on the St. Petersburg Exchange (SPB Exchange)*, where foreign securities are mainly traded, was most strongly influenced by a limited range of factors that had to do with the comparative returns of Russian and foreign securities. Meanwhile, both the composition of these variables and the vectors of influence differed significantly from the factors that influenced the number of individual investors in the MOEX Index.

Unlike the Moscow Exchange market, the individual investors trading on the St. Petersburg Exchange attach greater importance to the return indices of foreign securities and the returns on Russian stocks recalculated in foreign currency. The ruble return of the S&P 500 with a 2-month lag has a significant and positive effect on the number of investors on the St. Petersburg: an increase in that index is followed, as a rule, by an inflow of individual investors onto the St. Petersburg Exchange. The return of the RTS Index denominated in US dollar, with a 2-month lag, significantly and negatively influenced the number of clients of brokers on the St. Petersburg Exchange: the prospect of receiving a higher return on Russian stocks when the ruble strengthens, as a rule, produced an outflow of investors from the St. Petersburg Exchange.

Thus, the two exchanges were interconnected. The growth of Russian bond and stock premiums increased the attractiveness of the MOEX Index in the eyes of individual investors and made less attractive the foreign securities market of the St. Petersburg Exchange. And vice versa, an increasing exchange rate volatility and a weakening ruble translates in a lower attractiveness of the ruble securities market for domestic investors, who then have to seek an alternative in the form of foreign securities.

Domestic institutional investors

The entry of individual investors into the domestic market made it possible to compensate, in part, for the outflow of foreign investments. However, the positive changes in this direction were not followed by positive developments in the segment of mandatory pension savings and pension reserves. As shown in *Fig. 59*, in 2019, after the pension savings freeze, the pension reserves and savings management sector was growing at a very slow pace. The value of pension savings held by non-governmental pension funds (NPF), state asset managers (SAM) and private asset managers (PAM) increased from RUB 4.3 trillion in 2018 to RUB 4.7 trillion in 2019, or by 8.8%; that of pension reserves held by non-governmental pension funds increased over the same period from RUB 1.3 trillion to RUB 1.4 trillion, or by 12.3%.

In terms of share of GDP, the total value of pension savings increased from 4.2% in 2018 to 4.3% in 2019, and that of pension reserves held by non-governmental pension funds from 1.2% of GDP to 1.3% of GDP, respectively.

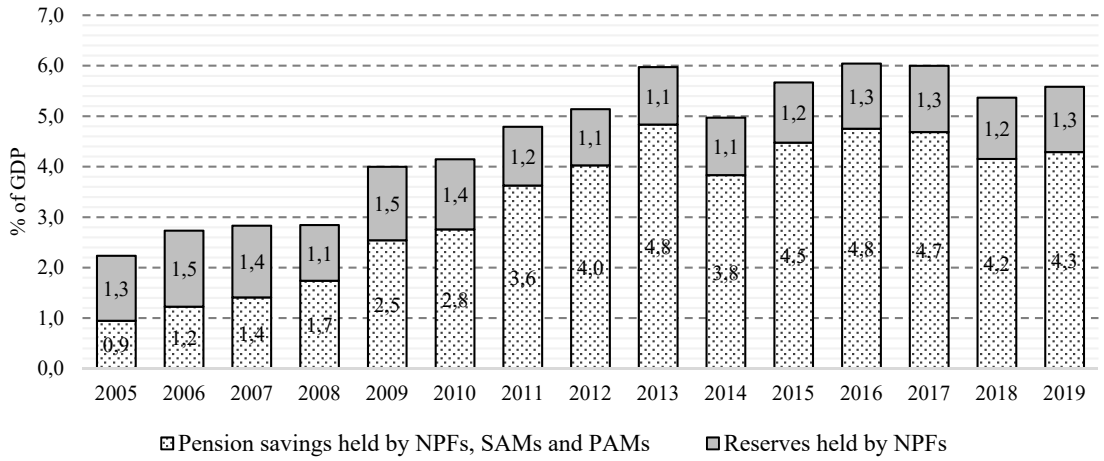


Fig. 59. The movement of pension savings and reserves in 2005–2019, % of GDP

Source: own calculations based on data released by Rosstat, the Bank of Russia, and the RF Pension Fund.

The absence of a properly functioning mandatory corporate pension savings system or voluntary retirement plans for the employed population, stimulated by tax benefits for employees and employers, is currently one of the key constraints on the domestic stock market development. In 2019, the attempts by the RF Ministry of Finance and the Bank of Russia to offer some new promising systems of supplementary retirement programs in the form of individual pension capital (IPC) and guaranteed pension plans (GPP) did not yield any concrete results.[1]

In 2019 and early 2020, another collective investment mechanism – open-end mutual funds and interval funds – was demonstrating a more dynamic pace of development. As shown in *Fig. 60*, net asset value (NAV) of open-end mutual funds in 2018, 2019 and in March 2020 amounted to RUB 315 billion, RUB 454 billion, and RUB 477 billion, respectively, and their NAV over the period from 2018 through March 2020 amounted to 51.4%. The NAV of interval funds over the same periods amounted to RUB 31 billion, RUB 7 billion, and RUB 6 billion, respectively, thus shrinking by 80.6%.[2] So far, the GDP share of the NAV of these two types of investment funds has amounted only 0.44%, but it continues to grow steadily.

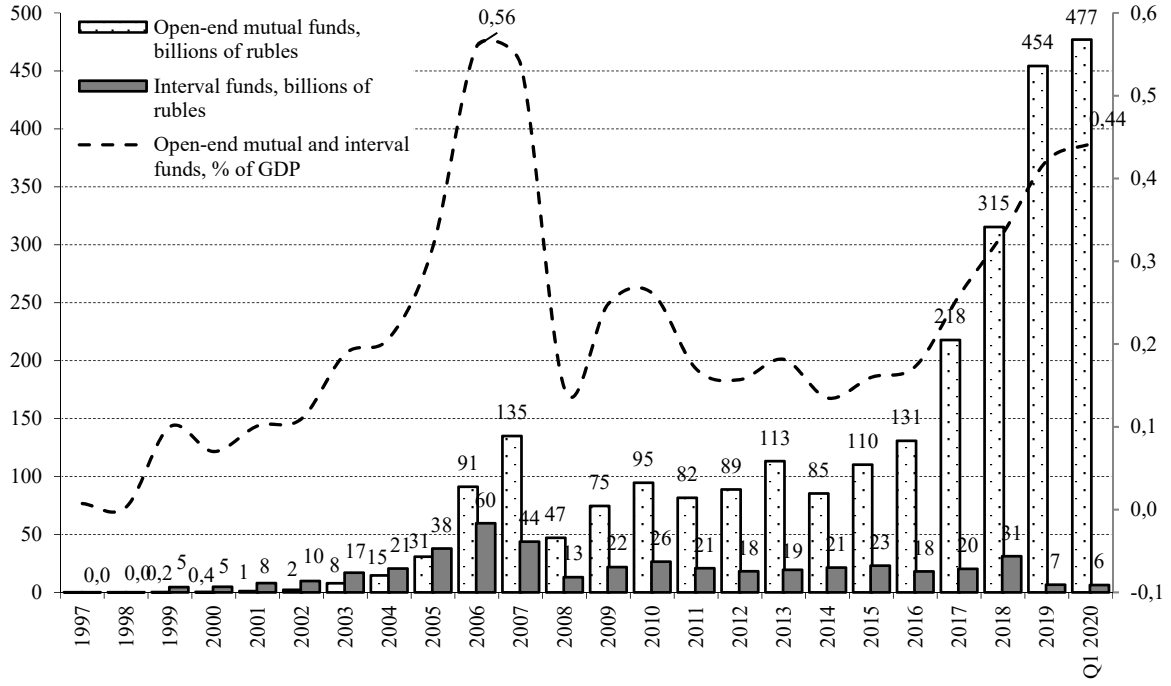


Fig. 60. Net asset value of open-end mutual funds and interval funds from 1997 through March 2020, billions of rubles (left-hand side axis), and their share of GDP, % (right-hand side axis)

Source: own calculations based on data released by Investfunds and Rosstat.

[1] For the commentary of the Center for Institutions Analysis and Financial Markets (IAES RANEPA) concerning the draft law on GPP presented by the RF Ministry of Finance, see URL: https://ipei.ranepa. ru/images/2019/FR/com_FZ_GGP.pdf

[2] At present, interval funds are not very popular with investors, because they offer low liquidity.

In *Fig. 61*, the results of an analysis of several important and interesting trends in the development of open-end mutual funds are shown. *Fig. 61a* demonstrates that, on medium-term horizons of 2-3 years, growth of the RTS Index is usually followed by a net inflow of investment into open-end mutual funds, while a long-term decline in the index value triggers an investment outflow. In 2019, the RTS Index gained 44.9%, which resulted in an inflow of investor money into the funds in the average amount of RUB 1.5 billion per month. On short-term horizons of several months, investors can resort to an opposite strategy of market timing in order to increase the amount of their shares in open-end mutual funds during the periods of temporary stock price decline. This is exactly what happened in January-February 2020: at a moderate decline of the RTS Index by 16.1%, the stock mutual funds were receiving on average RUB 3.8 billion per month. However, after the stock market crash in March 2020, shareholders withdrew RUB 0.5 billion from these funds.

In *Fig. 61b*, it is shown that also on medium-term horizons, the investor cash inflows into bond mutual funds depend on the size of interest rates on bank deposits. The reduction in interest rates on deposits for a period of 181 days to a year from 12.4% in December 2014 to 4.8% in January 2020 gave rise to a stable investment inflow into bond mutual funds. The average monthly cash inflow into these funds amounted to RUB 4.6 billion in 2018, RUB 1.4 billion in 2019, and RUB 8.4 billion in January – February 2020, while a massive cash outflow from bond mutual funds occurred from July 2018 through March 2019, when the interest rate on bank deposits increased from 5.1% to 6.4%. In March 2020, amid fears of corporate defaults, shareholders withdrew a total of RUB 4.5 billion from open-end mutual funds.

In *Fig. 61c,* alongside an individual investment outflow demonstrated by the foreign funds specializing in Russian stocks (Russia-EMEA-Equity), the accumulated volume of domestic investment in Russian stock mutual funds was gradually approaching a level which was comparable with that of the said foreign investment funds. From December 2004 through February 2020, the accumulated investment in Russia-EMEA-Equity amounted to USD 1.5 billion, while the corresponding index for Russian mutual funds amounted to USD 0.3 million. When the attractiveness of the Russian stock market for these foreign funds peaked in April 2011, their accumulated investment amounted to USD 14.1 billion, while the similar indicator of open-end mutual funds was only USD 0.3 billion.

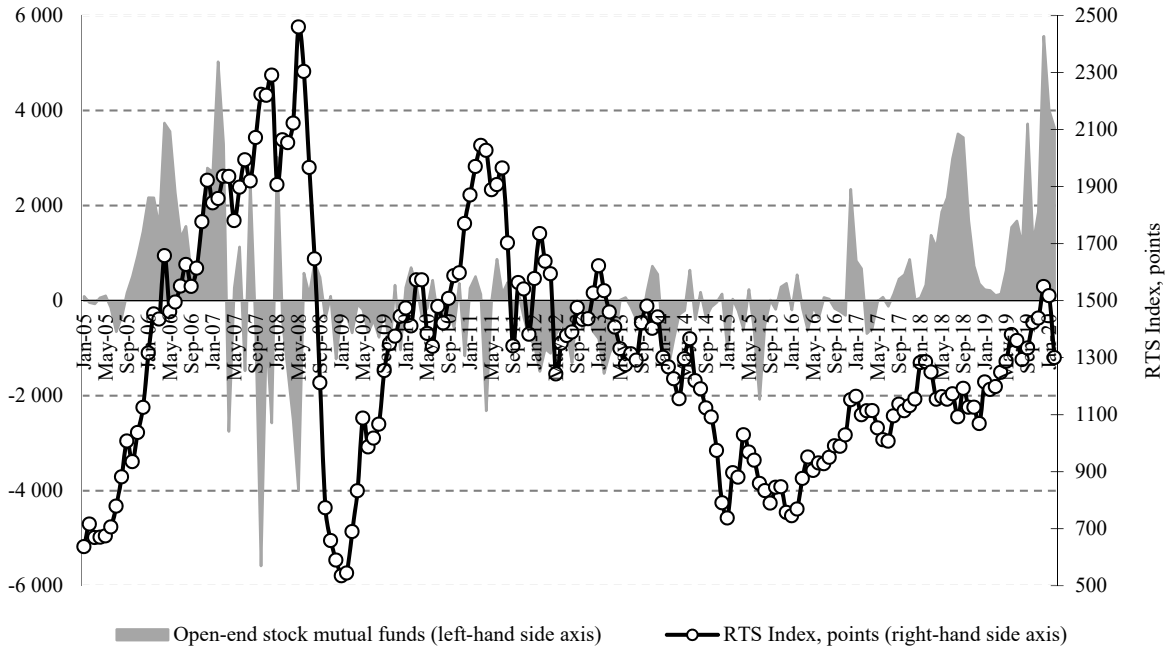
Fig. 61d illustrates the differences in the behavior of foreign and domestic individual investors when they invested in one and the same Russian stock through mutual funds. Essentially, they differ in that foreign individual investors were eager to invest during the periods of low prices for Russian stocks, and withdrew their money from the funds in advance at the first signs of potential risks of stock revaluation and the national currency weakening. Therefore, during the 2019 surge in shares, they were mainly withdrawing their own funds from Russia-EMEA-Equity. But Russian investors, as noted above, rely on more procyclical investment strategies, and so they were investing more as stock prices were climbing, giving practically no regard for the risks of the ruble depreciation. In 2019, their new investment in stock mutual funds amounted on average to RUB 1.5 billion per month.

From the point of view of long-term investments, the Russian stock market is cyclical, and so investors should pay more attention to the possible global diversification of their individual portfolios.

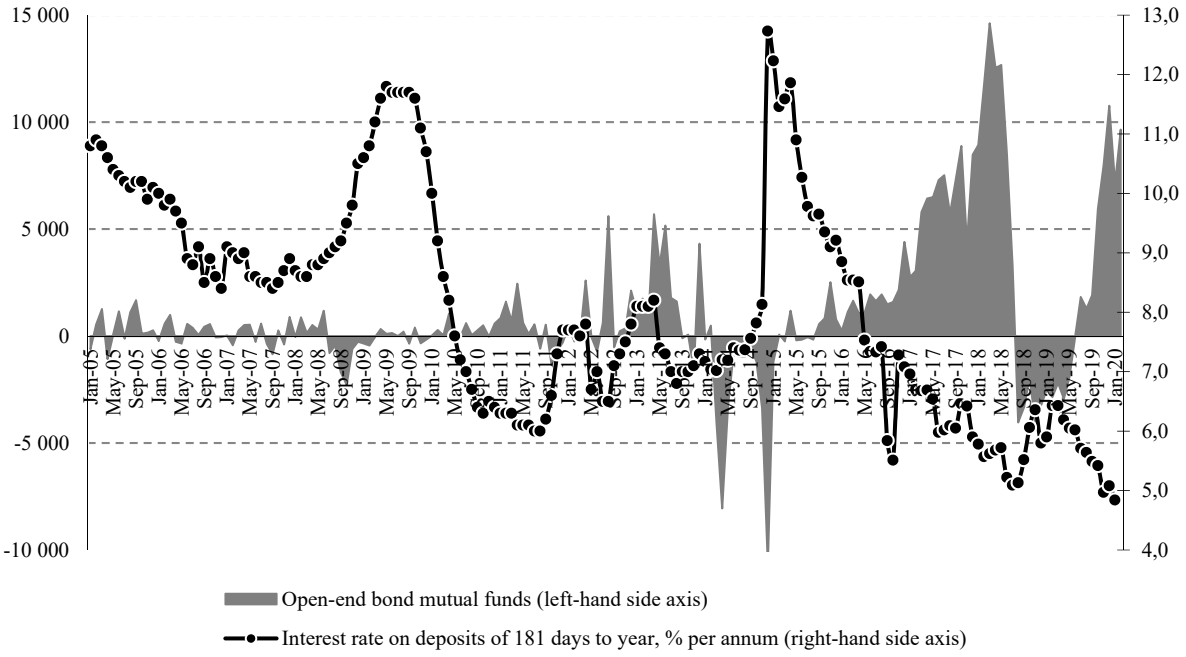
Thus, the year 2019 saw a variety of collective investment trends. The development of the domestic pension savings and reserves is constrained by a number of fundamental unresolved legislative problems. In the mutual fund industry, a tentative domestic savings growth can be

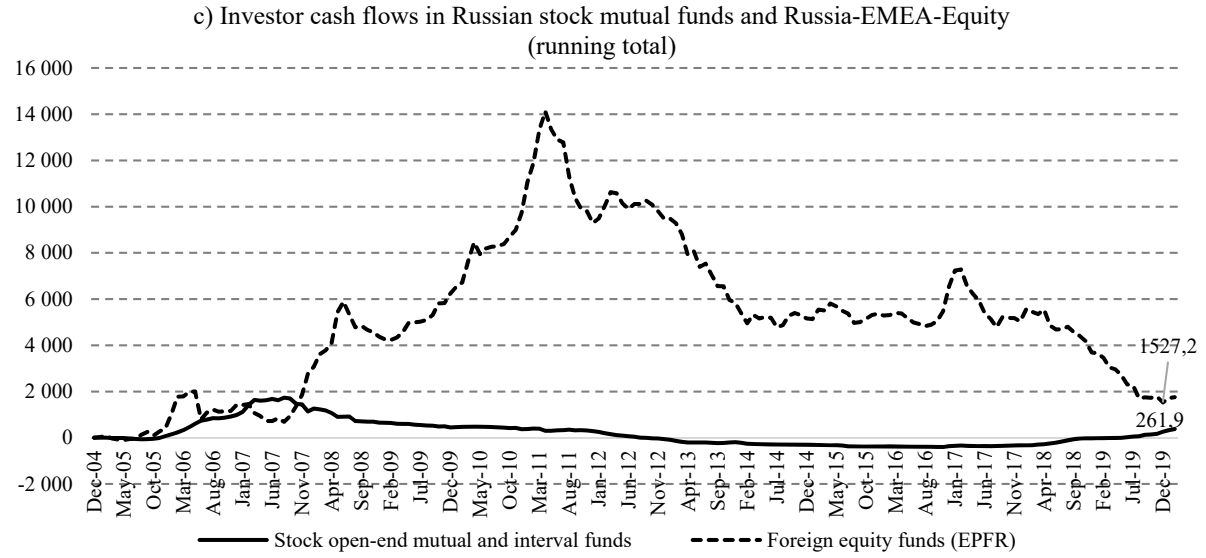
observed, which, unlike that of brokerage accounts, is not accompanied by aggressive sales in big retail banks. However, the retail mutual fund industry has remained rather small because of the high investment costs and low attractiveness for a really wide range of investors.

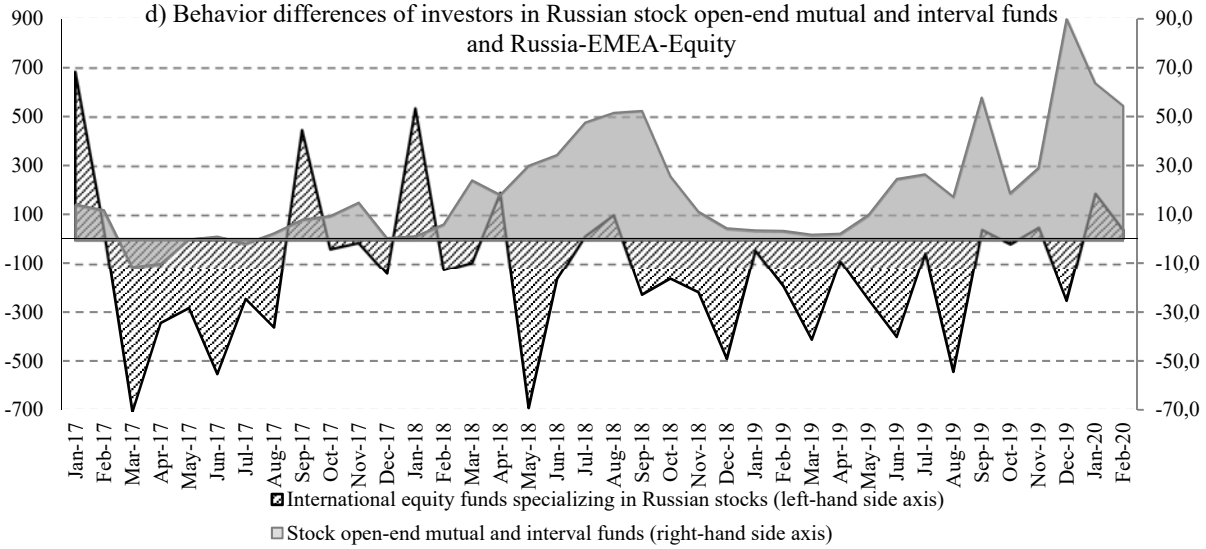
a) Open-end stock mutual funds and RTS Index



b) Open-end bond mutual funds and bank deposit interest rate







Note. Fig. (a): monthly net investor cash flows in stock open-end mutual and interval funds, billions of rubles (left-hand side axis) and the RTS Index, points (right-hand side axis). Fig. (b): monthly net investor cash flows in open-end bond mutual funds, billions of rubles (left-hand side axis) and average interest rates on deposits of 181 days to year, % per annum (right-hand side axis). Fig. (c): monthly net investor cash flows in stock open-end mutual and interval funds and foreign equity funds specializing in Russian stocks, running total, millions of US dollars (December 2004 = 0). Fig. (d): monthly net investor cash flows in Russian stock open-end mutual and interval funds (right-hand side axis) and foreign equity funds specializing in Russian stocks (left-hand side axis), millions of US dollars.

Fig. 61. Analysis of the specific behaviors of individual investors in Russian stocks and bonds under different collective investment mechanisms

Source: own calculations based on data released by Investfunds.ru and Emerging Portfolio Fund Research (EPFR Global)[1].

[1] URL: https://www.epfrglobal.com/

Foreign investors

In many emerging markets, foreign portfolio investors frequently operate under very similar scenarios. Their decisions concerning investing in or withdrawing from investment funds depend on the general cyclical patterns and the weight of each country in terms of global stock indices, and not on the individual characteristics of each national economy or national issuers.[1]

As follows from the data presented in *Fig. 62*, according to EPFR, the Russian stock market was faced with a massive withdrawal of foreign funds from mid-2011 onwards. A comparison with the other top 5 emerging equity markets (Brazil, India, China, South Korea and Indonesia) has revealed that almost all of them, at about the same time, had to deal with a similar phenomenon, but most of them managed to reverse this trend in 2018. The investment outflow from the Russian stock market, which continued in 2018–2019 despite a reduced risk premium, is an upshot of the uncertain economic growth prospects and unfavorable investment climate in this country in face of persisting geopolitical risks.

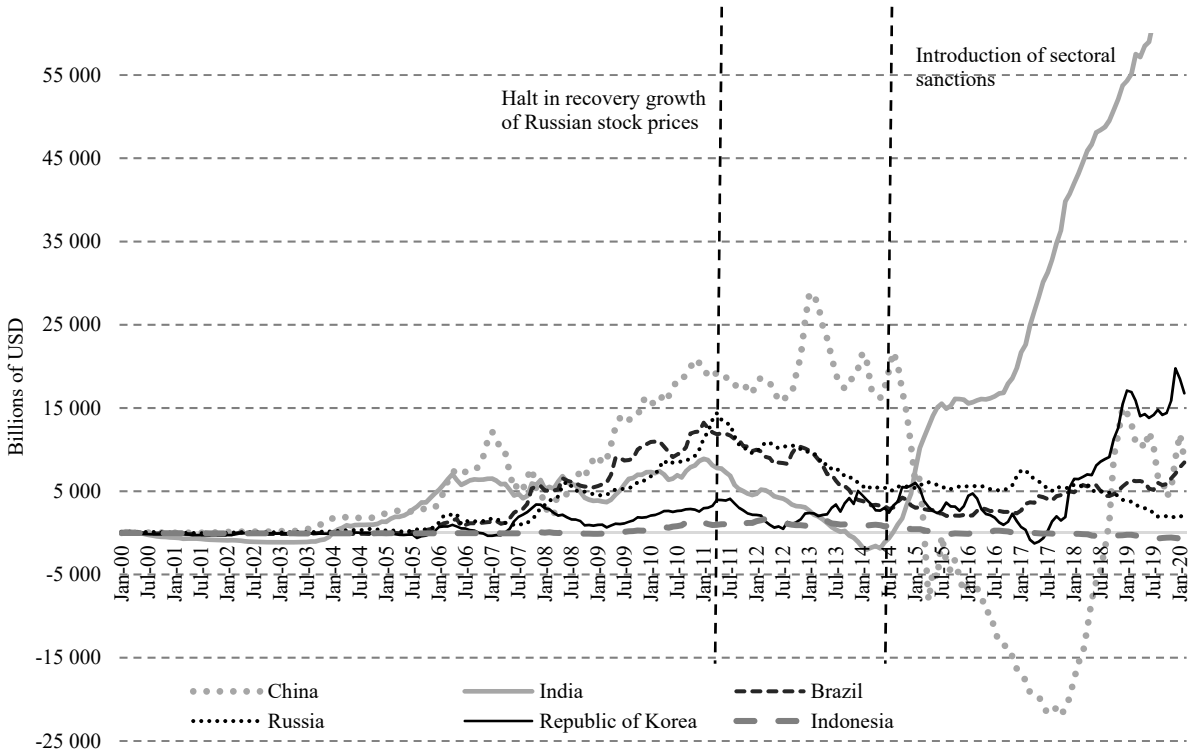


Fig. 62. The cumulative cash flows of foreign investment funds specializing in stocks on some developing markets, from January 2000 through February 2020

Source: own calculations based on data released by EPFR.

The Russian financial market's attractiveness for foreign investors largely depends on the investment climate. Russia has made significant progress in her Global Competitiveness Index ranking by the World Economic Forum (WEF). This, Russia climbed from 67th place in in

[1] For more information on the investment strategy of these funds in Russia, see *Abramov, A*. The difference in the behaviour of domestic and foreign private investors in the Russian stock market. Russian Economic Developments, No 11, 2014.

2013 to 43rd in 2018 and 2019 (*Fig. 63*). Relative to the other BRICS, Russia rose above Brazil, South Africa and India, and is now second only to China.

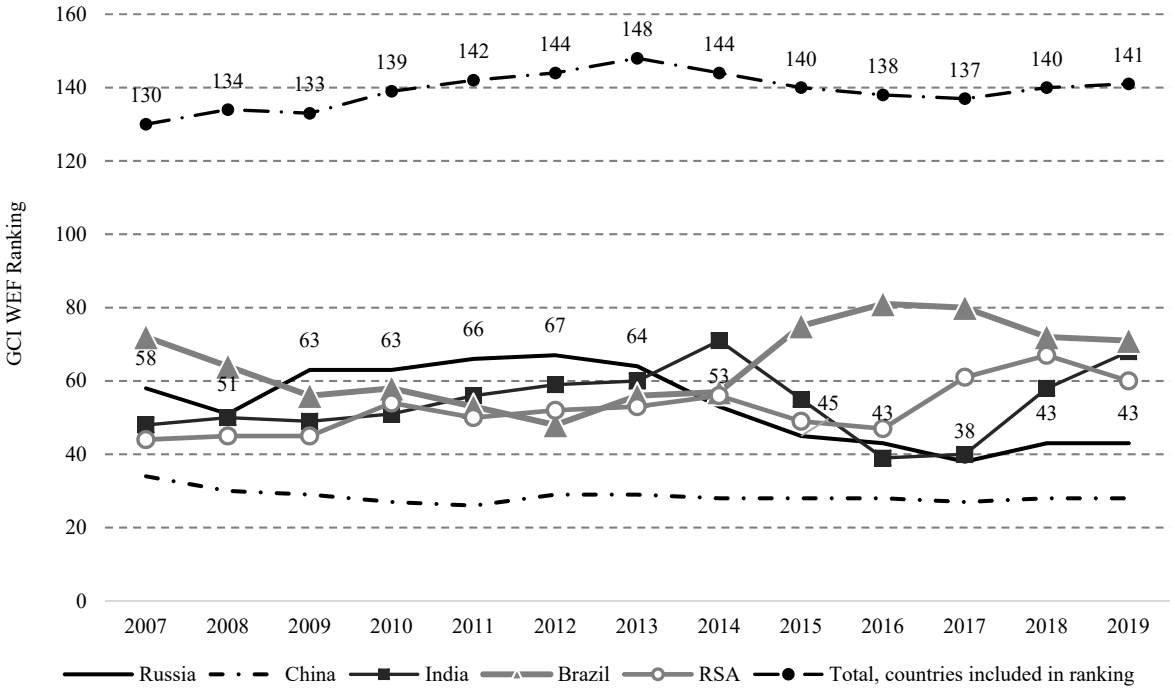


Fig. 63. BRICS members' rankings in the World Economic Forum's Global Competitiveness Index in 2007–2019

Source: own calculations based on data for several years from *The Global Competitiveness Report* released by the World Economic Forum.

Thanks to the availability of long-term data series, we selected three criteria for assessing the investment climate in Russia based on the WEF Global Competitiveness Rankings. If we take the 2013 indices as the base level, it can be concluded that in these three areas, Russia has managed to improve its investment climate quality (*Table 10*). Thus, for example, by the judicial system independence criterion, Russia moved from 119th place in 2013 to 91st in 2018, by that of compliance with international reporting and audit standards – from 107th place to 97th, and by that of the banking system's reliability – from 124th to 115th place. However, in 2019, by two out of these three criteria (audit and reporting standards, and banks' reliability), Russia's ranking worsened compared to 2018.

Thus, in spite of the macroeconomic and financial sustainability achieved by 2019 and the reduced risk premiums, the Russian stock and bond market, with the exception of the OFZ segment, remained insufficiently attractive for foreign investors, as evidenced by the cash outflow from the foreign equity funds specializing in Russian securities. The developments in March 2020, including the drop in global prices for many financial assets and oil, the slide of many economies into a deep recession in response to the coronavirus pandemic, and the increasing probability of defaults in the risky corporate bond markets of some countries, demonstrate that the Russian market has strengthened its image of one of the world's most risky places for investment.

Table 10

The most problematic aspects of Russia's investment climate according to the rankings in the World Economic Forum's Global Competitiveness Index

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Judicial system independence													
Russia	106	109	116	115	123	122	119	109	108	95	90	92	91
China	82	69	62	62	63	66	57	60	67	56	46	45	47
India	26	43	37	41	51	45	40	50	64	54	53	41	51
Brazil	89	68	78	76	71	71	65	76	92	79	59	79	94
South Africa	23	30	38	44	35	27	22	24	24	16	36	48	33
Audit and reporting standards													
Russia	95	108	119	116	120	123	107	106	102	103	100	89	97
China	102	86	72	61	61	72	80	82	80	68	71	75	78
India	27	30	27	45	51	44	52	102	95	64	69	63	67
Brazil	63	60	70	64	49	42	31	41	70	72	58	65	71
South Africa	6	4	2	1	1	1	1	1	1	1	30	55	49
Banks' reliability													
Russia	108	107	123	129	129	132	124	118	115	121	121	114	115
China	128	108	66	60	64	71	72	63	78	79	82	90	95
India	46	51	25	25	32	38	49	101	100	75	78	83	89
Brazil	36	24	10	14	16	14	12	13	27	38	26	22	19
South Africa	16	15	6	6	2	2	3	6	8	2	37	62	29

Source: own calculations based on data for a number of years from *The Global Competitiveness Report* published by the World Economic Forum.

3.1.12. The Russian financial market risks

One of the key obstacles to the formation of domestic savings in Russia has been the periodically emerging risk of the national currency depreciation. The ruble depreciation usually always follows the same scenario. The decline in oil prices and the intensification of capital outflows trigger an abrupt depreciation of the ruble, followed by a period of 6–8 years when the ruble remains stable and even rebounds slightly (*Fig. 64*). The depreciation lowers the incentives for making domestic savings. The measures undertaken in recent years to liberalize the ruble exchange rate and the introduction of a fiscal rule have helped reduce the risks of national currency depreciation, but in order to properly manage these risks, structural changes in the economy are urgently needed.

As shown in *Fig. 64*, from September 1995 until the present, three ruble devaluation waves were observed in Russia. During the first one, from September 1, 1995 to August 31, 1998, the average exchange rate for the period was RUB 5.7 per USD. After the August 1998 crisis until August 2008, the average exchange rate rose to RUB 27.5 per USD. Beginning from the 2008 crisis, during the period of lower oil prices until September 2014, the average rate stayed at RUB 31.1 per USD. The forex crisis of 2014, followed by long-term decline in the average level of oil prices until the end of 2019, resulted in the national currency's average exchange rate hovering near RUB 61.7 per USD.

The ruble weakening in Q1 2020 in response to the shocks of the pandemic and the intensified competition between oil exporting countries led to the ruble plunging to the level of RUB 80.16 per USD (as of March 20, 2020). It is still unknown at what level oil prices are going to stay when the acute phase of the current crisis is over, but it can be assumed that if the average oil prices should plummet over the next period, this may give rise to yet another wave

of ruble depreciation followed by the emergence of disincentives for households and organizations to keep ruble savings.

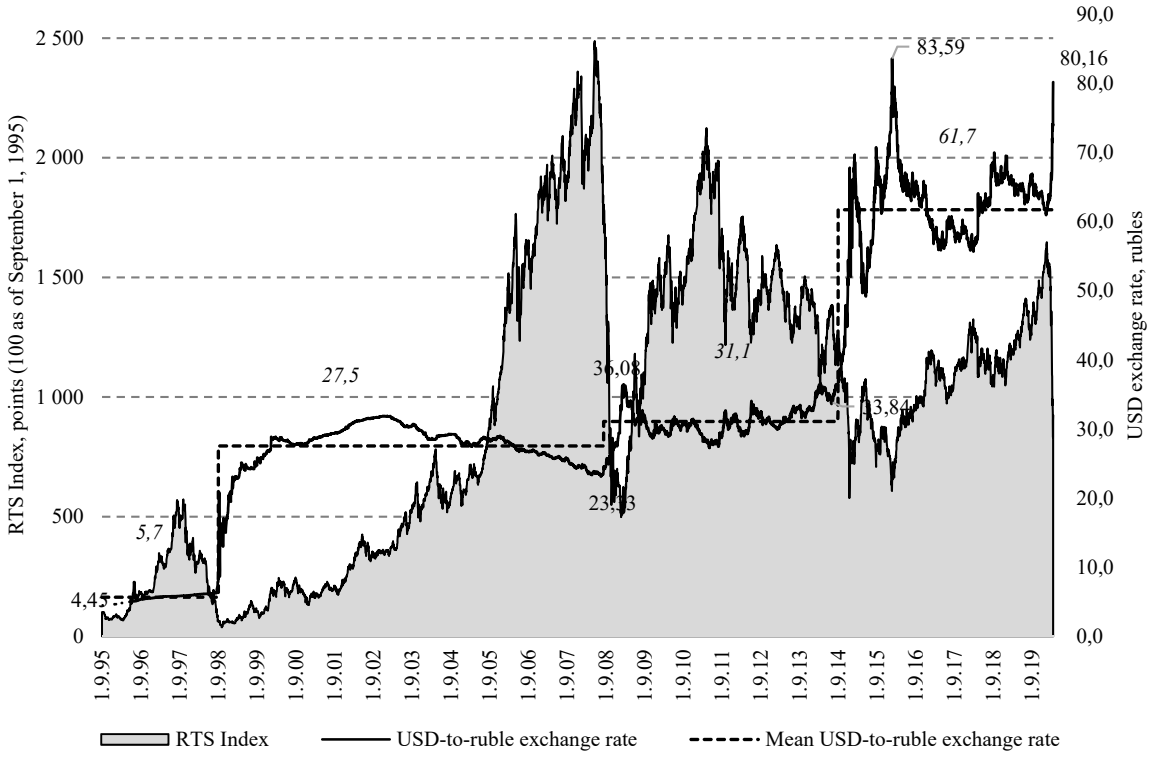


Fig. 64. The movement of the RTS Index and the USD-to-ruble exchange rate over the period from September 1, 1995 through March 20, 2020

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

The stock prices of Russian companies strongly depend on oil prices. The coefficient of determination (R^2) between the absolute monthly values of the RTS Index and the price of Brent crude oil over the period from September 1995 through March 2020 (*Fig. 65*) is equal to 0.8, which points to a very close interdependence of these two indicators. To a large extent, the price of oil continues to influence the national currency's exchange rate, especially when certain price shocks occur in the market.

The economic sanctions continue to pose significant risks to the financial market, although their impact on the behavior of market participants is still limited. The main channels whereby the sanctions are influencing the financial market are the restrictions on the amount of lending to Russian companies, the cost of borrowed funds, and the outflow of foreign investment from the stock market. Although the available estimates of the effects of sanctions on the financial market vary significantly, they all mostly have to do with the expected slowdown in GDP growth. There are few studies that analyze directly the consequences of sanctions for the financial market. Thus, according to E. Gurvich and I. Prilepskiy, the total additional net capital outflow resulting from the sanctions is estimated to have been at the level of USD 58 billion in 2014, and USD 160–170 billion in 2014–2017. [1]

[1] *Gurvich, E., Prilepskiy, I.* The impact of financial sanctions on the Russian economy, No 1, January 2016, p.33.

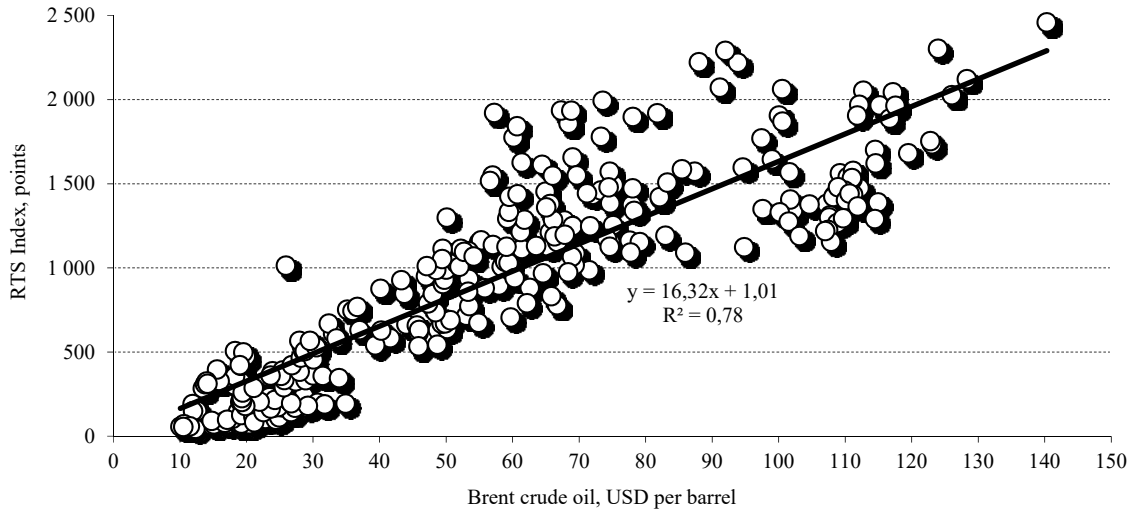


Fig. 65. The dependence of the RTS Index on the price of Brent crude oil, from September 1995 through March 2020

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

The economic sanctions and the current expectations of their possible toughening limit, for big companies and the government, the possibilities to borrow in global markets, and thus suppress the investment activity of the business community, which has a negatively effect on economic growth.

In the context of an impending global financial crisis, one of the most serious threats to financial sustainability in Russia and elsewhere is posed by defaults in the high yield bond market. The massive work stoppages of businesses in their response to the coronavirus epidemic have made it more difficult for companies to fulfill their obligations to creditors. In Russia, this problem is further aggravated by the fact that, unlike many countries, the government has not yet decided to implement large-scale relief programs to compensate businesses for their losses incurred from staying idle.

In addition, as has been shown above, the bond markets of many countries, Russia including, for many years have been displaying a trend towards an underestimation, by investors, of the risks associated with junk bonds. Due to the increased demand, the yield spreads for these instruments were close to those of investment grade bonds, and did not adequately offset the real risks for investors. According to Kenneth Rogoff, who is one of the most eminent financial crisis experts, the corporate debt sector is one of the most vulnerable sectors of the US financial market, as he notes in his interview with Barron's on March 30, 2020. In his opinion, the measures that have been taken there by way of supporting the financial market could prevent defaults in the US debt market. However, the most serious problems can be expected to occur in the developing markets, where the current capital outflows exceed in scale those observed during the Asian financial crisis. Perhaps indeed 'we will see one after another emerging market restructure debt.'[1]

The specific risk typical of the Russian financial market in the context of an impending crisis may be the disappointment of the mass investor in the stock market. The soaring number of

[1] *Kapadia R. (2020).* The Coronavirus Crisis Could Be as Bad as Anything We've Seen in the Last 150 Years: Harvard Economist. Barron's. March 31.

brokerage accounts and the scale of activity of their owners in 2019 and early 2020 was the upshot of aggressive marketing by the 3–4 biggest retail banks, which had been aiming at reorienting their traditional client towards brokerage services. At the same time, banks gave preference to direct investments by novice investors, instead of the more secure collective investment mechanisms. This practice did not result in any significant improvements in the standards of sales of financial products and instruments, for example, the reliance on the principles of open sales architecture, or fiduciary duties for sellers and investment consultants. All this was fraught with increased risks of misselling of financial products, which will probably happen in the medium term.

* * *

Overall, 2019 was a successful year. The positive changes that took place over the course of that year can be described in brief as follows:

- the returns of the Russian stock indexes were among the highest in the world; on the back of a stronger ruble, the return of 44.9% of the RTS Index (denominated in foreign currency) was significantly above the return of the ruble-denominated MOEX Index, which stood at 26.6%;
- Russian corporate stocks demonstrated nearly the highest dividend yields around the world, while the equity risk premiums dropped to their record lows of many years;
- in the wake of the Bank of Russia key rate reduction from 7.75% to 6.25%, there was a real boom in the bond market: OFZ issues jumped 90.9% to RUB 2.1 trillion, and corporate bond offer increased by 68.7% to RUB 2.7 trillion;
- while bank deposits were losing their attractiveness, there occurred a massive inflow of individual investors into the stock market; over one year, the number of registered brokerage accounts of individuals on the exchange almost doubled, reaching 3.9 million;
- in the domestic stock market, the inflow of individual investors largely offset the outflow of foreign portfolio investments, while the relative share of individual investors in exchange-traded market transactions increased to 31.7%;
- the returns on the OFZ market fell 6.09%, which is their record low of the entire post-crisis period since 2008; after the recession in 2018, which was caused by the expectation of sanctions, foreign investors returned to this market, their share in the OFZ structure in early 2020 increasing to its historic high of 34.9%;
- the number of individual investment accounts (IIAs) jumped severalfold, to 1.9 million; increasingly, these accounts are becoming important mechanisms for long-term individual savings;
- in the collective investment market, the monies of individual investors were actively flowing into open-end stock and bond mutual funds, which began to play an increasingly prominent role in the financial market.
- At the same time, many domestic financial market issues have remained unresolved, of which the following ones can be pointed out:
- Russian stock indexes remain in the category of the world's riskiest; on long-term time horizons, they are significantly inferior to the stock indexes of many developed and developing stock markets;

- the level of development of the domestic stock market still does not match the scale of the Russian economy, and it is behind the majority of competing markets by certain parameters like capitalization, the stock market liquidity, volume of IPO transactions, and the number of issuers listed on the exchange;
- in 2018–2019, the Moscow Exchange demonstrated a decline in the total volume of exchange trading, while low liquidity was observed in the segment of market transactions in stocks and bonds, and in the futures and options market;
- the equity and corporate bond markets are characterized by a high level of concentration; the top 10 issuers account for 70.1% of the total stock market cap, and for 53.5% of new corporate bond offer, respectively;
- from year to year, the relative share of state-owned companies (SOE) in the stock capitalization index and the value volume of bonds outstanding has been on the rise; in 2019, it stood at 53.5% in the stock market, and at 71.8% in the corporate bond market;
- the corporate bond market remains insufficiently transparent from the point of view of credit and interest rate risks; the relative shares of high risk bonds and high yield bonds in its structure amounted to 39.5% and 11.6%, respectively;
- the soaring number of individual investors was not associated with any qualitative improvements in the standards for sales of investment and financial products, or an increased transparency of information about the issuers and their financial instruments;
- since 2014, the freeze of the system of compulsory pension savings has continued, and there is still legal uncertainty in the sector of voluntary corporate and individual pension plans;
- as demonstrated by the stock market downfall in March 2020, the risks of ruble depreciation have remained high, which has negative effects on long-term savings.

The first signs of the upcoming financial crisis that appeared in March 2020, alongside a slowdown of the global economy caused by the coronavirus pandemic, have given rise to new risks in the high yield bond and individual savings markets.

3.2. Municipal and sub-federal debt market[1]

3.2.1. Market development dynamic

At year-end 2019, the regional consolidated budgets and local government off-budget funds' budgets ran a surplus of RUB 17.4 billion or 0.02 percent of GDP (contraction by around 30-fold over the year).

To compare, in 2018 the regional consolidated budgets and local government off-budget funds' budgets ran a surplus of RUB 512.9 billion or 0.49 percent of GDP.

In 2019, the budgets of the subjects of the Russian Federation ran a surplus of RUB 15.5 billion, urban districts' budgets ran a deficit of RUB 16.3 billion, federal-status cities' inner-city municipalities' budgets ran a surplus of RUB 0.5 billion, municipal areas' budgets ran a surplus of RUB 16.0 billion, urban settlements' budgets ran a surplus of RUB 0.9 billion, local government off-budget funds' budgets ran a surplus of RUB 12.7 billion.

In 2018, the budgets of the subjects of the Russian Federation ran a surplus of RUB 491.5 billion, urban districts' budgets ran a deficit of RUB 0.8 billion, federal-status cities' inner-city municipalities' budgets ran a deficit of RUB 0.4 billion, municipal areas' budgets ran a surplus

[1] This section was written by *Shadrin A.E.,* senior director on innovation policy of NRU HSE; researcher, Center for Macroeconomics and Finance, Gaidar Institute.

of RUB 6.7 billion, urban settlements' budgets ran a deficit of RUB 0.2 billion, rural settlements' budgets ran a deficit of RUB 0.6 billion, local government off-budget funds' budgets ran a deficit of RUB 2.7 billion.

Table 11

Ratio of surplus (deficit) of the consolidated regional and regions' budgets to budget expenditure in 2007–2019, percent

Year	Regional consolidated budget *	Regions' budgets
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
2010	–1.4	-1.6
2009	–5.3	-5.3
2008	– 0.7	-0.7
2007	0.8	0.6

* With account of state extrabudgetary funds.
Source: own calculations based on the data released by the Federal Treasury.

Table 12

Ratio of surplus (deficit) of territorial budgets to budget expenditure in 2007–2019, percent

Year	Inner-city municipalities budgets in federal-status cities	Urban districts' budgets	Municipal areas' budgets	Urban and rural settlements' budgets
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, 20209, the consolidated budget (including local government off-budget funds) of 33 subjects of the Russian Federation (16 regions and the city of Baikonur in 2018). The total deficit amounted to RUB 227.5 billion, or 2.6 percent of the revenue side (RUB 64.0 billion in 2018, or 2.8 percent of the revenue side of the regions' budgets that ran a deficit).

The median budget deficit value stood at 1.3 percent relative to a given budget revenue. The highest ratio of budget deficit to budget revenue was recorded in the Moscow region (8.7 percent), Republic of Bashkortostan–5.4 percent, and the city of Sebastopol–5.3 percent.

Moscow region accounted for nearly a third – 32.7 percent of the total regions' consolidated budget deficit or RUB 74.4 billion, Moscow accounted for 22.9 percent or RUB 52.2 billion, Republic of Bashkortostan accounted for 7.0 percent or RUB 16.0 billion, Sverdlovsk region accounted for 6.0 percent or RUB 13.8 billion (*Table 13*).

Table 13

Execution of the consolidated budgets of the subjects of the Russian Federation (including state extrabudgetary funds) in 2019

	Budget revenues, rubles in billions	Budget deficit (surplus), rubles in billions	Deficit (surplus) to revenues ratio, percent	Borrowing to revenues ratio, percent	Net borrowing to revenues ratio, percent	Redemption costs to revenues ratio, percent	Net borrowings to deficit (surplus), percent
1	2	3	4	5	6	7	8
Central Federal District							
Belgorod Region	141.9	0.9	0.6	5.4	-0.2	5.6	-32.7
Bryansk Region	88.8	-1.1	-1.2	6.5	-0.3	6.8	25.9
Vladimir Region	95.5	-0.7	-0.7	1.4	-0.4	1.8	60.1
Voronezh Region	169.7	-1.8	-1.0	32.7	-2.7	35.4	261.9
Ivanovo Region	63.4	-1.4	-2.2	10.9	-2.1	13.0	94.0
Tver Region	96.1	-4.1	-4.2	12.9	-1.1	14.0	25.8
Kaluga Region	98.1	-1.0	-1.0	2.8	-0.9	3.7	90.4
Kostroma Region	50.0	-2.0	-3.9	23.6	-3.5	27.1	90.1
Kursk Region	90.1	-1.2	-1.3	22.5	-0.1	22.6	5.7
Lipetsk Region	90.4	3.8	4.2	3.9	-2.3	6.2	-55.9
Moscow Region	858.5	74.4	8.7	13.2	5.0	8.2	57.4
Orel Region	50.8	0.0	0.1	54.8	-0.6	55.4	-618.2
Ryazan Region	84.8	-0.5	-0.6	6.1	0.0	6.1	-6.9
Smolensk Region	65.5	-0.7	-1.0	42.9	0.1	42.7	-14.6
Tambov Region	67.0	2.7	4.0	23.9	3.2	20.7	81.4
Tula Region	118.7	1.5	1.3	7.6	-1.0	8.7	-80.0
Yaroslavl Region	98.1	0.6	0.6	54.7	0.5	54.1	92.4
City of Moscow	2 909.9	52.2	1.8	0.0	0.0	0.0	0.0
City of Baikonur	4.8	0.0	0.7	0.0	0.0	0.0	0.0
Total	**5 241.9**	**121.8**	**2.3**	**7.3**	**0.6**	**6.7**	**25.7**
North-West Federal District							
Republic of Karelia	70.6	-1.1	-1.5	29.2	-2.2	31.4	142.6
Republic of Komi	117.6	-3.6	-3.1	5.6	-2.1	7.6	67.6
Arkhangelsk Region	130.6	-4.0	-3.0	66.3	-1.1	67.4	36.5
Vologda Region	121.7	-9.8	-8.1	6.6	-4.2	10.8	52.2
Kaliningrad Region	143.2	-0.9	-0.6	8.9	-0.3	9.2	47.3
Leningrad Region	197.8	-2.0	-1.0	0.0	-0.1	0.1	12.7
Murmansk Region	118.5	-3.5	-2.9	46.8	-4.1	50.9	140.3
Novgorod Region	50.2	0.3	0.6	9.6	0.3	9.3	49.1
Pskov Region	48.7	0.7	1.4	39.7	2.2	37.5	155.4
St. Petersburg	743.7	10.4	1.4	0.0	0.0	0.0	0.0
Nenets Autonomous District	26.2	-0.3	-1.0	1.8	-1.6	3.3	159.6
Total	**1 768.9**	**-13.6**	**-0.8**	**12.1**	**-0.9**	**13.0**	**112.0**
Southern Federal District							
Republic of Kalmykia	21.6	0.4	1.7	25.5	3.1	22.5	176.0
Krasnodar Territory	434.9	-31.8	-7.3	4.6	-9.0	13.6	123.1
Astrakhan Region	71.3	-5.0	-7.0	1.0	-12.3	13.2	175.7
Volgograd Region	161.6	-1.9	-1.1	9.1	-2.4	11.5	209.1
Rostov Region	271.2	4.9	1.8	2.7	0.2	2.6	9.7
City of Sevastopol	43.6	2.3	5.3	0.0	0.0	0.0	0.0
Republic of Crimea	215.4	-1.2	-0.6	0.0	-0.1	0.1	15.6
Republic of Adygea (Adygea)	33.6	0.4	1.3	1.6	-0.2	1.8	-12.1
Total	**1 253.2**	**-31.9**	**-2.5**	**3.9**	**-4.1**	**8.0**	**159.8**

Cont'd

1	2	3	4	5	6	7	8
North-Caucasus Federal District							
Republic of Dagestan	166.3	-6.0	-3.6	0.0	-0.3	0.3	7.8
Kabardino-Balkar Republic	50.4	-2.5	-4.9	52.0	-4.5	56.5	91.8
Republic of Northern Ossetia-Alania	47.4	-1.0	-2.2	19.8	-1.4	21.1	61.8
Republic of Ingushetia	32.1	-0.6	-1.8	4.0	-0.4	4.3	19.6
Stavropol Territory	172.4	-0.2	-0.1	17.8	-0.4	18.3	377.6
Karachay-Cherkess Republic	35.5	-0.3	-0.9	12.6	-0.5	13.1	54.8
Chechen Republic	114.7	0.2	0.1	0.0	-0.2	0.2	-113.0
Total	**618.9**	**-10.5**	**-1.7**	**11.6**	**-0.7**	**12.4**	**44.2**
Volga Federal District							
Republic of Bashkortostan	293.9	16.0	5.4	0.4	-1.7	2.1	-31.2
Republic of Mariy-El	45.2	-1.7	-3.7	13.4	-2.8	16.1	75.5
Republic of Mordovia	56.1	-1.4	-2.5	32.0	-5.9	37.9	236.8
Republic of Tatarstan (Tatarstan)	382.6	-15.1	-3.9	1.5	-0.1	1.6	2.0
Udmurt Republic	115.0	1.6	1.4	40.8	0.5	40.3	34.0
Republic of Chuvashia--Chuvashia	82.3	-4.9	-6.0	7.8	-3.1	10.9	51.5
Nizhniy Novgorod Region	254.2	0.7	0.3	19.0	0.1	19.0	22.4
Kirov Region	90.4	-1.8	-2.0	31.0	-0.8	31.8	39.1
Samara Region	252.5	-7.5	-3.0	19.5	-2.1	21.6	71.3
Orenburg Region	146.6	-1.6	-1.1	2.2	-1.6	3.8	146.0
Penza Region	83.8	0.9	1.1	5.3	0.4	4.9	34.2
Perm Territory	219.3	-9.7	-4.4	6.9	-0.2	7.0	4.3
Saratov Region	151.4	0.5	0.3	16.8	-0.5	17.4	-155.0
Ulyanovsk Region	84.3	2.5	2.9	14.6	0.4	14.2	14.0
Total	**2 257.5**	**-21.5**	**-1.0**	**12.0**	**-0.9**	**12.9**	**96.2**
Urals Federal District							
Kurgan Region	66.7	-0.2	-0.3	18.5	0.8	17.7	-235.5
Sverdlovsk Region	372.5	13.8	3.7	5.5	1.2	4.3	31.7
Tyumen Region	262.2	-19.5	-7.4	0.0	0.0	0.0	0.0
Chelyabinsk Region	262.6	0.5	0.2	3.0	0.1	2.9	63.0
Hanty-Mansiysky Autonomous District – Yugra	353.4	-7.0	-2.0	0.6	-0.3	0.9	14.8
Yamal-Nenets Autonomous District	274.1	-31.8	-11.6	0.0	0.0	0.0	0.1
Total	**1 591.4**	**-44.1**	**-2.8**	**2.7**	**0.3**	**2.4**	**-9.5**
Siberia Federal District							
Republic of Tyva	40.4	0.4	1.0	5.7	0.0	5.7	-0.1
Altai Territory	159.6	-0.6	-0.4	0.0	0.0	0.0	13.1
Krasnoyarsk Territory	381.1	-38.3	-10.1	5.1	-5.7	10.8	57.0
Irkutsk Region	269.6	12.7	4.7	3.7	2.1	1.7	43.9
Kemerovo Region	232.6	2.1	0.9	0.4	-1.3	1.7	-146.5
Novosibirsk Region	235.6	8.2	3.5	29.5	0.7	28.8	19.1
Omsk Region	138.4	-0.6	-0.4	65.1	-0.2	65.3	51.7
Tomsk Region	98.2	3.5	3.5	53.3	3.7	49.6	103.6

Cont'd

1	2	3	4	5	6	7	8
Republic of Altai	29.9	-0.7	-2.3	3.3	-0.1	3.5	5.1
Republic of Khakassia	46.6	-1.3	-2.7	5.7	-1.7	7.5	62.9
Total	**1 632.0**	**-14.6**	**-0.9**	**15.2**	**-0.9**	**16.1**	**104.8**
Far East Federal District							
Republic of Buryatia	96.9	0.4	0.4	36.4	0.4	36.0	97.7
Republic of Sakha (Yakutia)	283.1	2.7	0.9	9.8	-0.2	10.0	-21.2
Primorsky Territory	194.4	-2.3	-1.2	3.2	-0.2	3.3	13.2
Khabarovsk Territory	158.8	3.9	2.5	18.6	1.9	16.7	75.8
Amur Region	97.8	-5.3	-5.4	8.1	-0.4	8.5	7.7
Kamchatka Territory	104.1	1.3	1.2	1.2	-0.7	1.9	-56.3
Magadan Region	49.2	0.0	0.0	62.7	0.1	62.7	198.2
Sakhalin Region	217.1	-1.5	-0.7	0.0	0.0	0.0	0.0
Jewish Autonomous Region	18.2	0.1	0.7	21.5	1.0	20.5	140.1
Chukotka Autonomous District	58.6	-0.4	-0.6	0.0	-0.8	0.8	124.0
Zabaikalsky Territory	107.4	-2.0	-1.8	8.3	-0.2	8.5	11.4
Total	**1 385.6**	**-3.0**	**-0.2**	**10.9**	**0.1**	**10.9**	**-29.4**
Total Russian Federation	**15 749.4**	**-17.4**	**-0.1**	**9.1**	**-0.4**	**9.5**	**404.4**

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

In 2019, the consolidated budgets of 50 subjects of the Russian Federation ran a surplus (compared to 69 regions in 2018). These regions ran the total budget surplus of RUB 244.9 billion, or 1.9 percent of their budgets' revenue side (RUB 576.9 billion, or 3.6 percent of the budget revenue side, in 2018). The median budget surplus value stood at 2.0 percent relative to the budget revenue side.

The biggest ratio of surplus to the consolidated budget revenues was recorded in Yamal-Nenets AD – 11.6 percent, Krasnoyarsk krai – 10.1 percent, Vologda region – 8.1 percent, and in Krasnodar krai–7.3 percent.

In 2019, Krasnoyarsk krai accounted for 15.6 percent of the total surplus of the regional budgets or RUB 38.3 billion, Yamal Nenets AD and Krasnodar krai–13.0 percent each or RUB 31.8 billion each, Tyumen region – 7.9 percent or RUB 19.5 billion, and Republic of Tatarstan – 6.1 percent or RUB 15.1 billion.

3.2.2. Borrowing structure

According to the data released by the Russian Finance Ministry, the debt piled up by the subjects of the Russian Federation in 2019 contracted by RUB 93.3 billion or by 4.2 percent totaling RUB 2,113.0 billion as the debt accumulated by municipalities rose by RUB 8.6 billion or by 2.3 percent amounting to RUB 380.5 billion (*Table 14)*

Table 14

Volume and structure of public debt of the subjects of the Russian Federation and debt of municipalities as of January 1, 2019 and 2020

Types of debt instruments	State debt volume of RF subject, RUB million			Municipalities debt volume, RUB million		
	2019	2020	increase/decrease 2020 to 2019, %	2019	2020	increase/decrease 2020 to 2019, %
Government bonds	551 363.6	588 530.4	6.7	18 123.9	21 295.4	17.5
Loans issued by credit institutions, foreign banks and international financial organizations	636 015.2	575 767. 8	-9.5	256 539.0	259 464.8	1.1
Public budget loans from other budgets of the budgetary system of the Russian Federation	939 977.0	886 190.6	-5.7	86 464.1	92 085.7	6.5
Government guarantees	71 504,9	55 358,1	-22,6	10 730,9	7 606,4	-29,1
Other debt instruments	7 452,7	7 127,7	-4,4	5,5	5,4	-1,8
Total	**2 206 313,3**	**2 112 974,6,**	**-4,2**	**371 863,4**	**380 457,6**	**2,3**

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

Regions and municipalities borrowed in 2019 a total of RUB 1,769.8 billion. The top-ranked borrowers were Moscow region – RUB 113.4 billion, Omsk Region – RUB 90.1 billion, Arkhangelsk Region – RUB 86.6 billion, and Novosibirsk Region – RUB 649.4 billion.

Bond issues accounted for 8.0 percent of the total consolidated regional budgets, loans from higher-level budgets (fiscal credits) constituted 26.9 percent thereof, loans from commercial banks amounted to 65.2 percent thereof.

Total net debt of the consolidated regional budget in 2019 was negative and constituted – RUB 70.5 billion (RUB -86.0 billion in 2018). The highest ratio of net debt to budget revenues was recorded in Moscow – 5.0 percent, Tomsk region – 3.7 percent, and Tambov region – 3.2 percent.

The largest net borrowers were: Moscow region – RUB 42.7 billion, Irkutsk – RUB 5.6 billion, Sverdlovsk – RUB 4.4 billion, and Tomsk regions – RUB 3.6 billion.

Table 15

Regional and local budgets net borrowing, as percent of GDP

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
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
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
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
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

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

Regions had their accumulated debt reduced to the maximum by repaying more for outstanding debt instruments compared to new fundraising, were: Krasnodar krai – by RUB 39.2 billion, Krasnoyarsk krai – by RUB 21.8 billion, Astrakhan region – by RUB 8.7 billion, and Voronezh region – by RUB 4.6 billion.

3.2.3. Domestic bonded debt

Thirteen subjects of the Russian Federation and 2 municipalities had their bonded debt prospectus registered in 2019 (as compared to 21 regions and 3 municipalities which issued bonded debt in 2018). The following regions had their bonded debt prospectus registered with Russia's Ministry of Finance in 2019: St. Petersburg, Krasnoyarsk and Krasnodar krais, Republic of Sakha (Yakutia), Belgorod region, Ryazan region, Sverdlovsk region, Magadan region, Samara region, Novosibirsk region, Yaroslavl region, Nizhny Novgorod region, Moscow region, Lipetsk region, the city of Novosibirsk and the city of Tomsk.

In 2019, the amount of bonded debt issuance went up from 0.08 to 0.10 percent of GDP (*Table 16*).

Table 16

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

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
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
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
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

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

The top-ranked bonded debt issuers were: Moscow region – RUB 51.5 billion or 27.6 percent or 45.2 percent of the total domestic bond issuance), Republic of Sakha (Yakutia) – RUB 12.0 billion or 10.5 percent), Krasnodarsky Territory and Nizhniy Novgorod region – RUB 10.0 billion each or 8.8 each.

Hence, the top-5 issuers accounted for 82.3 percent of the total regional and municipal bonded debt placed (*Table 17*).

Table 17

Sub-federal and municipal bond placement in 2019

Subject of the Russian Federation	Amount issued, rubles in millions	Issuer's percentage of total amount issued, percent	Amount issued to domestic borrowing ratio, percent
Central Federal Okrug			
Belgorod region	4 000.0	3.5	52.2
Lipetsk region	2 500.0	2.2	71.3
Moscow region	51500.0	45.2	45.4
Yaroslavl region	3 000.0	2.6	5.6
South Federal Okrug			
Krasnodar krai	10 000.0	8.8	50.2
Volga Federal Okrug			
Nizhny Novgorod region	10 000.0	8.8	20.6
Urals Federal Okrug			
Sverdlovsk region	5 000.0	4.4	24.6
Siberia Federal Okrug			
Novosibirsk region	5 750.8	5.0	8.3
Tomsk region	10 239.5	9.0	19.6
Far-East Federal Okrug			
Republic of Sakha (Yakutia)	12 000.0	10.5	43.4
Russian Federation, total	**113 990.3**	**100.0**	**8.0**

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

The highest level of securitization was observed in Lipetsk region – 71.3 percent, Belgorod region – 52.2 percent, and Krasnodar krai – 50.2 percent.

In 2019, the amount of bonds issuance by subjects of the Russian Federation and municipalities exceeded by RUB 40.55 million the amount of redeemed bonds, while in 2018 –

RUB 97.0 billion. That said, the volume of placed bonds went up by over 31 percent totaling RUB 114.0 (*Table 18*).

Table 18

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

	Consolidated regional budget	Regional budgets	Municipal budgets
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

Источник: расчеты автора на основе данных Федерального казначейства.

Most of the regions that issue bonded debt on a regular basis continued doing so in 2019 (*Table 19*).

Table 19

Sub-federal and municipal bonds prospectus registration in 2007–2019

Issuer	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Subjects of the Federation													
Krasnoyarsk krai	*	*	*	*	*	*	*	*	*	*	*	*	*
Nizhniy Novgorod Region	*	*	*	*	*	*	*	*	*	*	*	*	*
St. Petersburg	*	*		*	*	*	*	*	*	*	*	*	*

Cont'd

1	2	3	4	5	6	7	8	9	10	11	12	13	14
Republic of Sakha (Yakutia)	*	*		*	*	*	*	*	*	*	*	*	*
Yaroslavl Region	*	*		*	*	*	*	*	*	*	*	*	*
Samara Region	*	*	*		*	*	*	*	*	*	*	*	*
Belgorod Region		*				*	*	*	*	*	*	*	*
Novosibirsk Region	*						*	*		*	*	*	*
Sverdlovsk Region				*	*	*		*		*	*	*	*
Moscow Region	*	*								*	*	*	*
Krasnodar krai	*			*		*			*		*	*	*
Lipetsk region	*	*				*	*	*			*	*	*
Рязанская область				*		*							*
Tomsk Region	*	*		*	*	*	*	*	*	*	*	*	
Orenburg region						*	*	*	*	*	*	*	
Republic of Karelia	*	*	*	*	*	*	*	*		*	*	*	
Irkutsk region	*	*	*			*			*	*	*	*	
Magadan region							*	*			*	*	
Udmurt republic	*	*		*	*	*	*	*	*	*		*	
Khabarovsk krai												*	
Kirov region												*	
Kamchatka krai												*	
Komi republic		*		*	*		*	*	*	*	*		
Khanty-Mansi aut district			*				*	*		*	*		
Omsk region							*	*		*	*		
Yamal-Nenets aut district										*	*		
Tambov region										*	*		
Volgograd region	*	*	*	*	*	*	*	*	*		*		
Republic of Chuvashia	*	*	*		*	*	*	*			*		
Republic of Mari-El						*	*	*			*		
Kemerovo region							*				*		
Ivanovo region	*				*						*		
Ulyanovsk region	*	*									*		
Nenets aut district											*		
Kursk region											*		
Kaliningrad region											*		
Saratov region											*		
Orel region											*		
Karachaevo-Cherkassia republic											*		
Republic of Mordovia							*	*	*	*			
Republic of Khakassia				*		*	*	*	*	*			
Stavropol krai		*			*	*	*	*		*			
Tyumen region										*			
Tver region	*	*	*	*	*	*	*	*					
Voronezh region	*					*	*	*					
Smolensk region							*	*					
Leningrad region							*	*					
Republic of Bashkortostan	*				*	*	*	*	*				
Tula region						*	*	*	*				
Kostroma region	*				*		*						
Moscow		*	*	*			*						
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		*											

Cont'd

1	2	3	4	5	6	7	8	9	10	11	12	13	14
Municipalites													
City of Novosibirsk					*	*	*	*				*	*
City of Tomsk	*	*		*		*		*	*	*	*	*	*
City of Nizhniy Novgorod											*		
City of Omsk								*		*			
City Volzhsky, Volgograd region								*					
City of Krasnoyarsk	*	*	*	*	*	*							
City of Kazan	*		*	*	*								
City of Krasnodar				*	*								
City of Ufa				*									
City of Elekrostal, Moscow region	*		*										
Smolensk			*										
Lipetsk	*	*											
Magadan	*	*											
Bratsk		*											
Novorossiysk		*											
Ekaterinburg	*												
Klin district, Moscow region	*	*	*										
Noginsk district, Moscow region		*	*										
City of Blagoveshensk		*	*										
City of Cheboksary	*		*										
City of Balashikha, Moscow region			*										
Odintsovo district, Moscow region	*	*											
City of Astrakhan		*											
City of Briansk		*											
City of Voronezh		*											
City of Orekhovo-Zuyevo, Moscow region		*											
City of Yaroslavl		*											
City of Voronezh		*											
City of Yuzhno-Sakhalinsk	*												
City of Novocheboksarsk	*												
City of Angarsk	*												
Vurnarsky district, Republic of Chuvashia	*												
City of Shumerlia, Republic of Chuvashia	*												
City of Barnaul													
City of Perm													
City of Kostroma													
City of Arkhangelsk													
City of Dzerzhinsky													

Source: Ministry of Finance of Russia.

3.2.4. Prospects for the development of market of regional and municipal borrowing

The outbreak of the crisis developments in the Russian economy directly related to putting in place lockdown orders in 2020 create preconditions for the expansion of the regional and municipal budgets' deficit.

This is due both to the contraction of the tax returns and to the need for additional spending aimed at expansion of the social assistance to households and businesses, to the need of the

implementation of anti-epidemiological measures. That said, capacities for the reduction of expenditure budget items are restricted by a significant volume of the non-reducible commitments on financing state and municipal organizations by legally fixed social payments.

In the meantime, the dynamic of deficit growth of the consolidated budget in the regions will depend on the following factors:

– on the duration and the depth of economic recession;

– on the selected support model from the federal budget (ration between additional direct fiscal transfers and reimbursable loans extended by the federal budget);

– on the ratio between the additionally provided funds from the federal budget and decline of the revenues in the consolidated regional budget and the volume of additionally popped up expenditure commitments with taking into account the capacity to relatively safely decrease of previously planned budget allocations.

This being said, we should lift legal restrictions applied to the amount of the budget deficit of the subjects of the Russian Federation and municipalities.

For example, in compliance with the Article 92 of the Budget Code of the Russian Federation, budget deficit of a subject of the Russian Federation should not exceed 15 percent of the approved total annual revenues of a subject of the Russian Federation without the approved volume of non-repayable receipts (10 percent – for highly subsidized regions).

Correspondingly, the local budgets' deficit should not exceed 10 percent of the approved total annual amount of revenues without the approved volume of non-repayable receipts and (or) tax returns under the additional normative of contributions (5 percent for highly subsidized municipalities).

The bank of Russia capacity for extending loans to commercial banks backed by bond issuance by regions positively affects the accessibility of borrowings for the regions' budgets.

From January 1, 2020, for bonds issued by the subjects of the Russian Federation the Bank of Russia raised the lowest level of the credit rating for inclusion on the Lombard list by 4 levels in the framework of countercyclical regulation – for the level "A+(RU)"/"ruA+" along the classification of the credit rating agencies AKPA (AO)/AO "Ekspert" (from "ruBBB").

As on April 14, 2020, 24 subjects in the Russian Federation boasted by this ratings (*Table 20*).

Furthermore, upon the inclusion of these bonds on the Lombard list in addition to ratings the Bank of Russia will take into consideration the conditions of bonds placement and circulation as well as other important factors.

Taking into consideration the feasibility of the regions' credit downgrade amid economic crisis and easing of the monetary policy by the Bank of Russia within the implementation of rescue measures, it will be expedient to put in place relaxation of the requirements to the credit level of regional and municipal issuers for the inclusion on the Lombard list.

Table 20

Credit ratings of the subjects and municipalities of the Russian Federation (as on April, 14 2020)

RF subject / municipality	AKRA (JSC)	JSC "Ekspert RA"
1	2	3
Central Federal District		
Belgorod region	**AA-(RU)**	
Voronezh region		ruA-
Tver region	BBB+(RU)	
Kostroma region	BBB-(RU)	
Kursk region	**A+(RU)**	

Cont'd

1	2	3
Lipetsk region	**AA(RU)**	
Moscow region	**AA+(RU)**	
Ryazan region	A-(RU)	
Tambov region	BBB+(RU)	
Tula region		**ruA+**
Yaroslavl region		ruBBB+
City of Moscow	**AAA(RU)**	
North-West Federal District		
Republic of Karelia		ruBBB-
Kaliningrad region		ruBBB+
Murmansk region	A-(RU)	
Novgorod region	BBB(RU)	
St. Petersburg	**AAA(RU)**	
Nenets autonomous okrug		**ruA+**
Southern Federal Dstrict		
Krasnodar krai	**A+(RU)**	**ruAA-**
Volgograd region		ruA-
Republic of Adygea (Adygea)		ruBBB
North-Caucasus Federal District		
Stavropol krai		ruA
Volga Federal District		
Republic of Bashkortostan		**ruAAA**
Republic of Mordovia	B(RU)	
Republic of Tatarstan (Tatarstan)	**AAA(RU)**	**ruAAA**
Udmurt republic		ruBBB-
Chuvash republic--Chuvashia		ruA
Nizhniy Novgorod region		ruA
Kirov region		ruBBB+
Samara region	**AA(RU)**	
Orenburg region	**A+(RU)**	
Penza region	BBB+(RU)	
Saratov region		ruA-
Ulyanovsk region		ruBBB+
Urals Federal District		
Kurgan region		
Sverdlovsk region	**A+(RU)**	**ruAA-**
Tyumen region	**AAA(RU)**	
Chelyabinsk region	**AA(RU)**	
Khanty-Mansi autonomous okrug--Yugra	**AAA(RU)**	
Yamal-Nenets autonomous okrug	**AAA(RU)**	**ruAAA**
Siberian Federal District		
Altai krai	**A+(RU)**	
Krasnoyarsk krai	**A+(RU)**	
Irkutsk region		**ruAA+**
Kemerovo region	A-(RU)	
Novosibirsk region	**AA-(RU)**	
Omsk region		ruBBB+
Tomsk region	BBB(RU)	
Far-East Federal District		
Republic of Buryatia		ruBBB+
Republic of Sakha (Yakutia)		**ruAA-**
Khabarovsk krai		ruBBB
Kamchatka krai		**ruA+**
Magadan region	BBB-(RU)	
Municipalities		
Bratsk	BBB(RU)	
Krasnodar		ruA
Krasnoyarsk		ruA-
Nizhniy Novgorod	A-(RU)	
Novosibirsk		ruA-

Note. Embolden are the RF subjects with the rating not below "A+(RU)"/"ruA+".
Sources: on data released by AKRA (JSC) and JSC "Ekspert RA".

3.3. The Banking sector[1]

At 2019-end, Russian banking sector numbered 442 lending institutions. Over the year the number of operational lending institutions decreased by 42 (in 2018 – down by 77). Seven years ago in early 2013 the number of operational institutions exceeded one thousand (1094). Consequently, the Central Bank of Russia consistently has been conducting the bank resolution process (*Fig. 66*).

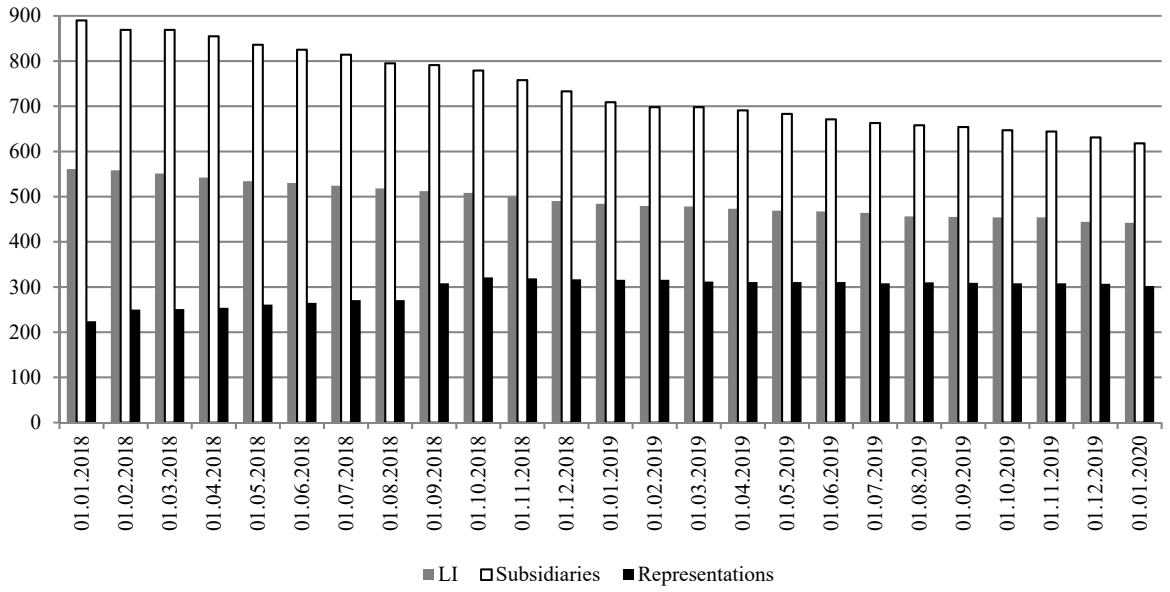


Fig. 66. Number of lending institutions, subsidiaries, and representations

Source: Bank of Russia.

As of January 1, 2020, 373 lending institutions' profit hit RUB 2,196.4 billion and losses of 69 banks amounted to RUB 159.6 billion. On the whole, the share of loss-making institutions over the year went down from 29 to 16 percent.

3.3.1. Financial results of the banking sector

Total assets of the lending institutions went up over 2019 by 2.7 percent (up by 10.4 percent over the previous year), and banks' own funds moved up by 7.6 percent (up by 3.8 a year earlier).

In spite of a decline of interest rates on accounts and deposits, over 2019 banks managed to ramp up retail deposits volume by 7.3 percent down from 2018 (8.9 percent). Having said that growth was partially triggered by capitalization of the interest accrued on bank deposits. On the whole, the total growth of the deposits volume reduces the net interest earnings due to the relatively high cost of this type of bank liabilities. Over last year, the share pf deposits in the total volume of bank liabilities rose to 35.3 percent (at the end of 2018 – 33.6 percent).

The situation with attracted funds from legal entities was somewhat different. The growth rate of the aggregate volume of deposits and funds on accounts opened by the corporate clients

[1] This section was written by *Zubov S.A.,* Candidate of science (Economics), senior researcher, RANEPA.

over 2019 rose by mere 4.6 percent, which is substantially below the corresponding index of 2018 (up by 29.3 percent).

Regarding the active bank operations, the rise of the corporate lending constituted 1.2 percent against 10.5 percent seen in 2018. The growth rate of the retail lending in the past year also somewhat slowed down: from 22.4 percent in 2018 to 18.5 percent in 2019.

Over 2019, past-due payment on credits extended to non-financial organizations rose by 25.1 percent, however that was due to technical factors: in 2019 this index engulfed outstanding account receivable and overdue acquired receivables (operations on acquiring and assignment of receivables). With respect to retail credits growth of past due payments came to 0.5 percent of the total volume of extended credits, in other words somewhat decreased on the back of the credit portfolio increase. Despite the absolute growth of past due debt, its proportion in the credit portfolio declined as of January 1, 2020 to 4.3 percent (5.1 percent a year earlier).

Important factor impacting the financial results of the Russian financial sector was putting in place the new procedure for reflecting in accounting and reporting of reserves for potential losses which entered into force from January 1, 2019 in compliance with the Instructions issued by the Bank of Russia No. 4555-Y and 2556-Y of October 2, 2017. The new procedure envisages implementation of IFRS 9 standard. According to the new accounting rules received additional balance accounts and symbols “Report on financial results” which reflect reserves adjustments. The changes have also related to the methodology of the interest income accounting.

Decisions taken by the bank of Russia have contributed to the profitability of Russian banks. It has increased even in the context of the pressure brought to bear on the sector’s profitability by the interest margin reduction, triggered by the cut in the key rate. At the end of 2019, ROA profitability stood at 2.1% and ROE profitability – at 20.3%. At 2018-end, these indicators constituted 1.4 and 12.4 percent, respectively. Most likely, in the near future bank analysts will include in their practice reserves adjusted profit calculation according to International Accounting Standards.[1] To date this index demonstrates stagnation of the banking profitability (as of January 1, 2018, it stood at 13.8 percent and in 2019 – at 13.1 percent).

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

Shrinkage of bank margin triggered by the reduction of inflation and the key rate, forces banks to ramp up the fee-based income. In 2019, the fee-based income from private corporate loans increased by 72.1 percent and from the retail loans by 227.3 percent. The net income from operations with securities over the past year increased notably (up by RUB 164.7 billion or by 115.4 percent) which to a large extent was due to the growth of the stock exchange last year.

At the same time, banks are forced to more carefully plan their expenses linked to ensuring activities of credit institution including spending on personnel, on operations with fixed capital and non-material assets, organizational and managerial expenses. Operational effectiveness of the Russian lending institutions on average across sector went up: cost-to-income ratio, CIR over 2019 declined to 41 percent which demonstrates increased effectiveness of these expenses management (in the majority of EU countries this index is below 50 percent).

For the first time in recent years, the interest income generated from retail lending has exceeded that from the corporate clients. This is due to the growth of retail and corporate lending which rates are significantly higher than the crediting rates for legal entities.

[1] International financial accounting standards.

3.3.2. Corporate lending

The total volume of loans issued to Russian enterprises of all form of ownership in non-financial and financial (minus banks) sectors and legal entities – non-residents (minus banks) over 2019 rose by RUB 992.7 billion or by 2.6 percent. Over the previous year, the rise was fundamentally higher and came to RUB 4,191.1 billion or 12.4 percent.

Growth of the aggregate corporate loans portfolio to a large extent was due to the increase of the loan volume denominated in the national currency – by 8.2 percent (in 2018 – up by 12.8 percent), meanwhile lending in foreign currency has fallen by 12.0 percent (over the previous year up by 11.4 percent). As a result, the amount of ruble loans as of end of October came to 76.3 percent in the total corporate loans portfolio.

Outstanding debt take-off has somewhat accelerated. Over 2019, total past-due corporate debt rose by 27.0 percent, a year earlier the increment constituted 6.0 percent. At the year-end, past-due debt amounts to 7.1 percent of the credit portfolio, in 2018 this index stood at 5.7 percent.

The government adopts measures aimed at stimulating corporate lending. In late 2018, the RF government adopted Resolution No. 1764 "On the Adoption of Rules for Granting Subsidies from the Federal Budget to the Russian Lending institutions to Offset Shortfall of Income from Loans Extended in 2019–2024 to Small and Medium-sized Businesses at Reduced Rate." In early 2019 the implementation of the program of preferential loans was launched in the framework of the national project "MSE and support of individual entrepreneurial initiative." The RF Ministry of Economic Development has approved a list of 70 banks in 29 regions for preferential loans extended to small and medium-sized businesses at the rate of 8.5 percent (the 2018 program included 15 authorized banks, reduced rate of 6.5 percent).

Owing to programs of preferential loans the amounts of credits extended to small and medium-sized businesses have gone up by 14.5 percent (to RUB 4,695.5 billion). Loans to individual entrepreneurs over 2019 were moving up faster than in the previous year: the increment came to 12.2 percent (a year earlier – 7.1 percent). As of January 1, 2020, the total preferential loans portfolio for MSE totaled RUB 527.0 billion or 11.7 percent of the overall volume of SME credit portfolio. The debt volume on the currency loans extended to individual entrepreneurs is insignificant (below 0.5 percent) and contracted over the year by 21.1 percent (over 2018 reduction came to 16.2 percent).

The rise of the inflationary expectations and the real inflation rate in early 2019 culminated in the nominal interest rates on the ruble loans on average in 2019 somewhat took-of against the previous year. Rates on dollar and euro loans declined following the cut in the FRS rate and zero rate of ECB (*Fig. 67*).

From January 1, 2020, ceased to be in force: the Instruction of the RF Central Bank No. 180-И "On Mandatory Statutory Ratios of Banks" and the Instruction No. 112-И "On Mandatory Statutory Ratios of Lending institutions Listing Mortgage-backed Securities." Instead from 2020 was put in force Instruction of the Bank of Russia No. 199-И "On Mandatory Statutory Ratios and Premiums to Statutory Ratios of Sufficiency of Capital of Banks with Universal License." The new approach envisages calculation of compulsory normative across counterparties' classes and allows to release capital for provision of additional resources for lending to the real sector of the economy.

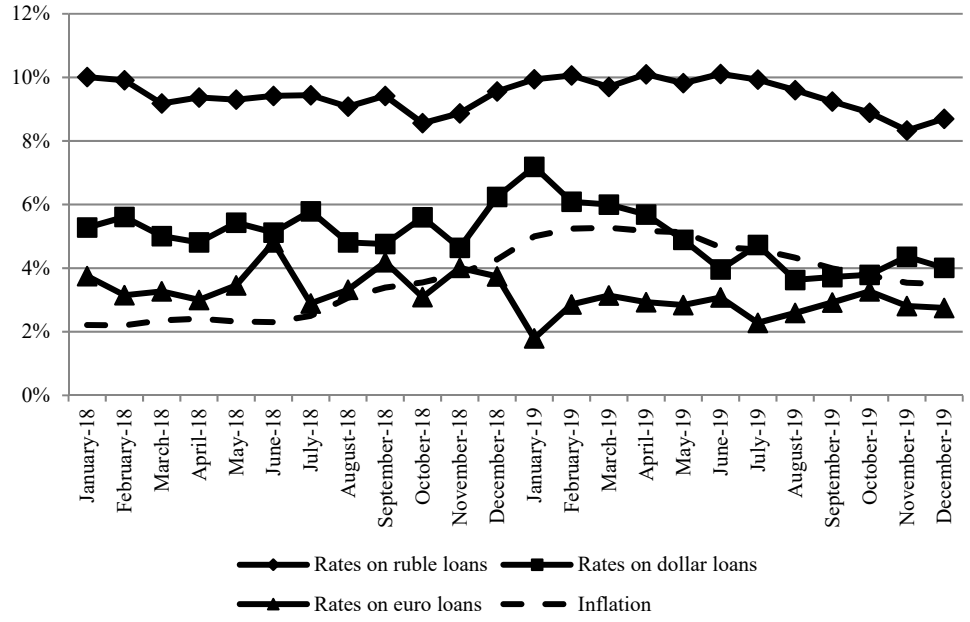


Fig. 67. Corporate lending rates

Source: Bank of Russia.

The Instruction No. 199-*И* sets aside a category of borrowers "investment class" with a reduced risk ratio – 65 percent (to date–100 percent) when identifying them as I and II quality categories to create provisions and admission of the borrower's securities to listing. This decision should contribute to raise attractiveness of the corporate lending sector for banks. It also set a reduced risk rate of 85 percent regarding requirements applied to small and medium-sized businesses evaluated individually (previously risk ration of 100 percent was applied) where the borrowers' financial situation corresponds to the high quality standards (evaluated by banks according to their methodologies in compliance with the Bank of Russia instructions).

According to the requirements applied to small and medium sized businesses evaluated on the portfolio basis corresponding to criteria set by the Instruction a reduced ration of 75 percent is retained.

3.3.3. Retail lending

Analysis of the aggregate retail credit portfolio for 2019 demonstrates run-up of the household debt load: monthly rates of credits advance originated by banks to households vary in the range of 1–2 percent, the total retail loaning debt from the onset of 2019 has moved up by 18.4 percent and as of January 1, 2020 amounted to RUB 17.6 trillion. At the same time, according the Bank of Russia[1] the upsurge of unsecure consumer lending positively affects the consumer dynamic and GDP, without this factor the economic growth would have been significantly lower. However, the issue of reducing risks for ensuring financial sustainability remains in the years to come.

[1] Evaluation of the contribution of the unsecure consumer lending and auto credits in the consumption growth and GSP. Report of the Bank of Russia "Accelerated growth of consumer loans in the structure of bank lending: reasons, risks and measures of the Bank of Russia" June 2019.

In 2019, households' budgets following their multiyear contraction were in stagnation: cash income (average per capita) amounted to RUB 40.9 thousand per month and went up compared to 2018 by 6.1 percent meanwhile the real disposable income of the population have risen by merely 0.8 percent. Against this backdrop, the positive role of consumer lending consisted both in maintaining the spending volume of the population on final consumption and in sustainability of the households' savings.

A number of factors mark a somewhat improvement of the credit environment in 2019. For example, at Q2 – end 2019, FICO registered the credit health index growth calculated on the data released by the National Bureau of Credit Histories (NBCH). At the year-end 2019 the index hit 96 points and thus to values reported prior to December crisis of 2014, when amid the plunge of the oil prices and collapse of the ruble exchange rate the regulator raised the key rate to 17 percent annualized.[1] The index envisages identification of bad debts with 60 days past due over last six months.

According to the Bank of Russia, as of mid-2019 the number of complaints received by the central bank related to "Consumer lending" declined compared to 2018 by 5.4 percent and came to 28.2 thousand. Nevertheless, retail lending remains one of the most acute issues in the banks' activities with clients: the share of consumer and mortgage leans account for 38.1 and 10.2 percent of the total number of complaints (40.5 and 16.7 percent in 2018). Most often citizens' appeals dealt with credit repayment including refusals for their restructuring and refinancing (24.5 percent), with obtrusive automatic notification (14.4 percent), and violation of the rights of citizens on repayment of the past due debt (11.1 percent).

Assessments made by representatives of the banking community regarding the state of the consumer lending market in Russia vary notably. Many see serious risks in the spike of the consumer lending volumes, others speak about the lack of the universal credit overhang of the Russian borrowers. That said, the latter consider that there are no any grounds for the inception of the lending 'bubble' in the near future. Nominal wages growth and reduction of the interest rates serve as arguments in justification of the credit demand rise and simultaneously it is emphasized that the clients' solvency is substantiated by a high level of early payments.

Overstated concerns related to debt overburden of the households are also supported by the ratio between the consumer loans volume and deposits volume, which at the year-end 2019 constituted 57 percent while the acceptable ratio stands at 80–90 percent (as in EU countries) that demonstrates an ongoing potential for the retail lending growth.

Banks are interested in ramping up consumer lending in order to raise their income amid a reduction of the interest margin. Steady growth (and in Q3 2019 – even outstripping) of interest income generated by retail lending compared to corporate lending is a fundamental incentive for the expansion of the credit proposal to the population but carries the risk of subsequent market 'overheating' (*Fig. 68*).

The central bank, the Ministry of Economic Development and Finance Ministry of Russia time and again expressed their preoccupation with the extension of the consumer lending, and are taking concrete steps in an effort to restrict it.

One of the factors, which had to impact banks' policy was the introduction by the Bank of Russia from October 1, 2019 in regulatory documents debt burden indicator (DBI) designed to introduce premiums on the risk rates depending on the state of the credit portfolio. DBI is calculated as a ratio of monthly average payments across all credits of a borrower to his monthly

[1] URL: https://www.nbki.ru/company/news/?id=27458.

average income and is taken into account on extending a loan in excess of RUB 10 thousand at the credit limit discretion on the credit card at prolongation of credit contract life or at the debt restructuring. Previously, credit institutions used this indicator for the similar purposes. This is designed to restrict banks' expansion on the consumer lending market – the majority of lending institutions will have to adjust their procedures to the Bank of Russia requirements and be more inventive in approaching lending in highly risky segments.

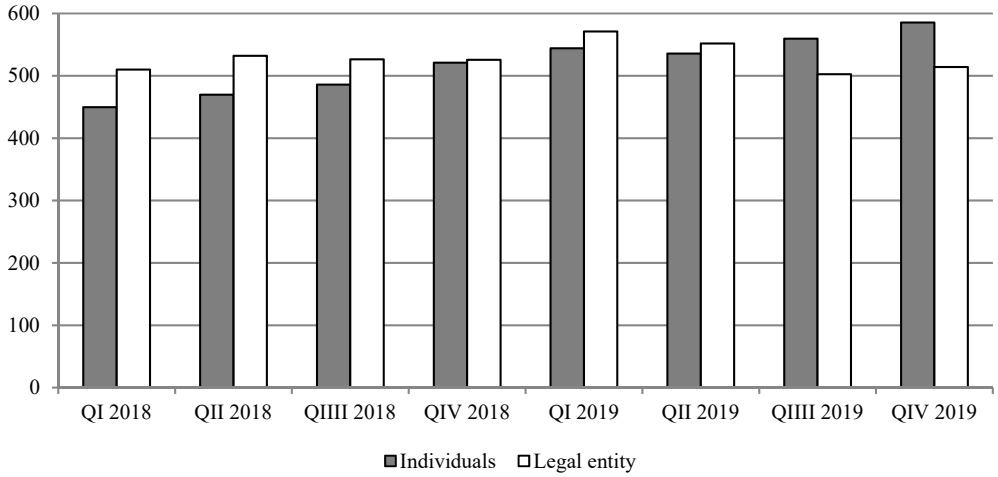


Fig. 68. Interest income generated from retail and corporate loans, Rb billion

Sources: Bank of Russia. URL: http://www.cbr.ru/credit/forms/.

Besides, from January 31, 2019, amendments to the Federal Law "On Credits Histories" entered into force according to which Russians get personal credit rating which is a score constructed on the basis of personal history. The value of the rating is affected by loan delinquencies, level of debt burden, number of requests for credit history inspection and other indicators. Introduction of the personal credit rating should assist banks in proactively take decisions on extending a loan, reduce operational costs. This being said, accessibility of loans for citizens with low rating will be falling, which, in its turn, can affect the divergence of the interest rates and slowdown of growth of the aggregate credit portfolio volume.

According to the Bank of Russia over 2019, the volume of ruble mortgage loans originated to individuals-residents moved up by 17.0% hitting RUB 7.5 trillion. This was driven by systematic reduction of the key rate, which the Bank of Russia carried out 5 times in the course of 2019. Demand hike for mortgage loans in the context of record-low mortgage interest rates was due to the households' demand for the resolution of the residential problem. A certain role in the mortgage demand growth today was also played by a transition to the new procedure of housing purchase by way of application of project financing and escrow accounts according. According to this scheme the developers had to borrow from banks for the construction which will trigger price hikes in newly erected buildings.

In early 2019 the microloan market was affected by the Law No. 554-FZ adopted in late 2018 and envisaging a significant restriction regarding a very expensive type of lending as 'pay day loans.' Putting in place of the new regulation triggered a reduction of the annual interest rate on this type of financial services. Main restrictions were: reduction of the maximum rate on microloan from 1.5 to 1 percent per day and reduction of the maximum asking amount from

2.5-fold of the originally borrowed amount to 2-fold. Owing to those measures at the year-end 2019 the highest annual interest rate on microloans considerably declined to 365 percent against 842 percent seen over the previous year.

Despite this novation, in Q2 2019 the microloan market demonstrated an upward trend of key indexes: microloan portfolio increased by 16 percent, quarterly origination of loans was up by 11 percent. At the same time, past due debt went on growing: NPL indicator 90+ (90+ days past due) hit an all-time high of 27.3 percent in late June, which probably, demonstrates aggressive strategy in an effort to "capture market" to the detriment of its quality ahead of a new round of restrictions which will come into force in 2020 as well as well as the impact of digitalization and expansion of online origination of PDL loans (Pay Day Loans – short-term loans of up to 30 days).

'Business as usual' scenario regarding the situation on the consumer lending market and microloan market in 2020 envisages selected deceleration of the volumes growth rates due to the influence of macro prudential and monetary policies conducted by the Bank of Russia. Forced contraction of supply on the retail lending will tell on the pricing policy of the commercial banks, which can trigger a reduction of rates on accounts and deposits and growth of commissions and tariffs. In the event measures adopted by the government and the Bank of Russia aimed at the cooling of the retail lending market will be materialized then we can expect an increase in corporate lending.

In the event of growing crisis developments in the economy on the back of negative factors (plunge of crude oil prices, inflation rise, and ruble's devaluation), a reduction of lending volumes, growth of interest rates, and decline of banks' income will be conceivable. The outbreak of recession in financial and banking sector can trigger risks of non-payments, which, in its turn, can result in a serious revaluation of banks' credit portfolios, spending growth on reserves build up and capital loss by credit institutions. Under this scenario the situation will depend on the stabilization measures undertaken by the government and the central bank, on their inclusiveness and timeliness.

3.3.4. Banking sector resources

Among the most significant components of the banking sector resources still remain retail deposits (31.6 percent of all bank liabilities), deposits of legal entities minus lending institutions (19.1 percent), organizations' current accounts (11.4 percent), and raised funds from banks including Bank of Russia (11.0 percent).

Retail deposits on ruble and currency bank accounts at 2019-end hit RUB 30.5 trillion, increase over past year amounted by RUB 2.1 trillion or 7.3 percent (in 2018, retail bank accounts grew by 8.9 percent). Slowdown of the retail bank accounts growth over last two years was due to the transition from the savings to consumption and investment models of behavior. Consumption growth rates amid real income stagnation were ensured by an increase of bank loan debt. Meanwhile, moderate revival of interest of the population towards investments in real estate and operations on the stock market has been observed.

Bank deposits growth was ensured, first of all, by the increment of ruble deposits by 9.9 percent (in 2018 – by 7.6 percent). Currency accounts volume in ruble equivalent decreased during the last year by 2.2 percent (the previous year demonstrated growth by 13.7 percent). However, taking into consideration USD exchange rate dynamics (ruble's depreciation in 2018 and its appreciation in 2019) seen over the last year, an increment of the dollar equivalent of

currency accounts by 9.8 percent was observed, meanwhile in 2018 the same indicator fell by 5.7 percent (*Fig. 69*).

The level of deposits' dollarization[1] of the population remains modest: over the year, the share of funds on currency deposits in ruble equivalent in the overall deposits volume decreased from 21.5 to 19.6 percent, which is due to the ruble appreciation in the first place.

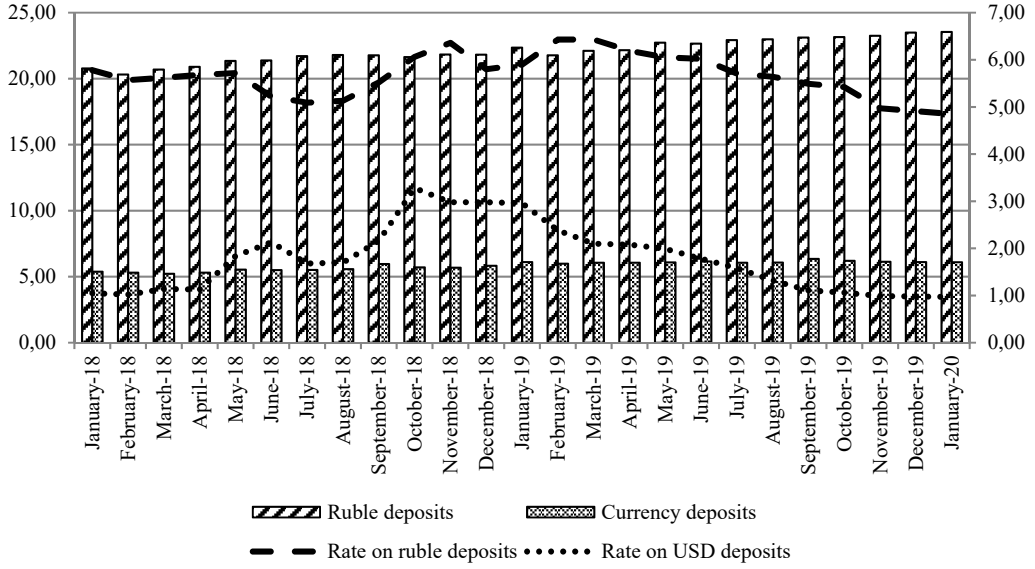


Fig. 69. Volumes of raised funds to retail deposits (trillion rubles) and interest rates on deposits (percent)

Source: Bank of Russia.

Another important component of the Russian banks' resource base are corporate deposits, which went up during 2019 by RUB 0.14 trillion or by 4.6 percent hitting RUB 18.5 trillion. Compared to the last year, growth rates of such deposits have significantly contracted (in 2018 growth amounted to 29.3 percent). This is primarily due to the contraction of currency deposits. However, taking into account the dollar exchange rate, the decline of dollar equivalent of currency deposits slowed down by 1.2 percent in 2019 against 5.8 percent in 2018 (*Fig. 70*).

Interest rates on ruble deposits declined by 15.8 percent (in 2018 up by 7.1 percent), contraction on dollar deposits was much more significant – 64.7 percent, meanwhile in 2018, growth hit 102.1 percent. At year-end 2019, many banks put an end to accepting euros on corporate deposits due to the fact that interest rates on deposits in the EU were in the red.

Transaction interest-free deposits[2] demonstrated last year a sustainable growth: total amount of such accounts during last year went up by 5.7 percent (over 2018 by 7.9 percent) hitting RUB 11 trillion.

Banks' debt commitments remain not too attractive financial instruments for the clients: compared to interest-bearing deposits their issuance volume is insignificant. Total volume of bonds at 2019-end hit RUB 1.9 trillion (in 2018 – RUB 1.3 trillion) up by 41.1 percent during

[1] Deposits in all currencies are taken into consideration.
[2] Funds of legal entities and retail operating and current accounts, resources in settlements, factoring and forfaiting transactions.

the year (up by 9.7 percent over past year). The volume of issued promissory notes came to RUB 0.38 trillion down by 12.8 percent (over 2018 – up by 2.5 percent). The total volume of issued debt securities and savings certificates contracted by 75.8 percent (down by 61.0% percent during 2018) and stays at a low level – RUB 0.04 trillion

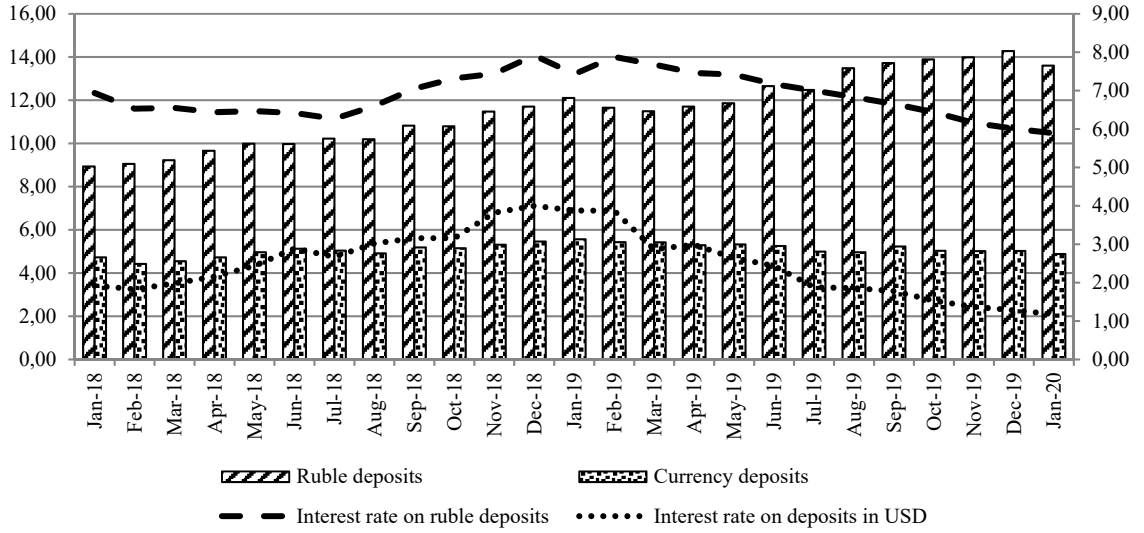


Fig. 70. Volumes of funds raised on corporate deposits (trillion rubles) and interests on deposits (percent)

Source: Bank of Russia.

Decrease of borrowing on the interbank market demonstrates a reduction of dependence on the most volatile sources of funding. During the year, the volume of loans and deposits originated by the resident banks went down by 8.3 percent (down by 3.3 percent in 2018).

Alongside this, the volume of funds raised from the non-resident banks continued a downward trend, over the year it decreased by 32.3 percent in the ruble equivalent (up by 20.7 percent in 2018).

As far as borrowings from the Bank of Russia go, they decreased over the past year by 6.0 percent, meanwhile in 2018 a significant growth was observed – by 29.3 percent. Taking into consideration the short term of borrowings, one can draw a conclusion on the improvement of the bank liquidity.

The level of the bank resources concentration remains high. The share of five major banks as for the size of assets of lending organizations account for 65.5 percent of retail deposits (in 2018, this indicator stood at 65.1 percent), and 59.2 percent of corporate deposits (61.2 percent). The share of raised funds by way of credits from the Bank of Russia decreased slightly – by 24.7 percent (in 2018 – 32.9 percent).

In 2020, under the escalation of the crisis developments related to the oil prices and the outbreak of the coronavirus pandemic, surge of inflation and ruble's devaluation are feasible, which will lead to an increased demand for foreign currencies and contraction of ruble savings. In case of this scenario implementation the stability of the banks' resource base will be dependent of the timeline of the crisis development and measures undertaken by the government and the Bank of Russia.

Section 4. The real sector of the economy

4.1. The dynamics and pattern of economic growth[1]

4.1.1. The dynamics of the Russian economy in 2019: domestic and external demand

Unlike the previous two years when the domestic market's weakness was made up for by growth in the foreign trade balance and net exports, in 2019 the development of the Russian economy took place amid a simultaneous decline of the growth rates of overall domestic demand and foreign trade.[2]

In 2019, GDP growth rates calculated as per the methods of the system of national accounts (SNA) amounted to 101.3 percent, a decrease of 1.2 percentage point as compared with the index value of the previous year. For the first time in the past decade, in 2019 the economic situation became complicated owing to a 2.1 percent decrease in exports' volumes as per the SNA methods in comparable prices relative to the previous year's index value.[3] Consequently, in 2019 net exports' contribution to GDP as per SNA methods fell to 2.5 percent against 3.6 percent a year before[4] (*Fig. 1*).

In the past three years, the positive dynamics of domestic demand was underpinned by the contribution of imports of goods and services into gross resources with a simultaneous revival of domestic manufacturing for the internal market. In 2019, growth in imports amounted to 2.2 percent and 2.5 percent as per the SNA methods in comparable prices and the balance of payments method, respectively (*Fig. 2*).

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[1] This section was written by: *Izryadnova O.I.*, Head of the Structural Policy Department, Gaidar Institute, Leading Researcher of the Structural Policy Department, IAES RANEPA; *Kaukin A.S.,* Head of the Department of Sectorial Markets and Infrastructure, Gaidar Institute, Center for Real Sector, Gaidar Institute, Head of the Department of the System Analysis of Sectorial Markets, IORSI RANEPA; *Miller E.M.,* Senior Researcher of the Department of the System Analysis of Sectorial Markets, IORSI RANEPA.

[2] Izryadnova O. The Dynamics and Pattern of Economic Growth // Russian Economy in 2018. Trends and Prospects (Issue 40). Moscow. The Gaidar Institute's Publishing House. 2019. pp. 189–208.

[3] By 0.3 percent in current prices and by 5.7 percent in volume terms as per the balance of payments methods.

[4] To 7.7 percent against 10.0 percent a year before in current prices.

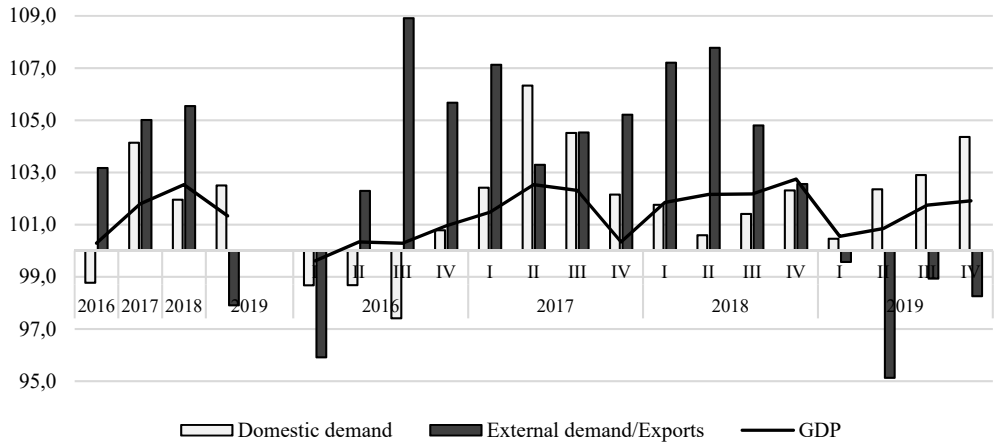


Fig. 1. GDP dynamics by the component of domestic and external demand in 2016–2019, % on the previous year

Source: own calculations based on the data of the Rosstat.

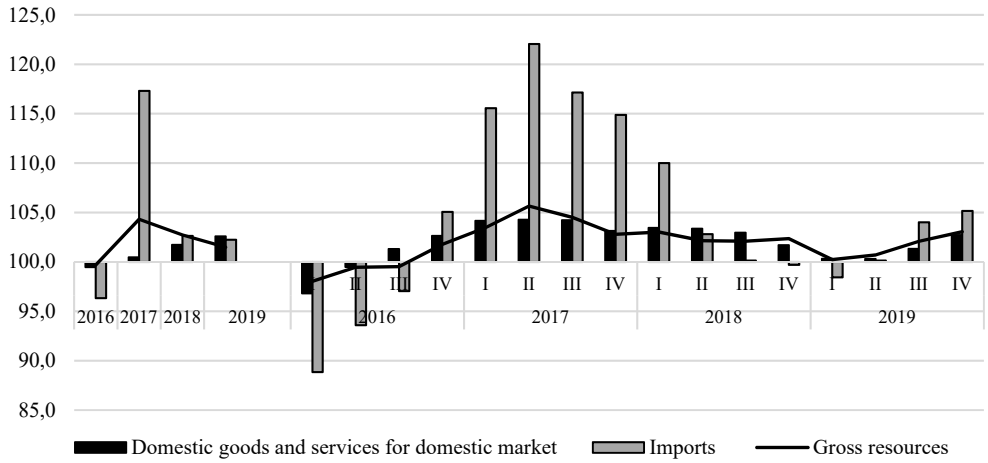


Fig. 2. The dynamics of domestic demand by the component in 2016–2019, % on the relevant period of the previous year

Source: own calculations based on the data of the Rosstat.

In 2019, the decline of the share of investment goods in imports to the average values seen during the grave investment crisis of 2014–2015 had a negative effect on the dynamics of building and investment activities and processes of technological modernization of capital assets. The growth rates of investments in capital assets amounted to 0.8 percent in 2019 with the annual average value of 4.5 percent in 2017–2018. Growth in the share of intermediate demand goods in imports to the values exceeding the indices of the past decade underpinned the dynamics of domestic output, particularly, in activities with a high share of assembling. All other factors being equal, the expansion of trade in intermediate goods is aimed at reduction of losses by means of upgrading technologies and effective management of production activities, sales, goods promotion and investment strategies, however, the domination of low value-added

goods in exports increases the national economy's dependence on imported high-tech goods (*Table 1*).

Table 1

The pattern of imports by the functional nature of utilization (as per the methods of the balance of payments), %

	Goods		
	consumer	investment	intermediate
2016	35.6	26.5	37.9
2017	33.6	27.5	38.9
2018	33.2	25.4	41.4
2019	33.8	24.4	41.8
I	34.7	22.9	42.4
II	32.0	24.3	43.7
III	33.4	23.9	42.7
IV	35.0	26.2	38.8

Source: The Rosstat.

The depreciation of the ruble's exchange rate failed to compensate the shortfall in incomes on the back of changes in the pattern of foreign economic parameters and had an ambiguous effect on the Russian economy. On one side, it reduced the effect of external factors on individual sectors of the Russian economy and facilitated import substitution and modernization of export-oriented industries, while, on the other side, led to growth in production costs as a result of appreciation of imports of intermediate and investment goods and reduction of consumer demand amid the high accumulated inflation rate and low dynamics of households' incomes. It is worthwhile to point out the specifics of formation of domestic consumer market resources. With existing dynamics of production in the consumers' sector of the economy amid appreciation of the national currency, inflation rate targeting, as well as modification of the pattern of prices and consumer demand, the share of import goods in retail trade commodity resources increased in 2019 (*Table 2*).

Table 2

The pattern of the retail trade's commodity resources (in actual prices), %

	Commodity resources of retail trade	Including commodities		Share of import food products in commodity resources of retail trade in food products
		Domestic goods	Import goods	
2016	100	62	38	23
2017	100	65	35	23
2018	100	64	36	24
2019	100	62	38	25
Q 1	100	63	37	25
Q 2	100	64	36	24
Q 3	100	61	39	24
Q 4	100	61	39	27

Source: The Rosstat.

Amid the depreciation of the exchange rate of the national currency, the effect of import substitution is generally concentrated in manufacturing which is driving out from the market high-priced import goods and leads in the short-term prospect to domestic output growth, but the pattern of demand on domestic and import goods is seriously influenced by consumers' preferences and the income effect.

In 2016–2018, the dynamics and pattern of domestic production were determined by a shift of priorities in favor of support of external demand, which situation defined the specifics of utilization of resources, while the year 2019 saw advanced growth in domestic manufacturing

of goods and provision of services for the domestic market. In addition, changes in the pattern of imports – the reduction of consumer goods supplies and growth in imports of industrial goods – underpinned the domestic market and gave an additional impetus to overcome the recession in domestic manufacturing and expanded the opportunities to diversify the economy (*Fig. 3*).

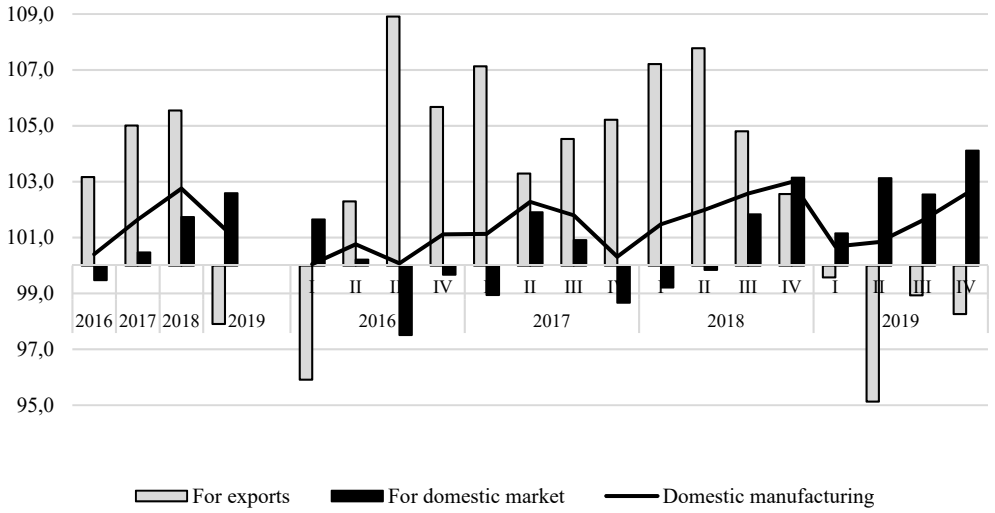


Fig. 3. The dynamics of domestic manufacturing of goods and provision of services by the line of utilization in 2016–2019, % on the relevant period of the previous year

Source: The Rosstat.

In growth models based on the expansion of domestic demand, the key issue is the implementation of the Russian business's potential capacity to react to changes in the environment on the domestic and external markets. It is believed that growth based on high investment activities related to solution of modernization issues is more sustainable, however, in such a situation tougher requirements are set to modification of the pattern of utilization of gross resources.

In 2017–2018, the recovery of growth in ultimate consumption with advanced dynamics of investment demand upturn became a key factor which facilitated to overcome a three-year long recession of the domestic market. In 2019, the ratio of domestic demand factors changed: with a 1.3 percent GDP growth, the ultimate consumption and investments in capital assets increased by 2.5 percent and 0.8 percent on the previous year, respectively. It is to be noted that with the speed-up of domestic demand dynamics as compared with the previous year GDP growth rates saw a downturn trend, reacting more acutely to the level of investment activities. With growth of the domestic market of goods and services being important as a factor of sustainable economic growth, GDP growth rates are more influenced by the dynamics of investments and net exports (*Fig. 4*).

The efficiency of the development process based on external demand can be traced in the values of the indices of the quality and standard of living, as well as employment. Exports of goods and services facilitates growth in labor efficiency in a complex system of networking of various types of economic activities at the sectorial, cross-industry and cross-sectoral levels. Even with sufficient capacity, the domestic market is not able to materialize the overall effect of these economic processes without adequate promotion of activities on external markets.

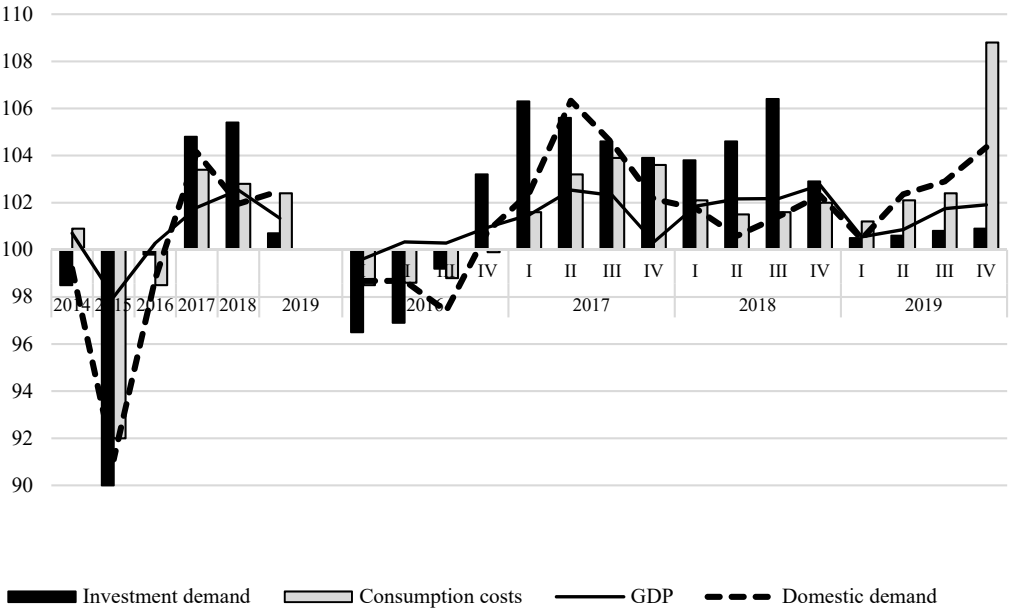


Fig. 4. The dynamics of domestic demand by the component in 2014–2019, % on the relevant period of the previous year

Source: The Rosstat

The correlation between the trade and industrial development can be considered in two aspects: the effect of exports/external demand and imports of intermediate and ultimate demand resources on growth in efficiency in terms of modification of the pattern of production; and the effect of revenues from the foreign trade on the specifics of formation of national saving and motivation of investments and labor remuneration. With the economy functioning amid households' shrinking incomes and budget constraints, the overall domestic demand decreased, so, the issue of mobilization of investment resources as a key prerequisite of support of diversification of exports and support of priority sectors of the economy became quite acute.

4.1.2. Utilization of GDP in 2016–2019: households' ultimate consumption

The specifics of the 2017–2019 period was the recovery of growth in ultimate consumption after two years of recession. In 2019, with a 1.3 percent GDP growth, ultimate consumption increased by 2.5 percent, including that of households and the public administration by 2.3 percent and 2.8 percent on the previous year, respectively. Unlike 2017–2018, in 2019 the dynamics of GDP was formed amid advanced growth rates of ultimate consumption as compared with investments in capital assets. It is noteworthy that in 2019 ultimate consumption was transformed on the back of increase in dynamics and the share of the public administration's expenditures on individual and collective services to 18.5 percent of GDP, as well as the share of social transfers in households' actual ultimate consumption. So, the slowdown of growth in households' consumption was partially offset by growth in the public administration's expenditures on implementation of national projects. As seen from the analysis of the pattern of GDP utilization as per the SNA-2008 methods in comparable prices the share of expenditures on households' ultimate consumption owing to the implementation of measures

aimed at underpinning social parameters of 2019 amounted to 54.5 percent (50.3 percent in current prices) and returned to the pre-crisis values (*Table 3*).

Table 3

The dynamics and pattern of expenditures on ultimate consumption

	2016	2017	2018	2019
% on previous year				
Gross domestic product	100.3	101.8	102.5	101.3
Expenditures on ultimate consumption of	98.5	103.4	102.8	102.4
households	97.4	103.7	103.3	102.3
public administration	101.4	102.5	101.3	102.8
% to total				
Gross domestic product	100	100	100	100
Expenditures on ultimate consumption of	71.7	71.1	67.2	69.2
households	52.8	52.5	49.2	50.3
public administration	18.5	18.2	17.6	18.5

Source: The Rosstat.

Households' ultimate consumption was affected considerably by moderate dynamics of changes in households' cash incomes. In the past four years, the formation of the pattern of households' cash incomes was influenced by advanced growth in labor remuneration as compared with social payments and other income sources. The dominating factor behind the formation and modification of the pattern of households' incomes was a growing gap in the dynamics of the actual amount of pensions and wages.

In 2019, households' real disposable income increased by 0.8 percent on the previous year with its dynamics formed amid weakening of the growth rates of wages to 102.9 percent (108.5 percent a year before). In 2019, the size of granted pensions increased by 1.5 percent, which failed to compensate the decrease in the level of pensioners' material security (*Fig. 5*).

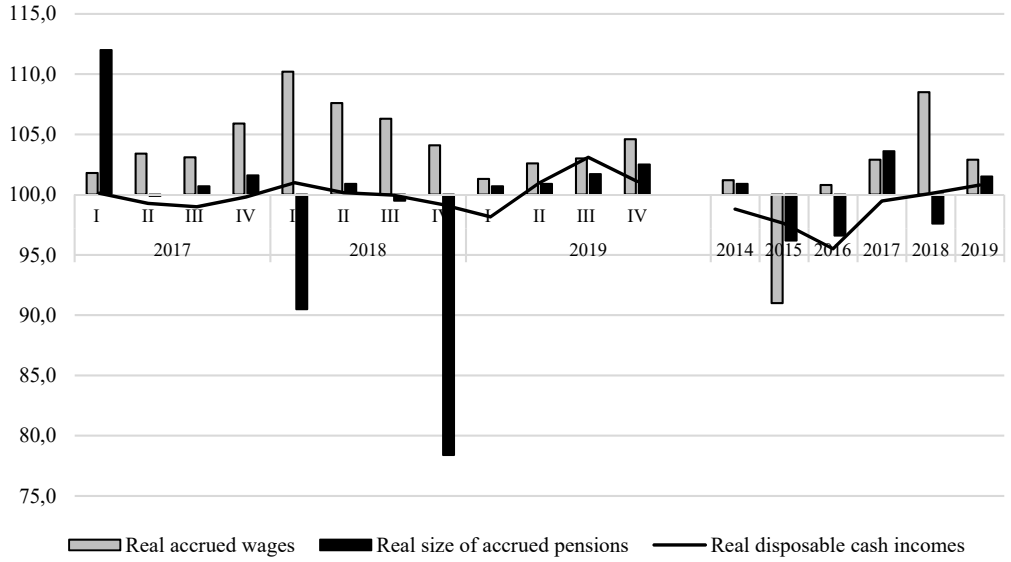


Fig. 5. Dynamics of households' real disposable incomes, average monthly wages and the real amount of granted pensions in 2014–2019, % on the previous year

Source: The Rosstat.

In the pattern of households' cash incomes in 2016–2019, the share of earned income increased as compared with other sources. With growth in nominal average monthly wages, in 2019 the share of labor remuneration in households' cash incomes increased to 58.1 percent, an increase of 5.8 percentage point on the value seen in 2015 when the minimum growth in nominal wages was registered in the past twenty years of observations. Despite the fact that the share of social payments in households' nominal cash incomes increased from 18.2 percent in 2014 to 19.1 percent in 2019, the real size of pensions decreased by 4.6 percent during that period. The situation became more complicated owing to the weakening of dynamics of households' entrepreneurial and investment activities and eventually resulted in a decrease in the contribution of these components into households' cash incomes to 10.7 percent against 11.8 percent in 2014 (*Table 4*).

Table 4

The pattern of households' cash incomes in 2014–2019, % to the total

	Total	Including					
	Cash incomes	Labor remuneration of hired workers	Including wages of workers employed by organizations	Social payments	Incomes from entrepreneurial activities	Incomes from property	Other cash incomes
2014	100	54.9		18.2	7.0	4.8	15.1
2015	100	52.8		18.2	6.5	5.1	17.4
2016	100	54.0		18.8	6.5	5.1	15.7
2017	100	54.5		19.4	6.3	4.3	14.6
2018	100	57.4	39.2	19.1	6.1	4.6	12.8
2019	100	58.1	40.2	19.0	6.1	4.4	12.4

Source: The Rosstat.

The dynamics and pattern of households' cash incomes were characterized by the growing social and economic differentiation and unevenness of distribution of households' incomes and wages. High differentiation and inequality in distribution of incomes and wages is interpreted as a factor restraining economic growth rates and social well-being. In 2019, Gini coefficient and R/P10% ratio remained at the level of the previous year and amounted to 0.413 and 15.6-fold, respectively. The number of the employed with entities with wages below the minimum subsistence level amounted to 3.1 percent of those employed in the economy or 5.2 percent of employees of various institutions. Amid the growing demographic pressure on the able-bodied population, the share of low-paid workers affected seriously the level of poverty. In 2019, the number of the population with incomes below the minimum subsistence level was equal to 19.2 million people (+0.8 million people on the index value seen in 2018) or 13.1 percent (+0.5 percent of the total number of the population). This situation could not, but affect households' consumption.

Households' consumption was formed amid the slowdown of the growth rates of the rate of inflation to 103.0 percent from 104.3 percent in 2018. In 2019, consumer behavior was determined by the slowdown of price dynamics in Q2–Q4 after their speed-up in the beginning of the year. The inflation rate was slowing down at a rather rapid rate with the following price index changes in 2019: food products – 2.6 percent (-1.9 percentage point on 2018), non-food products – 3.0 percent (-1.1 percentage point) and services – 3.8 percent (-0.1 percentage point). On the food market, the price dynamics was influenced by the expansion of the supply of agricultural products, while on the non-food market the appreciation of the ruble weakened growth in prices of import goods and set more moderate dynamics as compared with 2018 (*Fig. 6*).

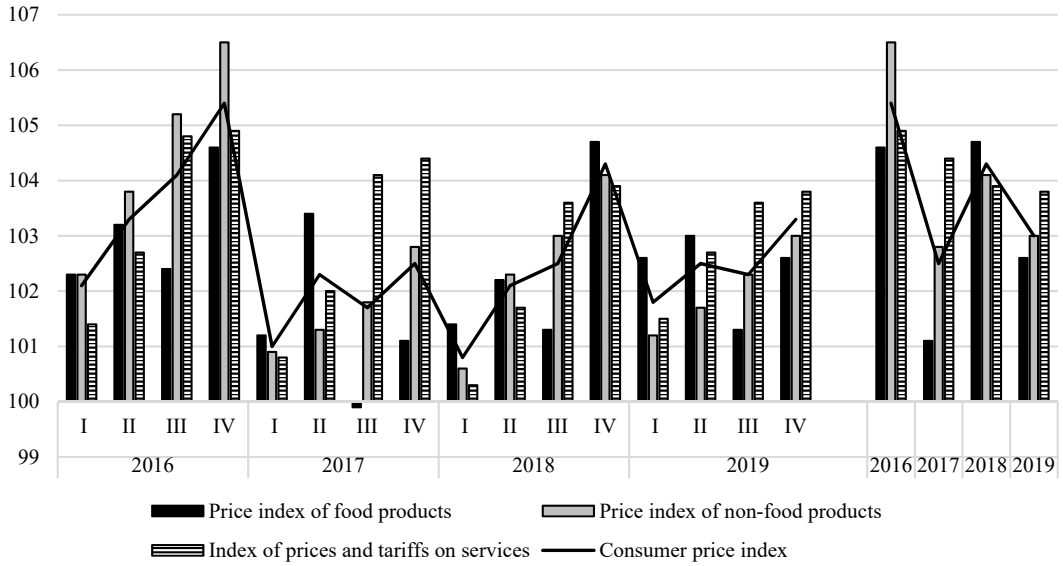


Fig. 6. The dynamics of consumer prices by the market segment in 2016–2019, % on December of the previous year

Source: The Rosstat.

With rather weak dynamics of growth in real disposable incomes, in 2019 the growth rates of the retail trade turnover slowed down to 1.6 percent (-1.2 percentage point as compared with 2018), while those of the food market and non-food market, to 1.4 percent (-0.7 percentage point) and 1.8 percent (-1.7 percentage point), respectively (*Fig. 7*).

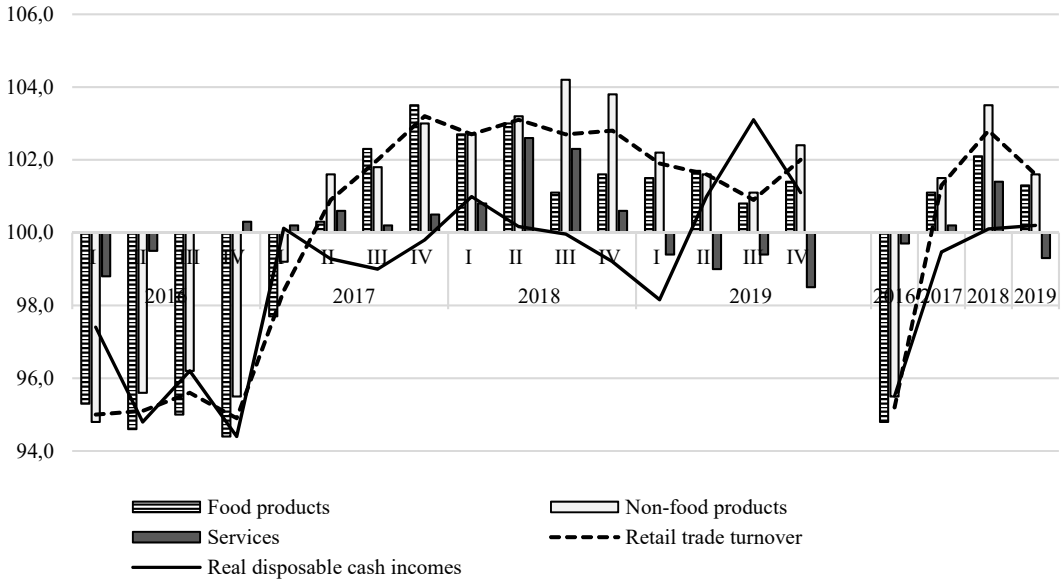


Fig. 7. The dynamics of the consumer market in 2016–2019, % on the previous year

Source: The Rosstat.

With low dynamics of households' cash incomes in the pattern of households' cash expenditures, the share of consumer spendings increased from 77.5 percent in 2016 to 81.2 percent in 2019 with a decrease in the share of savings from 8.7 percent to 4.3 percent, respectively (*Table 5*).

Table 5

The pattern of households' cash incomes in 2016–2019, %

	Consumer spendings	Mandatory payments, various contributions and other expenditures	Increase in households' savings	Including	
				Savings on bank deposits	Expenditures on purchasing of real property
2016	77.5	13.8	8.7	4.2	2.1
2017	79.1	14.2	6.8	4.1	2.0
2018	80.7	15.1	4.2	3.1	2.4
2019	81.2	15.4	4.3	3.1	2.5

Source: The Rosstat.

A change of the trend in households' expenditures with growth in the share of expenditures on purchasing of goods was accompanied by growth in demand on consumer loans. Households' saving behavior was influenced by cuts in interest rates on mortgage loans with the expansion of supply of housing of a wide price range on the housing market. This situation determined some growth in the share of expenditures on purchasing of real property and growth in households' debt load with a decline of the share of savings in incomes, which factor under certain conditions might create problems with fulfillment by households of their obligations to banks (*Fig. 8*).

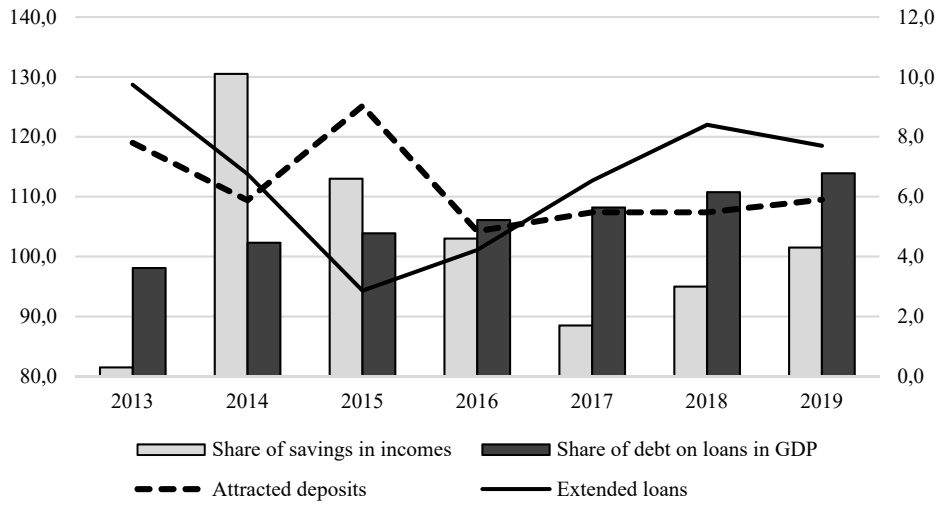


Fig. 8. The share of savings in households' incomes (%) and dynamics of deposits and loans to households in 2013–2019 (% on the previous year)

Source: The Rosstat.

4.1.3. The formation of GDP by income source: wages and labor efficiency

The modification of the pattern of formation of GDP in terms of incomes was determined by means of the mechanisms of redistribution of resources in favor of the business, backbone types of economic activities and enterprises; interest rates and the terms of borrowing and

saving with a decrease in investment activities and total factor productivity; dynamics of prices and tariffs, inflation targeting and gradual depreciation of the ruble. The external macroeconomic factors were the dynamics of prices of energy commodities and revenues from exports, as well as the rate of capital outflow. In 2019, the share of gross profit in GDP rose to 41.9 percent against the index value of 42.5 percent in 2018. If the pattern of production costs modified on the back of regulation of labor remuneration and employment, changes in financial performance of economic activities were seriously affected by changes in the level and pattern of prices.

In 2017–2019, the level of profitability of production and dynamics of the balanced financial result were primarily determined by manufacturers' pricing policy. If in 2018 manufacturers' reaction to the trend of recovery of domestic demand was the speed-up of growth rates of prices both in industry and building, in 2019 the situation changed: the decline of producers' prices in extractive industries brought about the adjustment of prices in manufacturing (*Table 6*).

Table 6

Price and tariff indices in 2016–2019, % (December on December of the previous year)

	2016	2017	2018	2019
Consumer price index	105.4	102.5	104.3	103.0
Producer price index, including:	107.4	108.4	111.7	95.7
mining	108.5	123.9	120.7	90.8
manufacturing	107.6	104.2	110.3	96.6
Agricultural producer price index	101.8	92.2	112.9	95.5
Overall index of building material prices	103.2	103.1	107.3	106.0
Index of cargo transportation tariffs	105.6	109.0	100.9	101.5

Source: The Rosstat.

Changes in the level of prices determined the specifics of dynamics of financial performance of economic activities and profitability ratios. In 2019, profitability of production was at the level of 11.4 percent and fell by 0.9 percentage point on the relevant period of 2018. High differentiation of the level of profitability by the type of economic activities was determined by the pattern of domestic prices, the ruble's exchange rate and redistribution of factors of production between various types of economic activities and the domestic and external demand (*Table 7*).

Table 7

Profitability of sold goods, products, jobs and services by the type of economic activity in 2017–2019, %

	2017	2018	2019
Total in economy	7.5	12.3	11,4
Agriculture, hunting and forestry	17.3	20.2	18,6
Mining	24.6	33.6	29,6
Manufacturing	10.9	12.8	12,1
Power-, gas-,steam-supply, air conditioning	8.3	8.8	9,2
Building	3.8	6.1	7,0
Retail and wholesale trade	4.1	7.3	6,4
Hotels and public catering	7.0	7.1	5,9
Transportation and storage	3.4	8.8	8,7
Information and communications	12.0	14.6	16,0
Finance and insurance	0.8	11.2	11,8
Real-estate operations	18.5	15.9	13,7
Public administration and military security; social security	-1.5	2.4	2,4
Education	2.7	4.2	6,7
Health care and social services	7.0	10.4	9,8

Source: The Rosstat.

The indices and dynamics of the nominal pay react more acutely to changes in macroeconomic conditions. A change in the share of labor remuneration in GDP is normally acyclic: it increases in the period of recession and shrinks during recovery. In 2019, the share of labor remuneration in GDP amounted to 46.9 percent and fell by 1.3 percentage point relative to 2016 when the trend towards stabilization of economic growth rates emerged (*Table 8*).

Table 8

The pattern of GDP by the income source in 2016–2019, % to the total

	2016	2017	2018	2019
GDP, including:	100	100	100	100
Labor remuneration of hired workers	48.2	47.8	46.1	46.9
Economy's gross profit and gross mixed income	40.8	41.3	42.5	41.9
Net taxes on manufacturing and imports	11.0	10.9	11.4	11.2

Source: The Rosstat.

In the Russian economy, changes in economic conditions affect primarily indices of the dynamics of nominal and real wages and slightly the level of employment. In 2019, the number of workforce amounted to 75.4 million people of which 71.9 million people were employed in the economy and 3.5 million people (4.6 percent) were classified as the unemployed (as per the ILO's methods). The level of the rate of unemployment fell all-time low. The level of the rate of unemployment was restrained by the shortage of labor supply justified by demographic factors. With the overall trend of reduction of the share of the able-bodies population in the total number of the population, the dynamics of the number of the workforce and those employed in the economy saw a weak decrease in 2019.

Employers' need in workers declared at state employment services remains approximately at the level of the previous year; tension coefficient per 100 declared vacancies amounted to 52.6 persons (-1.1 persons relative to 2018) late in 2019.

The reaction of the labor market to the changes in the situation remains rather weak because adaptation takes place not by means of release of the workforce, but through adaptation mechanisms of regulation of the work time, administrative measures and the practice of informal labor relations. The macroeconomic instability on the labor market leads to the development of processes of informal employment amounting to 20.5 percent of the total workforce.

Comparison of the dynamics of nominal wages and real wages, labor efficiency and overall labor costs reveals that the values of these indices in 2010–2019 were much below than in the previous decade. In conditions of macroeconomic turbulence, mechanisms of labor remuneration regulation did not lead to adequate growth in labor efficiency. It is to be noted that growth of social claims and the policy of underpinning the standard of living increased the gap between the dynamics of labor efficiency and real wages and reduced the efficiency of the economy and contribution of the total factor productivity. Advanced growth in real wages relative to labor productivity highlighted a lack of automated short-term correlation with indicators of labor market efficiency (*Table 9*).

As seen from the dynamics of labor efficiency in 2017–2019, with a change in the level of prices and the cost of borrowing in industry growth in labor efficiency in mining permitted to underpin positive dynamics of output and facilitated growth in the role of this type of activity in forming the gross value added. In manufacturing, growth in workers' labor efficiency with an increase in the average earned rate facilitated a decrease in labor intensity and offset the reduction of the average annual number of the employed on the back of restructuring of production.

Table 9

Labor market indicators in 2016–2019, % on the previous year

	2016	2017	2018	2019
Gross domestic product	100.3	101.8	102.3	101.3
Overall labor costs	99.8	99.6	99.9	99.8
Index of labor efficiency	100.2	101.9	102.3	101.3
Real accrued wages of workers of entities	100.8	102.9	108.5	102.5
Nominal accrued wages	107.9	106.7	111.6	108.5
Number of employed	101.1	99.7	100.3	99.2
Number of unemployed	99.5	93.5	92.2	94.7

Source: The Rosstat

In the investment and building sectors and the trade-related and sales sectors, the retention of jobs became a factor keeping in check social risks on the labor market with a high share of those engaged in these types of activities in the pattern of the economy taken into account, however, labor efficiency dynamics slowed down (*Table 10*).

Table 10

Dynamics of labor efficiency by the type of economic activities, % on the previous year

	2016	2017	2018	2019*
Total in economy	100.2	101.9	102.3	101.4
Agriculture	102.6	105.3	99.8	99.3
Mining	100.3	101.6	101.8	103.1
Manufacturing	102.4	100.7	101.5	101.8
Power-,gas- and steam-supply; air conditioning	101.1	100.1	101.9	100.6
Water-supply; water disposal, waste collection and utilization	100.1	96.7	102.7	103.1
Building	102.3	97.6	102.8	99.7
Wholesale and retail trade	96.4	101.7	102.5	101.5
Transportation and storage	100.8	100.0	100.5	102.6
Hotel business and public catering	94.1	103.5	102.5	103.7
Information and communications	93.7	99.0	100.2	104.3
Real-estate operations	99.6	100.4	95.9	102.3
Professional, scientific and technical activities	94.7	108.4	102.7	101.1
Administrative activities and related additional services	103.9	98.6	101.3	95.4

* preliminary estimate.
Source: The Rosstat.

The most well-paid types of economic activities – mining, production of petrochemicals, pipeline and air transportation and financial activities – retained the leading positions, but the excess of nominal wages over the nationwide average indicator decreased somewhat. Advanced growth in nominal wages in industry was still a factor of retention of human resources. The lowest wages – 67 percent of the nationwide average – still prevailed in the agrarian sector. The shrinkage of investment and internal consumer demand slowed down growth in wages in building and trade with restructuring of employment in these types of business activities.

4.2. The output dynamics by the type of economic activities

In 2017–2019, recovery of positive dynamics of the Russian economy was determined by the fact that recession was overcome virtually in all baseline types of economic activities. The highest growth rates were observed in mining and agriculture; weak growth in households' incomes relative to the previous year determined the slowdown of growth rates of the retail trade turnover; weakening of the growth rates of the manufacturing segment of the economy led to the slowdown of the wholesale trade's volumes and transport, while in the investment activity – the volumes of jobs in building.

As per the results of the first three quarters of 2019, growth in industrial production was facilitated by positive dynamics both of the mining sector and the manufacturing sector. At the end of the year, it returned to near-zero growth rates, while recession was observed in power, gas and water production. An increase in output of a number of manufacturing industries was mainly justified by a favorable market environment and state support, however, this trend cannot survive in the long-term prospect because of a lack of structural prerequisites for growth and decline of domestic demand.

For the sake of correct interpretation of the continued existence of negative trends or overcoming thereof in individual industries, it is necessary to carry out decomposing of their output into the following components: calendar, seasonal, irregular and trend; interpretation of the latter is of a substantial interest. The Rosstat publishes the data with exclusion of the seasonal and calendar factors only in respect of the 2017–2019 period and only for the industrial production index as a whole and its most significant components[1], so, experts of the Gaidar Institute cleared a number of indices of all industrial sectors in 2000–2019 of seasonal and calendar components and separated the trend component[2] on the basis of the latest statistical data published by the Rosstat as regards output indices of the industrial sector of the economy.

The findings of the processing of a series for the industrial production index as a whole are presented in *Fig. 9*. Presented in *Fig. 10* are the findings for the aggregated indices of the mining sector, as well as production and distribution of power, gas and water.

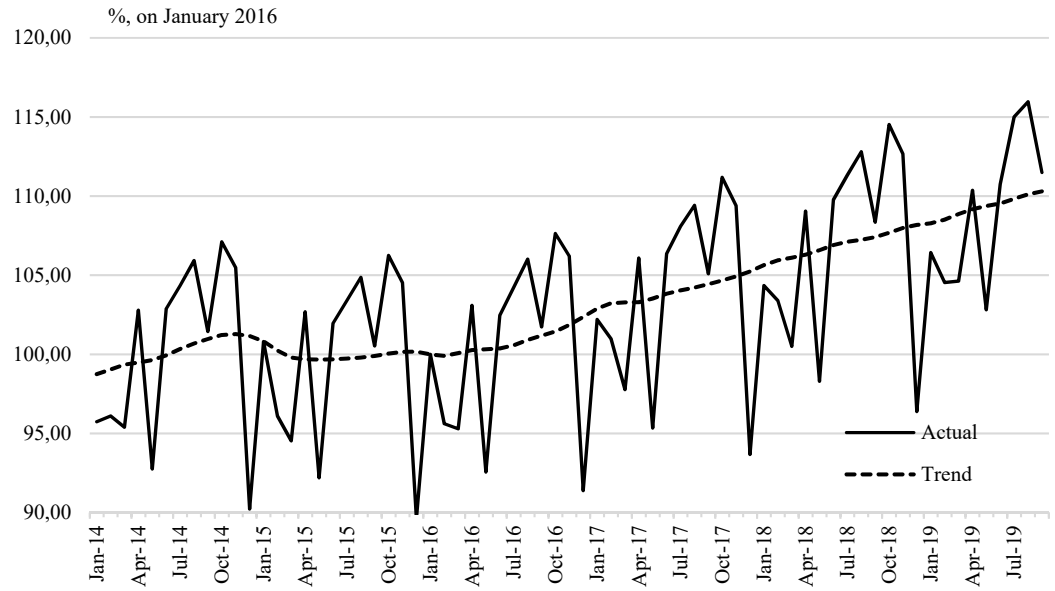


Fig. 9. The dynamics of the industrial production index, 2014–2019 (the actual data and trade component), % on January 2016

[1] Mining; manufacturing; power-, gas- and steam-supply; air conditioning; water-supply, water removal, waste collection and utilization and pollution cleaning.

[2] Detection of the trend component was carried out by means of the Demetra package with utilization of the X12-ARIMA procedure.

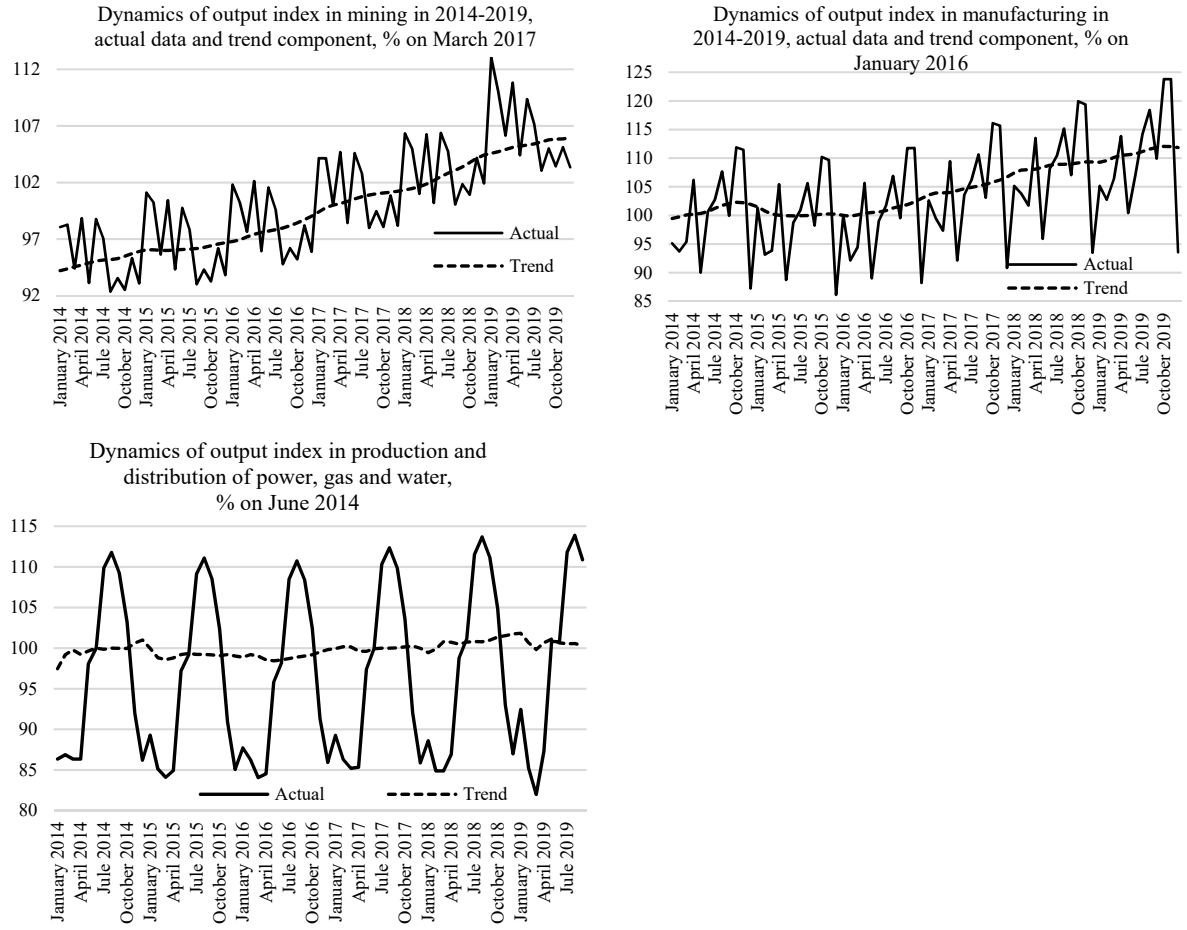


Fig. 10. The dynamics of output indices in mining, manufacturing and production and distribution of power, gas and water, 2014–2019

On the back of extension of the OPEC+ agreement, reduction of oil production in Venezuela and the US warning of sanctions to be introduced against countries importing Iranian oil, in Q1 2019[1] the price of Brent oil appreciated substantially on the global market to USD 68.35 a barrel (an increase of nearly +25 percent as compared with the beginning of the year). Growth in oil prices was accompanied by positive dynamics of the national currency.

Also, early in 2019, changes in the customs and tax regulations affected the volumes of supply and demand in the Russian industrial sector: the beginning of implementation of measures of the final stage of the tax maneuver in the oil and oil-refining industries accompanied by freezing of wholesale prices of gasoline; an increase in excise rates, including those on engine fuel (growth in costs on transportation and storage of goods); change in the VAT rate from 18 percent to 20 percent (growth in prices on products for ultimate consumers).

[1] Kaukin A.S., Miller E.M. Output Dynamics in Q1 2019: Manufacturing Industry Growth // Russia's Economic Development. 2019. Vol. 26. No 5. pp. 14–19.

As per the findings of the calculation, in Q1 2019 the industrial production index saw slow growth like that early in 2018. However, the factors which determined such dynamics early in 2018 and early in 2019 were different: growth in Q1 2019 was facilitated simultaneously by the mining sector and manufacturing, while in the same period of 2018 it was mainly the mining sector that saw growth.

In Q1 2019, industries engaging in production of fuel and energy commodities were growing despite negative factors on the part of supply: the beginning of fulfillment of obligations under the OPEC+ agreement on reduction of the daily rate of oil production. Growth was facilitated in particular by some changes in demand:

- early in the year abnormally warm weather in Europe led to the reduction of export supplies of natural gas, however, it was offset by growth in reserves at European and Russian underground gas storage facilities:
- substantial reduction of global prices of gas resulted in a partial replacement of coal by natural gas, particularly, in Germany;
- implementation of the program of reduction of carbon dioxide emissions in Europe, gradual scale down of the coal-fired power industry and, consequently, a switchover to renewable energy resources and gas;
- growth in Russian coal supplies to Ukraine by railway, including re-exports via Belarus in January-February 2019.[1]

In Q1 2019, growth in manufacturing industries was driven by the following: the food industry – partially because of import substitution's residual effects; metallurgy – owing to growth in output volumes of industries, which are end-users of manufactured products (manufacturing of transport vehicles) and lifting of sanctions from the Rusal; the chemical industry – owing to continued investments in building of new production facilities; woodworking and manufacturing of wood products – thanks to putting into operation of a number of large industrial facilities in the timber industry in 2018.

A slump in the pulp-and-paper industry was justified by entering of the existing capacities into the active modernization phase and introduction of new ones, which situation slowed down production somewhat. In the next few years, the pulp-and-paper industry is expected to see the expansion of its production capacities and growth in its output and exports.

Despite coming into effect from January 1, 2019 of measures to complete tax reforming in the oil industry and the agreement on the extension of a freeze on wholesale prices of gasoline, production of petrochemicals and charred coal saw slow growth as per the results of Q1 2019, which can be explained by an increase in production capacities in January-February 2019 as compared with the previous year, that is, putting into operation of the Euro-5 gasoline production facilities at the Antipinsky Oil Refinery and the Taneko Plant in autumn 2018.[2]

The findings of separation of trend components of sectorial indices of the mining and manufacturing sectors are presented in *Fig. 11–12*.

[1] IPEM's indices. Monitoring of the Situation in the Industry // IPEM. February 2019.
[2] The Energy Bulletin: New Requirements to Marine Fuels// The Analytical Center under the RF Government. February 2019. Issue No. 69. p. 7–8.

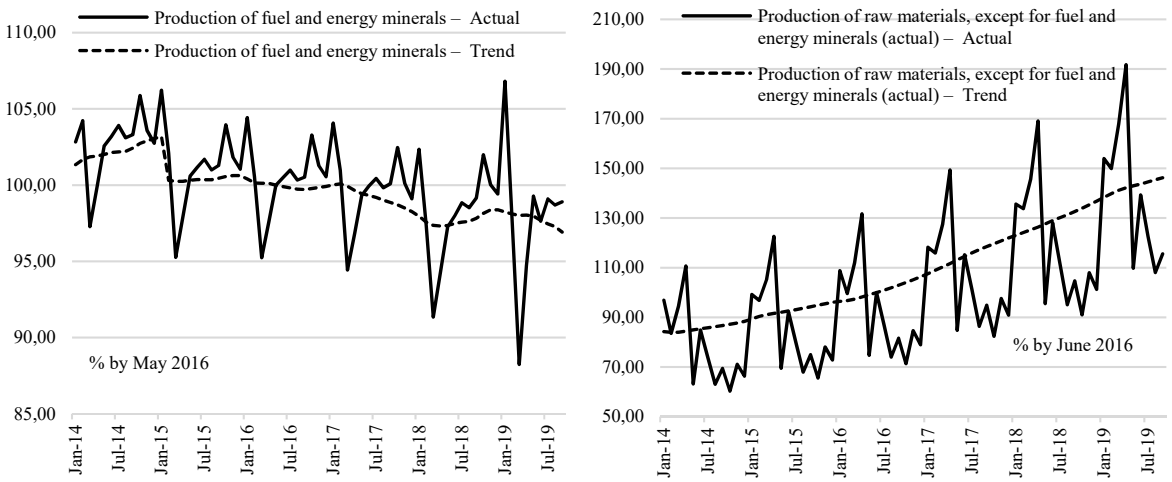
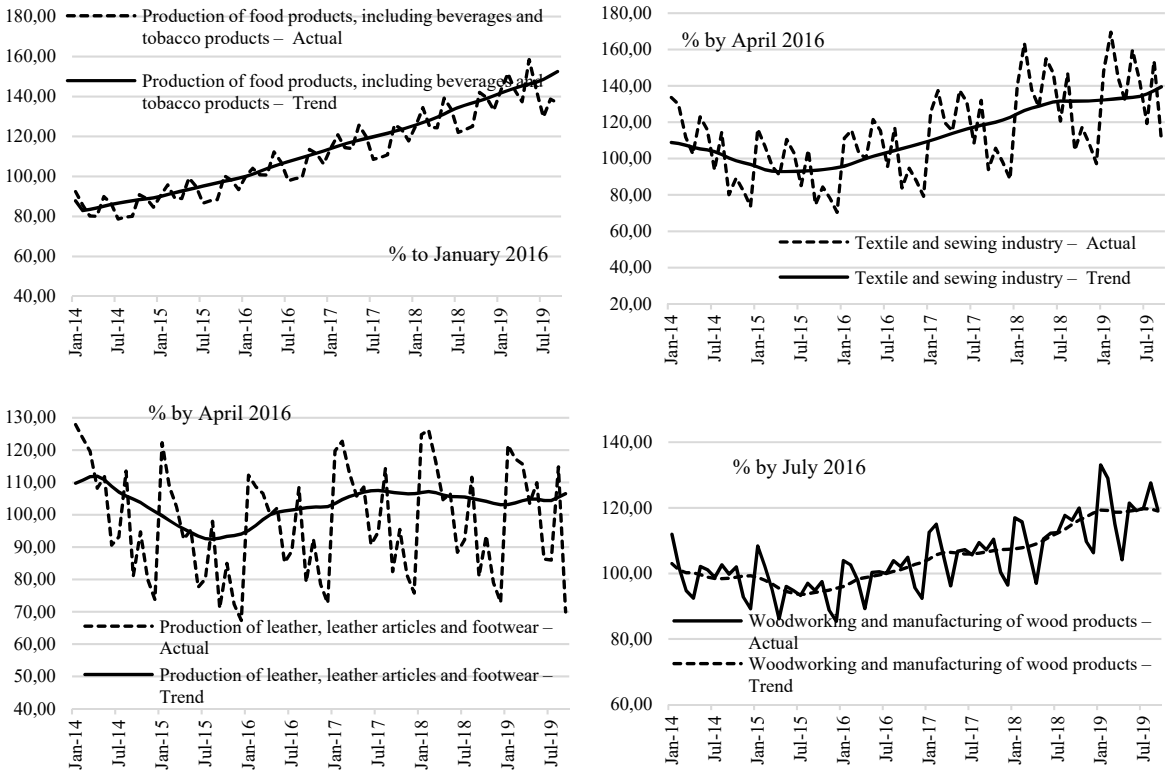
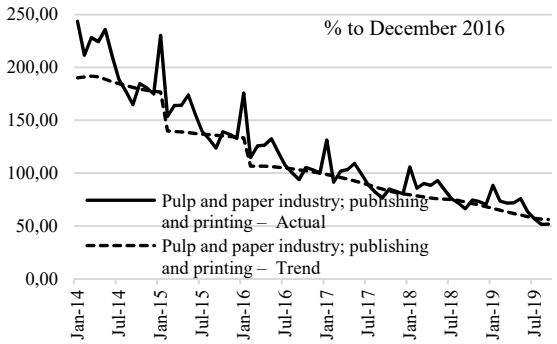
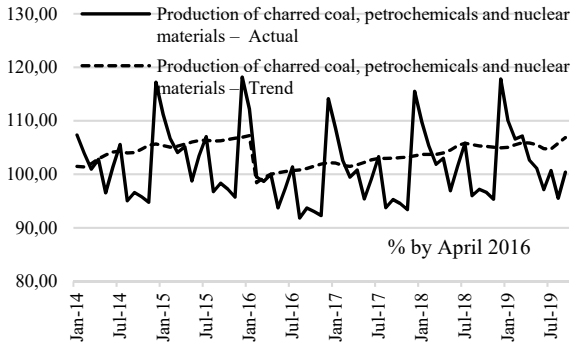
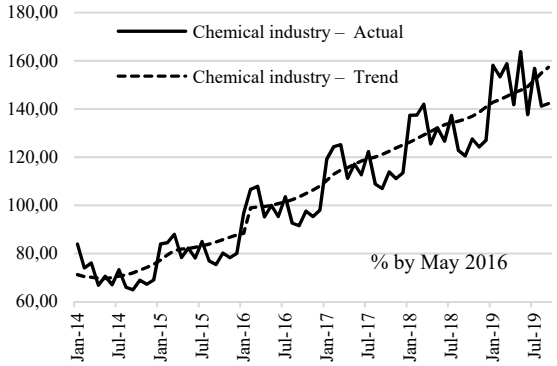


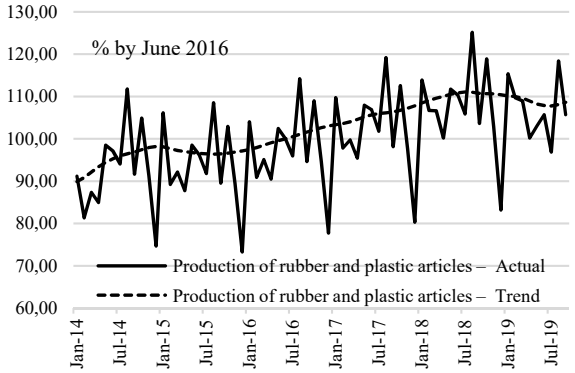
Fig. 11. Dynamics of output indices in the mining sector of the Russian economy, 2014–2019

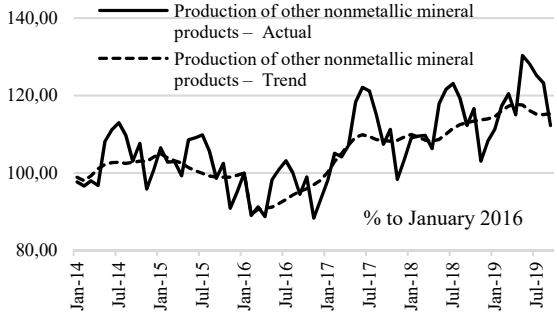


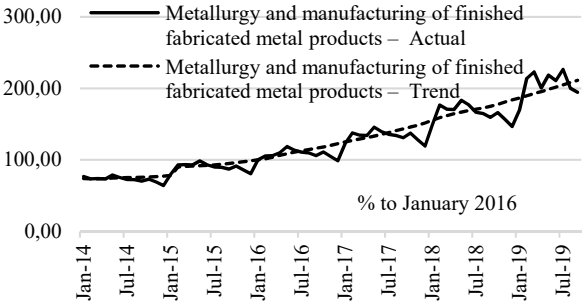

% to December 2016
Pulp and paper industry; publishing and printing – Actual
Pulp and paper industry; publishing and printing – Trend

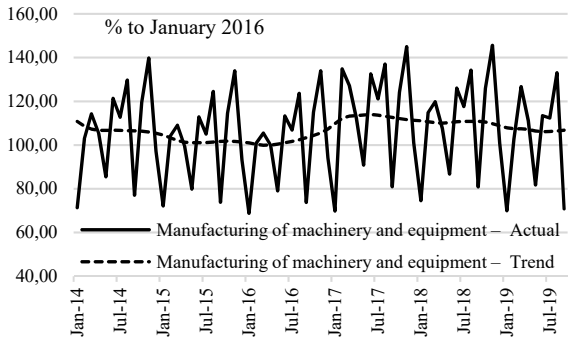

Production of charred coal, petrochemicals and nuclear materials – Actual
Production of charred coal, petrochemicals and nuclear materials – Trend
% by April 2016

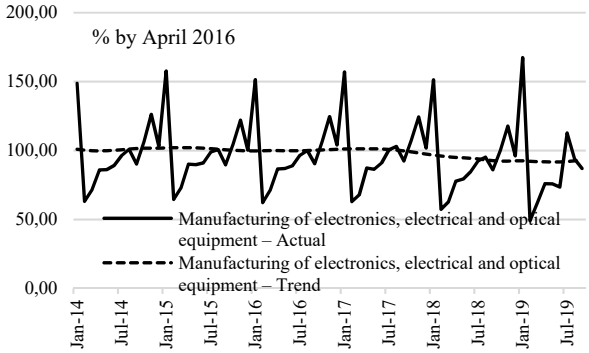

Chemical industry – Actual
Chemical industry – Trend
% by May 2016


% by June 2016
Production of rubber and plastic articles – Actual
Production of rubber and plastic articles – Trend


Production of other nonmetallic mineral products – Actual
Production of other nonmetallic mineral products – Trend
% to January 2016


Metallurgy and manufacturing of finished fabricated metal products – Actual
Metallurgy and manufacturing of finished fabricated metal products – Trend
% to January 2016


% to January 2016
Manufacturing of machinery and equipment – Actual
Manufacturing of machinery and equipment – Trend


% by April 2016
Manufacturing of electronics, electrical and optical equipment – Actual
Manufacturing of electronics, electrical and optical equipment – Trend

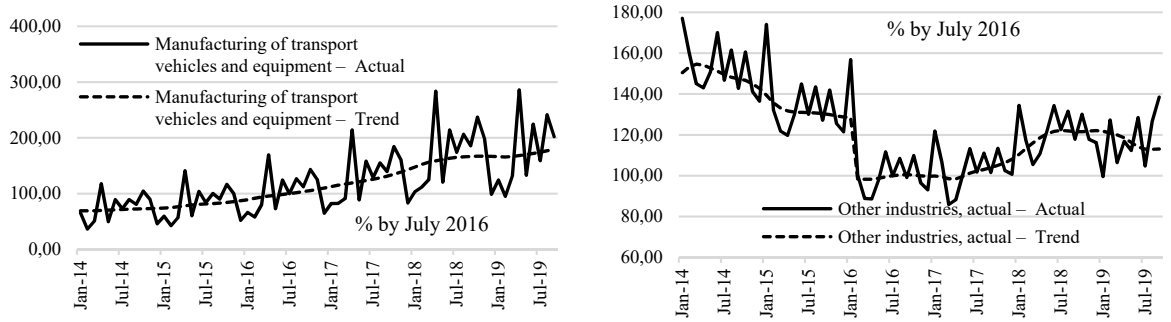
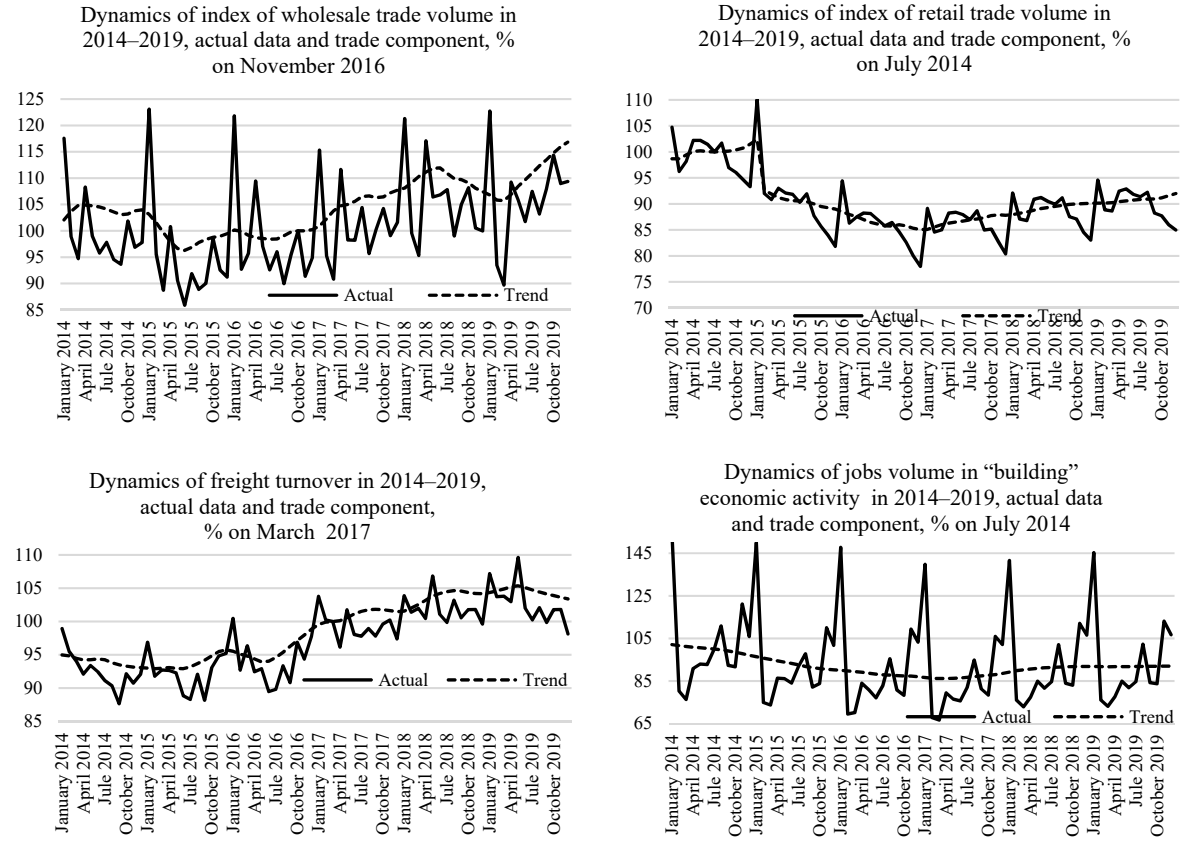


Fig. 12. Dynamics of output indices in the manufacturing sector of the Russian economy, 2014–2019

Also, a slump was observed in wholesale trade, while in Q1 2019 other important sectors of the Russian economy (retail trade, building and paid services to households) saw small-scale positive dynamics. This can be explained by stockpiling by enterprises of reserves late in 2018 ahead of the VAT increase, which situation sped up economic growth in that period, but Q1 2019 saw quite the opposite dynamics of the wholesale trade. Early in 2019, the freight turnover dynamics increased mainly on the back of growth in volumes of transportation of fuel and energy commodities (*Fig. 13*).



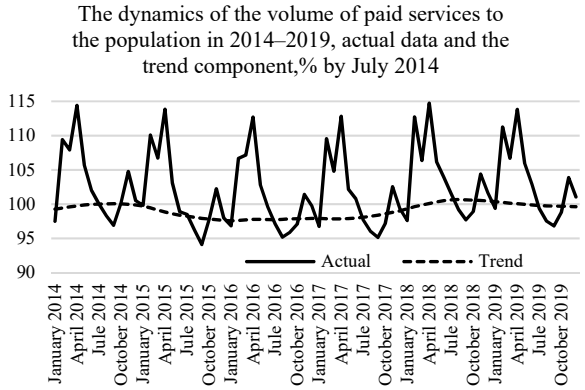


Fig. 13. Dynamics of indices of other industries of the real sector of the economy, 2014–2019

In Q2 2019[1], experts were particularly concerned about exports[2], which fell amid the continued appreciation of the national currency and oil prices. The factors behind the decline of exports were as follows: first, a large share of the fuel and energy complex in exports, that is, over 60 percent (Q2 2019 saw a reduction in export volumes of natural gas and coal); second, the policy of tariff barriers pursued by a number of countries-consumers of domestic products, for example, metal products; third, a relatively low quality of Russian products which can compete on the international market only in terms of price, but with appreciation of the ruble such prospects largely decreased. With sluggish domestic demand, a drop in private investments and capital outflow observed, this situation could be evidence of the slowdown of economic growth in this country.

Despite concerns, the dynamics of the industrial production index and its trend component highlighted growth which was achieved, as in Q1 2019, owing both to the mining and manufacturing sectors of the Russian industry.

The mining sector was still under influence of the OPEC+ agreement on reduction of oil production volumes. Also, it was affected by an unfavorable pricing environment on the global coal market that made enterprises of this sector adjust their output plans, that is, to reduce output volumes by the end of Q2 and reorient supplies to Asian markets.[3] Growth in the gas industry was facilitated by expectations of appreciation of prices of gas before winter, so European countries started to accumulate it actively at their underground gas storage facilities buying it at current relatively lower prices. The fill rate of gas storage facilities increased by nearly 100 percent as compared with last June.

In Q2 2019, in the manufacturing sector growth was still observed in the food industry, the timber industry, the chemical industry, the iron and steel industry and manufacturing of transport vehicles. The factors behind growth remained the same, that is, the state support and a favorable market environment. The wholesale trade's positive dynamics recovered. The

[1] Kaukin A.S., Miller E.M. Industrial Output Dynamics in H1 2019 // Russia's Economic Development. 2019. Vol. 26. Issue No. 8. pp. 27–32.

[2] Bashkatova A. Russia's Export Curse Stats to Come True // The Nezavisimaya Gazeta. 13.06.2019. [URL: http://www.ng.ru/economics/2019-06-13/4_7597_export.html].

[3] In Kuzbas, coal production fell by 7 percent on the back of depreciation of prices in Europe // RBK. 22.07.2019. URL: [https://www.rbc.ru/business/22/07/2019/5d35dc409a7947aa069fe85f?from=newsfeed].

highest growth was registered in freight turnover mainly owing to motor transport. Among the factors which had an effect on it were the following:

- Extension of the transportation range thanks to the commissioning of new high-speed highways;
- Speed up of the car fleet renewal. As compared with the similar period of the previous year, the rate of leasing and extension of loans to transportation carriers against new vehicles was higher (those who postponed the renewal of their car fleet started to do it actively). With new vehicles in use, the rate of breakdown and idle time instances becomes lower and the number of hauls over the distance of more than 300 km increases;[1]
- increase in small batch deliveries because of restrictions which were in effect in April in the Central Federal Okrug, the North-Western Federal Okrug and the Privolzhsky Federal Okrug.[2]

Other important sectors of the Russian economy did not see any significant growth: paid services to households, retail trade and the building industry demonstrated near-zero dynamics.

According to the data of the IHS Markit company,[3] in September 2019 the business activity index in Russian industry decreased considerably, the largest drop since May 2009.[4] According to the company's survey, manufacturers pointed to a decrease in the volume of orders and loss of customers on the domestic market and reduction of export orders.

Also, the evidence of shrinkage of domestic demand is the decline of the "balance of estimates of demand in products (order portfolio)" component of the business confidence index calculated by the Rosstat in respect of the manufacturing and mining sectors in September 2019. Indirect evidence of reduction of domestic demand is the shrinkage of the wholesale trade turnover: in January-August 2019 the index value was equal to 97.9 percent as compared with the relevant period of the previous year.

A number of the following factors hindered growth in volumes of production of key raw materials: the extension of the OPEC+ agreement on reduction of the oil production rate to 228,000 barrels a day; a decrease in natural gas export supplies by the PAO Gazprom to the EU countries (filling up of the EU's gas storage facilities to full capacity) and to Turkey (competition on the part of low-priced gas supplied from Azerbaijan via the TANAP gas pipeline); a decrease in exports of coal to Europe (a shrinkage of demand in coal in European countries) and infeasibility to increase coal exports to Asia due to the overloading of the route network. Despite the existence of these factors, Q3 2019 saw positive dynamics in the mining industry.

Among the factors which underpinned growth in the mining sector, the following can be singled out: first, fulfillment of the obligations as regards the reduction of the daily rate of oil production in full volume was complicated due to the cleaning of organochloride soiling of the Druzhba pipeline and a drop in Saudi Arabia's oil production after the attack on its oil-refining facilities (as a consequence, the reduction of oil production in August and September was equal

[1] Traft: Cargo turnover is growing, among other things, owing to the extension of haul distance // The Single Transportation Website. 28.05.2019. [URL: https://trans.ru/news/traft-gruzooborot-rastet-v-tom-chisle-i-za-schet-uvelicheniya-dalnosti-perevozok].

[2] Spring 2019 Limitations: Where, When and What Tonnage // The Single Transportation Website. 07.02.2019. [URL: https://trans.ru/news/vesennie-ogranicheniya-2019-gde-kogda-i-na-skolko-tonn].

[3] The IHS Markit PMI Index of manufacturing industries // 01.10.2019. [URL: https://www.markiteconomics.com/Public/Home/PressRelease/2a2da5ec9fcb4af8aca0938ef2b77877].

[4] Slump was equal to 46.3 points. The IHS Markit PMI index varies from 0 to 100. The index value of over 50 indicates the overall increase on the previous month, while that of below 50, the overall decrease.

to 140,000 barrels a day and 160 barrels a day, respectively, which values were below the target); second, in August the volume of the Gazprom's exports was underpinned by the reduction of supply of pipeline gas from Norway and liquefied natural gas from Qatar; third, from July in respect of the tariff on export shipments of power-generating coal towards port railway stations of the North Caucasian Railway, a reduced rate (0.9259 to the existing tariffs of Section 2 of Price List No.10-01) was applied; the extension of the period of application of this rate till the end of 2019 had a positive impact on Russian exporters' costs in Q3 2019.

Based on the results of Q3 2019, the main contribution to manufacturing industries' growth was made by the food industry owing to the substantial surplus in the agrarian sector's output indices as compared with the previous year (the yield of grain, pulses, potatoes and vegetables surpassed largely the results of 2018); the chemical industry – mainly owing to the pharmaceutical industry (whose growth was related to an increase in demand on domestic generic drugs on the part of Kazakhstan, Uzbekistan and Belarus); production of other non-metallic mineral products – on the back of growth in production of building materials.

In the beginning of H2 2019, growth in metallurgy continued though metal prices remained below the level seen in 2018 because of high smelting volumes in China, excess of the supply of metals over demand in the US and subdued demand on metals in the EU. Growth in metallurgy can be explained by formation of commodity stocks in the building industry in Q2 for implementation of future investment projects.

In September 2019, growth in manufacturing of transport vehicles was justified by an increase in manufacturing of light commercial vehicles, mainly, busses. According to experts[1], until the end of the year the industry expects a decrease in output due to weak consumer demand and the reduced state support (since the beginning of the year for this purpose RUB 10.4 billion have been allocated out of the federal budget, of which RUB 6 billion and RUB 4 billion were spent on subsidized automotive lending and leasing, respectively).

In Q3 2019, other baseline sectors, particularly, the building industry, freight turnover, retail trade and paid services to households saw near-zero growth rates. The wholesale trade continued its growth: output growth amid slowdown of domestic demand led to the speed up of accumulation of stockpiles (*Table 11*).

Table 11

Change in the output index by industry, %

	Share in index of industrial production, %	December 2019 on June 2019, %	December 2019 on December 2018, %	Change in past few months
1	2	3	4	5
Index of industrial production		100.43	101.69	stagnation
Mining	34.54	100.64	101.48	stagnation
Manufacturing	54.91	100.99	102.28	stagnation
including:				
Production of food products, including beverages and tobacco	16.34	107.33	112.54	growth
Textile and sewing industry	1.14	108.01	109.92	growth
Production of leather, leather articles and footwear	0.27	104.98	106.28	growth

[1] Romanova T. Car Sales Will Fall This Year after Two Years of Explosive Growth // The Vedomosti daily 04.10.2019. [URL: https://www.vedomosti.ru/business/articles/2019/10/04/812909-prodazhi-avtomobilei#].

Cont'd

1	2	3	4	5
Woodworking and manufacturing of wood articles	2.02	99.19	99.94	stagnation
Pulp and paper industry;	3.35	92.54	79.61	slump
Production of charred coal and petrochemicals	17.25	104.24	104.09	growth
Chemical products	7.56	107.75	114.23	growth
Production of rubber and plastic articles	2.14	100.97	98.64	stagnation
Production of other nonmetallic mineral products	4.02	99.47	101.35	stagnation
Metallurgy and manufacturing of fabricated metal end products	17.42	107.58	118.06	growth
Manufacturing of machinery and equipment	6.97	103.91	101.32	growth
Manufacturing of electronics, electrics and optical equipment	6.27	101.31	100.44	stagnation
Manufacturing of transport vehicles and equipment	6.75	107.50	110.80	growth
Other industries	2.42	83.79	78.28	slump
Power, gas and water	13.51	98.74	97.68	slow recession
Wholesale trade		106.53	108.74	growth
Retail trade		101.39	102.06	slow growth
Freight turnover		98.36	99.23	slow recession
Building		100.27	100.18	stagnation
Volume of paid services to households		101.61	104.04	stagnation

Source: own calculations.

Based on the results of Q4, 2019[1], the manufacturing and mining sectors of the Russian economy returned to near-zero growth rates; slump was registered in power, gas and water production. The slowdown of the mining sector is related to the fulfillment of the OPEC+ agreement on reduction of the daily rate of oil production and weakening of external demand on Russian gas on the part of European countries because of the warm weather and filling up of European storage facilities.[2] The highest positive impact was made by the coal industry on the back of reduction of the tariff on export shipments of power-generating coal towards port railway stations of the North Caucasian Railway; from November 1 this tariff was also applied to escort shipments from railway stations of the Kemerovo Region towards port railway stations of the Oktyabrskaya Railway, the Northern Railway and the Kaliningrad Railway.[3] The reduced tariff on export shipments was in effect till December 31, 2019.

The analysis of output trend components of individual manufacturing industries in Q4 highlighted the following common factors:

– the list of industries which demonstrated growth did not change as compared with Q3 2019: the food industry, the chemical industry and the iron and steel industry. Growth sources remained the same. Despite the fact that growth was demonstrated by the industries which accounted for 70 percent of the gross value added of the manufacturing industry, the overall index of growth rates in manufacturing was near-zero (such a difference was registered in the Rosstat's primary observations based on output indices, too; the interpretation of the

[1] Kaukin A., Miller E. Industrial Output Dynamics in Q4 2019 // The Online Monitoring of Russia's Economic Outlook. Trends and Challenges of the Socioeconomic Development. 2020. Issue No.2. Vol. 103. pp. 12–15.

[2] For the PAO Gazprom, REPO commodity deals are a current capital management instrument permitting to monetize own gas reserves during the low demand period. De jure change of the owner is deemed as exports, but actually it is the volume of supplies for the next period.

[3] The reduced rate was introduced in July because of worsening of demand on western markets.

results of the manufacturing sector as a whole requires apparently the update by the Rosstat of online statistical data);

- a substantial slump (79 percent in 2019 on the relevant period of the previous year) was registered in the pulp and paper industry because of a temporary pause related to the commissioning of new production facilities and modernization of the existing ones;[1]
- stagnation was observed in the timber industry and manufacturing of wood products (the implications of wild fires in Siberia and the Far East); production of rubber and plastic articles (a decrease in the share of Russian-made tires and casings on the market to 49 percent[2]); production of other nonmetallic mineral products on the back of near-zero growth rates in the building industry, which is the major consumer of these products.

Based on the results of Q4, the wholesale trade saw growth. Paid services to households demonstrated near-zero growth rates due to the stagnation of households' disposable cash incomes. Building volumes kept growing at a low rate (100.18 percent in December 2019 on the relevant period of the previous year). Slump continued in freight turnover (99.23 percent in December 2019 on the relevant period of the previous year).

Positive dynamics in the manufacturing sector was observed amid moderate capital investments being made, that is, only the existing production capacities were mainly used. Taking into account the role of fuel and energy industries in the Russian economy, the decision of OPEC+ as regards the new reduction of oil production causes further concern (from January 1 till March 31, 2020 Russia has to reduce the daily rate of oil production by 300,000 barrels as compared with the reduction of 228,000 barrels a day late in 2019).

Thus, in the first three quarters of 2019 industrial growth was facilitated by the manufacturing and mining sectors. In Q4, the industry returned to near-zero growth rates. At the same time, relatively sustainable growth remained in the food industry, the chemical industry (production of fertilizers) and metallurgy, that is, the sectors of the economy with a relatively low gross value added. Growth in industries with a relatively high gross value added was observed only in manufacturing of transport vehicles and would probably be short-termed as the state subsidizing of the sector decreased and domestic demand fell. The industries with high value added potential, such as manufacturing of machinery, equipment and electrics saw the near-zero or weak negative dynamics.

Registered as per calculations late in 2019, the stagnation of industrial production, investment, building sector, transport and logistics determined the starting conditions and moderate estimates of growth dynamics in 2020. Early in 2020, the economic situation became complicated due to dramatic changes in the foreign trade situation, primarily, on the hydrocarbons market. The external factors were supplemented by a simultaneous shrinkage of demand and supply on the domestic market because of changes in prices and the exchange rate of the national currency, as well as the urgent solution of acute economic issues related to the outbreak of the coronavirus COVID-19. The most likely development scenario will consist in stepping up of measures to adapt the economy to changes in the global and domestic

[1] Capital investments in the industry increased by 20 percent in 2018 on 2017; a larger portion was spent on technological modernization. See, for example, Golubkina M. Wealth of Opportunities// The Rossiiskaya Gazeta. 12.09.2019. [URL: https://rg.ru/2019/09/12/reg-szfo/po-prognozu-moshchnosti-celliulozno-bumazhnoj-promyshlennosti-v-rf-vyrastut.html].

[2] As per the marketing research – "The Market of Tires and Casings in Russia: Research and Forecast till 2023" – prepared by the ROIF Expert marketing agency, the market changed its pattern for the first time. As per the retrospective analysis, domestic manufacturers accounted traditionally for a larger share of the market.

environment in the context of implementation of the package of anti-crisis measures both in the healthcare sector and other sectors affected the most by the coronavirus outbreak.

4.3. Russian industrial sector in 2019 (based on survey findings)[1]

This Chapter has been prepared on the results 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. It became especially important in recent years.

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. General assessment of 2019

Prolonged period of industrial business surveys conducted by the Gaidar Institute and representative range of indicators permit to resolve the first task – analyze the situation in the sector in 2019 – determine the place for the year 2019 in all the 28 years' history of our monitoring the industrial sector. For this purpose, first of all, we will use aggregate indicators. The latter are usually calculated on a monthly basis on the findings obtained from monthly surveys and became widely popular owing to promptness of the findings and limitations of official data released on the Russian industrial sector. However, this approach to present surveys' findings complicates assessment of each year as a whole. That is why we analyze all consolidated indicators in a year-on-year basis for the entire period of IET business surveys launched in 1992.

[1] This section was written by *Tsukhlo S.V.*, Candidate of sciences (Economics), Head of the Business Surveys Department, Gaidar Institute.

The IEP Industrial Confidence Index[1] is the most general characteristic computed by all organizations on the basis of surveys and provides the first insight into the state of business in the sector.

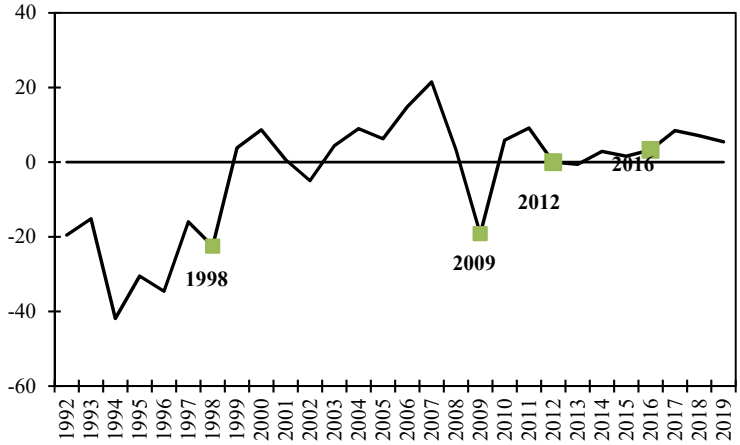


Fig. 14. IEP Industrial Confidence Index, 1992-2019, percentage points

In 2019, the Index demonstrated an ongoing downward trend in the Russian industrial sector following the local maximum seen in 2017 (*Fig. 14*). Over the last year, this Index shed another 1.5 points, and the total decrease after 2017 constituted -3 points. In 2017, when industry commenced recovering from the 2012–2016 stagnation, the Index abruptly went up by 5 points. However, in 2018 the recovery halted and reduction of the index seen in 2019 can signal a protracted entrance of industry into a new wave of stagnation. Slipping into the previous stagnation was tougher for the Russian industry – in 2012 the Index abruptly shed 9 points. In the officially crisis year of 2015 the index contracted by merely 1 point.

Decrease of the Industrial Confidence Index seen in 2019 was triggered by three indexes out of four used in its computing. The worsened dynamic of industrial products demand (balance changes in actual sales) that lost 3 points was the key factor of the economic outlook in Russian industry in 2019. The total loss over 2018–2019 of the Index stood at 10 points. Certainly, such decrease is far from a really crisis reduction by 32 points seen in 2008–2009. Reduction of the same balance during the allegedly crisis year of 2015 constituted solely 6 points.

The negative demand dynamic seen over last 2 years has logically triggered enterprises' disillusionment with the sales volumes. The balance of assessment of actual sales volumes of products achieved in 2019 fell by 5 points. In 2018, this indictor shed merely 1 point. Similar contraction (i.e. the scale of disillusionment of industry with actual demand volumes) in the

[1] The Index is computed as a simple arithmetic average (difference in responses) to four questions from the IEP's monthly business survey questionnaire:

1) Actual change of demand, balance = percent growth – percent decline;
2) Estimate of demand, difference of assessments = percent above normal + percent normal – percent below normal;
3) Estimate of finished goods inventory, balance = percent above normal – percent below normal, opposite sign;
4) Plans for output change, balance = percent growth – percent decline.

Balances of questions 1 and 4 are seasonally and calendar adjusted. The Index can range from –100 to +100 points. Positive index values imply the prevalence of positive assessments. Negative index values mean that adverse assessments prevail. Decline of index's values is the sign of deteriorating situation. Growth of index's values – the sing of ameliorating situation.

crisis 2015 year also came to 1 point. The most sweeping after the crisis of 2008–2009 was the disillusionment of industry with sales achieved in 2012 – then the balance of assessments had literally plummeted by 15 points.

The balance of assessments of stocks of finished products, which is used in this case with the opposite sign decreased (deteriorated) by 2.5 points in 2019, i.e. stocks of finished products were a little be in excess than seen in 2018. The growth of average annual inventory excess in 2019 was due to two in general contrary factors. On the one hand, slowdown of demand and output reported at the year-end triggered "bad" growth of finished goods inventory. On the other hand, the higher level of confidence in projections of demand and sales plans in 2019 has brought about a "correct" manageable by industry of inventory excess accumulated by businesses in the face of hopes for demand and output growth. Industry registered more of such hopes in 2019 against 2018.

Really, balance of output plans (part of the Industrial Confidence Index) increased by 4 points in 2019 and was the only original indicator positively contributing to dynamic of the composite Index. As a result, this index has returned to the 2017 level but was below its values seen in crisis 2015. Following the full-fledged crisis of 2008–2009, the most optimistic for the Russian industry regarding this index remain 2010–2011 when the balance constituted +22 and +21 points, respectively. However, the advent of stagnation in the Russian industrial sector in 2012 triggered a reduction of this index to +12 points. But this reduction and such balance value are far from the crisis situation seen in 2008–2009 when the indicator plummeted from +35 to +1 point. In the 2015 crisis the balance of output plans declined to 16.5 points against 17.2 points obtained in the 2014 non-crisis year. The minimal optimism of the output plans after the recovery from the crisis of 2008–2009 was registered in 2016 and constituted +11.4 points.

In 2019, surveys registered not only optimism growth arisen from the output plans but of balance growth arisen from projections for demand and employment. As a result, the Industrial Prediction Index[1] – our second composite indicator – demonstrated growth in 2019 due to positive dynamic of all its projections (projections of certain indicators (*Fig. 15*). In 2018, all reviewed herein projections of enterprises on the contrary went down.

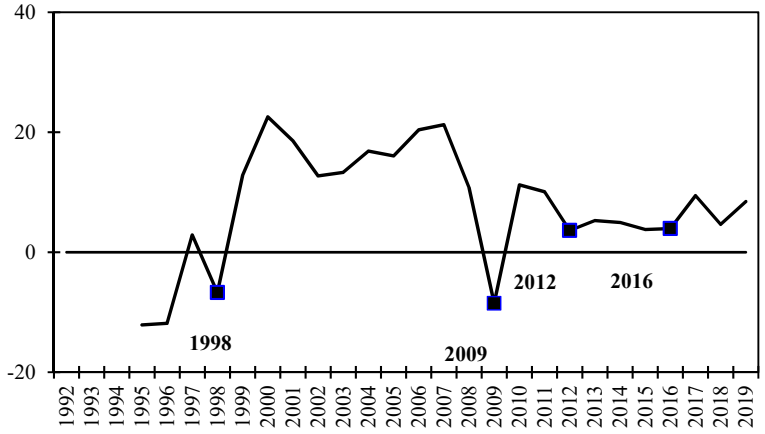


Fig. 15. Industrial Prediction Index, 1992–2019, percentage points

[1] The Industrial Prediction Index is measured as the arithmetical mean of the balances of three questions included in a survey questionnaire: demand change forecasts, output changes plans, and expected occupational employment changes. The Index can vary from -100 to +100 points.

Optimist growth based on the output plans was due to the optimism growth arisen from demand projections in 2019. Projected changes in demand were more optimistic by 3.5 points but failed to hit the 2017 level – the best year for this index for 2011–2019. 2015 remains the worst year for the mentioned period. However, in this officially recognized crises year the balance of demand projections fell by merely 4 points after the 2014 non-crisis year and barely got into "minus." In the 2008–2009 crisis, decreased of the index hit 27 points and the result was worse than that in 2018.

Occupational employment projections in 2019 went up by 4 points and hit the record high (very optimistic) values since 2017. High value of occupational employment balance was calculated not only on the basis with optimism growth generated by the output plans and demand projections but amid growth of staff shortage in industry. According to enterprises' estimates, the balance of supply of industrial workers in 2019 plummeted and was the lowest since 2011. That is why projections optimism regarding employment is largely forced – industry not for the fun of it demonstrated intention to hire workers. The same stance enterprises adhered in the officially registered crisis year of 2015. Then industry instead of the crisis-like growth of dismissals demonstrated decline of such intentions (by 3 points), which looked very strange for a normal crisis of 2008–2009. It should be noted that during that classical crisis the share of information on cutting the headcount increased from 16 to 29 percent. However, dismissals plan for 2019 did not avert a spike in excessive headcount in that crisis year. In seemingly crisis 2015 year plans for raising the headcount intertwined with constant estimates of excessive employment in the Russian industry at 11.5 percent.

The Industrial Projection Index is computed on the basis of balances. The latter is achieved by a deduction from responses "go up" responses "go down." Responses "remain unchanged" are unused. However, in the context of prolonged stagnation analysis of responses "remain unchanged" are of interest.

In 2019, propensity of the Russian industry towards stagnation increased across all indicators (expectations) of enterprises. In their projects (plans) for changes of demand, output, and employment proportion of responses "remain unchanged" increased (*Fig. 16*). Having said that, in all three cases an all-time high has been updated. The highest growth of stagnation expectation was registered regarding demand – this indicator went up by 3 points and hit 69%. All-time (monitoring period 1995–2019) low of expectations of demand changes happened to be in 2008 and amounted to 52 percent. From 2012 stagnation sales projections demonstrate annual growth except the crisis year 2015. Then the share of projections "remain unchanged" decreased symbolically by 2 percentage points[1].

By 2 percentage points moved up propensity towards stagnation regarding output plans. In 2019, an all-time (1992–2019) minimum also happened to be in 2008. From 2011 the share of stagnation output plans demonstrate growth with the same small and highly symbolical exception (decline by 1 point) in 2015. In crisis 2009 propensity towards the output stagnation increased by 10 points.

Occupational employment projections are marked by the highest propensity towards stagnation. On average in 1993–2019 sixty-five percent of enterprises reported projections to retain the occupational employment. Such expectations averaged 60 percent regarding demand and 48 percent regarding output. In 2019, this index with respect to occupational employment went up by 1 point hitting 77 percent. However, in the midst of industrial stagnation seen in

[1] It should be noted that in crisis 2009 the reviewed index went up by 5 points.

2012–2016, the share of responses "remain unchanged" regarding future headcount took a special turn. From 2011, the share of such responses commenced to decline and fell in 2014 to a local low (60 percent). The proportion of projections exhibiting occupational employment change is growing. However, among projections for change projections for decrease exceed projections for growth - the balance is negative. However, this aspect does not result from the goal-directed activity of enterprises. The negative balance of assessments of current occupational employment demonstrates the onset of personnel shortage in industry which was insurmountable at the onset of stagnation. And solely the onset of the officially recognized crisis years of 2015–2016 allowed enterprises to lower pessimism of their projections and get rid of the personnel shortage.

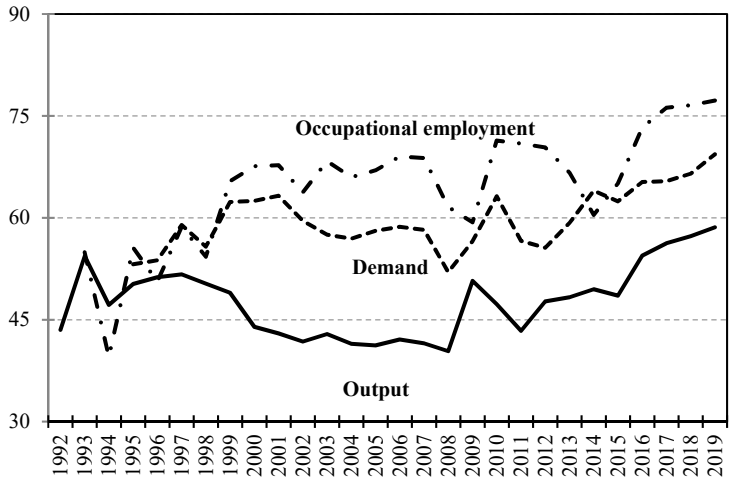


Fig. 16. Propensity of Russian industry towards stagnation (share of stagnation projections), 1992–2019, % of enterprises

Consequently, year to year the share of responses "will not change" in responses of enterprises regarding demand, output and occupational employment is increasing. The share of change projections (notably, in any direction) regarding mentioned indicators is leaving fewer and fewer hopes. In 2019, hopes for improvement in the situation in the Russian industry are few as never before. This, certainly, marks negatively the last year. This being said, enterprises that projected a change in the situation to happen in 2019 raised the number projects for improved situation over projections for deterioration of the situation year-on-year, which remains a positive outcome of 2019.

The growing share of projections "remain unchanged" has ensured the increase of certainty in industrial situation. The uncertainty index based on the calculation of concentration of projections in one of three categories (change strands) – "will increase", "remain unchanged", "will decrease" has ungraded an all-time low across all three projections under review. The highest reduction of uncertainty was obtained for demand projects (0.050), uncertainty for output projections fell a little less (by 0.035), and projections for occupational employment change have shed 0.009. It should be noted that uncertainty of demand and output plans projections demonstrated a crisis spike and hitting an all-time low in the classical crisis year of 2008. Growth of uncertainty of demand and output was also registered in 2012 – first year of stagnation, but practically was nonexistent in 2015. Uncertainty of occupational employment also went up in crisis year of 2008 but failed to update a record of 1996. The next peak of

uncertainty on projections for occupational employment was recorded in the non-crisis year of 2014.

However, non-crisis situation in the industrial sector seen in 2012–2019, prolonged stagnation and minimal hopes (plans) for recovery ensure a rather comfortable performance of industry, because do not require risky decisions on increasing investment, recruitment of the workforce, growth of output and replenishment of inventories. In 2019, the Industry Adaptability (normality) Index nearly returned to an all-time high registered in 2017 (*Fig. 18*).

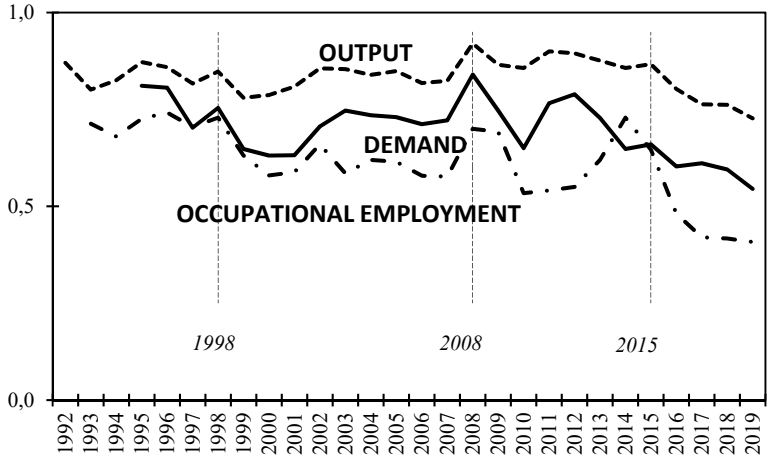


Fig. 17. Uncertainty on projections for demand, output and occupational employment, 1992–2019

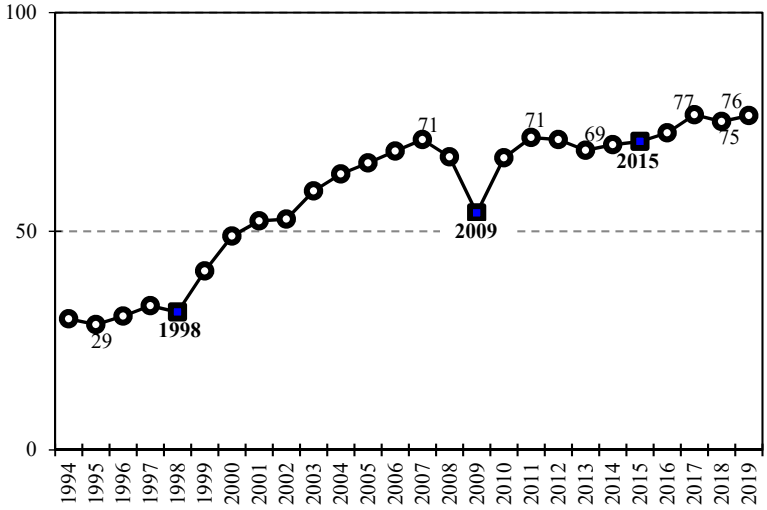


Fig. 18. Industry Adaptability (normality) Index, 1994–2019, percent

The Industry Adaptability (normality) Index – is the third consolidated indicator, measured according to the findings obtained in the course of business surveys conducted by us. Then, assessment of the situation by the Russian industrial sector at the onset of the official crisis year of 2015 made to turn attention to a business survey questionnaire asking industrial enterprises to measure their key performance figures using a grading scale: "higher than normal", "normal", "lower than normal" performance. The average share of answers like "normal" shows the extent to which industrial enterprises consider their situation as acceptable, that is, the extent

to which they are adapted to present economic conditions. The Industry Adaptability (Normality) Index is measured by industrial enterprises' assessments of demand, finished goods inventory, raw and other materials, number of workers, provision of capacities and financial and economic situation.

In 2019, used for the measure of the Industry Adaptability Index initial components demonstrated a variety of trends: three indexes went up and three moved down. The highest reduction was posted by assessments of current demand, which shed a little over 1 percentage point and dropped to 58 percent. Total reduction of the index since 2017 – first year of recovery from stagnation of 2012–2016 constituted 3 percentage points. Such small change in the share of normal assessments was registered not only in 2018–2019 but also was observed over 2012–2016. Then the index stood in the range of 50–52 perce4nt and did not exhibit any crisis-like drop in 2015. It should be noted that over the officially registered crisis of 2008–2009, this index shed more than 40 percentage points, however, during the recovery from that crisis in 2010–2011 managed to regain 30 points. Stagnation that lasted for 5 years denied this index its former dynamic.

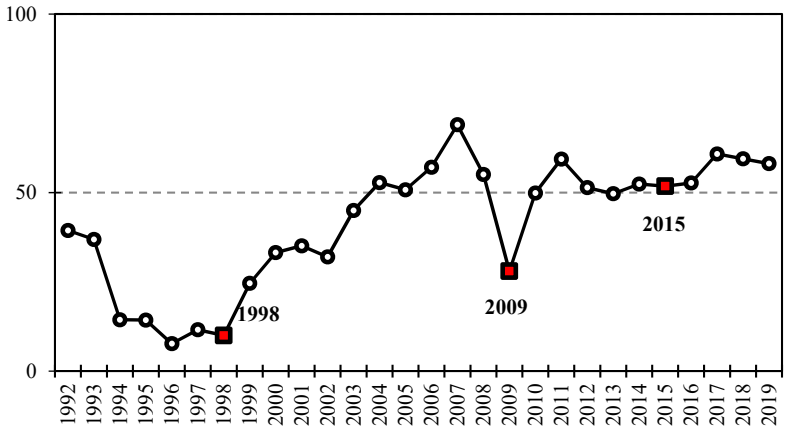


Fig. 19. Normal self-assessment of product demand, 1992–2019, percent

Second in amount but also symbolic was reduction in 2019 of the share of normal assessments of inventories of raw materials and supplies, which constituted less than 1 percentage point. Such insignificant change of this indicator in last year marks its retention at the maximum level, which has been registered for four years in a row – around 80 percent of enterprises boast of normal inventories of raw materials and supplies. Taking into account slack economic dynamic and good financial results of industrial performance, such assessments of supply of raw materials rather fit into a general picture of state of affairs in industry. Another hallmark of resolution of issues related to raw materials was a reduction to all-time (1993–2019) low of assessments of those inventories as insufficient. In 2019, there were solely 11 percent of such responses.

Decline of the share of "normal" assessments of finished goods inventory at 2019 year-end was still more symbolic and came to 0.2 percentage points, which provides more reasons for considering normal supply of stocks of finished products by Russian industry at the previous level of 73 percent. This is the best result seen throughout our surveys over 1992–2019. Industry, thus, continues confidently control its finished products inventory avoiding both critical overstocking and their pessimistic depletion. Industry retained such confident control in

2015. Moreover, in that officially recognized crisis year industry reported non-crisis-like dynamic of its finished products inventory. Then the share of normal assessments against the generally accepted assessment of economic situation as a crisis-like one increased by 3 points and the balance decreased by 3 points. Over the really crisis-like for the industry 2019, dynamic of these indicators was polar opposite but logical for the crisis: first of them as is due in crisis dropped by 5 points and the second went up by 5 points.

2019 registered growth of normal assessments of occupational employment, provision of industrial capacities and financial and economic situation of enterprises. Growth of these indexes turned out to be more significant than the reduction of three mentioned before indicators, which ensured increase of the final Index of normality.

Normal provision of the Russian industrial sector with qualified personnel went up over the year by 5 points and hit 84 percent, which was next all-time high of this indicator. The previous record registered in 2017 was surpassed by 2 points. This is undoubtedly a positive result amid a complicated demographic situation in the country, which sits well with negative dynamic of other enterprises' assessments of their personnel issues. In 2019, our survey registered a plunge in the balance of responses "more than sufficient" minus "less than sufficient". After 4-year stay around zero and even achieving in 2018 a symbolic plus in the last year this indicator literally plummeted by 5 points. Such sharp reduction of the assessment balance has not registered since 2011. Then, assessment of the personnel shortage plummeted to -6.5 balance points, and now it comes to -4.5 points. Reduction of the balance seen in 2019 was due to a sharp reduction of the share of enterprises with excessive headcount. At present, the Russian industry registers solely 6 percent of such enterprises which is an absolute low. Even amid overheating seen in 2007–2008 only 8 percent of enterprises reported excessive headcount.

Growth in 2019 of "normal" provision of capacities in the Russian industrial sector came to 3.5 points and lifted this indicator to 75 percent, i.e. three quarters of industrial enterprises boasted of sufficient provision of machinery and equipment on the back of expected demand changes. This indicator posted maximum in 2017 and stood at 77 percent. However, the situation with capacities in the Russian industrial sector on the whole differs crucially from the headcount situation. If in 2019 enterprises experienced shortage of the latter, then capacities were in excess. Balance of their assessments remained positive and constituted +11 points over last three years. During the industrial stagnation 2012–2016 the balance was relatively stable staying over entire 5 years in the range of +16…+20 points. Having said that, there was no spike in excess of capacities in the officially registered crisis year of 2015. All those years the share of responses "more than sufficient" stayed in the range of +23…+26 percent. The crisis year 2009 reported a spike of excessive capacities from 15 to 37 percent. Only 7 percent of Russian enterprises reported shortage of capacities in 2019. This value is close to the minimum seen in recent years obtained in 2009 (then 5.5 percent of such assessments were rece3ived). Absolute minimum of capacities shortage was registered in 1996 and constituted 4.4 percent.

Enterprises' assessments of their financial and economic situation in 2019 went up to 91 percent and formally updated the previous record registered in 2017. Then there were 90 percent of such responses. Following industrial recovery from 2012–2016 stagnation period the reviewed indicator did not fell below 88 percent. In crisis 2015 year the sum of good and satisfactory self-assessments of economic and financial situation declined to 81 percent, which resulted from a gradual decline ongoing from 2013 and constituting 1–2 percentage points year-on-year. In other words, there was no crisis nosedive, which would even remotely remind of 2009 outcome with its abrupt 21 points of reduction, in 2015 industry did not report.

4.3.2. Dynamics of key industrial indexes in 2019

In early 2019, Russian industry faced slowdown of demand accelerated in late 2018 on the back of the announced VAT rise. In January the sales dynamic after a local December spike triggered by an anticipatory response of the VAT and prices rise demonstrated an adverse adjusted balance of actual sales by 1 point. In February-March, the index shed another point. Such relatively small slowdown of the sales dynamic triggered similar small disappointment with the sales volumes. In Q1 2019, the average proportion of normal demand assessments declined to 57 percent, which was an 8-quarter low. In Q1 2019, demand projections made by Russian industry retained high (+4 points) optimism accumulated in late last year. Previously in Q2 and Q3 2018, the balance of expected changes of sales ranged -1…+1 point. Previously our surveys did not register such stable around-zero balance of sales projection.

However, businesses were unsure that upbeat sales projections of late 2018 – early 2019 will be fully realized and launch sustainable and statistically distinguishable industrial growth based on the effective demand growth. Around-zero balances of assessments of final goods inventories, which were registered by surveys even from early 2018 were in favor of such uncertainty. When Russian industry is confident in sustainable positive demand dynamic, it brings its inventories to a small surplus. Precisely that was seen in 2017 and this did not happen in 2018. In Q1 2019, balance of assessments of finished goods inventories constituted +2 points, meanwhile in Q1 2017, it hit +10 points.

In the context of positive demand dynamic recovery, the industry demonstrated in Q1 a rather high output growth against the disastrous H2 2018. And solely January was a weak month for the key index of the official statistics – industrial output volumes. However, difficulty in assessment of results when the whole country is on national holidays makes us to view with caution the January results regarding changes of any indexes.

Price estimates as of late 2018 in view of the VAT increase, customary January surge of prices and feasible ruble's depreciation demonstrated and upsurge comparable with the December 2014 results. Then balance of inflationary expectations surged to +37 points, in December 2018–to +34 points and exceeded all intermediary maximums. However, this spike of inflationary expectations was not realized by industrial enterprises in January 2019: actual price growth rate came to only +13 points. Such significant deviation of the actual price dynamic from expectations has not been registered by our surveys for a long time. The latter made enterprises to drastically adjust their price projections. In January, their balance literally plummeted to common +16 points.

In February, businesses were slowing down price growth: balance of their actual changes declined by 11 points. However, new price projections grew again and nearly hit December (2018) level. Inflationary wave maintained in the economy could have again push industry to raise the factory gate price. And rightly so, in March industry announced about the price increase. Balance added 7 points following February reduction by 11 points. Price policy of the Russian industry was ailing amid self-adjustment of the economy towards VAT increase. Nevertheless, the February projections of price changes envisaged precisely that development of affairs. And March projections demonstrated a reverse price movement – towards more moderate growth in April-May 2019.

In January 2019, enterprises reported about the biggest layoffs over recent years – balance (rate) of the headcount change declined to values, which already were not registered in January for four years. This resulted in shortage of industrial workers: balance of estimates of their number ("more than sufficient" minus "less than sufficient") in January was negative and

dropped to 10-quarters low. Having said that, headcount surplus contracted to an all-time low– merely 5 percent of enterprises estimated their actual headcount as "more than sufficient". Such value of this index previously was registered only in January 2008 – at the peak of the pre-crisis overheating of the Russian economy. However, the staff shortage in January 2019 also was relatively small – barely 10 percent of enterprises reported it. The vast majority (85 percent – then an all-time low) boasted for early 2019 of sufficient number of qualified staff. However, a difficult situation seen on the labor market, optimism of demand and output plans projections made the Russian industrial sector to bring (expected scale) recruitment plans to such extreme values that were registered for the last time in early 2008.

Following customary January dismissals seen in February-March, as was planned, industry proceeded to hire the required number of workers. Balance of headcount actual changes increased from the January 16 points first to +5 points and then to +7 points. Enterprises planned to continue hiring: balance of headcount change projections moved up by quarter-end to +16 points and hit levels that were not registered from early 2011.

In early 2019, Russian industry as usual demonstrated an impressive growth of investment plans optimism. Balance of these projections added another 12 points (after the December 2018 hike by 10 points) and hit 7-years high, i.e. the highest investment optimism the surveys registered only in 2011 – early 2012 – prior to the 2012–2016 stagnation. However, minimum capacities shortage was, probably, one of the reasons for negative adjustment of the investment plans. Balance of estimates of this resource has remained positive since 2008 (industry boasts of capacities surplus), and in Q1 2019 this index increased by 4 points and hit 9-quarters high. In early 2019, solely 5 percent of enterprises reported capacities shortage. That is why, already in February balance of investment projections began sliding and in March dropped to +3 points – customary investment hike of the turn of the year ran its course at Q1-end.

Thus, in Q1 2019 the Russian industry retained output growth amid recovery of the sales positive movement and zero balance of estimates of finished goods inventory. However, enterprises did not count on further (prolonged) demand strengthening, although retained high optimism in the output plans and recruitment schedules.

In early Q2, the demand dynamic according to enterprises deteriorated insignificantly. Balance (rate) of sales changes after seasonal and randomized adjustment shed 1 point. At Q2-end, the index regained the score. As a result, the achieved sales volumes in Q2 were estimated as "normal" by 60 percent of enterprises. Demand projections for the entire quarter constantly stayed "in positive territory" – not as large as it was in 2017, but clearly better than seen in 2018, industry retained optimism in sales growth.

However, actually enterprises still were not getting ready to a gradual positive scenario over next months. This way we can interpret the estimates of finished goods inventories. Balance of this indicator ("above norm" minus "below norm") from early 2018 stood around zero amid an absolute (no less than 70 percent) majority of responses "normal." Industry still avoided accumulation of small manageable surplus of finished products stocks, which were prevailing at the confidence periods regarding demand growth. Meanwhile, such balance of estimates of stocks of finished products demonstrated a firm control over their stockpiles.

Nevertheless, retention of optimism in demand growth maintained the industrial output. According to enterprises, in April industrial production retained a positive dynamic. May demonstrated the ongoing output but to a lesser extent – prolonged holidays hamper both industrial performance and adjustment of initial data from seasonal and calendar factors. According to enterprises, output growth rate remained in the black around zero. The output

plans, which gained in early 2019 high optimism level, later began falling but gradually and by merely 4 points for the first six months of the year.

Q2 saw a decisive slowdown of industrial price growth letting to understand the authorities that increased VAT rate pass-through was over. Over first two months of the quarter their growth rate slowed down from +13 to -4 points, and enterprises turned to absolute cut of their prices. In June, balance went up to +4 points amid planned tariffs increase onset from early H1. However, not for long as further surveys have demonstrated. Industrial prices projections had similar dynamic. By May they declined to 21-years low, i.e. such moderate (after seasonal and random movements) inflation expectations were not seen in industry from mid-1998. However, later they slightly increased: thus industry was getting ready to react to customary tariffs growth in H2, but hoped to continue slowing down production costs growth. Balance of its projections decreased compared to Q1 by another 8 points and total decline compared to the peak (due to VAT rate rise) November 2018 hit 22 points.

Large scale recruitment of workers following the customary January layoffs allowed enterprises to reduce staff shortage in Q2 2019 to 20-years low. In April only 7 percent of enterprises reported shortage of headcount "due to expected demand changes." Smaller shortage of headcount (4–6 percent) was registered in industry solely before the 1998 default. Normal provision of enterprises with workforce hit an all-time high. In Q2 2019, 86 percent of enterprises assessed it as "sufficient."

Against this backdrop, industrial sector commences to adjust actual recruitment and its plans towards slowing down, but in H2 2019 failed to increase headcount. Balance of changes of actual headcount remained around zero despite clear plans demonstrated by enterprises to achieve a positive occupational employment dynamic. However, by June optimism regarding these plans dropped from +10 to +5 points, which probably made them more realistic. But most likely, this will not resolve the issue of the headcount shortage in the industrial sector due to unwillingness of the management to raise paychecks. In H1 2019, solely 15 percent of enterprises estimated their level of paychecks as "below norm." This is the minimum (i.e. the best value) for the entire period (2007–2019) of this index monitoring. Maximum (i.e. the worst value) was registered over really crisis Q2 2009 and came to 59 percent. During the officially crisis 2015 the worst value of the index constituted by far not crisis-like 30 percent.

The investment plans of the industrial sector in early H2 2019 continued shedding optimism gained by early 2019. The balance of these plans hit maximum (+15 points) registered in 2017 and 2018. However, later it began losing positions shedding over February-April 17 points and went "negative": investment pessimism in the industrial sector exceeded the investment optimism. However, May reported termination of the index downward trend and even registered growth to +5 points, which signified an onset of customary around zero plateau, which was observed in the investment plans of 2017–2018 after a spike of optimism reported at the beginning of the calendar year. The June investment plans again went into the red. However, in 2019 this plateau was popping up in March whereas in 2018 the onset was registered in June and in 2017 – even in July. Thus, the investment optimism of the turn of the year could make it in 2019 only for two first months.

This being said, the industrial sector was rather satisfied with the volumes of its real investments in Q2: 69 percent of enterprises (maximum for the entire period of this index monitoring 2010–2019) estimated them as "normal" amid prolonged stagnation and highly unclear prospects of recovery.

Accessibility of credits for the Russian industrial sector following the April local failure recovered to customary 68 percent seen in 2017–2019. However, prolonged stagnation has affected borrowing plans of the Russian industry. In Q2 2019, balance of these plans fell to a minimum (+6 points for the entire period of our monitoring those plans. The ability of enterprises to service credits remained high and came in Q2 2019 to 90 percent (i.e. 90 percent of enterprises were able to pay for obtained credits). This is near the maximum for the entire monitoring of the index in 2009–2019. The highest value of the index came to 92 percent and was registered in late 2018.

Therefore, in Q2 favorable demand dynamic allowed Russian industry to demonstrate a rather large output growth for the given historic period. Furthermore, projections of demand and output plans retained a rather high and stable optimism seen since the turn of the year. The same could not be said about the borrowing plans, which plummeted to an all-time low despite a good accessibility of credits and high ability to service them.

The onset of H2 demonstrated the ongoing stagnation in the industrial sector. Moderate but relatively stable dynamic of demand over 2019 prevented businesses from achieving desirable sales volumes made them stem the output growth but still did not hamper to manage the finished products inventories. Businesses faced problems with hiring workers which has brought the headcount shortage to the 6-year low in the wake of sustainable excessive capacities overhang.

Pace of the demand change in July 2019 remained around best values of the index over the previous 12 months and was above the July 2018 index when surveys registered plunge of sales following a relatively good results sown over the first 6 months of the previous year. However, satisfaction with the obtained (or on the contrary unobtained) sales volumes in June-July 2019 was very low (or for unobtained – high). Solely 55% of enterprises considered these volumes "normal." This value was the index minimum seen from February 2018.

Enterprises' "normal" responses regarding the estimates of finished products inventories steadily prevailed. From the onset of 2019, their share did not go below 70%. Balance of remaining 24–30% of responses was in favor of "above normal" responses, but with a small pure symbolic predominance of 2–3 percentage points. Enterprises maintained a minimum surplus of inventories which signified a lack of real hopes for demand growth for the foreseeable future. Having said that the pace of the output growth remained in the positive territory around zero. In June the balance of real output change stood at +1 point.

Amid hopes to revive the weak demand and reach bigger sales volumes the industrial sector halted producers' price increase achieving a near zero balance in their change after the June balance of +4 points. Enterprises' price plans were subject to similar adjustments. This being said, the proportion of responses about a planned price growth declined to 6–7%, beating the record seen in the crisis 2009 when this index dropped to 8–9%. The industrial sector to the best of its power supported the government policy aimed at curbing inflation.

Companies have failed to overcome the negative (for industry) trend of reducing the headcount. Balance of real occupational employment changes in June was "in minus"– industry continued losing workers and dismally failed to increase hiring. Balances of planned occupational employment changes stayed net positive from the year onset although dropped to +3 points in June against March peak of +16 points. Enterprises have failed to implement even such modest plans. The latter has logically triggered the shortage of workers in the Russian industrial sector. The balance of estimates of available qualified personnel "more than sufficient" minus "less than sufficient" plummeted in early H2 2019 to -9 points. Such across the board shortage of personnel was not registered over 6 years.

That said, Russian industry boasts of capacities and even of their excess. The net balance of enterprises who report sufficient provision of industrial capacities remains positive over 11 years just from mid-2008. In this context, capacities shortage cannot be a valid factor for the Russian enterprises to increase fixed investment. And really, the investment optimism of the industry has already been waning for the third year following a surge in Q1. The investment plans of companies for July never managed to get rid of the pessimism accumulated in June. Then, the net balance of enterprises' investment projections plummeted by 10 points hitting -6 points. The Russian industrial sector did not register such investment pessimism since 2016. Although, the net balance went up to -2 points in July but remained in the black. The industrial sector none the less reported plans for the cutting the investments.

A symbolic deterioration of the sales dynamic seen in August did not change the general picture of the first 8 months of 2019: demand demonstrated strikingly stable against 2018 but obviously not as good rates of change compared to 2017. Sales projections were marked by stability in 2019. The net balance of this index seasonally adjusted and cleared of random factors stayed in the rage of +3…+4 points, which was definitely better expectations of H2 2018, but below the 2017 results.

Under the circumstances, it was hard for enterprises to monitor their inventories of finished products and demonstrate remote hopes for the feasibility of demand and output growth. The net balance of the enterprises' estimates of those inventories for over 20 months remained around zero which points to the lack of real hopes of demand growth.

Successful fight of the monetary authorities with inflation and enterprises' attempts to revive sales have again forced the industrial sector to cancel the factory gate price growth. In August, the net balance of the real price change dropped to zero. The same situation for the first time was registered in May 2019. Enterprises' price projections were also exceptionally frosted. In May, the net balance of price changes plummeted from +9 to -7 points. In July-August, the Index stabilized at the level of +2 points. That said, the share of price retention projections hit in August 2019 customary high of 86%.

In August, the Russian industry managed to overcome the negative trend of personnel reduction which took shape in April-July. The 4-months-long period of the headcount decline has led to an outbreak of the most widespread for the recent 6 years personnel shortage in industry and dissatisfaction of workers and specialists with the compensation rate. However, enterprises are unlikely to go on hiring personnel in industry. The balance of hiring plans lost in August both traditionally high optimism inherent to the year onset and moderate positive sentiment of Q2.

Accessibility of credits for the Russian industry retained in 2019 as a whole a customary for the recent years level. In August, 68% of enterprises considered it normal. The net balance of enterprises' borrowing plans recovered and achieved a customary for the end of 2018-early 2019 moderate optimism against a collapse seen in Q2.

In September, enterprises notified about a symbolic improvement of demand dynamic against a symbolic deterioration in August. As a result, the seasonally adjusted and cleared of random fluctuations balance of industrial products sales still demonstrated exceptional stability. Enterprises' demand projections for September retained stability by remaining in the range of +3…+4 points after seasonal adjustment and cleared of random fluctuations. Thus, industry retained the very same stability which to date is called stagnation.

In this context (amid stagnation) it was rather easy to enterprises to manage their inventories of finished products. As a result, Russian industrial enterprises report a record high level of

"normal" estimates of inventories. In September 2019, such estimates hit 78% – an all-time high for 328 surveys. The average result over first 9 months constituted 73% – also a record high for entire 28 years of surveys on 9-months data. The balance (disparity) of remaining estimates stood around zero without exceeding the range -2…+3 points from early 2019. The industrial sector still did not have grounds for accumulating manageable excessive inventories inherent for the periods of confidence in demand growth.

The output growth rates (seasonally adjusted and cleared of random fluctuations) remained in the positive around zero for a second quarter in a row – from April this index constantly demonstrates values in the range of 0…+1. In Q1 2019, the balance (rate) of actual output changes stayed according to surveys in the range of +2…+3 points. Despite such sluggish output dynamic, the industrial sector retained optimism of its output plans at the high level over the current year. In Q3, the net balance of the output projections averaged +13 points a little bit less than +16 points registered in Q1 2019. It should be noted that in 2018 the enterprises' output plans demonstrated less optimism: all quarterly balances stayed in the range of +11…+12 points.

In September, industry tried to raise selling prices – the balance of their real changes went up to +5 points against 0 points in August. However, enterprises considered this step ill-conceived. Price projections, on the contrary, declined by 5 points – industry again was ready to back down from raising them. In September 10% of enterprises reported an intention to cut prices which was nearly a record for the last 7 years. More responses about price cut (13%) were received solely in May 2019.

In September, the balance of enterprises forecasting a change in the personnel number stood at zero. Consequently, the negative downward trend formed over May-July amid the need of hiring more personnel has been overcome. However, enterprises' personnel projections have lost their optimism seen at the onset of the year. The net balance of this index remained at zero for a second consecutive month, in other words enterprises already did not plan headcount growth. And the vast majority of enterprises (83%) directly reported in Q3 2019 about the intention to retain the headcount. Such across the board intention of the Russian industrial enterprises not to change the number of headcount has not been registered not in a single quarter from the launch of the index monitoring in 1993. A close value (82%) was obtained in Q2 2019. The previous "record" of the Russian industry to freeze creation of new work places was registered in 2018 and stood at 78%.

In view of this, enterprises' stable projections dynamic regarding demand let them in Q3 to confidently control stocks of finished products by demonstrating around zero output growth rate and confidence in impracticality of optimistic output plans. Having said that, enterprises' reluctance to create new jobs has hit an all-time high over 1993–2019.

According to enterprises estimates, in early Q4 2019 the demand dynamic continued demonstrating stability: both regarding the real changes and projection-wise. Both real sales growth rate and expected sales growth rate seasonally adjusted and cleared of random fluctuations deviated from the average annual level not more than by 1 percentage point. Such unique situation was never registered over the previous years. However, in October industry ran the risk to increase output growth rates. This measure in the wake of stable dynamic of real sales and stable projections has triggered increase of excessive inventories of finished products. In October, the balance of their estimates went up to +6 points, which was a 12-month high. This being said, the output plans so far remained at the minimum of the current year: the industrial sector is not ready, which makes sense, to continue ramping up production.

The Russian industry was unable to get rid of the headcount shortage in Q4. 14% of enterprises reported shortage of personnel for a second consecutive month, which was a 3-year maximum. Solely 6% of enterprises registered surplus of headcount, which was close to an all-time low. Typical balance was negative and the worst over the last 5 years. The industrial sector has not seen such massive shortage of headcount from mid-2014. Furthermore, enterprises personnel projections hitting in early 2019 a post-crisis high by October declined by nearly zero – and this was in the wake of the significant headcount shortage.

Personnel shortage reported over H2 triggered growth of dissatisfaction with paychecks level in the industrial sector. The share of responses "below normal" has gone up to 23%, which was a 3-year low for the index, although at the onset of the year dissatisfaction with wages stood at an all-time low. However, in early 2020, enterprises were not hoping to mend the wage situation. The net balance of enterprises' expectations of wage changes in late 2019 was negative – companies responded about a cut in wages.

By the end of Q4, the Russian Industry faced an obvious slowdown of demand growth on its products. According to the December survey findings with seasonal adjustment and clearance of random fluctuations the net balance (rate) of sales declined to 48-months low, in other words the worst value of the index was obtained in late crisis year of 2015. Logically, such result underwhelmed enterprises: December sales were considered "normal" by only 55% of enterprises. On average over 2019, this index came to 58% down against 2018 (59%) and 2017 (61%). However, demand projects at the year-end remained at the previous level +3…+4 points (where they stayed over entire 12 months of the year) by conclusively proving an exceptional stability of enterprises' expectations.

Negative demand dynamic seen at the year-end logically triggered excessive inventories growth. In December, the balance of their estimates hit +11 points. Such high overhang was not registered since March-May 2017. However, then industry really saw a chance to exit from protracted recession of 2012–2016 and purposefully brought its inventories up to indicated excessive level. In late 2019 the situation is reverse – industry had to estimate its inventories as excessive and went on to slowdown the output growth in order to avoid their further stockpile and/or reduce inventories volume down to acceptable level. And sure enough in November-December 2019 enterprises decisively commenced slowing down the output growth. Over the last quarter industry proceeded from a slight output growth to similar output cut.

Slowdown of demand and successful fight of the government with inflation made enterprises refuse to increase selling prices and proceed to their absolute cut. Over Q4 2019 the balance of actual price change dropped from +5 points to -9. Surveys did not register such rapid price drop (with the balance of -9 points) over 6 years – from 2013. However, in December 2008, this index plunged to -24 points. Industrial projects demonstrated readiness of enterprises to demonstrate in early 2019 a typical price growth, however seasonal adjustment and clearance of random fluctuations revealed an utmost modesty of those intentions in late 2019.

4.4. Fixed investment[1]

4.4.1. Investment resources

In 2019, growth rates in fixed investments amounted to 1.7 percent relative to the previous year, while the corresponding indicator a year earlier reached the level of 5.4 percent. Despite

[1] This section was written by *Izryadnova O.I.*, Head of the Structural Policy Department, Gaidar Institute, Leading Researcher of the Structural Policy Department, IAES RANEPA.

certain success in the economic recovery growth in the previous two years, the dynamics of main components of the investment activity was negatively affected by persistence of crisis developments in the construction and investment sector, where fixed investments amounted to 99.2 percent in 2019, and the construction work volume was 97.2 percent against the indicator of 2013 (beginning of investment stagnation) (*Fig. 20*).

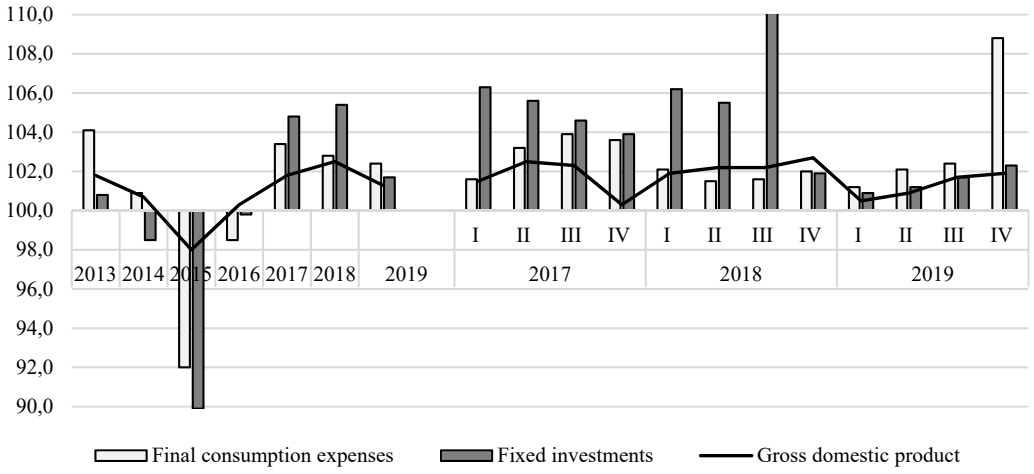


Fig. 20. Dynamics of GDP, fixed investments and volume of works in construction in 2013–2019, percent to the respective period of the previous year

Source: Rosstat.

Compared to the previous year, the pattern of investment activity in 2019 was significantly affected by a decrease in interest rates, a slowdown in the dynamics of prices for machinery and equipment, and an increase in international credit ratings to the investment level of the Russian economy. According to advance estimates by the RF Central Bank, the volume of direct foreign investments in the Russian economy amounted to $ 26.9 billion in 2019, and net private capital outflows fell to $ 26.7 billion against $ 63.0 billion a year earlier (*Table 12*).

Table 12

Financial conditions for investment activity in 2014–2019

	2014	2015	2016	2017	2018	2019
Key rate (year- end), percent	17.00	11.00	10.00	7.75	7.75	6.25
International reserves of the Russian Federation (year- end), USD billion	385.5	368.0	376.3	432.1	468.5	549.8
Private sector transactions (net lending (+) / net borrowing (-)), USD billion	152.1	57.1	18.5	24.3	63.0	26.7
Direct foreign investments in Russian economy, USD billion.	22.0	6.9	32.5	28.6	8,8	26.9
Direct Russian investment abroad, USD billion	57.1	22.1	22.3	36.8	31.4	16.9*
Price index for investment purposes goods, December to December of previous year, percent	107.2	110.3	103.2	103.1	107.3	106.0
Including:						
Producers of construction products	104.6	104.1	106.6	104.9	106.5	106.6
Purchase of machinery and equipment	112.3	120.1	97.8	101.1	108.9	107.1
Official Ruble USD exchange rate (year-end), RUB/USD	56.26	72.88	60.66	57.60	69.47	61.91

* January-September 2019.

Sources: Rosstat; Central Bank of Russia.

In the context of economy income growth seen in 2016–2019, the structure of GDP registered increase of the share of gross national savings. However, the current ratio of interest rates, inflation and earning record as a whole for the period have not significantly affected the investment decision making. The share of fixed investments amounted to 17.7 percent of GDP in 2019. The share of attracted by credit institutions corporate funds in 2019 amounted to 19.8 percent of GDP and households deposits to 27.9 percent of GDP under continued high interest rates (*Table 13*).

Table 13

Main characteristics of investment sources in 2015–2019, as percent of GDP

	2015	2016	2017	2018	2019
Gross savings	27.6	26.2	26.8	31.1	31.3*
Fixed investment	16.7	17.2	17.4	17.0	17.7
Gross income and other mixed revenues	47.8	48.2	47.8	46.1	46.9
Consolidated budget revenues	32.3	32.8	33.3	35.8	35.8
Budget funds for investment	2.3	2.2	2.1	2.1	2.1
Including federal budget funds	1.4	1.2	1.1	0.6	0.97
Deposits of individuals	27.8	28.2	28.2	27.5	27.9
Corporate deposits	22.,8	19.0	19.4	20.9	19.8

* Advance estimates.
Source: Rosstat.

Resource potential of investment activity was determined by reserves and capital stock. Coefficient of renewal of fixed assets has gone up amid reduction of depreciation degree and contraction of proportion of outspent fixed assets for the whole of economy, while maintaining positive dynamics of capital stock commissioning in 2016–2018. However, this was not kept up with increased return on assets and significant change in the investment structure in fixed assets by source and by type of activity.

4.4.2. Fixed investment financing by source and by type of ownership

In 2019, financing of investment resources was dominated by own funds of enterprises and organizations. The share of investment from own funds of organizations hit maximum for twenty years monitoring period of 57.1 percent of the total fixed investment volume. The long-term financial investments decreased to 9.1 percent in the pattern of financial fixed assets against the indicator of 13.2 percent in 2018. Growing rate of own funds in financial resources of enterprises and organizations in 2019 was entailed by slowdown in increase of financial performance results for the whole of economy to 17.5 percent (66.4 percent a year earlier) and rate of return to 11.4 percent against 12.3 percent in 2018).

Participation of Russian banks in financing investment projects in 2019 was marked by reduction of the contraction of loans share by 2.5 percentage points relative to the previous year. Moreover, share of foreign loans and investments from abroad contracted to 2.1 percent (-2.3 pp against 2018) and 0.5 percent (-0.1 pp) respectively in the structure of fixed investments sources. Loans of Russian banks did not compensate the reduction of foreign loans within investment resources.

In 2019, volumes of budget funds for investment spending have insignificantly increased against reduction of the federal budget and increase of budgets of the RF subjects and local budgets (*Table 14*). At the end of 2019, financing of the federal targeted investment program from the federal budget appropriations amounted to 66 percent compared to 70.1 percent a year earlier. The federal budget expenditures for national projects in 2019 amounted to 91.4 percent

(89.3 percent according to data of the "Electronic Budget" portal) or RUB 1.6 trillion vs planned indicator RUB 1.75 trillion.

This is due to the low rhythm of funding: in H1, exercising of the federal budget spending on the implementation of national projects and the comprehensive plan amounted to 32.4 percent at the end of September, with 52 percent, the major part, used in December 2019.

Table 14

Structure of fixed investments by sources of financing in 2016–2019 (less small businesses and informal activity)

	2016	2017	2018	2019
Fixed investment	100	100	100	100
Including by sources of financing: Own funds	51.0	51.3	53.0	57.1
Attracted funds	49.0	48.7	47.0	42.0
Including: Bank loans	10.4	11.2	11.2	8.7
Of which: Foreign banks loans	2.9	5.4	4.4	2.1
Russian banks loans	7.5	5.8	6.8	6.6
Borrowed funds from other institutions	6.0	5.4	4.3	4.1
Foreign investments	0.8	0.8	0.6	0.5
Budget funds	16.4	16.3	15.3	15.8
including: Federal budget	9.3	8.5	7.0	6.6
RF subjects budget funds	6.0	6.7	5.6	6.0
Local budget funds	1.1	1.1	1.1	1.3
Extrabudgetary funds	0.2	0.2	0.2	0.2
Funds obtained from shared construction (organization and population)	3.0	3.3	3.5	3.7
Including funds of population	237	2.5	2.5	2.9
Other	12.2	11.5	11.9	9.5

Source: Rosstat.

The share of Russian ownership investments in 2019 increased to 82.8 percent (in investments without small businesses and the parameters of informal activity), mainly due to an increase in the share of private Russian ownership to 50.5 percent and state ownership to 19.8 percent (*Table 15*).

The positive role of private sector in 2017–2018 was determined by dynamic growth of fixed investments, which compensated the reduction of public, mixed Russian forms of ownership and ownership of state corporations. In 2019, the situation has changed: private investments gave way to the state investments (*Table 15*). Herewith, it should be noted that structural shifts in fixed investments by forms of ownership were developed amid reduction of share of mixed Russian, foreign, and joint Russian and foreign forms of ownership.

Таблица 15

Structure of fixed investments by forms of ownership in current prices in 2015–2019

	On full range of businesses				Without small businesses and parameters of informal activity	
	2015	2016	2017	2018	2018	2019
Fixed investment, total	100	100	100	100	100	100
Including form of ownership						
Russian	84.3	83.1	83.8	85.6	81.3	82.8
State	14.8	15.2	14.4	13.8	18.3	19.8
Municipal	3	2.7	2.5	2.2	2.9	3.5
Private	56.8	55.9	58.1	60.9	49.0	50.5
Mixed Russian	8.2	7.8	7.5	7.4	9.5	7.6
State corporations	1.4	1.4	1.2	1.2	1.5	1.3
Foreign	8.3	7.4	7.4	6.2	8.0	7.9
Joint Russian and foreign	7.4	9.5	8.8	8.2	10.7	9.3

4.4.3. Fixed investments by type of capital stock

Short – term acceleration of the indicators dynamics in construction-investment activity in 2018 did not compensate the impact of the 4-years investment crisis. In 2019, the growth of construction volume constituted 0.6 percent against the previous year after 6.3 percent a year earlier. The investment structure by types of fixed assets was influenced by factors of renewal of capital stock, modernization and reconstruction of fixed assets. With a general tendency to weaken financing of construction works and services, their structure by types of fixed assets showed a steady increase in the share of costs for machinery and equipment. The increase in demand for new equipment in the majority of cases is due to critical aspects of physical depreciation and economic inefficiency in the operation of the old types of equipment.

With the implementation of projects on modernization, reconstruction and technical re-equipment, the priority area is the comprehensive re-instrumentation of production, purchasing of electronic computer technology, mechanical equipment and automation of engineering and administrative work.

Positive factor was seen in the increase of investment rate in information technology, computer and telecommunications equipment, which create conditions for further development of digital technologies. In the structure of investments by type of capital stock the share of investment in machinery and equipment in 2019 moved up to 38.5 percent in the context of exceptionally low for twenty years of statistical monitoring indicator of 31.5 percent in 2016 (*Table 16*).

Table 16

Structure of fixed investments by type of capital stock in 2016–2019, in percent to total	**On full range of businesses**			**Without small businesses and parameters of informal activity**	
	2016	**2017**	**2018**	**2018**	**2019**
Fixed investments, total	100.0	100	100	100	100
Including:					
Residential buildings and facilities	14.7	13.6	12.7	5.5	5.5
Buildings (minus housing) and facilities	44.7	43.8	43.3	48.7	44.5
Spending on land improvement				0.1	0.03
Machinery, equipment, transportation	31,5	33,7	34,6	35,4	38,5
Of which: information, computer and TV communication equipment (ICT)				3.6	4.0
Intellectual property items		2.8	3.1	41	4.3
Other	9.1	6.1	6.3	6.2	7.2

Source: Rosstat.

The slowdown in domestic production and imports of investment goods in 2019 hindered the renewal of fixed assets, introduction of new technologies, cost saving and creating new jobs.

Change in the performance of construction activity was followed by structural shifts in the use of investments by type of capital goods. The 2019 distinctive feature was the reduction of fixed investments aggregate share in housing buildings and non-housing facilities.

Following the peak of spending on housing construction seen in 2015, subsequent three years registered gradual contraction of investment percentage by this type of capital goods. In 2019, the ratio of investment in construction of buildings and facilities remained at the previous year level and constituted 5.5 percent of the total volume of investment in the economy (without small businesses and parameters of informal activity).

The development of housing construction and housing services in state and program documents is determined by priority trend for improving the quality of life and prerequisite for modernization of the social sphere and economy.

The dynamics of expenditures and their structure for housing construction is affected by both the growing demand of households and the need to reconstruct the housing stock, while reducing the share of dilapidated and substandard housing having poor chances for improvement.

In accordance with the budget parameters of the national project "Housing and urban environment for the period 2019–2024" almost half of the allocated funds are planned to be used to ensure sustainable reduction of unsuitable housing stock.

Despite the positive dynamics in resettlement of dilapidated housing and the overhaul of apartment buildings in recent years, the existing rates remain insufficient to finally resolve these problems. Important in this regard is the attraction of private and institutional investors in housing construction and the formation of effective regional overhaul systems.

A positive impact on the development of housing construction was secured by measures to promote competition and reduce administrative barriers, simplify the preparation of planning projects, develop and hold state examination of project documents, issue building permits and provide land for housing construction.

Business activity in housing construction was supported by such measures as the implementation of the program of subsidizing the interest rate on loans for purchasing housing in new buildings, the reduction of interest rates on mortgages, the implementation of mortgage programs for certain social groups at a reduced rate. Given the current level and structure of households' incomes and expenditures, the low availability to purchase housing at market prices remains the principal issue for popular majority.

In 2019, for the first time after a three-year drop, the rate of commissioning of housing climbed positive and amounted to 104.9 percent compared to the previous year indicator. At the same time, housing construction was most dynamically expanded due to own funds and loans attracted by households. In 2019, the share of living space paid by household funds reached a historic maximum of 45.2 percent of the total volume of commissioning (*Table 17*).

Table 17

Size, structure and dynamics of commissioned residential housing by developers in 2013–2019

Year	Housing commissioning, mln sq.m	Including		Structure of housing commissioning, percent to total		Rate of commissioning, percent to previous year		
		By organizations	By populations	By organizations	By population	Total	By organizations	By population
2013	70.5	39.3	28.4	55.8	43.5	107.3	106.2	106.0
2014	84.2	47.6	30.7	56.6	43.0	119.4	121.1	108.1
2015	85.3	49.5	36.2	58.1	41.2	101.3	104.0	117.9
2016	80.2	47.4	31.8	59.2	39.6	94.0	95.8	87.8
2017	79.2	45.4	33.0	57.4	41.6	98.8	95.8	103.8
2018	75.7	42.9	32.	56.6	42.9	95.6	94.5	98.2
2019	79.4	43.5	35.9	54.8	45.2	104.9	101.4	110.8

Source: Rosstat.

Changes in the living-standard-criteria, the national currency exchange rate, consumer prices and prices for construction and assemblage works as well as government measures related to supporting household incomes and the mortgage market will improve the situation in the housing market in 2020.

4.4.4. Investment activity by type of economic activity

A sharp slowdown in construction and investment activity in 2019 was registered for almost all basic types of economic activity. Fixed investments by large businesses, which account for almost 3/4 of capital investments in the national economy, amounted to 97.8 percent in 2019 compared to the indicator of the previous year. The largest decline in investment activity was registered in mining industries: 92.8 percent relative to 2018.

Structural shifts in the mining industry in 2019 were determined by the renewal of growth of investments in the extraction of crude oil and natural gas and maintaining high investment activity in coal mining. The share of fixed investments in the extraction of fuel and energy resources increased in the structure of investments for the whole to 15.5 percent (+1.1 percentage points relative to 2018) and up to 70.8 percent (+7.1 percentage points) in fixed investments and mining operations (*Fig. 21*).

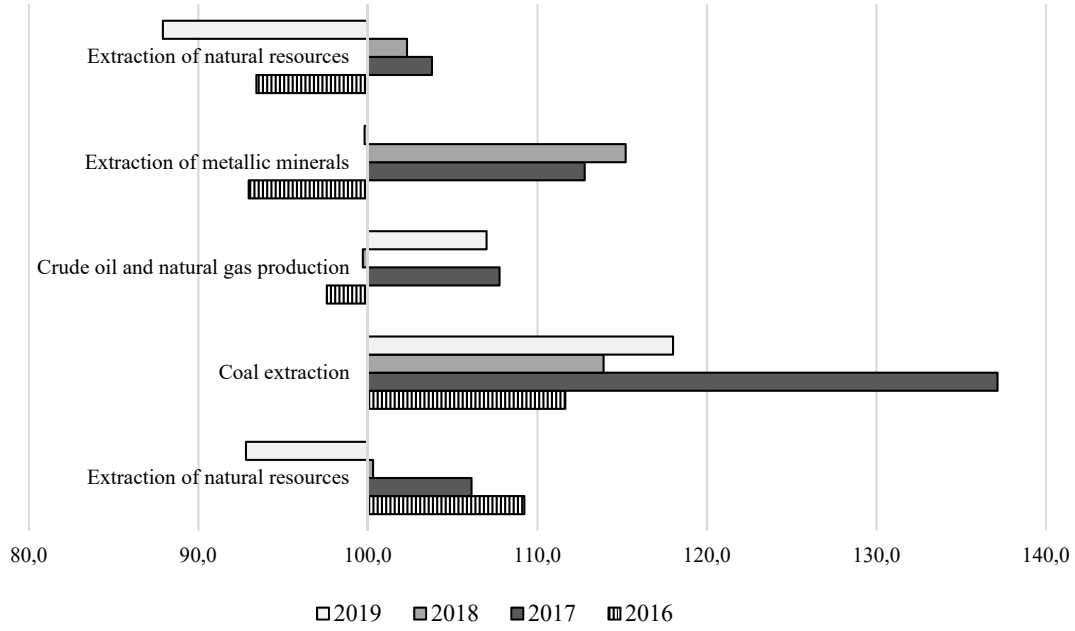


Fig. 21. Fixed investments dynamics in natural resources extraction during 2016–2019, percent to previous year

Source: Rosstat.

In manufacturing, fixed investments increased by 0.9 percent in 2019 compared to 3.6 percent in the previous year. In contrast to 2018, the positive dynamics was maintained due to the increase in construction and investment activity in the oil refining complex with the simultaneous increase in coke production (210.0 percent by 2018) and in the production of petroleum products (128.1 percent). The continued growth of fixed investments in the metallurgical complex in 2019 was supported by a change in the proportions between metallurgical production and production of finished metal products.

Amid slowdown of dynamics of the fixed investments and the volume of construction work for the whole of economy, a drop in capital investments in the machine-building complex and in the production of construction materials was recorded in 2019. In the machine-building complex, a drop of fixed investments in the production of motor vehicles by 24.3 percent, in

the production of computers and electronic-optical products by 14.2 percent and electrical equipment by 17.2 percent relative to 2018, led to curbing the technical and technological renovation of these industries, as well as of other types of economic activity.

In the chemical/pharmaceutical sector, in 2019, in contrast with growth in capital investments for all sub-productions in 2018, the positive dynamics of investment demand maintained only in production of medicines (112.7 percent relative to 2018). Decline in investments in production of chemicals, rubber and plastic articles, which account for 3.3 percent of investments in economy, exceeded 10 percent (*Fig. 22*). Reduction of fixed investments in the consumer complex amid concurrent decline of investments in agriculture, is disturbing.

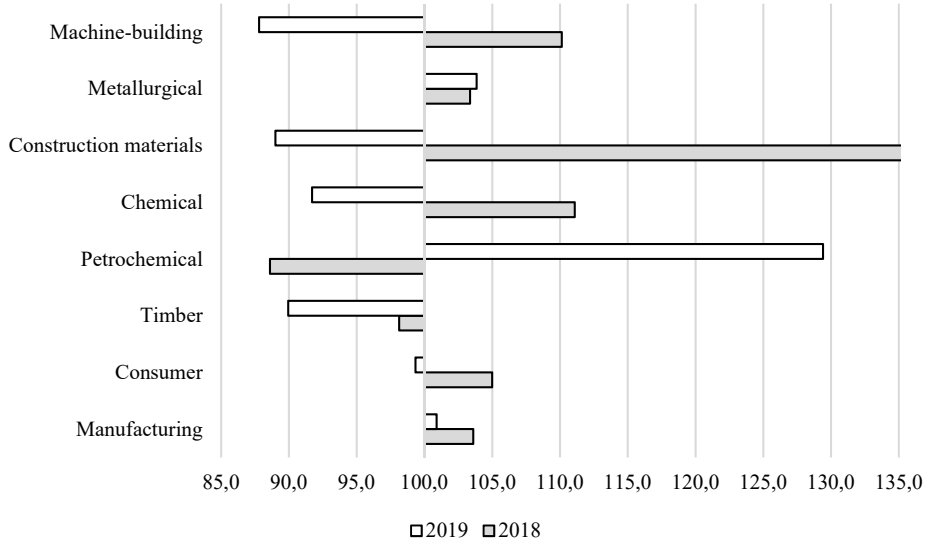


Fig. 22. Fixed investment dynamic in manufacturing industry in 2018–2019, in percent to previous year

Source: Rosstat.

The growth of fixed investments in education activities (119.6 percent), healthcare (115.0 percent) continued in the sector of services under strengthening of social profile of investment policy in 2019. Such positive aspects as the outstripping growth of investments in the field of information and communication (115.6 percent against 2018), in professional and scientific-technical activities (115.6 percent) should also be noted. However, the decrease in investments in the development of transport and logistics (97.1 percent) and trade and marketing services (87.9 percent), especially in the context of the implementation of a comprehensive plan for modernization and expansion of the main infrastructure, is particularly alarming.

Low investment activity in 2019 and new challenges early in the year 2020, associated with an extremely unfavorable factor combination, i.e. Ruble depreciation, decline in oil prices and the need to finance emergency measures in the health sector and related economic activities, will have a significant impact on the dynamics and structure of public investment and determine the structural changes in investment activity in 2020.

4.5. The Oil and gas sector in 2019[1]

The oil and gas sector is among the basic ones of the Russian economy and is playing an important role in the income generation for the state budget and Russia's trade balance. Implementation of the OPE, Russia and a number of other countries agreement on the production cut with a simultaneous global crude oil demand growth in 2019 has resulted in the world crude oil prices stabilization in the range of $60–70 per barrel. In 2019, the volumes of crude oil production peaked for the entire post-Soviet period and the extraction of the natural gas hit an all-time high. Under the effect the tax maneuver in force in the oil industry, the crude oil refining volumes have stabilized and significantly increased the refining depth, production of fuel oil and its exports have contracted. March 2020 revealed a crucial discrepancy between the positions taken by Russia and the OPEC member states regarding the deal parameters for the subsequent period. Hence, there were no new agreements, the current deal was not extended and Saudi Arabia notified about the intention to ramp up production. In the wake of coronavirus pandemic and a plunge of the global oil demand the crude oil prices have collapsed.

4.5.1. Dynamic of global oil and gas prices

Over recent years the world crude oil market was marked by fundamental changes. Following the prolonged period of exceptionally high world crude oil prices (in 2011-H1 2014 they stood at USD 107–112 per barrel) the rapid growth of global crude oil production resulted in a substantial excess of crude oil supply over production and a plunge of crude oil prices. The main factor for the oil glut was the development of U.S.'s shale oil-fields bolstered by advanced drilling methods. Facing this context, OPEC countries refused to cut their oil production quota and in fact switched to a policy of retaining their market share on the global oil market, seeking to ramp up the supply volumes and thus offset contraction of revenues. Subsequently, the price of the Russian Urals crude oil on the world market dropped from USD 107.1 per barrel registered in H1 2014 to USD 51.2 per barrel in 2015 and to USD 41.9 per barrel in 2016, that said in January 2016 the price plummeted to USD 28.8 bpd. (*Table 18, Fig. 23*).

Table 18

World crude oil and natural gas prices in 2014–2019, USD/bbl.

	2014	2015	2016	2017	2018	Q12019	Q22019	Q32019	Q42019	2019
Brent crude price, Great Britain	98.9	52.4	44.0	54.4	71.1	63.3	68.3	61.9	62.7	64.0
Urals crude price, Russia	97.7	51.2	41.9	53.1	69.8	63.3	68.1	61.3	62.1	63.7
Average export price on Russian gas, USD/thousand cubic m.	314	225	157	179	223.3	226.2	183.6	162.7	174.8	186.8

Источник: OECD/IEA; World Bank; Росстат.

The decline in oil prices spurred oil-producing countries into taking decisive actions on output cuts. At the end of 2016, OPEC and a group of oil producing countries from outside OPEC, including Russia, (OPEC+) concluded a production cut agreement for 6 months period in effect since 1 January 2017. In compliance with this agreement OPEC+ obligated to reduce its oil production by 1.8 million barrel per day, including OPEC member states – by 1.2 million barrels per day and 11 non-OPEC countries, agree to cut output by 558,000 barrels per day, of which Russia by 300,000 barrel per day. In an effort to decrease further the oil supply glut, the

[1] This section was written by *Bobylev Yu.N.*, Candidate of science (Economics), Head of Mineral Sector Economics Department, Gaidar Institute.

OPEC+ parties to the agreement decided in May 2017 to extend the agreement for another nine months, that is, between July 2017 and March 2018, and in late November 2017 the deal was extended till the end of 2018. Meanwhile, some of the parties to the agreement (Venezuela, etc.), for various reasons, experienced a steep downfall in oil production. As a result, the real cut in oil production by OPEC+ has turned out to be a considerably higher target than envisaged by the agreement.

Fig. 23. Urals crude oil price in 2008–2019, USD/bbl.

Source: Rosstat.

In this context, in June 2018 OPEK+ decide to raise production from early July by 1 million barrels per day compared to May. That said, a provision was envisaged for switching from the previous per-country control over the agreed output targets to a control over total crude oil output (by 1.8 million barrels per day below the level of October 2016) of the parties to the agreement. Hence, countries with spare potential had the opportunity to boost their production in H2 2018. Saudi Arabia (representing nearly 70 percent of OPEC's available capacities) and Russia were the first to do this. However, production ramp up by major crude oil producers (USA, Saudi Arabia, and Russia) and some other factors resulted in the crude price drop over last months of 2018 (to USD 57–58 per barrel).

In this context, in December 2018 OPEC+ members agreed to cut oil production by 1.2 million barrels per day from early 2019 onwards from the output seen in October 2018. This deal was effective over 6 months (January-June 2019). Under the deal the cut of crude oil production by OPEC members was in the amount of 800 thousand bpd, and by non-OPEC major crude oil producers by 400 thousand bpd, with Russia taking on 228 thousand bpd. However, the output cut commitments did not apply to Iran, Venezuela and Libya where oil production was already low, plus Iran was facing the risk of reducing further its output in case of tougher U.S. sanctions against purchases of Iranian crude, which really occurred. By late 2019 compared to Q1 2018, oil output in Iran under the burden of sanctions dropped by 47%. Similar situation was observed in Venezuela: over that period oil production decreased by 57.5%. In early July 2019, the deal was extended for next 9 months (July 2019 – March 2020).

Implementation of OPEC+ agreements with simultaneous growth of the global oil demand resulted in the noticeable rise of the global oil prices and their stabilization in the range of

USD 60–70 per barrel. In 2018, the price of the Russian crude oil on the world market averaged USD 69.8 per barrel, in 2019 – USD 63.7 per barrel. In 2019, the price dropped by 8.7% against 2018. That said, in H2 the oil price declined to USD 61–61 per barrel and in some months decreased still further (for example, in October 2019 it stood at USD 58.5 per barrel).

Reason for the 2019 oil price drop was a slowdown of the global oil demand and ramp up production in countries outside of the deal, first of all, in the US (*Table 19*). Technological advancement and cost effectiveness allowed the U.S. oil industry to adapt to lower prices: in 2018 the US produced 10.99 million bpd (up by 17.5 percent against 2017), and in 2019– 12.24 million bpd (up by 11.4 percent against 2018).

Table 19

Oil production in US and OPEC members in 2016–2019, mn bpd.

	2016	2017	2018	Q12019	Q22019	Q32019	Q42019	2019
USA	8.86	9.35	10.99	11.81	12.10	12.23	12.82	12.24
OPEC, total	32.68	32.68	31.96	30.47	30.00	29.20	29.48	29.78
Saudi Arabia	10.42	10.09	10.38	10.00	9.92	9.38	9.83	9.78
Iraq	4.43	4.44	4.60	4.75	4.70	4.70	4.65	4.70
Iran	3.57	3.82	3.52	2.63	2.33	2.10	2.03	2.27
Venezuela	2.18	1.92	1.43	1.05	0.79	0.73	0.68	0.81

Source: US EIA.

In the context of growing oil supply by producers outside of the deal, in December 2019 the OPEC+ members agreed on additional cut of crude oil production from January 1, 2020 by another 503 thousand bpd (in addition to the effective commitments in the amount of 1.2 million bpd). That said, the OPEC members have to additionally cut production by 372 thousand bpd and other countries outside of the deal – by 131 thousand bpd. Taking into account this reduction, which had to stay in force over Q1 2020 the aggregate reduction by OPEC+ members compared to October 2018 should come to 1.7 million bpd.

Saudi Arabia accounted for a major cut: under effective commitments cut production totaling 322 thousand bpd it had to cut production by another 167 thousand bpd. Russia according to December agreement has to cut another 70 thousand bpd. As a result, taking into account effective commitments to the tune of 228 thousand bpd Russia's total production cut should be 298 thousand bpd. Moreover, on the insistence of the Russian party from 2020 the Russian quota will not include condensate, which corresponds the effective OPEC methodology applied to countries members of OPEC. This fact will allow Russia not to limit condensate production.

It should be noted that the effect of Russia's adherence to the OPEC+ agreements on the crude oil production in the country was rather limited: in 2017 compared to 2016, the annual oil output declined by 0.15 percent, and in 2018 and 2019, went up by 1.7 and 0.9 percent, respectively. With regard to the 2017 situation, we should point out two aspects. Firstly, the OPEC+ countries took production level of October 2016 as a benchmark for the oil production cut. During 2016, the oil production in Russia was growing and in October hit maximum (above the average level posted in 2016). Moreover, by virtue of technological and climatic features Russia was cutting production gradually in the curse of several months. Ultimately, the annual production in 2017 against the previous year decreased relatively insignificantly.

In 2018, Russia jumped at the opened within the framework of the agreement opportunity to raise production in the second half which led to an increase of annual production. In 2019, the annual oil production growth was triggered both by a relatively high benchmark level of October 2018 and by the relatively slow reduction of production due to technological and climatic factors.

As a result of Russia's 3-year adherence to the OPEC+ agreements (2017–2019), the annual oil production in the country went up by 2.4 percent.

Accordingly, the OPEC+ agreements on joint efforts aimed at the oil production cut were a substantial factor severely affecting global oil prices. The three-year experience of their implementation has demonstrated that such agreements allow to reduce risks of price crises and contribute to maintain a certain level of the global oil prices.

Whereas the effective agreement covered solely Q1 2020 in early March 2020 next meeting of the OPEC+ representatives took place where the issue of further joint actions on the production cut were to be taken. However, the meeting revealed a crucial discrepancy between the positions taken by Russia and the OPEC member states regarding the deal parameters for the subsequent period. The OPEC members considered necessary to additionally cut oil production by 1.5 mn bpd from April 1, 2020, the Russian position resided in retaining parameters of the ongoing agreement for the next quarter. Hence, the new agreement collapsed and the effective deal was not extended.

Starting from April 1, 2020 the agreement participants got a chance to exit from the restrictions regime and Saudi Arabia has notified about its intention to boost its production. In the second half of March 2020 the futures price on Brent crude declined to USD 25–28 per barrel.

Prices on Russian natural gas exported abroad on long-term contracts, as a rule, are tied to the prices of petroleum products and owing to this factor follow the world crude oil prices with a certain lag. Meanwhile changes that took place on the European market over recent years – increased supply of gas by other natural gas producers and lower spot prices on natural gas compared to the prices of long-term contracts signed by Gazprom produce downward pressure on the Russian natural gas. In 2019, the average export price on Russian gas stood at USD 186.8 per cub m or declined by 16.3 percent compared to 2018 and by 40.5 percent against 2014 (*Table 18*, *Fig. 24*).

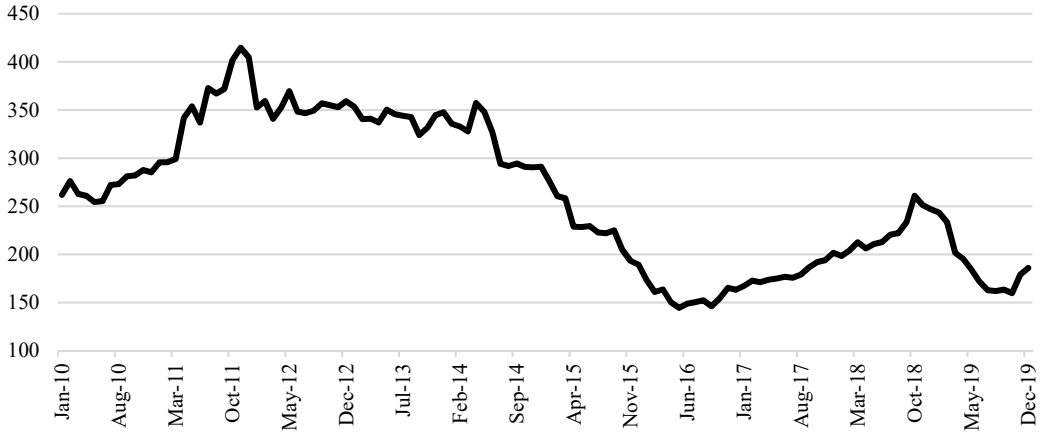


Fig. 24. Average price of Russian gas on external markets in 2010–2019, USD/thousand cub m

Source: Rosstat.

4.5.2. Production dynamic in the oil and gas sector

Volumes of crude oil output in 2019 were governed by Russia's compliance with her commitments taken within OPEC+ agreements. Along with this, in 2019 oil production in

Russia hit 560.8 million t or went up by 0.9 percent compared to 2018 (*Table 20*, *Fig. 25*). This was an all-time high since 1989 (Russia peaked its oil output in 1987 by 569.4 million tons). Extraction of natural gas in 2019 increased to 758.1 billion cubic meters (Up by 2.3 percent against 2018), which is an all-time high. In recent years, production of liquefied gas has surged (from 10.9 million t in 2016 to 29.5 million t in 2019). Russia boasts of a substantial potential in order to maintain and ramp up current volumes of oil and gas output. At the same time, the oil sector faces objectively deteriorated production conditions. Considerable share of producing fields demonstrate a downward trend of extraction and the new deposits in the majority of cases are marked with not as good mining-and-geological and geographic parameters, their development requires higher investment, running and transportation costs. In order to offset falling production on the brown fields, it is necessary to develop both new oil deposits in regions with underdeveloped infrastructure or in those regions that lack infrastructure altogether, and to develop low quality deposits in developed regions.[1]

Table 20

Production of crude oil and natural gas and oil refining in Russia in 2010–2019

	2010	2014	2015	2016	2017	2018	2019
Crude oil including condensate, million tons	505,1	526,7	534,0	547,6	546,8	556,0	560,8
Natural gas, billion cubic meters	665,5	654,2	645,9	652,6	704,1	741,1	758,1
Natural liquefied gas, million tons	10,0	10,7	10,8	10,9	11,8	20,0	29,5
Primary crude oil refining, million tons	249,3	294,4	287,2	284,5	284,3	290,7	290,0
Share of crude oil refining in crude production, percent	49,4	55,9	53,8	52,0	51,9	52,3	51,7
Crude oil refining depth, percent	71,1	72,4	74,4	79,1	81,0	82,1	82,7

Sources: Rosstat, Ministry of Energy of the Russian Federation.

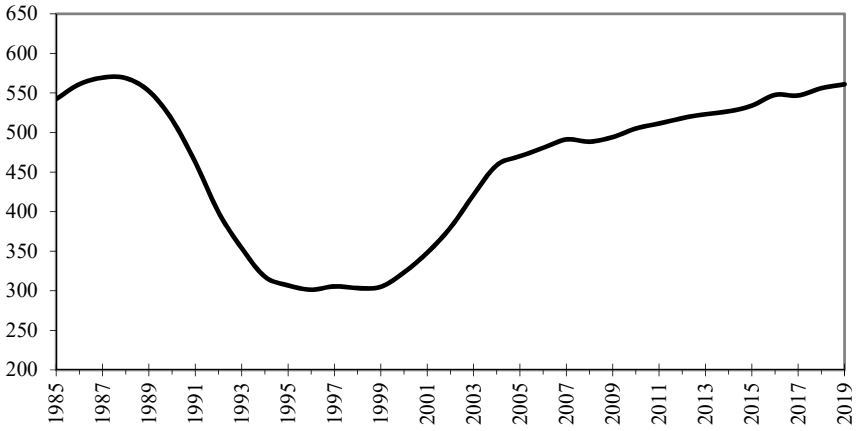


Fig. 25. Crude oil production, including condensate in 1985–2019, mn t

Sources: Rosstat, Ministry of energy of Russia.

Year 2018 demonstrates that the tax maneuver has delivered positive results from the first phase of the tax maneuver in force in the oil industry from 2015: a structural tax reform in this

[1] See Yu. Bobylev, O. Rasenko. Russia Oil Sector: main trends. Moscow, Delo Publishers, RANEPA, 2016.

sector envisages gradual reduction of export duties on both crude oil and petroleum products, as well as higher mineral extraction tax (MET).[1] Such restructuring of the tax system has created incentives for upgrading of oil refining capacities and has resulted in current trend changes.

In 2000–2014, the Russian oil sector saw growing volumes of both oil refining and exports of petroleum products owing to the increase of production and exports of fuel oil (the least valuable refining product which in Europe is used for further refining and obtaining light petroleum products). The oil refining depth was not growing at that and constituted solely 71–72 percent (while, in the leading industrial countries it came to 90–95 percent). Then tax system actually conserved technological backwardness of Russia's oil refining sector and led to marked losses for the state budget as a result of hidden subsidizing of the oil refining sector and other EAEU member states owing to lower compared to the world oil prices as well as lower export duties on petroleum products against the oil export duties.

Implementation of the tax maneuver resulted in the turnaround of existing trends. Among the new trends emerged in 2015–2019, and some of them deserve to be mentioned here: firstly, the oil refining depth increased notably as production of fuel oil declined, secondly, owing to the contraction of exports of fuel oil more lucrative crude oil exports moved up, thirdly, crude oil refining declined in volume terms due to the above two factors. The oil refining depth in Russia increased from 72.4 percent in 2014 to 82.7 percent in 2019 which is the all-time high (*Fig. 26*). Production of gasoline and diesel fuel went up while production of fuel oil declined by 39.6 percent. The share of refined oil in its production decreased from 55.9 percent to 51.7 percent. Petroleum products exports contracted by 13.3 percent

In view of this, thanks to the implementation of the tax maneuver previously observed trends which demonstrated growth of refined oil volumes and growing exports of petroleum products due to increasing production and exports of fuel oil were phased out by trends which show contraction of production and export of fuel oil and as a result contraction of the oil refined volumes and petroleum products exports. Meanwhile, depth of the oil refining increased notably.

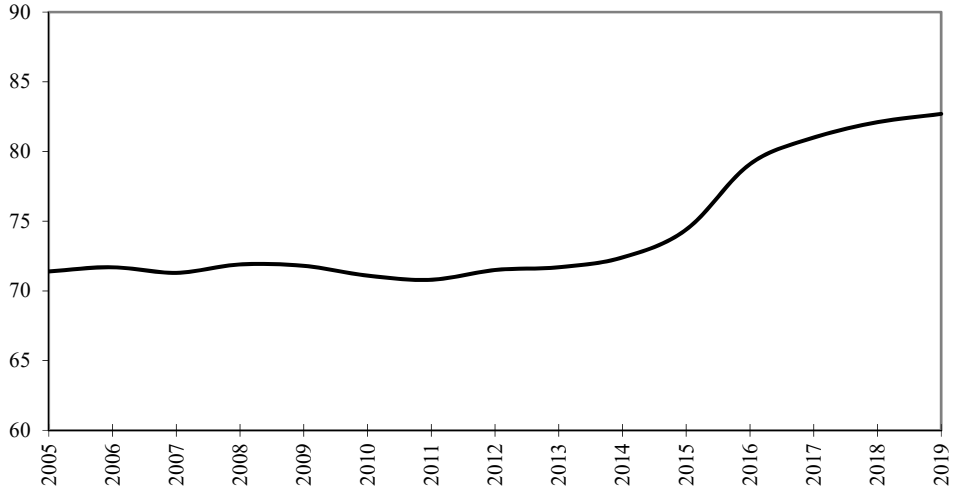


Fig. 26. Crude oil refining depth in 2005–2019, percent

Sources: Ministry of Energy of Russia, Rosstat.

[1] See Yu. Bobylev. Tax Maneuver in Oil Industry. Russian Economic Developments. 2015. No. 8, pp. 45–49.

4.5.3. Dynamic and structure of oil and gas export

In 2019, the total Russia's exports of crude oil and petroleum products constituted 409.7 million tons, up by 6.7 percent against 2014 or by 0.1 percent against 2018. This index is close to an all-time high achieved in 2015 (411.8 million t). The share of net exports of crude oil and petroleum products in 2019 came to 73.1 percent (*Table 21*). It should be noted that 2015–2019 saw a notable growth of 19.7 percent of crude oil exports spurred by the tax maneuver and 13.3 percent decline in exports of petroleum products mainly owing to a steep fall of the fuel oil exports (by 34.7 percent). As a result, the share of crude oil in total oil exports went up from 57.5 percent in 2014 to 65.2 percent in 2019, and that of petroleum products – declined from 42.5 to 34.8 percent. Meanwhile, exports of diesel fuel and motor gasoline went up. The share of exports in diesel fuel production in 2019 made up 65.6 percent, and in motor gasoline production – 13 percent. The share of fuel oil in petroleum products exports declined from 52.9 percent in 2014 to 39.9 percent in 2019.

Table 21

Ratio of production, consumption and exports of crude oil and natural gas in 2010–2019

	2010	2014	2015	2016	2017	2018	2019
Crude oil, mn t							
Production	505.1	526.7	534.0	547.6	546.8	556.0	560.8
Exports, total	250.4	223.4	244.5	254.8	252.6	260.2	267.5
Exports to - non-CIS countries	223.9	199.3	221.6	236.2	234.5	241.7	249.1
Exports to CIS countries	26.5	24.1	22.9	18.6	18.1	18.5	18.3
Net exports	249.3	222.6	241.6	254.0	252.0	259.7	267.5
Domestic consumption	125.9	141.3	122.2	138.3	147.1	146.7	151.1
Net exports as percent of production	49.4	42.3	45.2	46.4	46.1	46.7	47.7
Petroleum products, mn t							
Export	132.2	164.8	171.5	156.0	148.4	150.1	142.8
Net export	129.9	162.8	170.2	155.3	147.7	149.6	142.2
Crude oil and petroleum products, mn t							
Net exports of crude oil and petroleum products	379.2	385.4	411.8	409.3	399.7	409.3	409.7
Net exports of crude oil and petroleum products as percent of crude oil production	75.1	73.2	77.1	74.7	73.1	73.6	73.1
Natural gas, billion cubic meters							
Production	665.5	654.2	645.9	652.6	704.1	741.1	758.1
Exports	177.8	172.6	185.5	198.7	210.2	220.6	219.9
Net exports	173.5	165.5	178.4	189.8	201.4	211.2	210.8
Domestic consumption	492.0	488.7	467.5	462.8	502.7	529.9	547.3
Net exports in percent to production	26.1	25.3	27.6	29.1	28.6	28.5	27.8

Sources: Rosstat, Russian Ministry of Energy, Federal Customs Service, own calculations.

Analysis of Russia's crude oil exports over the course of a long period demonstrates a marked increase in the export-led component of oil industry. The share of net exports of crude oil and petroleum products in crude oil production went up from 47.7 percent in 1990 to 73.1 percent 2019. This, however, is due not only to the increase in absolute volumes of exports but to a crucial contraction of domestic oil consumption against the Soviet period on the back of the market reform of the Russian economy and more efficient oil consumption and the replacement of petroleum products (fuel oil) by natural gas.

Exports of natural gas in 2019 amounted to 219.9 billion cubic meters and was close to the previous year's level of 220.6 billion cubic meters, which was an all-time high. The share of net exports in the natural gas production in 2019 constituted 27.8 percent. We should note a

spike in exports of liquefied natural gas which over the recent years surged by over 3-fold: from 21.4 million cubic meters in 2015 to 65.4 million cubic meters in 2019.

Owing to the plunge of global prices on crude oil and natural gas, the share of oil and gas sector products in Russian exports amounts to over a half (*Table 22*). In 2019, the oil and gas sector accounts for 56.0 percent of Russia's exports. The oil sector accounts for the major part of exports. Nevertheless, its proportion in the Russia's exports over recent years declined from 54.2 percent in 2014 to 44.3 percent in 2019. The share of the natural gas sector in the Russia's exports amounted to 11.7 percent. Furthermore, the proportion of the liquefied gas went up (from 0.9 percent in 2017 to 1.9 percent in 2019).

Table 22

Cost and share of export of oil and gas sector products in Russian exports in 2017–2019

	Exports in 2017, billion USD	In percent to total volume of Russia's exports	Exports in 2018, billion USD	In percent to total volume of Russia's exports	Exports in 2019, billion USD	In percent to total volume of Russia's exports
Oil and gas sector, total	192.87	53.7	261.5	57.9	237.9	56.0
Crude oil and petroleum products	151.55	42.2	207.1	45.8	188.3	44.3
Crude oil	93.31	26.0	129.0	28.5	121.4	28.6
Petroleum products	58.24	16.2	78.1	17.3	66.9	15.8
Natural gas	38.15	10.6	49.1	10.9	41.6	9.8
Liquefied natural gas	3.17	0.9	5.3	1.2	7.9	1.9

Sources: Federal Customs Service, own calculations.

4.5.4. Dynamic of domestic prices on energy products

The pricing mechanism for crude oil and petroleum products on the Russian domestic market is based on equal-netback pricing, that is, prices are equal to the world price less export duty and transportation costs. On the back of this, domestic prices on crude oil and petroleum products in dollar terms actually follow the world market prices (*Table 23, Fig. 27*). Having said that, there is still a wide gap between world and domestic oil prices due to the export duty. Along with this, a convergence of international and domestic prices is observed owing to a lower rate of export duty envisaged as part of the tax maneuver. In 2014, the domestic oil price (the producers' price) came to 42 percent of the global price (Urals crude price on the European market), while in 2018 – 66 percent, and in 2019 – 71 percent.

Table 23

Domestic prices on crude oil, petroleum products and natural gas in dollar terms in 2010–2019 (average producers' prices at year-end, USD/ton)

	2010	2013	2014	2015	2016	2017	2018	2019
Crude oil	248.2	346.1	178.9	156.7	207.8	302.4	320.8	329.1
Motor gasoline	547.9	614.4	372.3	301.8	380.3	460.0	423.3	393.2
Diesel fuel	536.1	698.0	419.3	349.4	421.3	515.2	550.7	540.1
Fuel oil	246.3	235.8	128.7	49.5	129.7	166.1	186.0	116.1
Gas, USD/thousand cubic m	20.5	39.8	29.1	24.5	23.6	34.2	28.9	27.7

Source: own calculations based on data released by Rosstat.

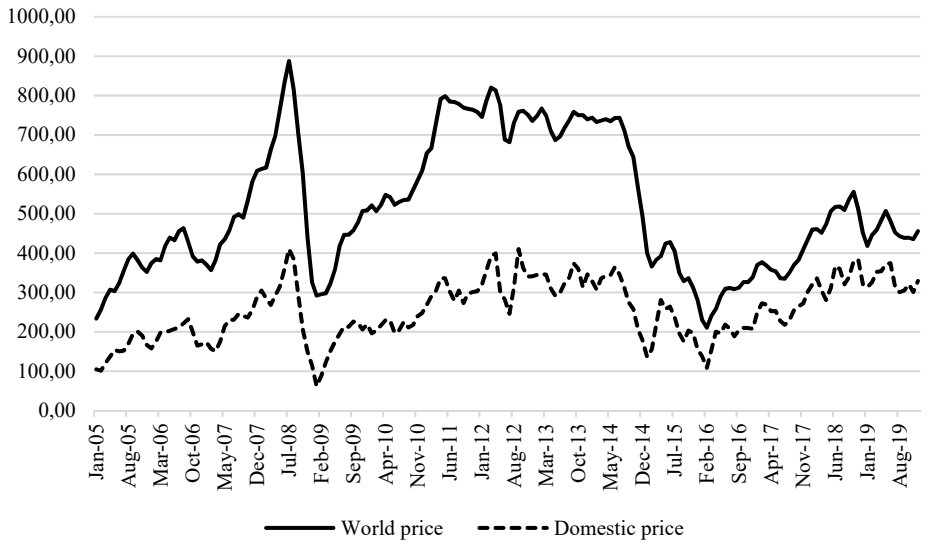


Fig. 27. Global and domestic crude oil prices in 2005–2019, USD/t

Sources: Rosstat, own calculations.

End-user (consumer) prices on motor gasoline (*Table 24* are set on net-back prices taking into account indirect taxes (excises, VAT) and markup. Russia regarding the share of indirect tax burden in the final motor gasoline price ranks in the middle between leading EU countries where this share is the highest (65 percent) and the USA where it is relatively low (20 percent).[1] With lower non-tax gasoline prices and such level of tax burden the consumer prices on motor gasoline in Russia are approaching the US prices, but remain significantly lower than in other developed countries. According to our calculations, in 2020 the consumer price on motor gasoline in Russia came to the level of the USA 100 percent, Canada – 75 percent, Japan – 49 percent and regarding the average level of leading EU-5 – 45 percent (*Table 25*).

Table 24

Consumer prices on motor gasoline in Russia 2014–2018, RUB/liter (in January y-o-y)

	2014	2015	2016	2017	2018	2019	2020
Regular unleaded gasoline	29.53	32.35	33.86	35.57	38.12	41.87	42.46
Premium 95 octane and plus	32.64	35.16	36.81	38.69	41.05	45.14	45.85

Source: Rosstat.

Accordingly, in the wake of the tax maneuver the relative level of end-user prices on motor gasoline in Russia went up insignificantly. The effective system of export duties and the level of tax burden on petroleum products in Russia ensures lower price level on motor gasoline on domestic market in comparison with the majority of developed countries. At the same time, prices on motor gasoline in Russia have arrived at the USA level which boasts of a lower tax burden on petroleum products.

[1] See Yu. Bobylev. Gasoline prices in Russia and other countries: comparative analysis. Russian Economic Developments. 2016, No. 10, pp. 28–31.

Table 25

Consumer prices on motor gasoline in Russia relative to other countries, percent

	2014, January	2020, January
USA	95.8	100.1
Canada	72.9	75.2
Japan	55.0	48.8
Germany	44.4	46.6
Great Britain	43.3	43.8
France	45.3	42.5
Italy	39.5	41.2
Spain	48.7	49.5
EU-5	44.1	44.7

Source: own calculations of data released by OECD/IEA and Rosstat.

Domestic prices on the natural gas are under the state regulation. In order to ensure competitiveness of the national economy, the government maintains significantly lower level of domestic prices on gas compared to the world gas prices. Meanwhile, owing to a regulated increase of the domestic gas prices and a significant decrease of the world prices on natural gas there is a gradual convergence of domestic and world gas prices. In 2019, domestic gas price (corporate consumers' price less indirect taxes) averaged 36 percent of the export price on Russian gas in 2018 – 31 percent).

4.5.5. Prospects for development of the Russian oil industry

Russia disposes of the vast oil reserves, which are enough to maintain high levels of crude oil extraction and exports for many years to come. There is a substantial potential for crude oil extraction owing to both undeveloped deposits in the developed areas and oilfields in the new producing areas. At the same time, there is a rather significant potential for additional extraction on already producing oilfields thanks to an in-depth development, and ramping up the oil recovery index. Moreover, Russia disposes of extensive currently undeveloped unconventional oil reserves including shale oil. Russia's oil refining potential is high and ramping up the refining depth rate to the level of industrial states allows to satisfy domestic need in motor fuel amid relatively lower volumes of oil consumption.

Global demand for oil will allow Russia to retain and even to increase current volumes of crude oil exports, first of all, by increasing shipments to China and other countries of Asia. In the context of low crude oil prices, options for the development of new oilfields and unconventional reserves will be significantly restricted in Russia because investment in the cost demanding projects will be unprofitable. Against this backdrop enforced technological sanctions against Russia, which ban exports to Russia of equipment and technologies for the development of deposits located on the Arctic shelf, deep-water oil fields and shale oil deposits will negatively affect the oil industry development.

There is a significant uncertainty regarding the world crude oil prices in 2020 due to the effect of such factors as coronavirus pandemic, economic recession, oil demand plunge, decline of shale oil production in the US as well as behavior of major oil producing stakeholders and first of all Saudi Arabia. In Q2–Q4 2020 the most feasible projection of the crude oil price to stay in the range of USD15–40 per barrel. That said, in Q2 2020, the oil prices may stay in the range of USD15–25 per barrel. Renewal of negotiations within OPEC+ and conclusion of a new deal on the production cut would have triggered stabilization and rise of the world oil prices in H2 2020.

In this context, the backbone of the further development of the Russian oil sector should become the conventional oil reserves on land. Having said that, particular significance will have deepened development of the producing fields, raising the oil refining rate. Capacities for additional crude oil output will depend on the technological progress in the sector, development of import substitution technologies, ramping up the oil recovery rate and development of unconventional reserves including shale oil deposits.

The future economic policy regarding the oil industry aimed at the creation of necessary conditions for its further development and at the government obtaining oil-related fiscal revenues should include the implementation of the following measures:

- continuation of the tax system reform: raising the MET role, reduce and abolish export duty on crude and petroleum products. This will contribute to a more efficient tax system structure, reduce subsidization of the refining sector, provide incentives for its further modernization, stepping up the oil refining depth; decrease subsidization by Russia of EAEU members; strengthen incentives for raising energy efficiency;
- expand the application of the additional profits tax on the new deposits with a progressive tax rate depending of the profitability of deposits development. This tax will ensure a wider differentiation of tax burden depending on the production conditions, complete resource rent extraction to the state and create favorable conditions for investment into the oil production, including the development of high-cost deposits;
- continuation of the tax burden differentiation policy applied to the producing oil fields: putting in place reduced MET rates and export duty for high-cost deposits. Reduction of tax burden on extensively depleted deposits: additional reduction of the MET rate for such deposits will provide incentives for their deep development, raising the oil extraction index;
- development of small and medium-sized companies: development of corresponding organizational and legal regime including a significant reduction of administrative barriers to entry for the development of mineral resource blocks. This will contribute to the deep development of producing oil fields, development of small-scale and low-income deposits and hard-to-recover reserves. It seems expedient to renew cooperation with OPEC+ and rearrange coordination of activities regarding oil production with OPEC members and other oil producing countries in an effort to maintain an acceptable level of world crude oil prices.

4.6. Agricultural sector[1]

4.6.1. Estimates of agricultural contribution to dynamics of national economy

Sustainable positive dynamics of agricultural production allowed agrarians, economists and politicians to talk about the industry not only as an instrument for ensuring food security, but also as a driver of economic growth. The inclusion of gross value added (GVA) data in the target indicators of the Government Program of Agriculture Development and Regulation of Markets for Agricultural Products, Raw Materials and Foodstuffs (hereinafter referred to as the Government Program) proved this thesis in practice.

[1] This section was written by *Gataulina E.A.,* Candidate of science (Economics), Leading Researcher, Sector of Agricultural Policy, IAES RANEPA; *Ternovsky D.S.,* Doctor of science (Economics), Leading Researcher, Sector of Agricultural Policy, IAES RANEPA; *Shagaida N.I.*, Doctor of science (Economics), Director, Sector of Agricultural Policy, IAES RANEPA; *Shishkina E.A*., Researcher, Sector of Agricultural Policy, IAES RANEPA.

At the same time, over recent years, growth of agricultural production is accompanied by reduction of agricultural share in the national economy (*Fig. 28*).

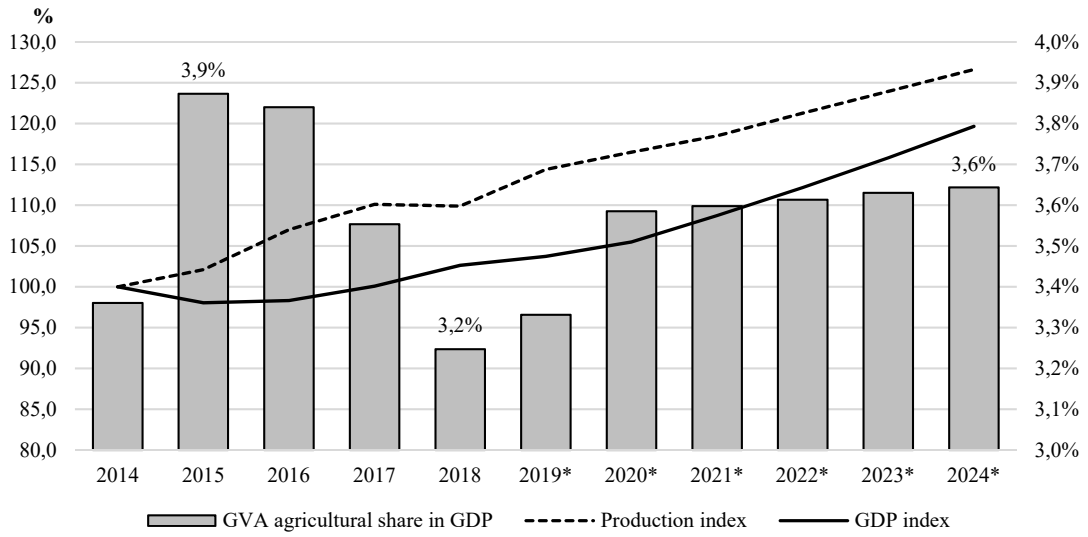


Fig. 28. Actual and forecast share of agriculture in the national economy of Russia[1]

Source: 2014–2018 – Rosstat data, *2020–2024 – own calculations based on Government Program of Agriculture Development and baseline version of the Forecast of social and economic development of the Russian Federation up to 2024.

Despite the increase in gross agricultural output (the main element of gross output under section A of OKVED 2) by 14.3% in 2019 compared to 2014, which is greater than GDP growth, the industry share in the national economy in current prices reduced from 3.4% of GDP in 2014 to 3.3% in 2019, peaking to 3.9% in 2015. The main factor of its reduction were lower growth rates of prices for agricultural products compared to products representing other sectors of economy. The share of agriculture in GDP in prices of 2016 fluctuated slightly at the level of 3.6–3.8% in 2014–2019.

The growth rate of agricultural GVA (7.8% in 2019 compared to 2014 in constant prices) exceeded the GDP growth rate (4.0%), but was evidently lower than the growth rate of gross output (14.6%) due to a change of its structure, i.e. an increase in the share of intermediate consumption in gross output (50.1% in 2019 compared to 47.0% in 2014 in constant prices).

Shifts in the structure of gross output were determined mainly by changes in the production of agricultural products as such (about 80% of the total increase in the share of intermediate consumption in this industry) and not related to redistribution of production between agriculture and forestry, fish farming and fishing.

The increase in the share of intermediate consumption in gross agricultural output is generated by both technological changes in households and peasant (farm) households (the "Households" sector, about 2/3 of the total increase), and a shift of production to agricultural organizations (sector of Non-financial corporations", about 1/3 of the total increase).

These processes stem from industrialization of agriculture, accompanied by growth of labor productivity, release of working hands and the flow of added value to other sectors (production of fertilizers, oil products, etc.), which reduces the growth of added value in agriculture.

[1] Section A OKVED 2 "Agriculture, forestry, hunting, fisheries and fish farming".

The dynamics of gross added value produced in agriculture, indicates a failure in reaching target indicators of the Government Program both in 2018 (-5.9%) and in 2019 (-5.7%). In addition, we believe that the level of 3.55–3.65% of GDP planned for 2020–2024 (according to estimates of the basic version of the Forecast of socio-economic development of the Russian Federation for the period until 2024) might not be achievable taking into consideration that target growth rate of agricultural production in 2020–2024. (10.7% by 2019), lags behind the scenario of GDP growth (15.4%), and having in mind current structural tendencies (suggesting reduction in the share of added value in the gross agricultural output).

4.6.2. Dynamics of production, consumption, food export port substitution

In 2019, crop production increased in all major groups, excluding potatoes, compared to the previous year. Growth amounted to more than 2% even for vegetables, which are still largely produced at households.

Despite the fact that Russia is mainly proud of its success in grain production, its growth in 2019 was insignificant against the last pre-reform five-year period of 1986–1990, whereas growth was by far higher for other essential products. In other words, transformation of the structure of production and its adaptation to the market is going on: production of export crops or those crops improving the pattern of consumption is increasing (*Table 26*).

Table 26

Crop production, millions of tons

Indicators	At the average for 1986–1990	2015	2016	2017	2018	2019*	2019 in %against 2018	2019 in % against average for 1986–1990
Grain	104.3	104.7	120.7	135.5	113.3	121.2	107.0	116.2
including wheat	43.5	61.8	73.3	86.0	72.1	74.5	103.3	171.3
Corn	3.3	13.1	15.3	13.2	11.4	14.3	125.4	433.3
Sugar beet	33.2	39.0	51.3	51.9	42.1	54.4	129.2	163.9
Sunflower	3.1	9.3	11.0	10.5	12.8	15.4	120.3	496.8
Soya	0.6	2.7	3.1	3.6	4.0	4.3**	107.5	716.7
Potatoes	35.9	25.4	22.5	21.7	22.4	22.1	98.7	61.6
Vegetables and gourds	11.2	13.2	13.2	13.6	13.7	14.1	102.9	125.9
Fruits and berries	3.3	2.7	3.1	2.7	3.3	No data	No data	No data

*Data as of March,1, 2020.

**Data prior to adjustment. No adjusted data for 2019 available at the time of review.

Source: Rosstat statistical data "Gross output of agricultural crop by categories of households at all standards households". URL: https://gks.ru/storage/mediabank/val1-19.rar; URL: https://www.gks.ru/storage/mediabank/val_1.xls.

The increase in livestock is negligible (*Table 27*). The reason for that is that domestic demand for meat and egg has been satisfied while meat and egg export not established and respectively insignificant. Besides, beef and pork to a lesser extent, is not competitive at world market price and, if the domestic market was open, then it is not competitive also there, although the growth in production and low consumer demand limits domestic prices, thereby increasing the competitiveness of these products.

Production of milk is actively supported by governmental subsidies, however, growth of production in agricultural organizations (AO) and peasant (farm) households (PFH) hardly compensates its decline at households. Only reduction of consumer purchasing power allows to allocate milk surplus for potential export. RF Ministry of Agriculture is working out programs for promotion of milk export to China. However, its price remains non-competitive

at the international market and export is restricted. Egg has been competitive for a long period of time, however, its export is still insignificant, less 2% of production. However, it grows fast: if egg export amounted to almost 480 million eggs in 2012, in 2018 it was already 770 million.

Table 27

Livestock production

Indicators	average for 1986–1990	2015	2016	2017	2018	2019 (estimates)*	2019 against 2018, %
Meat and poultry, thousands of tons of live weight at slaughter	9671	95.9	9853	10319	10629	10826	101.8
Milk, millions of tons	54.2	29.9	29.8	30.2	30.6	31.1	101.6
Egg, billions	47.9	42.5	43.5	44.8	44.9	44.8	99.8

Source: Rosstat.

The revival of domestic food consumer demand could be observed since June 2017. However, only in October 2019, volume of foodstuffs retail purchases exceeded the rate of 2015, but still it was very far from rates of 2012, 2013 and 2014. Thus, in December 2019, according to Rosstat, consumers bought 8% less (in comparable prices) than in December 2012. The good news is that throughout 2019 foodstuffs purchases were stable at 92–94% compared to respective months of 2012 (*Fig. 29*). In 2018, rates of purchases at 92% decreased from October 2018 to the end of the year (to 90%).

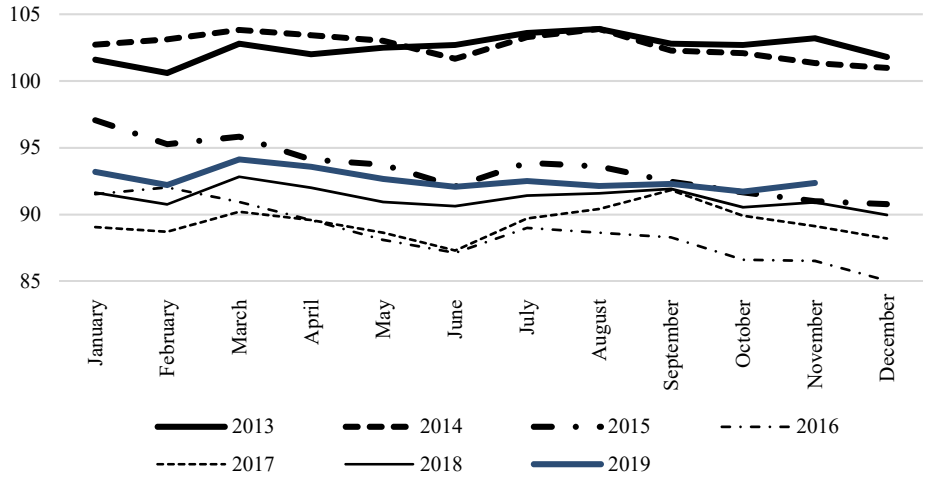


Fig. 29. Retail foodstuffs purchases, % against respective month of 2012

Source:calculations based on Rosstat data.

Poor growth in demand since 2017 impacted the dynamics of food imports according to the annual data shown on *Fig. 30*. In 2019, imports slightly increased while exports modestly decreased against 2018. However, even with these changes, it is clear that Russia is moving forward to become a net exporter of food despite the fact that from 2016, the share of imported foodstuffs in commodity resources of retail trade is not declining anymore, which was the case in 2013–2016 (*Table 28*).

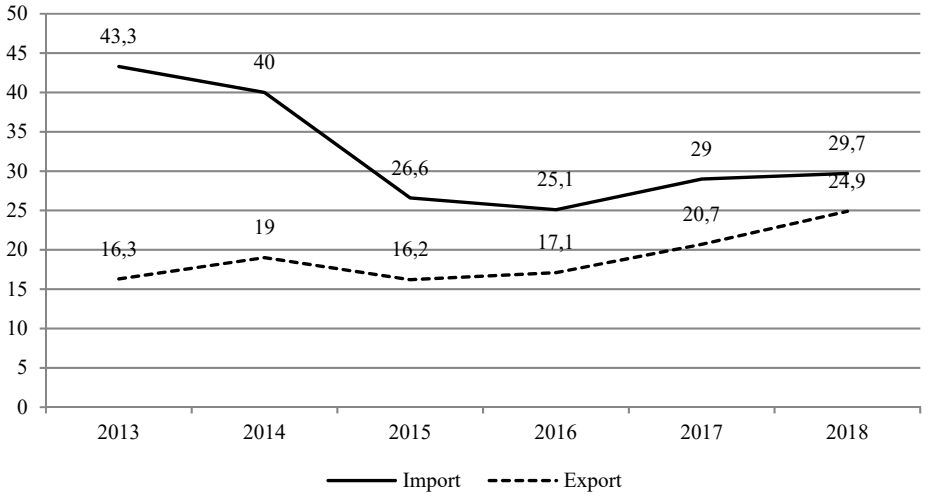


Fig. 30. Export and import of agricultural and food products (1–24 FEACN), billions of USD

Source: RF Federal Customs Service.

Table 28

Share of imported goods in food commodity resources, %

	QI	QII	QIII	QIV
2013	36	35	35	36
2014	36	33	32	36
2015	29	26	27	30
2016	24	22	22	24
2017	23	21	22	25
2018	25	22	22	25
2019	25	24	24	*

* No data for QIV 2019 available at the time of this review.
Source: EMISS. URL: https://www.fedstat.ru/indicator/37164

4.6.3. Government support of agriculture

Government Program of Agriculture Development and Regulation of Markets for Agricultural Products, Raw Materials and Foodstuffs is a principal document, shaping agrarian policy, in particular, priorities, directions and supportive measures. In 2019, another, 15th edition of the Government Program came into force (changes introduced by Decree of the RF Government No. 98 of February 8, 2019). By this Decree, the Government Program has been officially extended until 2025, and the phrase related to the period of its validity was excluded from the title. Thus, the Government Program has finally lost the properties of the medium-term planning tool, which provides for the stability of goals, directions, structure, funding throughout the entire period of its implementation, acquiring, in fact, an unlimited duration (it is possible to endlessly extend the implementation period).

According to Article 10 of the Federal Law of December 29, 2006 №264-ФZ (amended as on December 25, 2018) “On Development of Agriculture”, the National Report on the

implementation and results of the Government program[1] envisages the review of its implementation only "for the previous year and only if it has been completed, thus, for the whole period of its implementation." In other words, the Law suggested an annual review of the current situation with a full review of the selected strategy of agriculture development to be made every 5 years (initial validity period of the 1st Government Program). It is anticipated to introduce significant amendments into the Government Program, if required, specifically at the close of mid-term period based on results of the performed review. This was an example of achieving a combination of stability vital for business, and flexibility necessary to manage the industry.

At present, the Government Program has been extended to 2025 and, respectively, the review of agricultural policy for the period of 2013–2020 (valid until renewal), clearly reflected in the Government Program, will not be included in the National Report for 2020.

It remains unclear whether goals declared in the Government Program for this period have been achieved and priorities and support mechanisms correctly chosen. The review of the current situation, included for the time being in the annual National Reports, is certainly important, but only as a stage in assessing the achievement of medium-term goals. This aspect of review under National Annual Reports is not available now.

At present, the Government Program and the National Report reflect the actual state of affairs, meaning the current short-term mode of management, while 15 amendments of the Government Program over 7 years, including those that significantly changed its structure, directions and funding, serve as confirmation.

In addition, parameters of financial support for the Government Program and its projects for 2022–2025 are indicative in the Government Program Passport with notes that they will be "clarified after approval of the Federal Law on federal budget for the next financial year and the planning period." [2]. There are no restrictions on the amount of funding adjustments, that is, they can be substantial.

Thus, for instance, according to the Government Program Passport "Comprehensive development of rural areas" (this direction was included in the Government Program of Agriculture Development and Regulation of Markets for Agricultural Products, Raw Materials and Foodstuffs and in 2019 was spun off into a separate Government Program with financing due to start on January 1, 2020), the funding is planned out of the federal budget in the amount of RUB 79.2 billion in 2020, RUB 160.6 billion in 2021, RUB 193.1 billion in 2022[3]. However, according to Federal Law of December 2, 2019 № 380-FZ, it is planned to allocate only RUB 35.95 billion in 2020, RUB 34.4 billion in 2021 and RUB 34.98 billion in 2022, in other words, funding envisaged for 2022 is 5.5 times less compared to Government Program Passport.

This situation is far from normal, since such a reduction requires a radical review of all target indicators, and most likely, of the structure and goals of the Government Program already approved by RF Government Decree dated May 31, 2019 No. 696 (as amended on October 17, 2019).

The overall funding of the Government Program for the Development of Agriculture and the Regulation of Agricultural Products, Raw Materials and Foodstuffs also undergoes significant changes depending on the wording and calculation methods (*Table 29, Fig. 31*).

[1] Principal analytical document on implementation of goals, tasks, indicators of Government Program at fixed funding. Approved by RF Government, forwarded to RF Federal Assembly.
[2] Decree of RF Government of July 2012 № 717 (as amended on February 8, 2019).
[3] Decree of RF Government of May 31, 2019 № 696 (as amended on October 17, 2019).

Table 29

Scheduled funding for implementation of Government Program as in its different amended versions, RUB billion

Sources of funding	2019	2018	2019
	Amended version14 (Decree of RF Government №1443 of November 30, 2018)	Amended version 15 (Decree of RF Government of February 8, 2019 № 98)	
Federal budget	242.43	242.0	303.62
Consolidated budgets of RF subjects	42.77	45.0	21.33
Off- budget sources	11.98	878.7	468.79
Total	297.2	1165.6	793.74

Source: Decree of RF Government № 717 (as amended by Decrees of RF Government №1443 of November 30, 2018 and № 98 of February 8, 2019)

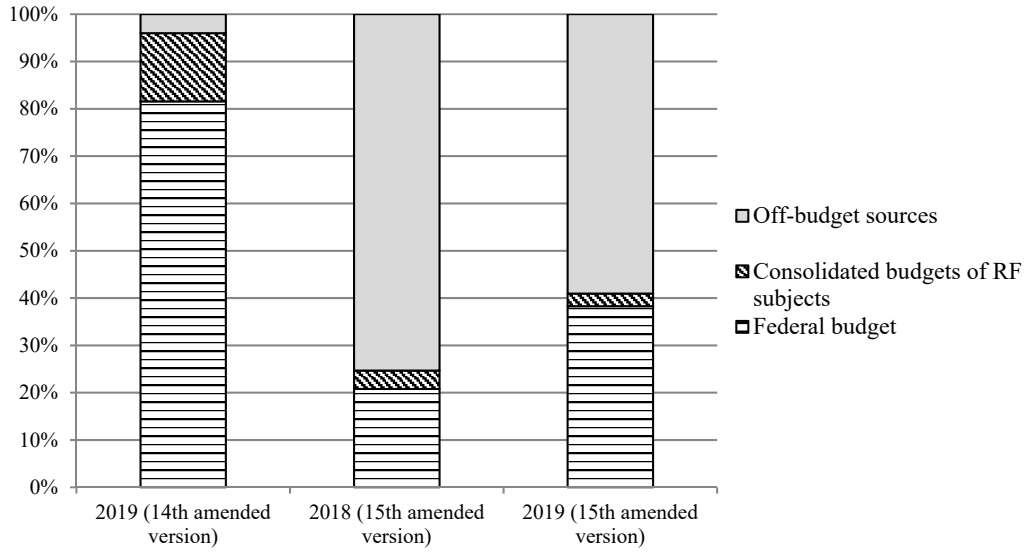


Fig. 31. Framework of scheduled level of funding for implementation of Government Program as in its different versions including off-budget sources

Source: Decree of RF Government № 717 (as amended by Decrees of RF Government №1443 of November 30, 2018 and № 98 of February 8, 2019)

Sharp increase of the off-budget funding sources in different versions of the Government Program could be explained by the fact that earlier (version 14) this particular article included only relevant data on the Federal Targeted Program (FTP) "Sustainable Development of Agricultural Lands" and "Development of Amelioration of Agricultural Lands in Russia."

It should be noted that financing pattern of these Federal Targeted Programs (FTP) was reviewed in the National Reports for the respective year taking into account the off-budget sources. All business and individual investments subject to the provision of governmental support were included there after methodology has been changed in the 15th amended version.

As a result, total funding of the Government Program in 2018 should have amounted to a record RUB 1 trillion 166 billion according to the Government Program Passport (15th amended version), when the off-budget funds, i.e. own finances of agribusiness and rural residents, were the major source of agricultural funding as shown at *Fig. 31* and *Table 29*.

In 2018, they should have amounted to 75% of the total funding of the Government Program and 59% in 2019. The role of the federal budget was restricted to 21% in 2018 while regional budgets settled with only 4% of total planned funding.

It was to be expected that the focus in examining the implementation of the Government Program will accordingly switch in the 2018 National Report to the main source of funding, that is, the dynamics of the off-budget funds. The actual execution of planned off-budget revenues, as well as the reasons for their planned rapid reduction in 2019 compared to 2018 became evident (according to the Government Program Passport from RUB 879 billion to RUB 469 billion).

In other words, if we consider that one of the budgetary funding goals is to promote the flow of investments to agriculture, it appears that taking into account the scheduled increase of the budgetary funding allocated from treasuries at all levels by 13% in 2019 compared to 2018 (15th amended version of the Government Program), the decline in the off-budget funds, as the source of funding the development of this sector, has been officially planned by 1.9 times.

However, there are no answers to these questions in the National Report for the respective year, which is the principal official document monitoring the Government Program implementation in 2018. It examines the implementation of resourcing for the Government Program exclusively from the federal budget.

The role played by the off-budget funds as well as regional budgets in providing financing for the Government Program is not estimated in general, likewise in the context of projects, subprograms, and measures, with the exception of their traditional inclusion in the FTP review "Sustainable Development of Agricultural Lands" and "Development of Amelioration of the Agricultural Lands in Russia." At the same time, the amount of the off-budget funds for these FTPs amounted to only RUB 13.4 billion in 2018, i.e. 1.5% of their total planned amount of funds.

There is no evaluation of what happened to 98.5% of planned off-budget funds in 2018. Alterations in the pattern of indicators, methodology of their calculation should be justified by practical need. Based on the content of the National Report for 2018, there was no need to change methodology.

The authorities consider even further funding out of the federal budget as the main driver for development of agricultural sector. As seen from *Table 29*, federal budget funding expects a significant growth (by 30%) (by 25% compared to the plan of 2018 according to the 15th amended version of the Government Program) with a two-fold planned reduction in the share of regional budgets.

Thus, growth of strain on federal budget has been planned for 2019. This can be partly explained by the fact that loan debts on loans granted on terms of interest rate reimbursement, financed, inter alia, from regional budgets, reduce, with an increase in loans received under new rules, i.e. at a reduced rate not exceeding 5%. Incomes lost by banks on these loans in the amount not exceeding the key rate, will be compensated only out of the federal budget.

In 2018, actual funding of the Government Program from the federal budget amounted to RUB 249.5 billion, i.e. the scheduled increase in funding for 2019 compared to the previous year, will amount 21.7% according to the latest 15th current version of the Government Program. Based on open sources, it was not possible to identify the relevant data on full funding of the Government Program from regional budgets in 2018.

Taking into consideration the "Information on local budget expenditures from the budget of RF subject with subsidies and other inter-budget transfers making up the source of financial

support"[1] for 2018 and 2019, one can only identify the role of federal and regional budgets in financing subsidies and grants transferred directly to agricultural producers (*Table 30*).

Table 30

Subsidies and other intergovernmental transfers forwarded to agricultural producers, billions of Rubles

Year	Total	Including from		Size of funding including budget of RF subject, %
		Federal budget	Regional budget	
2018	170.58	140.53	30.05	17.62
2019	152.32	126.91	25.41	16.7
2019 against 2018, %	89.3	90.3	84.5	

Source: Information on local budget expenditures from the budget of RF subject with subsidies and other inter-budget transfers making up the source of financial support (final forms for 2018; 2019) URL: http://mcx.ru/activity/state-support/funding/.

Thus, in 2018, only 56% of the actual funds allocated from the federal budget were meant for subsidies and other payments forwarded straightforward to agricultural producers. The remaining funds were channeled to maintain the administrative staff of the RF Ministry of Agriculture, subordinate institutions, compensations to banks that granted preferential lending to agricultural producers, manufacturers of agricultural machinery selling it at a discount, and other budget recipients.

Consequently, *Tables 29–30* show that a significant reduction in subsidies and other direct payments to agricultural producers was scheduled in 2019 compared to 2018, despite the plan to increase federal funds intended for implementation of the Government Program on the whole, to RUB 303.6 billion. Another reason for that is the growth of preferential loans suggesting transfer of compensation to credit institutions rather than to agricultural producers.

As also seen from *Tables 29–30,* actual regional funding of the Government Program measures for 2019 exceeded the planned level of regional funding by RUB 4.1 billion according to the Government Program Passport (15th amended version).

Table 31 shows actual funding of the Government Program directions in 2018[2] and funding for 2019 in accordance with the Federal Law of November 29, 2018 № 459-ФЗ "On Federal budget for 2019 and for the planning period of 2020 and 202." Funding was subjected to alterations throughout 2019, and cash execution will be known after completion of the accounting period.

Table 31

Funding of the Government Program of Agriculture Development and Regulation of Markets for Agricultural Products, Raw Materials and Foodstuffs in 2018 (cash execution including funding from reserve fund of the RF Government) and 2019 (planned cash allocation from federal budget), billions of Rubles

Program directions of the Government Program	2018, actual		2019, plan		2019 against 2018, %
	Billions of rubles	% of total	Billions of rubles	% of total	
1	2	3	4	5	6
Government Program, total	**249.504**	**100.0**	**303.62**	**100.0**	**121.7**
Direction Development of AIC Sectors	172.57	69.17	228.92	75.40	132.7
Federal Project Establishment of Support System for Farmers and Development of Agricultural Cooperation	-	0.00	7.7	2.43	
Federal Project Export of AIC products	1.431	0.57	38.81	12.78	2712.1

[1]URL: http://mcx.ru/activity/state-support/funding/.
[2] Within 2019.

Cont'd

1	2	3	4	5	6
Departmental Project Technological Modernization of the AIC	14.00	5.61	8.00	2.63	57.1
Measure Promotion of farming equipment renovation	10.00	4.01	8.00	2.63	80.0
Departmental Project Development of AIC Sectors Ensuring Accelerated Import Substitution of Main Types of Agricultural Products, Raw Materials and Foodstuffs	64.095	25.69	59.93	19.74	93.5
Measure Non-targeted Support of Agricultural Producers in Their Crop Production	16.305	6.53	11.34	3.74	69.5
Measure Increasing Productivity in Dairy Farming	7.962	3.19	7.96	2.62	100.0
Measure Aid in Achieving Regional Program Development Targets in AIC ("Single Subsidy")	39.827	15.96	40.62	13.38	102.0
Departmental Project Promotion of Investment Activity in Agroindustrial Complex	93.045	37.29	114.81	37.81	123.4
Measure Support of Investment Lending to AIC- subsidies to compensate for interest payment on investment loans issued to AIC	46.868	18.78	41.57	13.69	88.7
Measure Support of Preferential Lending to AIC Organizations	32.648	13.09	73.14	24.09	224.0
Measure Compensation for direct costs incurred for construction and modernization of AIC facilities	13.529	5.42	0.10	0.03	0.7
Direction Ensuring Development of AIC Sectors [1]	7693	30.83	74.70	24.60	97.1
Measure Management of Government Program Implementation by Executive Administration	18.271	7.32	1.17	0.39	6.4
All-Russia Production Center Implementation of veterinarian and phytosanitary surveillance	12.231	4.90	12.46	4.10	101.9
Subprogram Ensuring General Conditions for Functioning of AIC Sectors	17.211	6.90	29.90	9.85	173.7
Subprogram Development of Amelioration of Agricultural Lands in Russia	11.225	4.50	13.28	4.37	118.3
Subprogram Scientific and Technological Backing for Development of Sectors of AIC	0.616	0.25	0.48	0.16	77.9
Subprogram Sustainable Development of Agricultural Lands	17.046	6.83	17.42	5.74	102.2

Source: Federal Law of November 29, 2018 № 459-FZ "On Federal budget for 2019 and planning period of 2020 and 2021"; information of RF Ministry of Agriculture.

As seen from *Table 31*, fundamental changes took place in the pattern and funding of the Government Program. The direction "Development of AIC sectors" intensified mainly due to a sharp increase in funding of the Federal project "Export of AIC products" from inconsiderable for this direction RUB 1.4 billion up to RUB 38.8 billion. A closer look, however, shows that growth happened mainly due to measures of capitalization increase of RF Agricultural Bank included in the project in the amount of RUB 15 billion, preferential lending to agricultural producers and processing industries in the amount of RUB 17.7 billion as well as amelioration measures worth RUB 2.04 billion (*Table 32*).

Long since 2006, Government has been regularly recapitalizing the RF Agricultural Bank as part of the priority National Project "Development of the AIC". In the past, recapitalization of the RF Agricultural Bank was included in the direction of support "Improving financial stability of small businesses in rural areas" and stimulated by the necessity to develop a regional banking branch network to cooperate with small AIC businesses. This segment was not very attractive to banks, and, moreover, branches of other banks were not present in every rural area, therefore, the assistance of the Government seemed justified.

[1] No such subprogram in 2018. The table shows a summary of articles included in the 2019 subprogram for comparison purposes. In 2018, the direction included eventual measures not indicated in the table describing measure for support of information resources and monitoring of agricultural land – a total of RUB 332 thousand.

Table 32

Details of export support measures reflected in the Government Program of Agriculture Development and Regulation of Markets for Agricultural Products, Raw Materials and Foodstuffs in 2018 (actual) and 2019 (funding planned from federal budget), billions of Rubles

Measures	Indicators	
	Billions of Rubles	%
2019		
Federal project "Export of AIC products"	38.81	12.78
Implementation of Amelioration of Agricultural Lands	2.04	0.67
Government Support aimed at Promotion of AIC Production	0.05	0.02
Government Support aimed to reduce costs of transportation of Agricultural and Food Products	1.28	0.42
Capital contribution to Russian Agricultural Bank shareholding company	15.00	4.94
Compensation of lost incomes to Russian credit institutions on loans issued at reduced rate to agricultural producers, organizations and individual entrepreneurs involved in production, initial and (or) further (industrial) processing of agricultural products and sale at discounted rate[1]	17.73	5.84
Implementation of National project "International cooperation and export"	2.71	0.89
2018		
Priority project "Export of AIC products"	1.43	0.57
Measure "Establishment of a system promoting and supporting export of Russian AIC Production to International Markets	0.846	0.34
Measure "Assistance to Rosselkhoznadzor aimed at greater access of Russian AIC production to international markets"	0.481	0.19
Measure "Establishing and running the Analysis Center for export of AIC production and studies of potential international target markets"	0.1	0.04

Source: Federal Law of November 29, 2018 № 459-FZ "On federal budget for 2019 and planning period of 2020 2021"; RF Ministry of Agriculture.

Nowadays, "Pochta-Bank" rapidly occupies this niche. Although the capital contribution to RF Agricultural Bank accounts for almost 40% of the total allocated funding under Federal Export Support Project (*Table 32*), no special connection between RF Agricultural Bank and achievement of target indicators related to this project was found based on open documents. There is no reference to RF Agricultural Bank either in the current version of the Government Program, or in the Passport of the Federal Project "Export of AIC Production" (approved by minutes of the National project "International Cooperation and Export" committee meeting of December 14, 2018 No. 5), or in the Passport of the National Project "International Cooperation and Export."

Furthermore, the RF Agricultural Bank is not an exclusive authorized bank providing preferential lending to agricultural producers who have concluded agreements on competitiveness improvement (i.e. potential exporters). Nine more banks apart from those selected by tender, are included in the list of too-big-to-fail credit institutions granting preferential lending. However, no recapitalization was envisaged for them.

The other two most significant export support measures involve mechanisms that are already present in the Government Program: "Support of preferential lending to AIC agricultural organizations" and the subprogram "Development of Amelioration of Agricultural Lands in Russia". The difference is that governmental support related to these measures is linked with certain criteria of the project "Export of AIC Production", aimed ultimately at export growth.

In the mean time, it is prohibited to receive funds profiting both from the program "Support of preferential lending" and SEC (SEC – agricultural consumer cooperatives). According to analysts, it deters potential borrowers, as many of them have already taken preferential credits

[1] Those concluded agreement on improvement of competitiveness (SEC)

and now scared to borrow SEC loans, though double financing is prohibited only with regard to the same facilities, but not the same borrowers. Although, the amount of RUB 17.73 billion was originally envisaged for preferential SEC lending by Federal Law "On Federal budget for 2019 and Planning Period of 2020 and 2021", the total amount of subsidies made up a total of RUB 2.02 billion largely intended for development of processing, (RUB 1.9 billion) according to the Preferential Loan Plan for 2019 dated September 13, 2019. Thus, the demand for preferential SEC loans wad greatly overestimated when originally planned.

According to the WTO Agreement on Agriculture, "*export subsidies refers to subsidies contingent upon export performance*." [1] Having joined the WTO, Russia took the responsibility against such subsidies. At the same time, the "exported amount of AIC products (in physical terms) based on new commodity stock, obtained at agricultural lands, ameliorated lands put into use, and mobilized agricultural lands, in the year following the one when the subsidy was granted", was approved as indicator to assess the effectiveness of subsidies for ameliorated agricultural lands under the project "Export of AIC products." [2].

Even without this indicator, the very appropriation and allocation of preferential lending, amelioration subsidies and reduction of transportation costs in relation of the project "Export of Agricultural Products" clearly signals their link with export development, in other words, it exposes the country to risks of litigation against WTO and EAEU partners.

The mechanism aimed to improve the access to loans remained the main tool of the federal budget support in 2019, i.e. funding of the departmental project "Promotion of investment Activities in AIC" increased by 23%, reaching RUB 114.8 billion or 37% of the total governmental funding. Moreover, taking into account a similar mechanism for supporting preferential SEC lending and recapitalization of the RF Agricultural Bank, it reached RUB 147 billion vs 48.6% respectively.

Herewith, the amount of only RUB 13.75 billion subsidies (not counting SEC) was spent for new loans in 2019 according to the List of Borrowers who benefited from positive decision of the RF Ministry of Agriculture taken in the period of January 23 – November 25, 2019, to include them in the Borrowers' Register. Fixed capital assets compensate previously taken loans. However, funding of a measure promoting investment but not entailing long-term government obligations, i.e. compensation for the direct costs incurred for construction and modernization of AIC facilities in 2019, has been virtually halted.

Since 2019, this form of compensation cannot be used for implementation of the most demanded goals: construction and modernization of greenhouse facilities. It became possible, nevertheless, to receive it for establishment and (or) modernization of flax mills, hemp processing enterprises, breeding and seed-growing centers in crop production, poultry farming (Decree of the Government of the Russian Federation of November 24, 2018 No. 1413).

It is planned to reduce subsidies to agricultural machinery manufacturers selling it to agricultural producers at discounted rate by 20% from RUB 10 to 8 billion, which can also be negatively assessed, given the high wear and tear of machinery in the agricultural industry and the relevance of this measure. According to the official website of the RF Ministry of Agriculture, the entire limit of subsidies was entirely approved as of October 3, 2019. [3]

[1] Article 1 Part I WTO Agreement on Agriculture.
[2] Annex №10 of the Government Program of Agriculture Development and Regulation of Markets for Agricultural Products, Raw Materials and Foodstuffs for 2013–2020 " (as amended of February 8, 2019).
[3] URL: http://mcx.ru/activity/state-support/measures/machinery-subsidy/summarnyy-obem-subsidiy/.

Federal funding of the main measure of the relevant support for crop production, that is, the untargeted support, decreased from RUB 16.3 (relevant for 2018) to RUB 11.3 billion (plan for 2019). In 2018, the initially allocated limits of federal funding grew from RUB 11.3 to 16.3 billion proving high demand in subsidy. Funding of this measure from regional budgets amounted to RUB 4.5 billion in 2018; respective planned limits for 2019 equal RUB 3.6 billion.

In 2019, a new restriction was added to the Regulations of subsidies' allocation aimed at untargeted support (Annex №7 to Government Program), namely, to obtain the subsidy, it is required to use seeds of agricultural crops, varieties or hybrids included in the Government Register of State-permitted cultivars approved for specific regions, and also provided that the varietal and sowing qualities of such seeds comply with GOST R52325-2005. Agricultural producers negatively assess this restriction. Thus, regional AKKORs argue that *"the majority of small and medium-sized agricultural enterprises do not have documents confirming the use of these varieties, and, therefore, cannot rely on hectare subsidies"*[1].

Since 2019, calculation of untargeted support in terms of subsidies per hectare of cropped land under cereals, grain legumes and fodder crops (hereinafter referred to as untargeted support in crop production) is linked with the indicator of agricultural insurance. It is planned that part of the subsidy (15% of the total amount of untargeted support in crop production), calculated with due regard to intensity of crop area insurance for each region, will "give priority to agricultural producers for the insured cultivated area."[2] Accordingly, if the region refuses agricultural insurance, the total limit of subsidies will be reduced by 15%. Previously, regions demonstrating the highest positive financial and economic results of agricultural producers in crop production, taking into account the soil fertility indicator of the RF subject, were not eligible to receive the hectare untargeted support.

As from 2019, they are eligible to receive a part of subsidy allocated according to the intensity of crop lands' insurance. RF Ministry of Agriculture approves list of these regions on an annual basis. In 2019, these regions were as follows: Belgorod, Voronezh, Kursk, Lipetsk, Tambov and Rostov, Krasnodar and Stavropol.

Subsidies earmarked for boosting productivity in dairy farming remained as in the previous year, meaning actual reduction of support in view of inflation. The increase of funding of an important measure "Aid in Achieving Regional Program Development Targets in AIC" ("Single Subsidy") is also lower than envisaged inflation. In 2019, allocation of a separate limit is planned for planting vineyards as well as for government backed agricultural insurance within the frame of this subsidy.

In 2019, Federal project "Establishment of a support system for farmers and development of rural cooperation" was launched. The purpose of the project, designed for 2019–2024, is to "ensure, at least, 126 000 new people involved in small and medium-sized agricultural enterprises by 2024, setting up and developing small and medium-sized AIC enterprises including peasant (farm) households (PFHs) and agricultural consumer cooperatives (SECs)."[3] The following measures are: "Agrostartap" grants awarded on a competitive basis for setting up and developing PFH; reimbursement of partial costs to agricultural consumer cooperatives according to respective directions and subject to conditions regulated by Decree of the RF Government No. 476 of April 20, 2019; reimbursement of up to 70% of costs associated with

[1]URL: https://agrobook.ru/blog/user/aleksandra-koreneva/fermery-70-hozyaystv-ne-smogut-poluchit-v-etom-godu-pogektarnuyu.
[2] Decree of RF Government of July 14, 2012 № 717 (amended as of February 8, 2019).
[3] Ibid.

the implementation of current activities to the centers of competence in the field of agricultural cooperation and support of farmers.[1]

Planned funding of the project amounted to RUB 7.37 billion from the federal budget in 2019. Planned transfers to agricultural producers (SECs, PFHs) paid from federal budget equaled to RUB 5.35 billion against RUB 294.3 million from regional budgets[2], thus, level of co-funding to agricultural producers from regional budgets was very low, 5.2% in regard of this project.

PFHs and agricultural consumer cooperatives (SECs) are also eligible for support within "Single Subsidy". PFHs can receive it mainly under support measures for new farmers; development of family cattle farms; SECs can get grants for development of material/technical logistics. In 2018, PFHs received he amount of RUB 10.86 billion under these directions including RUB 8.45 billion from the federal budget, SECs received RUB 4.02 billion including RUB 2.65 billion from the federal budget with a total of RUB 14.88 billion from treasuries at all levels. In 2019, the amount of RUB 14.45 billion was envisaged from treasuries at all levels, including the federal budget, i.e RUB 10.28 billion. Thus, we can assume that while maintaining the level of PFHs and SECs support under directions of "Single Subsidy" in 2019, it is planned to increase support to PFHs and SECs by RUB 5.35 billion through the federal project. Cash execution will be adjusted upon assessment of the year results.

Thus, in 2019, there was an increased focus shown by authorities towards support for exports, small business forms, followed by shaping these directions into federal projects and increase in funding. The tendency to predominant support of agriculture through access to preferential loans maintained, the transition from direct subsidies granted to agricultural producers to subsidizing organizations providing resources for agriculture on favorable terms, is still in progress (banks, Rosagroleasing, manufacturers of machinery, Russian Railways, OJSC, insurance companies, etc.)

As from 2020, it is planned to significantly change the regulations of subsidies' allocation and distribution aimed at support of certain branches of crop production, livestock breeding and agricultural insurance, introducing compensating and promoting parts of subsidies. The changes relate to untargeted support and subsidies aimed at increase of productivity in dairy farming and directions of single subsidy.

4.6.4. New challenges of 2020

The year 2020 began with two cataclysms, which inevitably affected the food market in Russia: the spread of coronavirus pandemic in Russia and a sharp Ruble devaluation in February-March.

Potential restriction on free movement in the city under quarantine, risks of shutting down production facilities and shops due to workers' illnesses, as well as psychological fears amid restrictions of cargo traffic, caused speculative demand for cheap and long-stored products.

Moreover, Russia is a real net exporter of these products, including cereals, flour, salt, pasta. The following recommendations could be suggested to the Government in order to reduce speculative demand:

[1] Decree of RF Government of April 20, 2019 № 476.

[2] Information on local budget expenditures from the budget of RF subject with subsidies and other inter-budget transfers making up the source of financial support (final forms for 2018); form as of November 28, 2019) URL: http://mcx.ru/activity/state-support/funding/.

- conducting an information campaign aimed at raising awareness of agricultural producers, food producers, retailers, market analysts that the country has stocks of these products, resources sufficient to meet current demand, explaining reasons for empty shelves in supermarkets;
- nullification of import duties on foodstuffs;
- waiving of food embargo, introduced in 2014. Imports will be insignificant due to Ruble devaluation;
- waiving of trade control, which can regulate demand at short-term by raising food prices in order to reduce speculations.

These recommendations were largely discussed by the Government in March 2020.

After another Ruble devaluation in 2020, domestic prices for almost all agricultural products fell below global level. A risk of their export emerged to the detriment of domestic market. The Government began to consider ways of its protection.

In this context, one should bear in mind that up to date, numerous studies exist, estimating consequences related to protection of domestic market in the post-Soviet territory. They prove that restrictions strongly disrupt operations of grain markets and counteract the mobilization of production and export potentials of countries introducing them. They are always discriminatory against farmers, while benefits to consumers are not evident. This is also true with regard to other products.

The best solution to ensure economic and physical access to foodstuffs when Ruble devalues, would be to support people, so that they can buy food that is of no shortage at the global market at higher prices, rather than introduce restrictions for producers, i.e. ban on exports, introduction of export quotas or export duties. Taking into account that support of consumers' purchasing power announced by the Presidents of the Russian Federation, will be limited in Russia, the Government considers ways to limit export of products as a measure stabilizing prices at the domestic market.

A ban should not be imposed as a measure to regulate the market of export-oriented products, since the volume of domestic production can satisfy all domestic needs. Quota introduction is a corrupt measure that redistributes the benefits of high export prices in favor of traders who own export terminals.

Use of export duties could be effective when they are refunded or redistributed in favor of food producers, who experience export restrictions. To do this, we need a mechanism for consolidation of export duties on agricultural goods and raw materials, as well as a mechanism for refund of duties retained in favor of producers whose products were under export restriction duties.

In this context, introduction of export duties should be well determined and enshrined in the Federal Law. According to Article 8 of the Federal Law "On the Principles of State Regulation of Trade in the Russian Federation", the RF Government can approve prices limits for socially important goods if the increase in retail prices for certain types of socially important food essentials equals 30% and over within 30 calendar days in a row nationwide. Regulation can be introduced for a period of 90 days.

It would be logical to assume that regulation of raw materials markets required for food essential can be introduced after regulation of retail prices will have come into force.

Restriction of retail prices was not the case in Russia yet, while export restrictions have been introduced more than once.

Restriction of grain prices gives benefits to producers of livestock products, which can be exported even in the absence of food surpluses determined according to their quantity by recommended consumption standards. In this situation, it is impractical to introduce restrictions that discriminate manufacturers of one product and bring advantages to others.

It would be appropriate to reduce VAT on food, taking into consideration shrinkage of the population purchasing power.

Most suppliers of agricultural products intended for processing do not pay VAT, however, VAT is included in the price of food sales. This is resulted either in losses incurred by participants of the following sectors of food supply chain, which will be then passed on to consumers, while their income drop, or in discrimination of agricultural producers when their products have to be sold at reduced price to processing companies or exporters.

4.7. The transport complex [1]

The transport complex and its development, in particular the development of transport infrastructure, is one of the most important factors of economic growth. Investments in infrastructure invariably have a huge impact on long-term economic growth. A lack of proper infrastructure development can give rise to bottlenecks, imbalances and a significant increase in the cost of doing business.[2]

The transport and logistics complex and related activities play a significant role in the functioning of Russia's national economy. According to data released by Rosstat, the transport industry's share in GDP in 2017 and 2018 was 7.0% and 6.5%, respectively, and at year-end 2019, it was 6.6%.

According to the estimates released by the RF Ministry of Economic Development, from 2016 onwards the transport sector has been making a positive input into GDP growth: 0.09 percentage points in 2016, 0.01 percentage points in 2017, and 0.19 percentage points in 2018; in Q1 and Q2 2019, 0.21 and 0.19 percentage points, respectively; and by year-end 2019, the annual input of the transport industry into GDP growth is forecast be 0.12 percentage points. Through the existing inter-industry links, the transport complex influences almost every sector of the national economy.

Below, we consider in more detail the main trends of 2019 and the previous years observed in Russia's transport industry.

4.7.1. The general structure of transport activities in 2019

Freight transport

One of the key indicators of the transport system's activity is freight transportation intensity[3] – the index of freight transport volume per unit of GDP, which measures the 'transport load' on the economy. A lower freight transportation intensity indicates a relatively more efficient use of transport. In most countries with market economies, this figure has been

[1] This section was written by *Borzykh K.A*., junior researcher at the Laboratory for Infrastructural and Spatial Studies, ISMI RANEPA; *Ponomarev Yu.Yu.*, Candidate of Economic Sciences, Head of the Laboratory for Infrastructural and Spatial Studies, ISMI RANEPA, Senior Researcher at the Center for Real Sector of the Gaidar Institute.

[2] *Idrisov, G.I., Ponomarev, Y.Yu.* Infrastructure mortgage in Russia: opportunities and prospects // Voprosy Ekonomiki. 2019. No 2. P. 114–133.

[3] The sum of shipment transports, calculated by multiplying the shipment weight by the distance traveled.

declining over the past decades, reflecting the relative cost reduction of transport services.[1] For Russia, a similar trend has been noted (*Fig. 32*), although the freight transportation intensity index of the Russian economy is still quite high and stays above the corresponding indices of other large countries with comparable average distances traveled by freight transport (the USA, China, Germany, Canada).[2] At the same time, freight transportation intensity decline has been occurring alongside both an increasing freight volume carried by all types of transport and an increasing freight turnover.

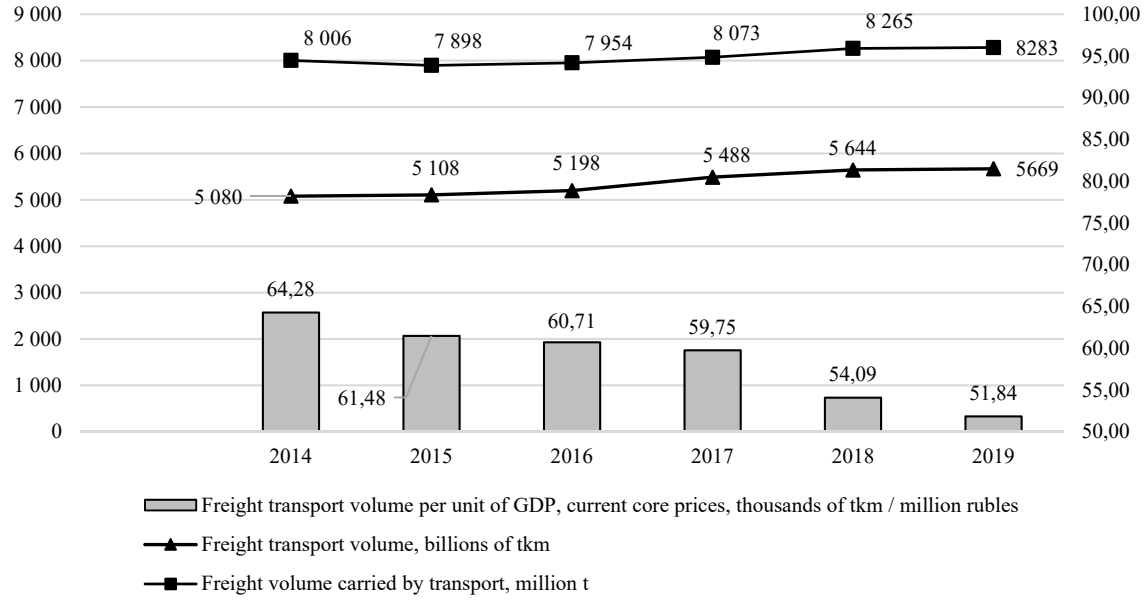


Fig. 32. The movement of freight transport volume per unit of GDP, in current prices (right-hand side axis), freight transport volume and freight turnover, 2014–2019

Source: Rosstat; own calculations.

The largest share in freight volume by transport mode (less pipeline transport) is taken up by railway transport. Thus, in 2019, railway freight volume per unit of GDP in current prices amounted to 23.800 tkm / million rubles (vs 25,000 tkm / million rubles in 2018).

Overall in recent years, the freight transport structure has undergone no significant changes: rail and pipeline transport still prevail in terms of freight volume, but road transport tops the list in terms of freight physical volume (*Fig. 33* and *36*).

A steady increase in freight turnover was observed practically every year over the period from 2009 to 2019. The leading role of pipeline and rail transport (*Fig. 33*) can be explained by the fact that the spatial profile of long-distance transport services (for example, the significant share of transportation of raw materials from remote deposits to their processing and consumption points) has changed only slightly compared with the other transport modes. Road transport, which is characterized by a more diversified structure (automotive vehicles of small,

[1] *Speranza M.G.* Trends in transportation and logistics // European Journal of Operational Research. 2018. Vol. 264. No. 3. P. 830–836.
[2] Integrated transport system. M.: CSR, 2018.

medium, or heavy capacity, etc.),[1] is mainly used for carrying cargo over relatively shorter distances, including 'door-to-door' delivery, i.e. for short-distance transportation, where it has competitive advantages over other modes of transport.[2] Over the past year, road freight transport turnover gained 5.8%, increasing from 259 billion tkm in 2018 to 274 billion tkm in 2019.

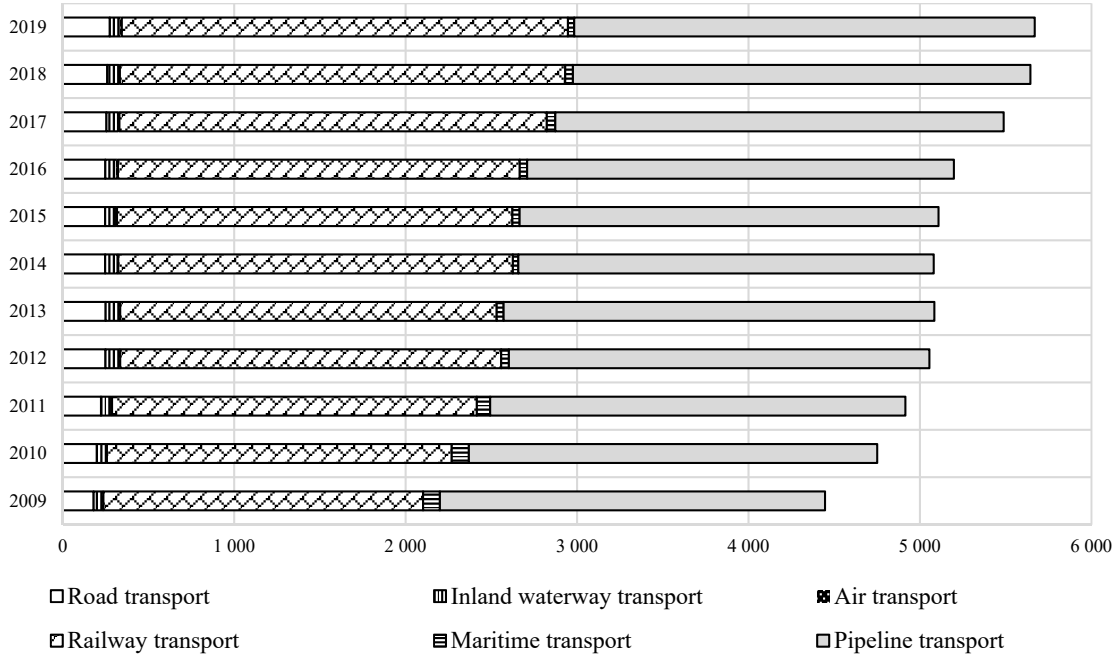


Fig. 33. Freight turnover structure by transport mode (billion tkm), 2009–2019

Source: Rosstat; own calculations.

The market for commercial road transport has been demonstrating a growing demand for transportation services on the part of the retail sector. Thus, in particular, a number of large retail companies (for example, X5 Retail Group) have launched an expansion across Russia's regions, opening their outlets in some hard-to-reach and remote places, thus requiring efficient logistics and supply chains stretched over a vast territory.[3] In addition, distribution networks have displayed a tendency to increase the number of their distribution centers[4] in order to centralize supplies and reduce the length of the transport leg, and in doing so boost their turnover rate (the number of deliveries per day), thus also creating additional demand for transport services.

Air freight is on the decline. Thus, while the freight turnover of Russian airlines in 2018 amounted to 7.8 billion tkm, in 2019 it shrank to 7.4 billion tkm (by 5.4%). The commercial freight load is also falling (by 1.4 percentage points). Overall in the civil aviation industry, the

[1] Analytical Center for the Government of the Russian Federation. Dynamics of freight transportation in Russia. Bulletin on Socioeconomic Crisis in Russia, 2015 (December). (In Russian). URL: http://ac.gov.ru/files/publication/a/7400.pdf.
[2] Integrated transport system. M.: CSR, 2018.
[3] Piatyorochka goes to the taiga // Retail.ru. URL: https://www.retail.ru/cases/pyaterochka-idet-v-taygu/.
[4] *Sereda, D.* Logistics in retail trade: how the federal networks are consolidating Russia anew. URL: https://www.lobanov-logist.ru/library/358/63667/.

freight and mail transportation volume fell by 2.4%.[1] There has been a decline in international air freight traffic, in particular between Russia and foreign countries outside the CIS.[2] The other factors that impose constraints on the industry's activity are the rising fuel prices and its sensitivity to forex rate fluctuations.

Maritime transport accounts for about 1% of total freight turnover. In 2019, sea freight shipping also displayed negative dynamics, dipping by 19.5% relative to 2018 (up to 23 million t). However, maritime transport competes with the other modes of transport in the export sector: thus, in 2018, 12.2% of the total volume of exports was carried by sea (vs 12% in 2017). This is 5 percentage points more than that carried by rail.[3] In 2019, that ratio, with some minor changes, remained basically the same.

The largest share in the structure of maritime freight turnover by type of route and destination is taken up by cabotage,[4] followed by exports (*Fig. 34*). The share of cabotage over the last two years (2017–2019) nearly doubled. The share of cargo turnover between foreign ports (BFP) decreased from 31% in 2017 to 12% in 2019. The share of imports has been steadily low, amounting to 1% of total maritime freight turnover in 2019.

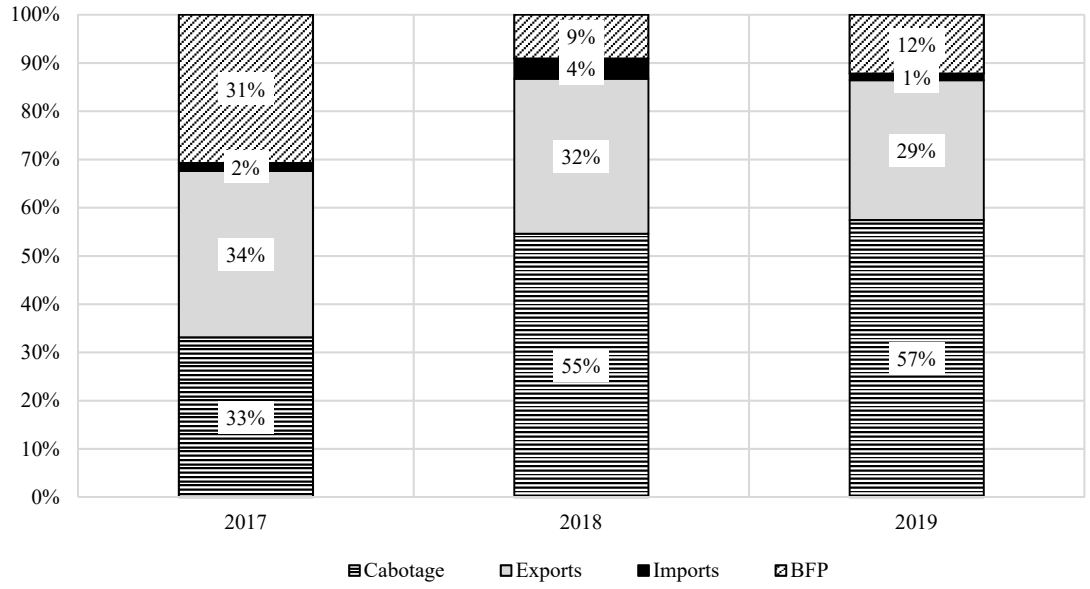


Fig. 34. Maritime freight turnover structure, by type of route, 2017–2019, %

Source: EMISS; own calculations.

[1] Freight and mail transportation. RF Ministry of Transport; Federal Agency for Air Transport. URL: https://www.favt.ru/dejatelnost-vozdushnye-perevozki-perevozki-gruzov-i-pochty/.
[2] Main production indicators of civil aviation. RF Ministry of Transport; Federal Agency for Air Transport. URL: https://www.favt.ru/dejatelnost-vozdushnye-perevozki-osnovnye-proizvodstvennye-pokazateli-ga/.
[3] Freight transportation in Russia: An overview of current statistics. Bulletins on Current Trends in the Russian Economy, 2019. (September). Analytical Center for the Government of the Russian Federation. URL: http://ac.gov.ru/files/publication/a/24196.pdf.
[4] Domestic cargo transportation by maritime vessels between Russia's ports.

In 2019, Russia's inland waterway transport turnover decreased only slightly: by 0.28% on 2018, and by 1.9% on 2017. Inland freight turnover, which takes up the biggest share (48%) in the freight volume carried by water transport, lost 2.7% on the previous year.

Unlike all the other modes of transport, pipe carriers are highly specialized, and are designed primarily for the transportation of hydrocarbon raw materials. In 2019, the total pipeline transport turnover reached 2,686.1 billion tkm, which is 0.7% above the 2018 index, and 2.7% above the 2017 index. At the same time, the year-end results of 2019 demonstrate a plunge, on 2018, of pipeline freight turnover by 8% for oil and petroleum products, and by 1.4% for natural gas.

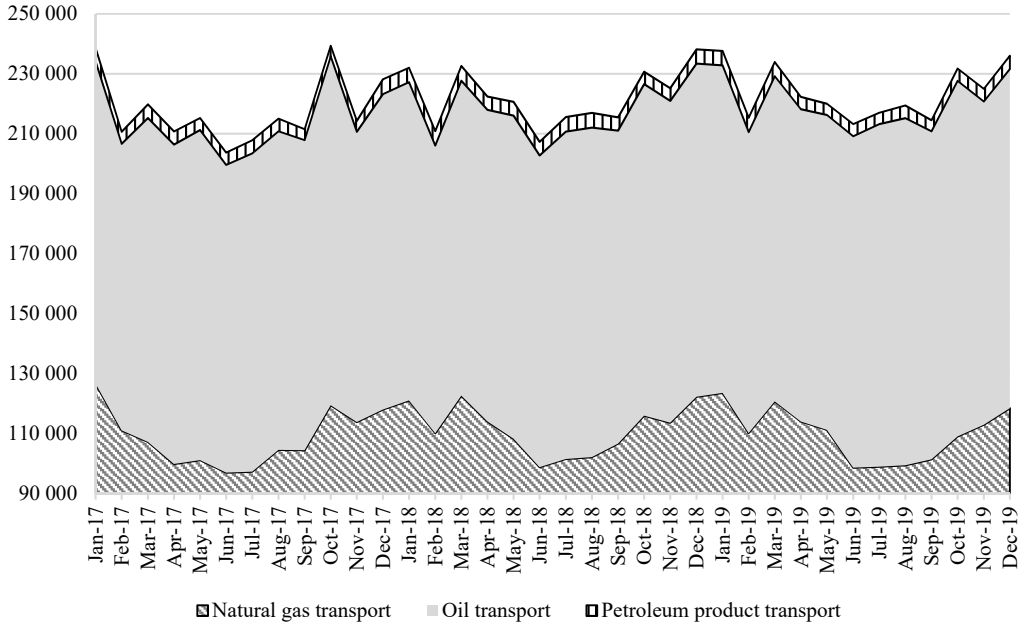


Fig. 35. Pipeline freight turnover structure (billions of tkm), 2017–2019

Source: EMISS; own calculations.

If the operation of the transport complex is to be considered in terms of freight volume, in general one can point to the same trends as can be observed in the movement pattern of freight turnover, because over the past year the transport network's spatial structure underwent only some minor changes. In 2019, the total freight volume[1] increased by 0.2% on the previous year, to 8,283 million t (*Fig. 36*). The cumulative freight volume increase over the period 2009–2019 amounts to 11%.[2] The largest share in the freight transportation structure is taken up by road transport: 69% of the total freight volume in 2019, which is 2 percentage points higher than in 2018. Railway transport accounts for 15.5%, pipeline transport for 14%, and the other modes of transport for less than 1.5%. In 2019, the volume of transport operations displayed the following trend: relative to the previous year, there was an increase in the volume of freight

[1] Without taking account of distances.

[2] Freight transportation in Russia: An overview of current statistics. Bulletins on Current Trends in the Russian Economy, 2019. (September). Analytical Center for the Government of the Russian Federation. URL: http://ac.gov.ru/files/publication/a/24196.pdf.

carried by road (+3%), while the corresponding indices for the other modes of transport declined. In 2019, the fright volume carried by inland waterway transport lost 15%, and that carried by maritime transport lost 19.6%. The railway and air freight volumes likewise declined, by 9.3% and 7.7%, respectively.

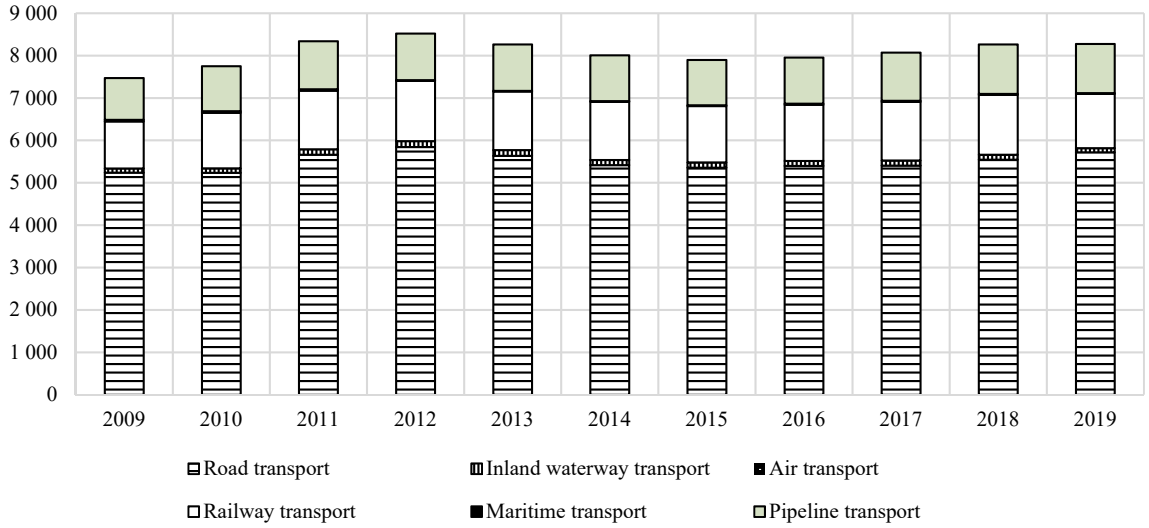


Fig. 36. The modal split of freight transport (in million t), 2009–2019

Source: Rosstat; own calculations.

As demonstrated by current data,[1] in 2019, the turnover of organizations operating in the transport and logistics complex and related activities amounted to RUB 13,188.6 billion. More than half of that index is accounted for by land and pipeline transport (RUB 7,120.2 billion), including the value volume of freight carried by rail (estimated at RUB 2,144.5 billion).

The overall movement and changes in the modal split of freight transport were also influenced by freight tariffs (*Fig. 37*). A general increase in the level of freight tariffs has been observed since 2011, and it continued throughout 2019. The highest volatility was demonstrated by the pipeline transport tariffs. Meanwhile, the growth rate of tariffs imposed on road freight transportation and railway freight transportation has been on the decrease since 2015, but its upward movement was more rapid in the latter case than in the former. The overall level of freight transportation tariffs amounted to 101.5% (in December 2019 relative to December 2018), i.e. it was below both that of the consumer price index (103.0%) and the consumer price index for services (103.8%).

Overall in 2019, the transport complex showed a positive trend in terms of its operation volume. According to the year-end results of 2019, the increase in freight turnover amounted to 0.5%, that of passenger turnover[2] – to 5.8%. The industry's development was facilitated by the growing demand for transport services, in particular for freight transportation. In 2019, the transport system operation volume by mode of transport did not undergo any significant changes relative to the previous years.

[1] The turnover of organizations, by type of activity (full range of organizations). URL: https://gks.ru/folder/14036.
[2] By main type of public transport, less underground transport systems, taxis, tramways and trolleybuses (no recent data available).

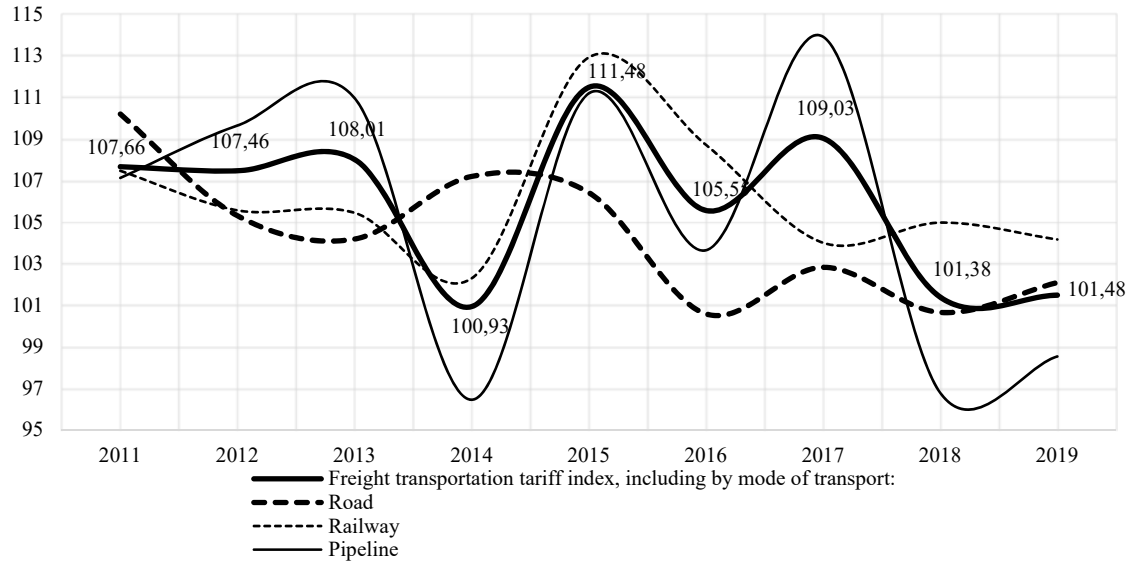
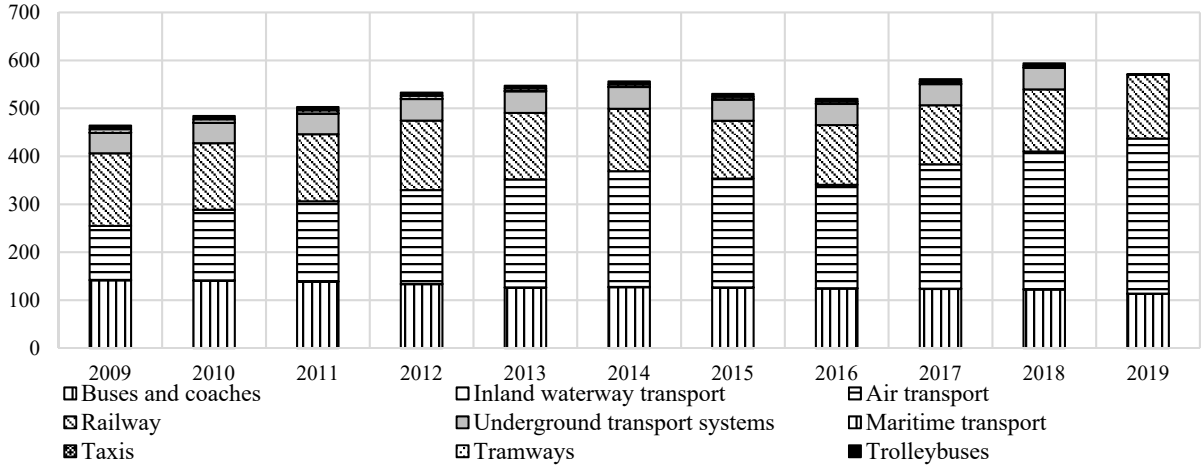


Fig. 37. The movement of freight tariffs, December relative to December of the previous year, %

Source: EMISS; own calculations.

Passenger transport

Over the previous years (except the period 2015–2016), there was a fairly steady increase in passenger turnover. The biggest share in total passenger turnover is taken up by land transport (*Fig. 38*). More particularly, this is railway transport (about 20%) and the various types of urban public transport: buses and coaches, the underground, tramways, and trolleybuses (in equal measure), i.e. those modes of transport that prevail in the intra-regional/inter-city transport systems. A significant input into the total passenger turnover has been made by air transport (323 billion passenger-km in 2019); over the period 2009–2019, its share increased 2.8 times.



Note. No 2019 data is available for trolleybus, tramway, and underground transport.

Fig. 38. The modal split of passenger traffic (billion pkm), 2009–2019

Source: EMISS; own calculations.

Over the period 2009–2019, the modal split of passenger air traffic underwent a number of changes (*Fig. 39*). More particularly, in 2009–2013 the passenger turnover index for international routes was growing at a faster pace than that for domestic flights, thus increasing its share in the total passenger turnover; later on, in 2014–2015, its growth rate declined. From 2015, the gap between domestic and international flights in the total passenger turnover was contracting; when cleared of seasonal fluctuations, the domestic and international passenger turnover indices become approximately equal. In 2019, the average share of passenger turnover on domestic routes in the total passenger turnover amounted to 42%. However, in the category of non-scheduled flights,[1] international routes were clearly predominant, with a large margin, in terms of passenger turnover: over the entire period 2009–2019, the share of domestic passenger turnover index in that segment did not exceed 15.5%.

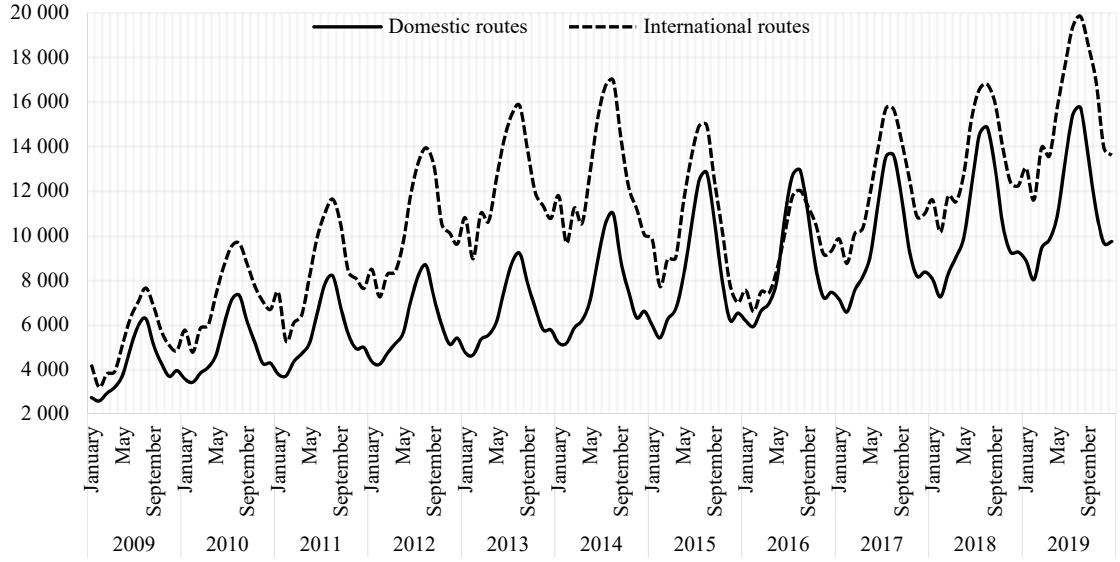


Fig. 39. The movement of air transport passenger turnover (million pkm), 2009–2019

Source: EMISS; own calculations.

In the structure of maritime transport passenger turnover, the biggest share (94.6% in January – December 2019) is taken up by cabotage, including commuter routes; the remainder is represented by international routes. Overall, passenger turnover displays a downward trend, having plunged by 41% (from 47.6 million passenger-miles in 2016 to 28 million in 2019).

By type of inland waterway transport route, the highest index is demonstrated by transit passenger turnover on the routes across several subjects of the Russian Federation and the tourist routes taking more than 24 hours (*Fig. 40*). Next comes the index of local passenger turnover (within the borders of one subject of the Russian Federation). The number of passengers carried displayed a downward trend in 2019 (10 million) relative to 2018 (12 million).

[1] Transportation on an irregular basis: charter flights, custom flights, special flights, tourist routes that are not reflected in regular flights. See *The global competitiveness report 2018* // World Economic Forum. URL: http://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=GCI4.A.02.

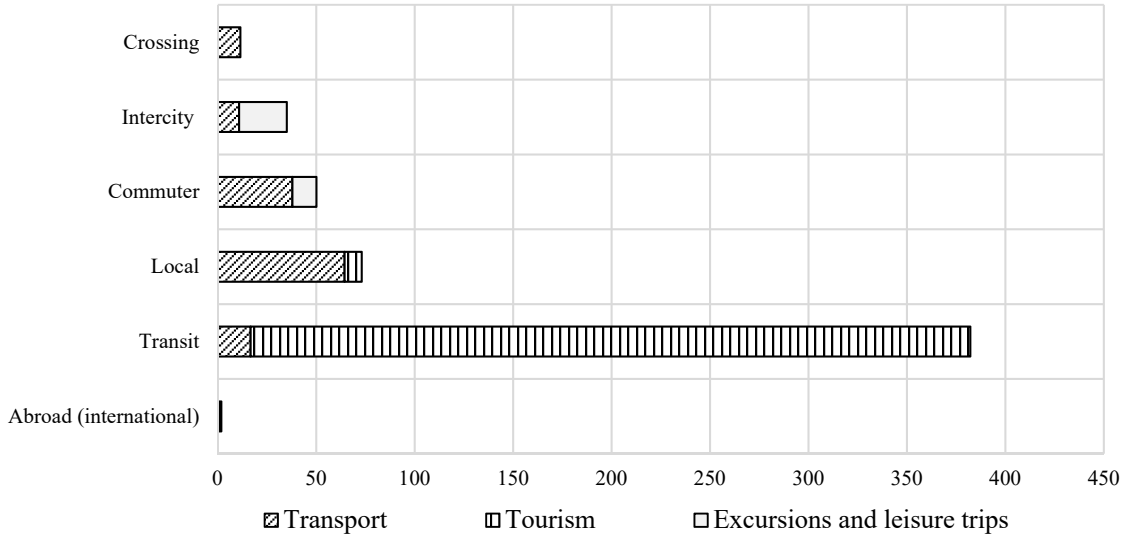


Fig. 40. The inland waterway passenger turnover structure, by type of route (million pkm), January – December 2019

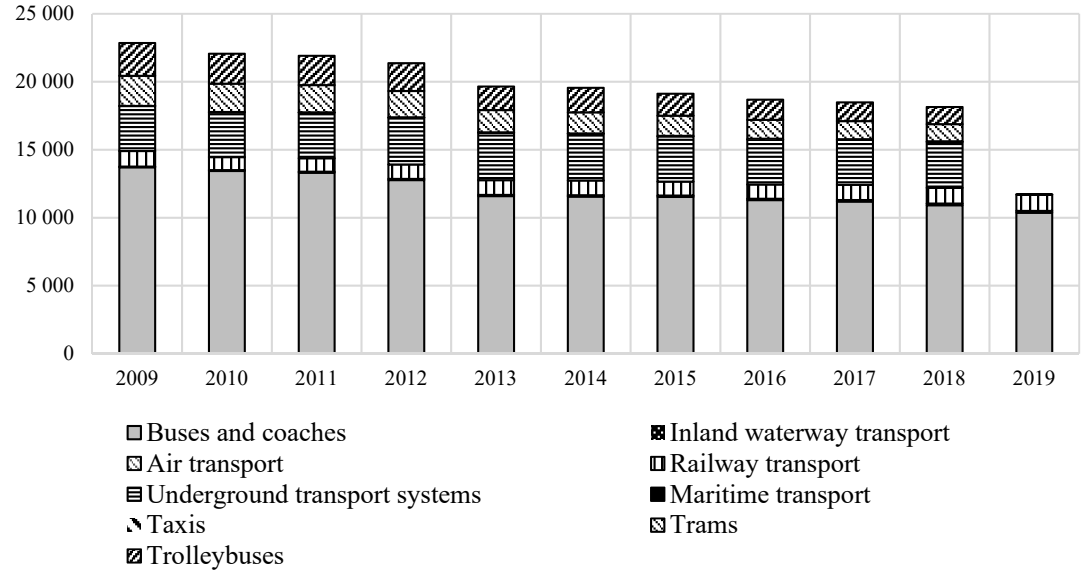
Source: Unified Interdepartmental Information Statistics System (EMISS); own calculations.

In general, there was a decrease in the share of freight and passengers carried by inland waterway vessels in the total volume of transport services provided by all modes of transport.

At the same time, there has been a downward trend in the nominal volume of passenger transport services (*Fig. 41*), as well as a shrinkage in the corresponding indices for trolleybus, tramway, and bus and coach services, which could be caused by the rising tariffs for passenger transport services that were moving ahead of the growth rate of personal disposable income, as well as by the gradually increasing motorization rate[1] in this country. According to data released by the RF Ministry of Transport, the growth of passenger transport tariffs in September 2019 relative to December 2018 amounted to 107.1%. According to the period-end results of the first 9 months of 2019, the steepest price increase was noted for air transport services (17%). The prices for the services of railway, urban electricity-powered and automobile transport gained 3.0%, 3.9%, and 4.4%, respectively.[2]

In the passenger turnover structure, bus and coach services prevail, having carried in 2019 a total of 10.3 billion passengers.[3] Next come underground transport systems (more than 3 billion passengers in 2018), while tramway and trolleybus services taken together account for about 2.5 billion passengers (2018). At the same time, the annual passenger turnover of railways in 2019 remained virtually unchanged relative to 2009, and even displayed a slight upward trend in 2015–2019.

[1] The motorization rate is the number of passenger vehicles per 1,000 people (Rosstat).
[2] Statistics Bulletin 'Transport of Russia'. January – September 2019. RF Ministry of Transport. URL: https://www.mintrans.ru/ministry/results/180/documents.
[3] Without taking account of distances.



Note. No 2019 data was available for trolleybus, tramway, and underground transport at the moment of writing this section.

Fig. 41. The passenger transportation structure, by mode of transport (million passengers), 2009–2019

Source: EMISS; own calculations.

The number of flight departures doubled, from 593,000 in 2009 to 1.1 million in 2019. For domestic routes, the growth rate was 89.7%, for international routes, 85.7%. The number of passengers carried on domestic routes increased 3-fold, that on international routes, 2.6 times. The air transportation market supply in 2019 became redundant:[1] as demonstrated by the period-end results of the first 5 months of 2019, the seat occupancy index of Russia's five biggest airlines fell by 0.1–2.4%.[2] However, overall by year-end 2019, this index demonstrated a slight positive dynamics, increasing from 83.8% in 2018 to 83.9% in 2019. In particular, an increase in the seat occupancy index on the international routes between Russia and foreign countries outside of the CIS amounted to +0.3 percentage points, while an opposite trend was noted for the international routes between Russia and the CIS members (-0.3 percentage points) and domestic routes (-0.2 percentage points).[3]

The transport sector and related activities are characterized by the high depreciation rates of their fixed assets (55.7%), which is above the nationwide average depreciation rate of fixed assets by 9.1 percentage points. More particularly, as of 2018, the road passenger transport and inland waterway transport sectors, as well as those of road freight transport and pipeline transport, are those that are most in need of renovating their fixed assets.

[1] Saveliev says there is excess supply in the air transportation market of the RF // RIA News. URL: https://ria.ru/20190625/1555914146.html.
[2] Passenger seat occupancy is going down // Kommersant. URL: https://www.kommersant.ru/doc/4018376.
[3] Passenger transportation. RF Ministry of Transport; Federal Agency for Air Transport. URL: https://www.favt.ru/dejatelnost-vozdushnye-perevozki-perevozki-passazhirov/.

According to the Global Competitiveness Rankings 2019, in terms of transport infrastructure development, Russia is ranked 49th out of 141 countries.[1] Russia lags farthest behind the topmost countries by its road network development and quality of roads indexes, ranking 65th and 99th respectively (*Table 33*).

The road quality index, on which the ranking is based, is composed of the index of average speed on the roads connecting the 10 largest cities where at least 15% of the country's population resides, and 'road connectivity'.

Table 33

Russia in the Global Competitiveness Rankings

Index components	Russia's ranking in 2018/2019	Index components	Russia's ranking in 2018/2019
Infrastructure (overall)	51/50	Transport infrastructure	52/49
Efficiency of train services	15/17	Efficiency of air transport services	52/52
Efficiency of seaport services	45/47	Road connectivity	38/41
Road connectivity:		Airport connectivity	18/18
Waterway infrastructure	53/51	Air transport	23/24
Quality of roads infrastructure	104/99	Roads	65/65
Railways	47/49	Railroad density	69/69
Water transport	48/42		

Source: Global Competitiveness Report 2018; 2019.

According to the rankings based on the Logistics Performance Index (LPI), Russia in 2018 was in 75th place, and by infrastructure development (which is one of the components of the LPI index), it ranked 61st.[2]

By looking at Russia's world rankings according to these indicators, we can conclude that, as far as infrastructure is concerned, even with due regard for the geographical characteristics of its territory, this country is lagging far behind both the developed and developing countries that have a similar economic development level (*Fig. 42*).

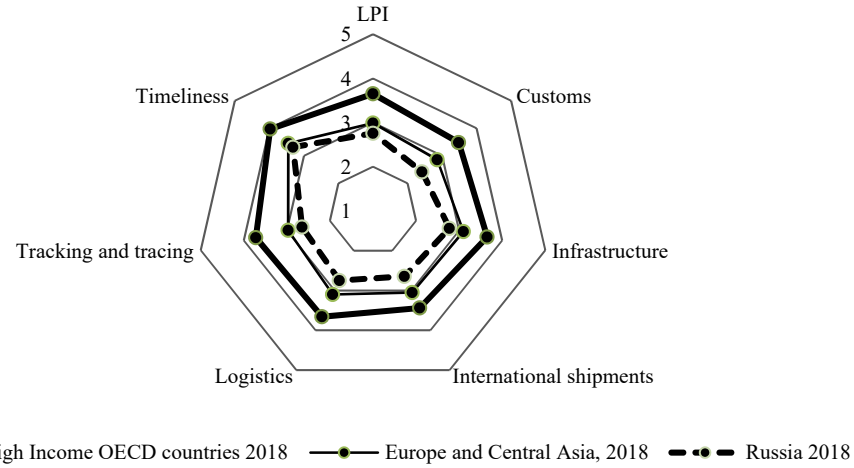


Fig. 42. Russia's logistics performance rankings, 2018

Source: World Bank. URL: https://lpi.worldbank.org/international/aggregated-ranking.

[1] Global Competitiveness Report 2019. World Economic Forum. URL: http://reports.weforum.org/global-competitiveness-report-2019/competitiveness-rankings/#series=GCI4.A.02.
[2] Aggregated LPI 2012-2018 // World Bank. URL: https://lpi.worldbank.org/international/aggregated-ranking.

As before, the principal infrastructural constraints in this country at present are those that have to do with poor connectivity of its domestic routes (insufficient density of the road network, significant regional imbalances, the star configuration of the road network, overloading on many roads), low connectivity with foreign markets (out of all the regions, these issues are felt most strongly in the South of Russia and in the Russian Far East,[1] where there are many bottlenecks on the roads running along the Pacific coast and the railway approaches to the ports situated in the Azov-Black Sea basin), low security, poor integration of advanced technologies in the development of the transport industry, and organizational difficulties in developing the existing infrastructure.

All these constraints have been decidedly shaping the movement patterns of passenger and cargo turnover over recent years. The progress of Russia's transport complex in 2009–2019 did not demonstrate any cardinal shifts that could translate into a significant improvement in the situation in that industry.

An analysis of the specific development trends displayed by each mode of transport can help clarify the dynamics of the entire industry, as well as the transport and logistics complex as a whole. Having analyzed the more general movement patterns of transport service indicators, we are proceeding to consider in more detail each mode of transport from the point of view of the key factors of supply of and demand for transport services – the state of transport infrastructure, rolling stock, and vehicle fleets.

4.7.2. The state of the transport infrastructure, rolling stock, and vehicle fleet specific to each mode of transport

Road transport

Due to its relatively low fixed costs and high variable (operating) costs per km, road transport is the most efficient method of traveling over small and medium distances.[2] Road transport prevails in the overall structure of freight and passenger transportation services because of its higher accessibility for customers and the huge fleet of vehicles currently possessed by the transport complex. At the beginning of 2019, Russia's automotive fleet consisted of 84% of passenger cars (43.5 million units), 8% of light commercial vehicles, and 8% of freight vehicles.[3] Over H1 2019, it further increased by more than 1%, and thus amounted to 52.4 million units.[4]

The passenger transportation industry has been demonstrating positive dynamics, in particular an improving availability of transport services for the individual customers: the urban transport fleet has increased, including by adding more energy-efficient buses powered by natural gas instead of motor fuel. However, the road transport fleet as a whole is characterized by the highest current amortization rate compared with the other modes of transport: as of year-end 2017, about half of the fleet of passenger cars and buses had been in operation for more than 10 years. If we look at the age structure of the fleet, 61% of trucks had been in use for

[1] Integrated transport system. M.: CSR, 2018. URL: https://www.csr.ru/wp-content/uploads/2018/05/Report-Traffic-Infrastructure-2.0.pdf.
[2] Ibid.
[3] Experts counted the number of automobiles in Russia // The Russian Newspaper. URL: https://rg.ru/2019/02/14/eksperty-podschitali-kolichestvo-avtomobilej-v-rossii.html.
[4] The Russian automobile fleet exceeded 52 million units. URL: https://www.autostat.ru/news/40983/.

more than 10 years.[1] In 2019, the average age of an automotive vehicle was 13.4 years, and the age of 35% of the fleet was over 15 years.[2]

As for the public motor road infrastructure, the previously established development priorities remained relevant in 2019 as well: that of expanding the road network and improving its quality in order to make it consistent with the existing norms, and to implement state-of-the art technologies and standards. Quite often, the star configuration of the existing road network (instead of matrix grid) is pointed out as one of the manifestations of insufficient road connectivity across this country's territory; if we add here the geographical features of Russia, the lengthy journeys along its roads translate into high mileage on the odometer. The currently existing highway network in Russia (in particular, the federal highways) is structured in such a way that the traffic flows are centered mostly around the Moscow agglomeration, and to a lesser extent around the St. Petersburg agglomeration, thus causing an overload of the Moscow transport hub, while the horizontal connections between regions are for the most part underdeveloped.

As of year-end 2018, the total length of public roads of federal, regional or inter-municipal and local importance was more than 1.5 million km, of which 965,000 km were roads of local importance, 510,000 km were roads of regional and inter-municipal importance, and 54,000 km were roads of federal importance. As far as their structure is concerned, after 2012 there has been a steady increase in the length of roads of local importance, and in 2017–2018, the total length of federal highways grew by 2,000 km. It should also be noted that the total length of paved roads was also increasing over the period 2012–2018 (*Fig. 43*).

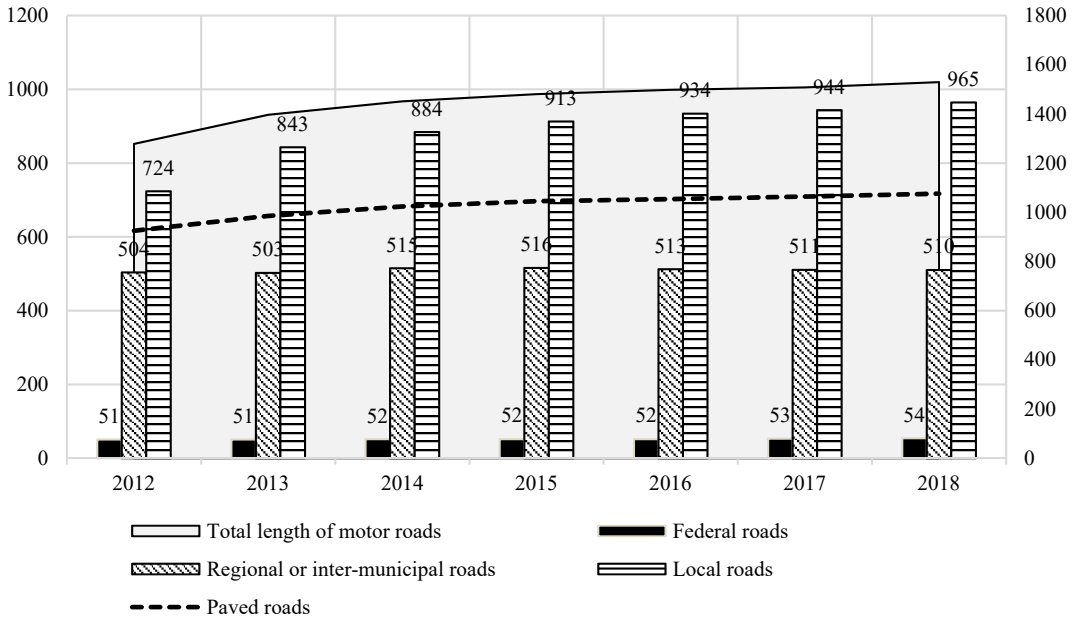


Fig. 43. The length of public motor roads (thousand km), 2012–2018

Source: Rosstat; own calculations.

[1] Transport in Russia. M.: Rosstat, 2018.
[2] Since the beginning of this year, Russia's automobile fleet increased to 52.4 million cars // RIA News. URL: https://ria.ru/20190919/1558863271.html.

As of 2019, the share of motorways and expressways in Russia accounted for less than 0.5%[1] of the paved road network's total length. Besides, there exist regional misbalances in the level of its development. Because of the absence of paved roads in some areas, more than 10% of this country's population in spring and autumn are cut off from transport communications. The roads serving more than 30% of localities, whose combined population amounts to almost 500,000 people, are not connected with paved roads.

As of year-beginning 2019, the share of motor roads of regional importance that meet regulatory requirements amounted to 42.4% (a decline of 2 percentage points since 2007), while the corresponding indicator for the urban agglomeration road network also amounted to 42%. According to Rosavtodor's plans, by year-end 2019, the share of roads of regional importance complying with the established norms was to increase to 44.1%, that of the urban agglomeration road network – to 46%, and the length of roads – to 218,000 km.[2]

According to the data released by the Association of Road Design and Survey Organizations, in 2015, only 53.5% of the total length of federal roads that carry more than 40% of freight traffic, including international and inter-regional, was suitable for vehicles with an axial load of 10 metric tons or more, and only 8.8%, for vehicles with an axial load of 11.5 metric tons.[3] In 2018, the roads of regional, inter-municipal, and federal importance suitable for the passage of heavy trucks belonging to these categories accounted for 29.9% and 0.4%, respectively, of the total length of motor roads.

As before, the existing administrative barriers, including pressure from supervisory bodies and excessive bureaucracy, create obstacles in the way of innovative solutions, the use of modern materials and structures, and the selection of highly-performing contractors through tenders for the implementation of building construction projects.[4]

One of the main reasons for traffic congestion on many motor roads of federal and regional importance has become the gap between supply and demand in transport services sector. The demand for road infrastructure services is growing rapidly due to swift motorization[5] and increasing population mobility, as well as to the ever-increasing volume of freight transported by road,[6] and is surpassing the pace of growth of the infrastructure that is necessary to satisfy it (*Fig. 44*). The upward trend displayed by the motorization rate also continued in 2019.

[1] Own estimations based on open data released by State Corporation *Avtodor* and Rosstat as of year-beginning 2019.

[2] The contracting of roadwork projects must be completed by the regions by March 1. RF Ministry of Transport's Press Center. URL: https://mintrans.ru/press-center/news/9406.

[3] Proposals (draft) on the execution of the instruction of the RF President of the Russian Federation issued following the Meeting of the State Council Presidium on improving Russia's road network, 2015. Association of Road Design and Survey Organizations. URL: http://rodosnpp.ru/media/rodos/documents/2015/perepiska/dr_org/_120215_-19.pdf.

[4] Transcript of the meeting of the State Council on road network development and road safety. URL: http://kremlin.ru/events/president/news/60825.

[5] According to data released by Rosstat and the RF Ministry of Transport, alongside an increase, over the period 1998–2008, of the length of public roads by 15%, the car fleet gained almost 75%. Later on, in 2008–2018, the growth of the car fleet and the motorization rate (vehicles per 1000 people) became somewhat slower. Growth over that decade amounted to 23% (for all types of motor vehicles, including trucks, buses and coaches, trolleybuses, and passenger cars) and 46%, respectively. It should be noted, however, that in general over the period 1995-2007, population mobility on non-urban routes declined by 60% – mainly due to a reduction in travel related to leisure and tourism.

[6] The increase in the volume of motor freight traffic in 2008 relative to 2000 amounted to 17.3%, while the increase in freight turnover amounted to 41.2%. The total amount of freight transported by motor vehicles in 2008 was 6.9 billion tons, while the volume of freight turnover amounted to 216 billion tkm.

According to various estimates, the passenger car fleet at year-beginning 2020 amounted to 44.5 million units.

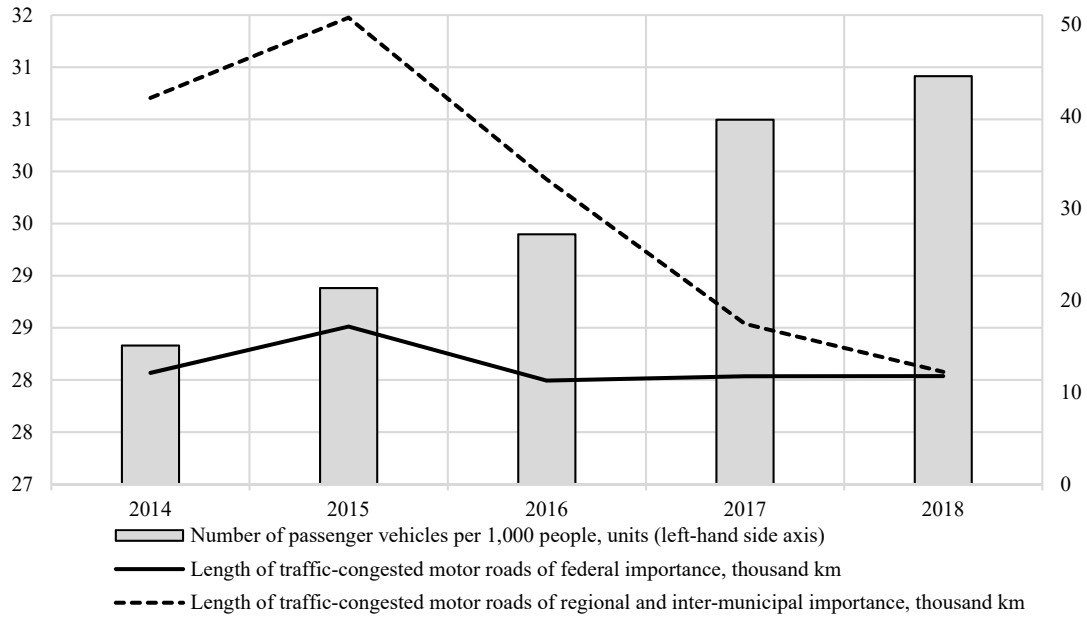


Fig. 44. The level and growth rate (%, relative to the previous period) of traffic congestion on federal and regional roads, and the level and growth rate of motorization, in 2014–2018

Source: Rosstat.

In this connection, it should be noted that the steadily growing demand for transport infrastructure services has not led to a significant improvement in the state of the road network.

Over the period from 2014 to 2018, the length of lighting lines on roads of federal importance and civil engineering works increased from 6,000 to 9.600 km. At the same time, to date, the level of illumination of (federal) motor roads remains extremely low.[1] However, a positive trend has been observed in length of repaired roads. In 2019, the total length of repaired paved roads of regional and inter-municipal importance stood at 14.600 km, thus doubling the corresponding indicator for 2015. A significant growth was noted in the index of major repairs of motor roads of regional and inter-municipal importance: 1,185 km in 2019 against 401 km in 2018; however, this indicator is below that of the total length of federal roads that underwent major repairs (1,811 km in 2019).

Within the framework of the National Project *Safe and High-Quality Roads*[2] for 2018–2024, it is planned to upgrade the road networks in major cities and metropolitan areas, thus bringing them into conformity with the established norms and increasing their safety level. The measures designed to improve the road system performance indicators of the 38 largest urban agglomerations situated in 36 subjects of the Russian Federation were launched in 2017–2018,

[1] Transcript of the meeting of the State Council on road network development and road safety. URL: http://kremlin.ru/events/president/news/60825.

[2] By way of implementing the Executive Order of the President 'On National Goals and Strategic Objectives of the Russian Federation through to 2024'.

in the course of implementation of the Priority Project *Safe and High-Quality Roads*. The number of subjects involved in implementing the current national project has increased to 83 (including 104 city agglomerations). Based on the implemented national project's results, by 2024, the relative share of regional roads consistent with the established norms is expected to increase to 50.9% (vs 41% at year-end 2018[1]), the number of traffic accident hotspots is expected to decrease by half relative to 2017, while the share of traffic-congested federal and regional motorways is also anticipated to decline.[2] According to recent data, there is a positive trend in the share of federal roads that meet regulatory requirements, from 53% in 2012 to 83% at year-end 2018.

The motor road sector is also positively influenced by the measures designed to expand the road network, including the construction and putting in operation of expressways, to improve the road surface quality, and to eliminate the existing traffic bottlenecks. Another project, to be implemented over the next few years, is the Comprehensive Plan for the Modernization and Expansion of Trunk Infrastructure for the Period until 2024, approved in 2018; the plan outlines the measures designed to improve economic connectivity across the territory of the Russian Federation through the expansion and modernization of all modes of transport. According to the Comprehensive Plan, by 2024, the construction of 300 km of motorways and expressways is to be completed, while the share of roads operating without overload will be increased from 26.9% to 67%. It is also planned to build international (high-speed) transport corridors (Europe – Western China, West – East, North – South) as part of one of the priority directions in the transport system development (integration into the global transport space and the realization of this country's transit potential).[3]

Railway transport

The relatively low variable (operating) costs per km (and high fixed costs) make railway transport a very cost-effective and competitive method of carrying high-tonnage goods and passengers over long distances, as evidenced by the high share of railway transport in this country's freight and passenger turnover.

The main limitations of the railway infrastructure are the existence of bottlenecks in some parts of the railway system; the long length of tracks and delays in their scheduled repairs; the absence of high-speed railway lines; and the low density of the railway network in Siberia and the Far East.

The density index of the railway network over the period 2000–2018 remained virtually unchanged. Besides, in a number of regions (the Altai Republic, the Republic of Tyva, Kamchatka Krai, Magadan Oblast, as well as the Nenets Autonomous Okrug and the Chukotka Autonomous Okrug) there is no railway network at all, which increases the load on other modes of transport (road transport for short and medium trips, and air for long trips) and reduces the overall transport infrastructure availability for the population and the economy.

As of year-end 2019, the length of railways operated by *Russian Railways* OJSC (and its subsidiaries) amounted to 85.600 km, while the length of electrified railway lines was 43,800 km. At present, the company handles 46% of Russia's total freight turnover (including pipeline

[1] Data released by EMISS; own calculations.
[2] Implementation of the National Project *Safe and High-Quality Roads*. URL: https://bkdrf.ru/massmedia.
[3] Directive of the RF Government No 2101-r dated September 30, 2018 (as amended on August 17, 2019) 'On approving the comprehensive plan for the modernization and expansion of trunk infrastructure for the period until 2024'.

transport), and 26.4% of passenger turnover.[1] As part of its railway infrastructure development in 2019, the company put into operation 422.7 km of railways, and more than 400 km of railway lines and station tracks were electrified.[2]

Since 2013, the structure of rolling stock in the railway sector has undergone some changes (*Fig. 45*): there was a reduction in the number of freight cars and a simultaneous increase in locomotives, passenger railcars, and electric railcars.

The introduction of more stringent rolling stock technical condition requirements, in particular the shortening of the service life of freight cars, has led to a shrinkage in the rolling stock available in the freight transportation market. As of December 2019, railroad freight rates rose 4.2% relative to December 2018; as of June 2019, these rates rose 4.7% relative to June 2018; and as of December 2018, they rose 5% relative to December 2017. At present, there has been an increase in the output of the domestic-market-oriented railway engineering sector[3] and in the volume of railway cars purchased in order to boost the output of rail supply enterprises.[4]

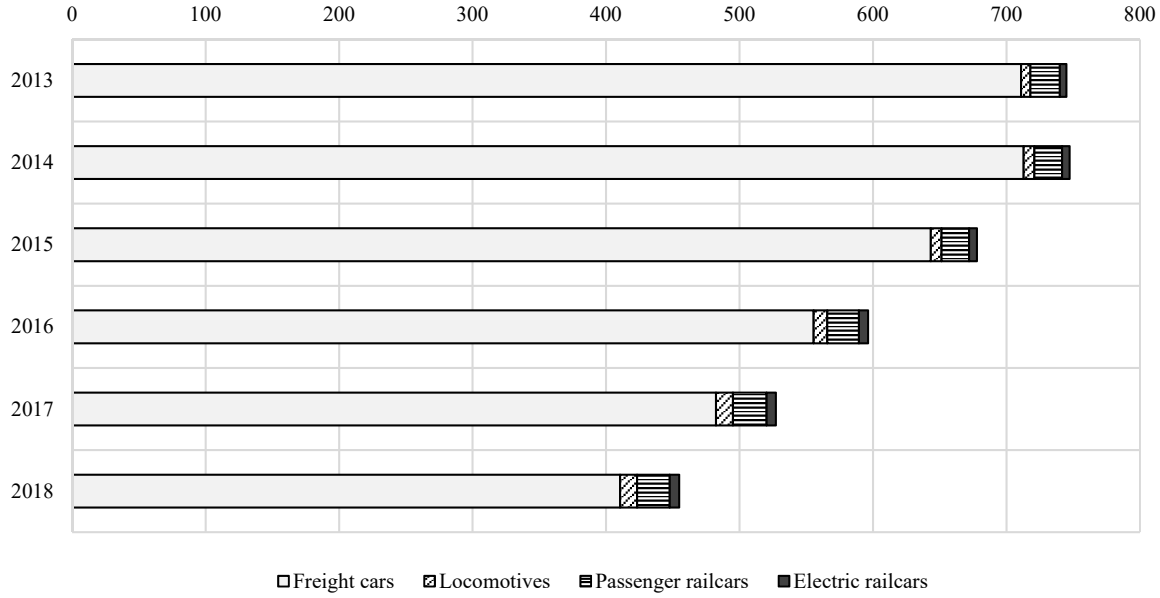


Fig. 45. The movement of railway rolling stock, 2013–2018, thousands of units

Source: EMISS; own calculations.

[1] *Russian Railways* OJSC. URL: https://www.rzd.ru/static/public/ru?STRUCTURE_ID=628.
[2] Press center of *Russian Railways* OJSC. URL: http://press.rzd.ru/news/public/ru?STRUCTURE_ID=654&layer_id=4069&refererLayerId=4067&refererPageId=704&id=95113.
[3] Freight cars face a peak in demand. Institute of Natural Monopolies Research (IPEM). URL: http://ipem.ru/news/publications/1845.html, http://ipem.ru/news/ipem/1829.html.
[4] Khusainov, F. They wanted to do better: why freight cars are again in short supply on the market // RBC. URL: https://www.rbc.ru/opinions/economics/26/10/2017/59f1e87a9a79470d83fc12b5

The current depreciation rate of fixed assets in the rail transport sector is 60%;[1] more particularly, in 2018, depreciation of railroad track superstructure was 40–50%, that of rolling stock, 50–60%, including freight cars (60%), passenger cars (50 %), and electric locomotives (40%).[2] According to data released by the Self-regulated Organization 'Association Promzheldortrans', in 2017 the average service life of locomotives in the non-public railway transport sector was 33 years, and its wear rate was over 90%. The situation in 2019 demonstrated no fundamental improvement.

The demand for passenger rail transport services has been boosted by the implementation of new infrastructure projects. In particular, there has been an increase in the passenger turnover on the Moscow Central Ring railroad: as of September 2019, the average daily passenger turnover on that line exceeded 500,000, a number that is 75% greater than the average daily passenger turnover in 2016.[3] The number of passengers carried by *Sapsan Fast Train* between Moscow and St. Petersburg in February 2019 jumped 8.7% relative to February 2018. The opening of the new 19-km-long railroad track section over the Crimean Bridge and the launch of direct railway service connecting the Crimea with mainland Russia has had a positive impact on passenger traffic, and after the start of freight traffic (scheduled for June 2020), a similar impact is expected on freight turnover. In addition, *Russian Railways* OJSC is planning to boost the demand for passenger transport services through non-price factors.

Several railway development projects are currently underway, including the construction of the Eurasia high-speed freight and passenger rail corridor within the framework of the priority project aimed at developing integration and transit potential. *Russian Railways* OJSC is also implementing the following infrastructure projects:[4] railway infrastructure modernization along the Baikal-Amur and Trans-Siberian lines in order to boost their throughput of trains and carrying capacities (2013–2020); railway infrastructure development and renewal along the approaches to the ports in the Azov-Black Sea basin (2014–2020) and the Northwest basin (2015–2025). Besides, we should note the implementation of investment programs aimed at developing the Moscow transport hub (2012–2024) and strengthening railway infrastructure in the framework of the Northern Latitudinal Railway project (2018–2022).

Air Transport

In spite of its competition with road and rail transport, the share of air transport in total passenger turnover is steadily on the rise. However, the air industry is still experiencing certain problems, in the form of a shrinking number of airports, fluctuating fuel prices and forex rates, and a shortage of funding needed for providing the subsidized regional and local transport services.

[1] On approving the Transport Strategy of the Russian Federation for the period until 2030 (as amended on May 12, 2018) // Electronic fund of legal and regulatory-technical documentation. RF Government. URL: http://docs.cntd.ru/document/902132678.

[2] *Menshikov, V.V., Eliseev, Yu.P.* The role and place of various modes of transport in military evacuation (railway transport)// Science and Military Security (In Russian). 2018. No 1(12). P. 90–94.

[3] Moscow City Mayor's official website. URL: https://www.mos.ru/news/item/61893073/.

[4] Information disclosure form for investment programs (on draft investment programs) and reports on their implementation. URL: http://www.rzd.ru/openinfo/public/ru?STRUCTURE_ID=5131.

Some airports need to be reconstructed; about a half of all airfields in the Far East does not have paved strips, and so cannot receive large aircraft; and the wear and tear of airport infrastructure is 80%.[1]

The aircraft fleet is being updated: aircraft with a high degree of wear are written off, and new ones are purchased. In the civil aviation sector, the aircraft fleet has shrunk by 23% since 2009, and its structure has also changed. More particularly, An-2 and Tu-134 aircraft were discarded (their number declining from 129 in Q1 2009 to 9 at the end of Q4 2019); as well as Tu-154M, to be replaced by A319, A320, A321, and Boeing 737-800 (the number of the latter increasing from 8 in 2009 to 145 at year-end 2019). There is a discussion underway concerning the possibility of replacing the written-off obsolete aircraft with modern airliners.[2] One of the available options could be Russian medium-haul passenger airliner MS-21, to be put in operation in 2021.

One of the goals outlined in Executive Order of the President No. 204 dated May 7, 2018 is to increase the share of domestic scheduled flights bypassing the Moscow Aviation Hub, to 50% by 2024. One of the measures designed to alleviate the achievement of that goal is the adoption of a law whereby a zero VAT rate should be applied on the flights bypassing Moscow on their way to the Far Eastern Federal District, Simferopol, and Kaliningrad. It is expected that this measure will help increase the passenger turnover on domestic routes to 38.1%; previously, this tax regime was applied to only 20.5% of the total passenger turnover on Russia's domestic airlines.[3] In its turn, this will not only boost the development of regional and local air transportation markets, but also the availability and quality of commercial passenger transportation services in accordance with the established social standards. The constraining factor could become the rising tariffs for air transport services due to the high price elasticity of demand.

Maritime transport

The maritime transport industry has a strategic importance because it services foreign trade, in particular export raw materials transshipments. The industry is also exceptionally important for several geographically remote areas (with low transport accessibility levels and/or severe climatic conditions), for example the Far East and the Arctic zone. In 2019, the Russian seaport industry consisted of more than 900 complexes in 60 ports with the total cargo handling capacity of over 1 billion tons.[4]

In 2019, the fleet of marine vessels totaled 2,700 units, with gross tonnage of 7.8 million gross register tons and passenger capacity of 6 thousand seats. By its age structure, the maritime transport fleet can be characterized by a high wear rate: 46% of it are vessels aged 30 years or more, and 20% – 26–30 years. Those aged 0 to 20 years make up only a quarter of the total fleet. The renewal of the fleet by adding more energy-efficient and eco-friendly ships with a

[1] The RF Ministry of Transport will prepare a program for developing airports in the Far East to the value of RUB 100 billion. // Vedomosti. URL: https://www.vedomosti.ru/business/news/2018/04/27/768071-mintrans-podgotovit-programmu-razvitiya-aeroportov-dalnego-vostoka-na-100-mlrd-rublei.

[2] A contract is signed for creating an airplane to replace the An-2 // RIA Novosti. URL: https://ria.ru/20191017/1559873875.html.

[3] Regional vector. RF Deputy Minister of Transport Alexander Yurchik on the key issues of national civil aviation. RF Ministry of Transport. URL: https://www.mintrans.ru/eye/press-center/interviews/492.

[4] At the conference 'Seaports are this country's economic development driver', the industry's key issues were discussed. RF Ministry of Transport. URL: https://mintrans.ru/press-center/news/9337.

higher cargo capacity will boost the total turnover volume and reduce the per unit freight transportation costs.[1]

As far as infrastructural transformations are concerned, the maritime transport industry attracts substantial private investments in port infrastructure. The main investment goals are to develop and increase the existing seaport capacities for the transshipment of domestic goods by domestic ports, to ensure comprehensive development of Russia's Arctic region, etc. Among the major ongoing infrastructure projects in the maritime transport sector we may point out the construction of the port infrastructure facilities of Sabetta seaport (Yamalo-Nenets Autonomous Okrug),[2] the reconstruction of hydraulic structures at Magadan seaport,[3] the construction of a coastal and marine infrastructure complex at Gelendzhik seaport,[4] and the construction of an international sea terminal at Pionersky (Kaliningrad Oblast).[5] A separate mention should be made of the development of the Northern Sea Route and a unified national transport system in the Arctic zone.

Inland Waterway Transport

As of year-beginning 2019, the total length of federal inland waterways was 101,500 km, of which 50,000 km are waterways with guaranteed dimensions of the shipway.[6] It should be noted that from 1990 onwards, the length of the routes with standardized shipway dimensions shrank by 30% due to the reduction of deep water zones and their traffic capacities resulting from insufficient funding of the waterway infrastructure,[7] and from 2014, the total length of inland waterways has also been on the decline.

The volume of cargo handled by inland water transport has been decreasing since 2011. In 2019, this indicator lost 31% relative to 2011, and 8.5% relative to 2017. As for the index of cargo volume delivered by inland water transport to the Far North and the localities of an equal status, it has remained sufficiently stable.

As before, a serious problem is the wear rate of material and technical means, which for inland water transport amounts to 66%.[8] At the end of 2017, the age of more than 55% of passenger carriers and more than 85% of cargo carriers was over 30 years[9] (*Fig. 46*).

As of year-end 2019, the fleet of inland waterway vessels in good condition amounted to 11,700 self-propelled and 5,300 non-self-propelled vessels; since 2009, their number had decreased by 17.4% and 34%, respectively. A twofold decrease is observed in the fleet of towboats and self-propelled dry bulk carriers. The fleet of combination cargo/passenger carriers, on the contrary, increased by 66% to 2,300 units. Out of all modes of transport, it is

[1] The special role of maritime transport // Sea News of Russia (Morvesti.ru). URL: http://www.morvesti.ru/analitics/detail.php?ID=68603.
[2] The project was launched in December 2017 in the framework of Yamal LNG.
[3] Completed on June 30, 2018.
[4] The project implementation timeframe: 2018–2022.
[5] The construction project's deadline has been moved to 2020.
[6] RF Ministry of Transport; Federal Agency for Air Transport. URL: http://www.morflot.ru/deyatelnost/napravleniya_deyatelnosti/rechnoy_flot/vvt.html.
[7] The RF Ministry of Transport: the length of RF inland waterways shrunk by 30% over 25 years. TASS. URL: https://tass.ru/transport/3458217.
[8] On approving the Transport Strategy of the Russian Federation for the Period until 2030 (as amended on May 12, 2018). // Electronic fund of legal and regulatory-technical documentation. RF Government. URL: http://docs.cntd.ru/document/902132678.
[9] As of March 22, 2019.

inland waterway vessels in operation that display the highest degree of physical and technological obsolescence.

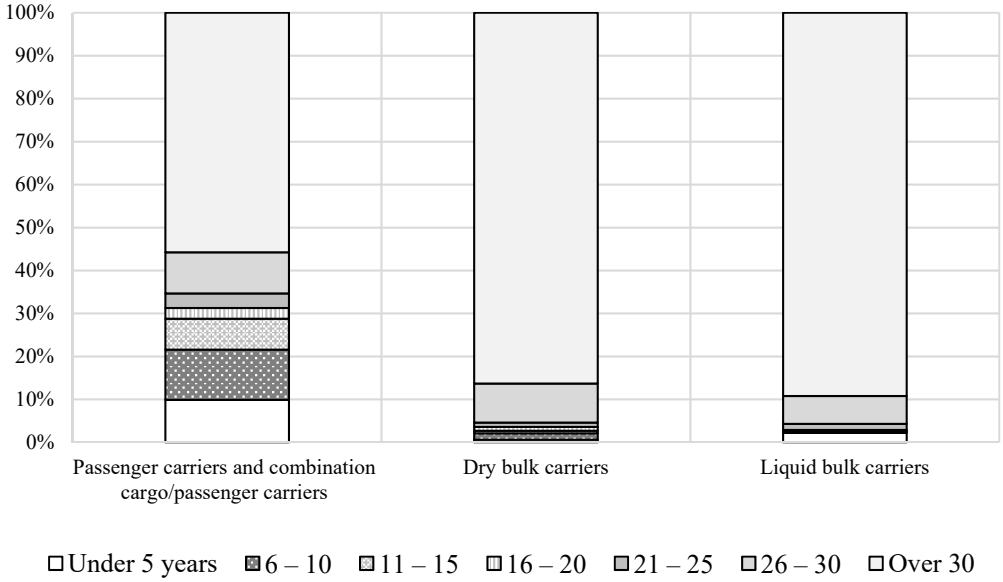


Fig. 46. The age structure of river and lake vessels in 2017
(year-end; as % of total)

Source: Rosstat.

In order to increase the competitiveness of inland waterway transport, along with improving its fleet's age structure, it is necessary also to equip it with hi-tech and more economical vessels. It is expected that after the most worn-out vessels, in particular river-sea navigation oil tankers, are written off, the supply of such services will shrink, thus pushing up the shipment tariffs by 2022.[1] The construction of passenger carrier fleet is sustained, among other things, by the development of domestic tourism and cruise market growth. Thus, since 2017, two Russian shipbuilding enterprises – Krasnoye Sormovo Shipyard PJSC and Lotos Shipbuilding Plant OJSC – have been constructing river-sea passenger vessels;[2] the first launches took place in 2019.

Among other things, a serious problem is associated with the safety issues resulting from the deterioration of navigation hydraulic structures, in particular, the high rates of wear and tear of port infrastructure, berthing facilities, and transshipment complexes. Most of the hydraulic structures on the inland waterways of the Moscow region have been in operation for 50–70 years.[3] The estimated service life of many of the structures operated by Moscow Canal FSBI and belonging to hazard classes I and II (extremely high and high hazard), is 100 years, provided

[1] The bark is still afloat. The fleet of river vessels must be renewed // The Russian Newspaper. URL: https://rg.ru/2018/04/16/park-rechnyh-sudov-neobhodimo-obnovliat.html.

[2] *Tsvetkov, Yu.* The river transport development is the state strategic goal // Sea News of Russia (Morvesti.ru). 2019. No 2. URL: http://www.morvesti.ru/interview/detail.php?ID=77280.

[3] Government Program 'Inland Waterway Transport', Subprogram 'Public Transport'. URL: http://vestnik.mos.ru/files/other/pril/2011/51/408PP/Podprogramma-Obwestvennyj-transport-Vnutrennij-vodnyj-transport.doc.

that the hydraulic units are duly repaired in accordance with the established technical schedules.[1]

In order to expand the inland waterway transport operations, it will be necessary to modernize the water infrastructure facilities, to increase waterway dimensions, and to carry out additional works involving their deepening, dredging, trawling, and expansion of the existing bottlenecks. The following major inland waterway transport infrastructure projects can be noted, their goal being the elimination of bottlenecks and other infrastructural constraints: the construction of the Bagaevsky hydroelectric complex on the Don River (2018–2020) and the low-pressure waterworks facility in Nizhny Novgorod (2019–2020). These infrastructure projects, once completed, will improve the competitiveness and efficiency of inland waterway and create some additional cargo flows, thereby reducing the load on the other modes of transport during the navigation period.

Pipeline transport

The pipeline transport routes are very lengthy, which is explained by the specificity of products that have to be transported from remote production sites and fields to their consumption points. As of 2018, the total length of the trunk lines amounted to 249,800 km, these being in the main natural gas pipelines (179,300 km). The length of crude oil and petroleum product pipelines amounted to 53,400 km and 17,100 km (21.4% and 6.8% of total length), respectively.

Pipeline transport is also characterized by a high degree of depreciation of fixed assets. According to the Pipe Industry Development Fund (PIDF), the age of more than 20% of trunk pipelines and about 40% of oil production pipelines exceeds 30 years, while their trouble-free service life is 15 years.[2]

Meanwhile, a number of major infrastructure projects are being implemented in the pipeline industry, in particular the construction of Nord Stream 2 and Turkish Stream, to be put in operation in 2020 (however, the launch of these two gas pipelines may be delayed due to the foreign economic sanctions). In 2019, the Power of Siberia gas pipeline was brought into operation, which will ensure further development of the domestic gas transmission system and its access to new markets.

* * *

The state of the transport complex is closely associated with the economic indicators, as well as the general situation in the country. The developments in the Russian and global economy in Q1 2020, in particular the volatile behavior of the oil market (in response to the breakdown of the OPEC+ agreement and the effects of several other factors) and the plunge of oil prices coupled with the ruble weakening, put the national economy under pressure, which also influenced the performance indices of the transport complex. However, the spread of coronavirus infection produced some very significant negative effects, which required some

[1] Report 'On complying with the set of mandatory requirements and conditions, their content in the normative legal acts regulating the inland waterway transport activity in Q1 2017', prepared by the Central Administration for State River Supervision of the Federal Service for Supervision of Transport (Rostransnadzor).

[2] The Pipe Industry development Fund called for an accelerated renewal of worn pipelines to prevent an environmental disaster. URL: http://frtp.ru/2018/04/19/frtp-vystupil-za-uskorenie-obnovlenija-iznoshennyh-truboprovodov-dlja-predotvrashhenija-jekologicheskoj-katastrofy/.

decisive restrictive measures (closure of the country's external borders and cancellation of foreign flights, limitations imposed on domestic flights, the launch of a long holiday from March 30, the enforcement of a 'self-isolation' regime in several regions of the country, and some other measures). All these developments negatively affected the activities in the transport sector, which thus became one of those sectors of the Russian economy that suffered most.[1]

The government support of the industry, a gradual economic recovery after the coronavirus epidemic recedes and the restrictive measures are lifted, as well as the implementation of national projects in the transport sector, [2] should all translate into a positive impact on the transport complex in 2020. However, overall, one can hardly expect an upward trend to be demonstrated by its indicators compared with those of the previous year.

4.8. Small and medium-sized entrepreneurship in Russia and regions in 2019–2020[3]

Government funding of the respective activities of small and medium-sized enterprises (SME) [4] under the national project "Small and medium-sized entrepreneurship and support of entrepreneurial initiatives" increased in 2018-2020. However, in 2019, the number of SMEs subjects decreased by 118 thousand compared to 2018, and the number of people employed in the sector fell to 18.8 million, i.e. decreased by almost half a million people (the goal of the national project for 2024 is 25 million people). The share of the SME sector in GDP decreased to 20 percent in 2018 (the goal of the national project for 2024 is 32.5 percent). Generally, negative trends in the development of the sector, associated with an increase in the VAT rate, the introduction of online cash registers and almost zero growth in household incomes were observed in Russia in 2019. In 2020, near-zero economic growth and the coronavirus pandemic, which has already led to a significant drop in demand, especially in the restaurant business, tourism and entertainment, will negatively affect the development of the SME sector. A more significant reduction in performance of the sector's activity is expected compared to 2019. However, the conditions for the development of entrepreneurship and, accordingly, the indicated trends vary significantly across Russia's regions.

Consideration of these differences can contribute to a conduct a more well-balanced entrepreneurial policy. A large differentiation of Russian regions in geography, population density, level of economic development and digitalization affects the development of entrepreneurship. Regions vary according to the level of entrepreneurial activity, the number of firms and the density of their distribution, industry specialization, the size of firms and the

[1] Mishustin named the industries affected by coronavirus // RBC. URL: https://www.rbc.ru/business/30/03/2020/5e819d039a7947925edc003a.

[2] Bringing both the federal and regional road networks into conformity with the established norms, improving the safety and quality of transport services and infrastructure, eliminating the transport system's bottlenecks in the framework of the National Project *Safe and High-Quality Roads*. As part of the transport-targeting section of the Comprehensive Plan for the Modernization and Expansion of Trunk Infrastructure for the Period until 2024, major federal infrastructure projects with state participation are being implemented.

[3] This section was written by *Barinova V.A.,* Candidate of science (Economics), Head of Innovation Economics Department, Gaidar Institute, Head of Entrepreneurship research department, IAES RANEPA; *Zemtsov S.P.*, Candidate of science (Geography), Leading Researcher, IAES RANEPA, Senior researcher, Gaidar Institute; *Tsareva Yu.V.,* Researcher, IAES RANEPA.

[4] *Maria Antonova, Vera Barinova, Vladimir Gromov, Stepan Zemtsov, Alexander Krasnoselskykh, Nikolay Milogolov, Aleksandra Potapova, Yulia Tsareva*. Development of small and medium-sized entrepreneurship in Russia in the context of national project implementation. M.: Publishing House "Delo" RANEPA, 2020.

number of relationships, different patterns of interaction with authorities, suppliers and partners, investors and consumers.[1]

Various territories of the world, practicing their own ways to develop entrepreneurship, became known as entrepreneurial ecosystems[2], featured by analogy with natural ecosystems by a certain environment and interconnections. Moreover, these regional differences can persist for decades, and conditions in one region can have a significant impact on other regions.[3] Some regions that pursued policies aimed at improving the business environment have reached a higher level of regional development.[4] Generally, more developed ecosystems of entrepreneurship are more resilient to crises.

4.8.1. The main development trends and barriers in Russia's SME sector in 2019–2020

The 2020 coronavirus pandemic negatively affects the economic situation worldwide, and tendencies observed of the onset of the global economic crisis. In Russia, the introduction of recommendations on quarantine compliance along with the Ruble depreciation caused a sharp decline in demand for offline services, resulted in reduction of revenues primarily for SMEs. At present, statistics on the number of firms does not yet reflect the negative consequences of the pandemic, but restaurants[5], fitness clubs, beauty salons, tourism industry enterprises[6], and event agencies[7], go massively bankrupt and close down.

Those businesses that failed to timely switch to the online provision of goods and services or their business model exclusively related to the provision of personal services, now face the risk of bankruptcy. According to surveys of the Chamber of Commerce and Industry (CCI)[8], every third enterprise in the SME sector may close by June. In fact, one can talk about zeroing the efforts of the authorities to develop small and medium-sized enterprises and improve the business climate in previous years, if emergency support measures left unchanged.

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[1] *Stepan Zemtsov, V. Baburin* Entrerpreneurial ecosystems in the regions of Russia//Regional research. 2019. № 2. P. 4–14.

[2] Entrepreneurial ecosystem is a system of interaction of firms, consumers, supplyers and other business agents shaped at a particular territory based on certain patterns (*Mooer J.F.* The death of competition: Leadership and strategy in the age of business ecosystem. NY: HarperCollins, 1996).

[3] *Stepan Zemtsov, Yulia Tsareva.* Entrepreneurial activity in Russia's regions: how spatial and temporary effects determine development of small business//Journal of the New Economic Association. 2018. T. 1. № 37. C. 145–165; *Fritsch M., Wyrwich M.* The long persistence of regional levels of entrepreneurship: Germany, 1925–2005 // Regional Studies. 2014. Vol. 48. No. 6. P. 955–973.

[4] *Stepan Zemtsov, Yuri Smelov.* Factors of regional development in Russia: geography, human capital or regions policy // Journal of the New Economic Association. 2018. No. 4 (40). pp. 84–108.

[5] *Anastasia Tatulova.* A few weeks left: how coronavirus kills small business in Russia //Forbes. March 23, 2020. URL: https://yandex.ru/turbo?text=https%3A%2F%2Fwww.forbes.ru%2Fkarera-i-svoy-biznes%2F395715-nam-ostalos-neskolko-nedel-kak-koronavirus-ubivaet-malyy-biznes-v-rossii.

[6] *Akhmedjanova R.* Recreation in the Era of Cotonavirus // Forbes. March 22, 2020. URL: https://www.forbes.ru/obshchestvo/395709-otdyh-epohi-koronavirusa-kakie-putevki-teper-predlagayut-rossiyanam.

[7] *Gaisina I., Melnikova K., Peshkova H.* We have simply collapsed: entertainment industry can lose up to RUB 20 billion due to the ban of mass events in Moscow // Forbes. March 12, 2020. URL: https://www.forbes.ru/karera-i-svoy-biznes/394785-my-prosto-ruhnuli-industriya-razvlecheniy-mozhet-poteryat-do-20-mlrd

[8] *Ageeva O.* CCI warned about the rusk of ruin of 3 million of businesses due to coronavirus //RBC. URL: https://www.rbc.ru/economics/21/03/2020/5e7490569a7947467949c77d 21,03,2020.

Russia was annually improving its position in the Doing Business ranking, rising from the 124th place in 2010 to 28th place in 2019[1], potentially indicating an improvement in formal conditions for doing business. However, the ranking does not fully account the conditions for SMEs activities, and calculations made only for Moscow and St. Petersburg, where doing business is apparently more lucrative due to concentration of solvent demand compared to most of regions.

In 2019, according to the all-Russia survey of small companies by Rosstat[2], there was a slight reduction of barriers hindering the development of SMEs, especially compared to the crisis year 2015 (*Fig. 47*). Among the restrictions on small business activities in the manufacturing industry, the most significant were insufficient financial resources and a high interest of banking loans (60 percent of respondents), insufficient demand in the domestic market (55 percent) and high taxation (56 percent). Therewith, the latter barrier was the second most significant restriction for the surveyed companies in connection with an increase in the VAT rate at the beginning of 2019 and the general introduction of online cash registers.

Far less respondents noted insufficient funds in 2019 compared to 71 percent in 2015. Indeed, according to the Central Bank[3], the rate on long-term loans granted to SMEs has been annually reduced from 17.8% in 2015 to 10.8 percent in 2019. Generally, this has been driven by a general reduction in rates; establishing a system of guarantees and introducing interest rate subsidizing programs for small businesses could play a certain positive role. Low demand remains in the domestic market due to a nearly zero growth in the consumer market (household incomes)

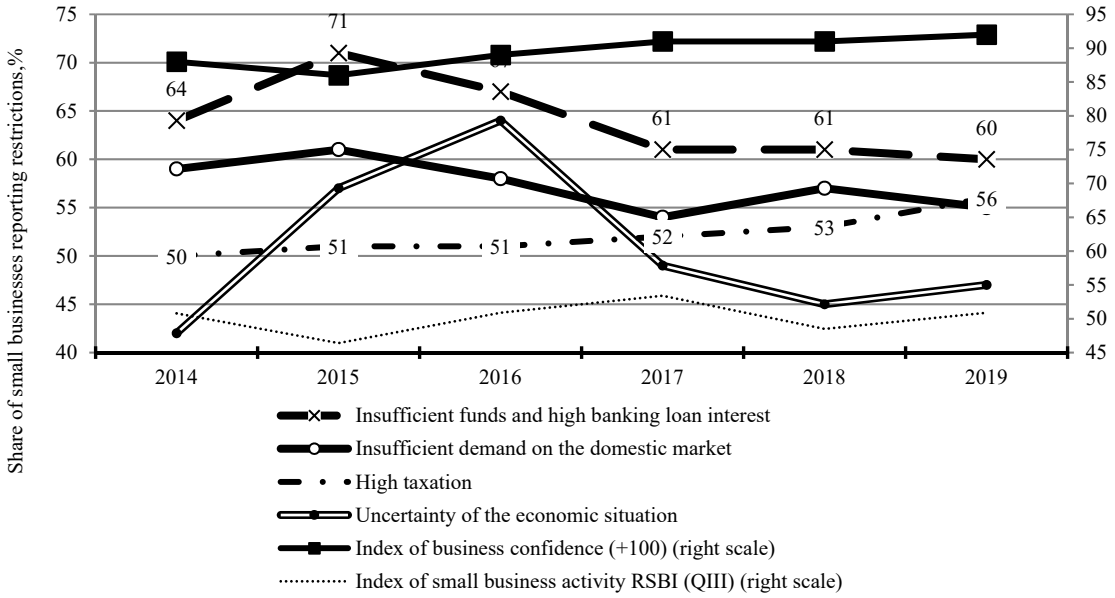
It is highly likely that increasing importance of such barriers as insufficient demand and the uncertainty of the economic situation will be observed at the beginning of 2020. Many enterprises will also experience a shortage of financial resources: actually, there is already a cash gap caused by a drastic decrease in demand while maintaining current employment, rental, loan and other payments. In 2019, lending to small businesses grew at a record pace compared to 2013, which could also negatively affect the economic situation in the SME sector in 2020[4].

In 2019, 9 percent of respondents did not report any restrictions hindering the development of their enterprises; there were 5% of them in a crisis period of 2015–2016, and this can be interpreted as an indicator of improvement for small business. The same goes for Rosstat positive dynamics in the index of small business confidence and RSBI business activity[5]. However, it is fair to assume that dynamics of main indicators of small and medium-sized entrepreneurship business development will be negative in 2020.

Administrative pressure on small businesses has somewhat decreased due to a reduction in the total number of business inspections[6] and a moratorium has been introduced on planned inspections of SMEs with an option to be extended in connection with the pandemic[7]. However,

[1] Doing Business. URL: https://www.doingbusiness.org/.
[2] Main indicators of small business activity. URL: https://www.gks.ru/folder/14036.
[3] Bank of Russia. URL: https://cbr.ru/statistics/pdko/sors/.
[4] Banks issued the record for 5 years amount of business loans. URL: https://www.vedomosti.ru/finance/articles/2020/02/26/823922-banki-rekordnuyu.
[5] Index OPORY RSBI. URL: https://opora.ru/projects/indeks-opory-rsbi/.
[6] *Antonova M.P., Barinova V.A., Gromov V.V., Zemtsov S.P., Krasnoselskikh A.N., Milogolov N.S., Potapova A.A., Tsareva Yu.V.* The development of small and medium-sized entrepreneurship in Russia in context of national project implementation. Moscow, Delo Publishing House RANEPA, 2020.
[7] Putin supported ban on scheduled inspections of small and medium businesses. URL: https://www.kommersant.ru/doc/4302091.

the tax control was equally strengthened resulted from introducing the online cash registers, combatting of the Federal Tax Service of Russia against shell companies and illegal business "fragmentation" aimed at avoiding taxation. At the same time, the number of shell companies fell in Russia to record low values[1] – 7.3 percent of the total number of legal entities (309 thousand).



Note. Left scale: share of small manufacturing businesses reporting any specific restrictive factor in QIII, yearly, percent.

Fig. 47. Estimation of business environment in Russia

In addition, FTS of Russia every year deletes firms failing to provide reporting from the list of registered ones, and around 90% of all liquidated legal entities were closed by the decision of tax authorities. In 2020, a significant rise of bankruptcies and shutdowns is expected. Moreover, check on enterprises may even be toughened in order to avoid massive lay off[2].

Overall strengthening of control in 2018–2019 could result in a reduction in the number of SME subjects in 2019 by 118 thousand units. Meanwhile, the number of individual entrepreneurs was growing. This may be due to the intention of small businesses to reduce their costs by using tax incentives and transferring individual employees to IP status. In Russia, a considerable part of those employed that might relate to the SME sector, is in the shade. Therefore, in 2019, an experimental introduction of such a special tax regime as PIT, was conducted in Moscow, the Moscow Region, Republic Tatarstan, and the Kaluga Region; there are plans to spill over this regime to every region[3] from July 1, 2020. The number of registered self-employed reached only 330 thousand people in 2019[4]. In the meantime, employment in the

[1] URL: https://www.rbc.ru/economics/26/06/2018/5b30fcab9a7947e36cf7a7b3.
[2] Mikhail Mishustin warned against inadmissibility of job cuts in pretense of coronavirus situation. URL: https://www.kommersant.ru/doc/4298985.
[3] Ministry of Finance of Russia plans to spill over a special tax regime for self-employed across the whole country from July 1, 2020. URL: https://www.minfin.ru/ru/press-center/?id_4=36837-minfin_rossii_planiruet_s_1_iyulya_2020_goda_rasprostranit_spetsialnyi_nalogovyi_rezhim_dlya_samozanyatykh_na_vsyu_stranu.
[4] Over 330 thousand people registered status of self-employed in Russia. URL: https://tass.ru/ekonomika/7406941.

informal sector is still growing from 14.3 million people in 2017 to 15.3 million in 2019 (21.3 percent of the total number of those employed)[1]. A number of employees in the SME sector decreased in 2019 compared to 2017–2018 by 0.5 million people (from 19.3 million to 18.8 million people), notably, due to reduction of a number of SME employees, which can be indicative of tax optimization. Modest growth in household incomes in 2019 as well as reduction in incomes early 2020 will result in further decrease of SME employment, largely associated with trade and services. The key SME sectors include wholesale and retail trade (60.4 percent of the total turnover), manufacturing (10.4 percent), construction (7.5 percent). The turnover structure of SME subjects over the last few years has not experienced major changes: the share of trade and refurbishment slightly reduced with manufacturing and internet services slightly growing. It is likely that in 2020 these trends will continue. Delivery services, various internet services, information technologies, distance education, telemedicine are developing.

The SME share in the GDP fell from 21.9 percent in 2017 to 20 percent in 2018. The turnover of SME sector has been generally growing in real terms since 2014, however, its significant reduction is expected in 2020. The turnover of medium-sized enterprises in 2017–2018 was lower than the level of 2015–2016. The ratio of the SME sector vs GDP grew from 2015 to 2017 (from 61 to 75 percent), but in 2018 there was a decrease to 72 percent, which most likely decreased in 2019 and will continue to decline in 2020. According to Rosstat, the number of small and medium-sized exporting enterprises grew by 3.4 times over 2018[2]. The share of SMEs in the non-resource sector also grew in 2018 amounting to 8.71 percent. However, the number of annually established startups decreases: 12.2 thousand startups were set up in 2018, being 4.6 thousand less than in 2017[3].

4.8.2. Geography and dynamics of SME subjects activity indicators

Spatial distribution of SME subjects

The geography of small and medium-sized enterprises in Russia has been developing over the last 30 years with stable institutional, sectoral and other regional specific features created during this period. The differences in the density of small businesses and involvement of the population in entrepreneurial activity are quite large. Actually, one can talk about different types of entrepreneurial ecosystems. It is important that changes in macroeconomic and other pstterns result in a different response of the SME sector in different regions. For example, the establishment of new enterprises under introduction of federal initiatives aimed to simplify business processes grows differentially in the regions depending on the quality of institutions, density of small firms, etc.[4].

Such major urban agglomerations as Moscow, St. Petersburg, Novosibirsk as well as port regions, i.e. Krasnodar krai and Kaliningrad regions, demonstrate the highest density of SME

[1] Rosstat informed about growth of informal employment in Russia. URL: https://www.rbc.ru/economics/05/09/2019/5d6e74fb9a794709eeba4f8c.

[2] EMISS. Number of small and medium-sized enterprises involved in export business. URL: https://fedstat.ru/indicator/54389.

[3] *Vera Barinova, Stepan Zemtsov, Vladimir Zinov, Vera Kidyaeva, Alexander Krasnoselskykh, Natalia Kurakova, Roza Semenova, Ivan Fedotov, S.Khalimova, Rustam Khafizov, Yulia Tsareva.* National report "Highly technological business in Russia's regions". 2020 / edited by Stepan Zemtsov. M.:RANEPA; AIRR, 2020.

[4] *Yakovlev E., Zhuravskaya E.* The unequal enforcement of liberalization: evidence from Russia's reform of business regulation // Journal of the European Economic Association. 2013. Vol. 11. No. 4. P. 808–838.

subjects per capita. The highest relative growth rate in the number of SME subjects was observed in 2019 in these particular regions or close to them, i.e. Moscow, Leningrad, Samara, Sverdlovsk Tyumen regions, Republic of Tatarstan, St. Petersburg, Krasnodar krai. Large consumer markets and, as a result, higher demand for SME products, higher need for a variety of goods, developed infrastructure (advanced transport network, enhanced logistics, access to facilities and equipment, a higher number of development institutions) are the strengths of major urban agglomerations. Moreover, population density positively correlates with the intensity of social ties, thus, allowing to share experience and get additional economic benefits, and negatively correlates with the fear of failure in starting a business.

Regions having an access to the sea and, accordingly, to trade routes, demonstrate a higher potential for the development of international trade, access to new foreign markets and the development of small and medium-sized business sector in tourism and transport.

A favorable investment climate resulted from political, legal, social and economic patterns, also stimulates business activity in the region. According to Agency for Strategic Initiatives rating, the best investment climate is in Kaluga, Tyumen, Voronezh, Ivanovo, Rostov regions, Krasnodar krai, Republic of Tatarstan, Moscow and St. Petersburg.

Republic of Crimea and the federal city Sevastopol demonstrate the density of entrepreneurial activity above average, explained by a great number of touristic businesses and guest houses present there. Last but not the least, the free trade zone rule is implemented in these regions[1], when enterprises pay a reduced profit tax of 2 percent, exempt from property tax for a long period of time after being registered, pay insurance premium at 7.6 percent rate instead of 30%.

In 2019, the number of SME subjects most critically reduced in Yaroslavl and Magadan regions, in the Republics of Chechnya, Komi, Mari El, Adygea, Altay and the city of Moscow. In our opinion, the decrease in the underdeveloped southern and northern regions is due to the departure of small firms in the shadow sector under the continuing decline in household incomes since 2014 and introduction of online cash registers. Evidently, the introduction of online cash registers could have a more detrimental effect on less developed and remote settlements. Less developed regions with the higher share of trade in the SME structure, suffered more after raising of the VAT rate. This reduction in Moscow and the Yaroslavl region could also be associated with the effect of the FIFA World Cup, when many enterprises closed immediately after the tournament ended.

The SME sector can suffer the most in regions with a developed entertainment sector and restaurant business. These types of businesses are traditionally concentrated in large agglomerations, especially in the regions, where large sporting events were envisaged and postponed indefinitely. Particular construction projects have been frozen, and the housing and apartments renovation market is unlikely to reach the level of 2019. The touristic sector and the relative small business in Krasnodar krai, Republic of Crimea, Kaliningrad Region, Republic of Tatarstan, St. Petersburg, Yaroslavl Region, will suffer significantly.

Quarantine measures imposed in foreign countries cause difficulties for small business in the bordering regions, i.e. Kaliningrad, Amur regions, Primorsky krai. This will result in reduction of a number of SME subjects. The shrinking rate will be lower in the less developed regions with a high share of agricultural business, i.e. Tambov, Lipetsk, Voronezh, Saratov regions, Altay krai. Foodstuffs are in demand under crisis and pandemic. The level of

[1] Federal law «On development of the Republic of Crimea and the federal city Sevastopol and free trade zone in the Republic of Crimea and the federal city Sevastopol" of November 29, 2014 № 377-FZ.

digitalization services is nevertheless higher in major agglomerations, there are more opportunities for distant work and, consequently, more opportunities to adapt to crisis, which is already the reality for many firms, transitioning to providing services in the online format, and distant employment.

Geography and dynamics of employment in SME sector

The National project suggests an annual growth of employment in the SME sector by 900 thousand people in 2019–2024 (*Fig. 48*).Taking into consideration the reduction of labor force in Russia against stable dynamics of employment in the SME sector over the last years and reduction of employment in the sector in 2019 by half a million people, this scenario could be called optimistic[1]. Keeping the current value of the labor force in Russia at 76 million people, an increase in the number of employees by 20 percent (by 5–6 million people) over 5 years means an increase in the share of employees in SMEs from 24–26 to 32–34 percent. However, in times of crisis and according to business request to reduce their costs, the employment in the sector will most likely decline in 2020 more rapidly than in the economy as a whole. It is expected that control over budgetary organizations and large enterprises will be tougher.

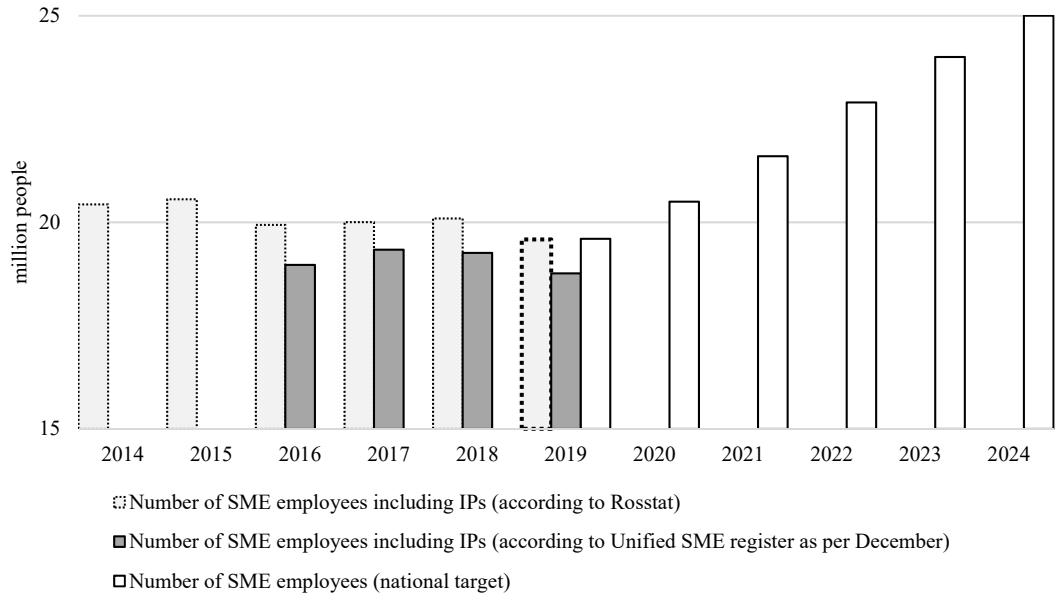


Fig. 48. Dynamics of employment in SME sector in Russia and national targets of SME employment declared for 2019–2024

Source: Rosstat; Unified SME register[2]; passport of the national project[3].

[1] More modest rates conveyed in The "The development strategy of small and medium-sized entrepreneurship in Russia up to 2030"; actual target value of 2030 transferred to 2024. See: *Vera Barinova, Stepan Zemtsov, Vladimir Kotsyubinsky, Alexander Krasnoselskih, Yulia Tsareva.* Implementation of development strategy of small and medium-sized entrepreneurship in Russia//Russia economic development. 2018. Vol. 25. № 11. P. 36–45.

[2] Unified register of small and medium-sized entrepreneurship subjects. FTS. URL: https://rmsp.nalog.ru/index.html.

[3] Passport of the national project "Small and medium-sized entrepreneurship and support of individual entrepreneurial incentive". URL: http://government.ru/info/35563/.

Employment in SME sector is highly concentrated, i.e. over 45.2 percent of those employed is centralized in major Russia's regions. For comparison, only 39 percent of total employment in Russia is concentrated in 10 major regions. The share of SME employees against the total number of employed in 2019 is the highest (over 30 percent) in large urban agglomerations with developed spheres of trade and services, i.e. St. Petersburg, Moscow, Novosibirsk, Sverdlovsk regions and close to a major market of Moscow (Kostroma and Ryazan regions) and in port regions (Kaliningrad and Sakhalin regions). This indicator is the lowest, less than 4%, at Chukotka, Kabardino-Balkar Republic, Republic of Chechnya, Republic of Dagestan, Republic of Ingushetia, where the share of informal sector is higher, and small and medium-sized businesses registered less frequently and less commonly officially register their employees. Slight reduction in the concentration of SME employment can be expected in 2020 in major centers.

The number of SME employees increased in 2019 only in eight Russia's regions: Republic of Ingushetia, Chukotka and Nenets Autonomous Okrugs, Republic of Dagestan, Republic of Crimea, Republic of Tuva, Republic of Chechnya and Moscow region. Growth of employment in the regions of North Caucasus and Far North can be explained by low base effect, free trade zone in the Republic of Crimea and by favorable institutional conditions for opening firms in Moscow region. Most of all, employment declined in a number of large-urban northern regions (Murmansk, Arkhangelsk regions, the Komi Republic), as well as in the sparsely populated Non-Black Soil zone region (Yaroslavl, Novgorod and Pskov regions), which may partly be due to the introduction of online cash registers and the inability to use them in remote and rural settlements. In addition, the increase in costs associated with the VAT rate growth for businesses in these settlements could prove to be unbearable.

To secure the increase of the number of employees in the SME sector, many entrepreneurs should first thing come out of the shadows and the self-employed legalize. The *Table 34* shows the potential number of self-employed in each region. Nationwide, there are more than 8.5 million unregistered self-employed, provided that all employees of the informal sector could be referred to this work status with the exception of already registered individual entrepreneurs. Moreover, more than a third of potential self-employed are located in the 10 largest regions with the highest share falling for underdeveloped regions with unfavorable institutional conditions.

In 2020, despite the expansion of the experiment on introduction of business income tax for all regions, the share of employees in the informal sector should increase.

Table 34

Employment in informal sector in Russia's regions

Region	Employed in informal sector, percent to total number of employed population	Employed in informal sector, thousands of people	Employed in informal sector excluding individual entrepreneurs, thousands of people
1	2	3	4
Russian Federation	20.1	14193.9	8915.8
Leaders by number of employees in informal sector excluding IPs			
Republic of Dagestan	56.9	610.8	583
Krasnodar region	29.9	762.8	503.9
Rostov region	29.1	559.5	344.6
Republic of Bashkortostan	24.6	417.8	301.2
Republic of Chechnya	65	328	297
Stavropol region	30.9	374.1	270
Nizhny Novgorod region	18.4	299.4	232
Republic of Crimea	35.7	295.1	204.4
St. Petersburg	12.4	389.3	198.6
Republic of Tatarstan	17	324.4	184.5

Cont'd

1	2	3	4
Leaders by employment rate in the informal sector			
Republic of Ingushetia	50.2	88.5	71
Kabardino-Balkar Republic	44.9	160	140.7
Republic of North Ossetia - Alanya	37.8	107.7	94.2
Altay Republic	37.5	30.7	23.5
Sevastopol	33.1	59.3	39.2
Republic of Kalmykia	33	36.1	25.7
Ivanovo region	31.1	139.4	88.4
Penza region	30.8	183.4	118.9
Republic of Khakassia	30.2	70	38.9
Republic of Adygea	30.2	45.2	30.6

Source: own calculations based on Rosstat data.

Geography and dynamics of the SME non-resource exports

The volume of non-resource exports of the SME subjects in Russia accounted for nearly USD 14.1 billion or 7.2 percent of the aggregated non-resource exports in 2017[1]. In 2018, the volume of non-resource exports of the SME subjects increased by 45% compared to the previous year constituting USD 20.6 billion or 8.7 percent of the aggregated exports this year. The share of non-resource SME exports increased in the total SME exports volume: from 85 percent in 2017 to 87 percent in 2018. Only 2.6 percent of the total volume of the SME non-resource exports falls for individual entrepreneurs.

The increase of the SME exports share in the total volume of non-resource exports to 8.8 percent by 2019 and to 10 percent by 2024, foreseen under project, is feasible provided major enterprises reduce exports in the new environment. Amid falling consumer demand within the country, some successful small and medium-sized businesses will increase export deliveries benefiting from Ruble depreciation and, accordingly, a relative decrease in the cost of production in foreign markets. Therewith, small firms may be more adapted to changing environment due to the production and export of piece products and the ability to take into account the needs of specific consumers.

Additional measures aimed to support exports, can contribute to survival of the most competitive companies in the SME sector.

During 2018, the leaders in the absolute volume of non-resource SME exports were the largest agglomerations of Russia with concentration of processing enterprises (Moscow, St. Petersburg), agricultural and farming centers (Rostov region, Krasnodar Krai), forestry and wood processing centers (Irkutsk region, Krasnoyarsk krai) and centers of marine industries and marine farming (Sakhalin region, Primorsky Krai).

The share of the SME sector in the region's non-resource exports accounts for more than 50% in economically underdeveloped regions specializing in agriculture (Republic of Tuva, Altai Krai, Republic of Adygea, Republic of Karachay-Cherkessia, Republic of Chechnya). In the remote regions there are no large non-resource companies due to the increased costs of transporting raw materials and finished products, therefore, the share of SME exporters is also high in the Yamalo-Nenets, Chukotka Autonomous Okrugs, Tomsk Region and Zabaykalsky

[1] Russia FTS and FCS data were used. Note that it is impossible to receive quality regional statistics as the region, where the firm has been officially registered, is reflected in the customs declaration as exporting region rather than the region where this firm conducts their activity (around 20 percent of SMEs registered in Moscow and St. Petersburg in Russia).

krai (*Table 35*). Less than 2 percent of this share is concentrated in the regions with high volume of the non-resource metallurgic production (Vologda, Lipetsk, Kemerovo regions), and chemistry (Tula, Tyumen regions), associated with the activities of the respective largest enterprises in these regions.

Table 35

Leading regions according to absolute value of SME non-resource exports (legal entities and individual entrepreneurs) in 2018

Leading regions according to absolute volume of SME exports	Non-resource SME exports, USD, million	Regional share in the total volume of non-resource SME exports in Russia, percent to total	Growth in 2018 against 2017, %
Moscow	3 859.00	25.20	34.30
Rostov region	944,1	11,20	143,90
Irkutsk region	911.4	3.70	-15.70
St.Petersburg	821.4	5.40	34.80
Krasnoyarsk krai	671.1	4.50	36.40
Primorsky krai	668.1	3.90	21.30
Krasnodar krai	469.7	6.00	164.20
Moscow region	353.3	2.70	56.00
Sakhalin region	225.7	2.10	91.00

Source: own calculations based on FTS[1], FCS[2] data.

4.8.3. Recommendations for entrepreneurial policy in Russia

Modern measures to support entrepreneurial sector can be split into short term and long term.

Short-term measures introduced in many countries, including Russia[3], are designed to ease the negative effects of the pandemic. Among these measures, the following is suggested: deferrals of payments on taxes and social contributions, on leasing of facilities owned by the state, support of consumer demand by issuing subsidies to vulnerable groups of the population, deferral of payments on loans, introducing a moratorium on bankruptcy[4]. Measures of higher value are being developed in Russia for enterprises in the transport industry and tourism, however, it will be necessary to introduce subsequent particular measures for creative industries closely related to the entertainment sector.

Anti-crisis supportive measures are also being developed in certain regions having financial, administrative and other resources for their implementation. The city of Moscow was one of the first to start collecting proposals for supportive measures and provided small and medium-sized businesses with certain relaxation options[5]. Among these measures are: expanding soft loan programs and guarantee support for SME lending, deferral of payment of rent for SME subjects, renting the state or municipal property, moratorium on SME inspections, including on-site tax inspections (except for issues that pose risks to human life and health).

[1] Federal Tax Service. URL: http://nalog.ru.
[2] Federal Customs Service of the Russian Federation. URL: http://customs.ru/.
[3] Rescue of entrepreneurs: supportive measures introduced by governments of European countries, the USA and Russia amid crisis. URL: https://vc.ru/finance/114412-spasenie-predprinimateley-kakie-mery-pomoshchi-vvodyat-pravitelstva-stran-evropy-ssha-i-rossii-v-usloviyah-krizisa.
[4] Draft bill № 931192-7 "On amendments to particular legislative acts of the Russian Federation on prevention and control of emergencies". URL: https://sozd.duma.gov.ru/bill/931192-7#bh_note.
[5] Moscow will strengthen SME support under economic instability/RIA Novosti. March 18, 2020 URL: https://ria.ru/20200318/1568799432.html.

However, introduced and declared measures are evidently not sufficient to mitigate the negative crisis impact taking into consideration strong decline in demand. The option to introduce tax holidays up until quarterly deferral of tax payment[1] is under discussion.

Long term supportive measures should be focused on reducing the impact of potentially protracted crisis and adaptation to new environment (support of changes in the SME sector pattern towards increase of the internet-economy share, support of enterprises digital transformation, providing incentives to access foreign markets). Significant differences between regional entrepreneurial systems require, on the one hand, to make adjustments to the federal policy of entrepreneurship, while, on the other hand, allow to use strengths and weaknesses of the regions, their specialization and economic/geographic conditions for more effective long term development of the SME sector in Russia.

The support of "gazelles", product, fast – growing companies related to medium-sized businesses, often innovative, is relevant amid the changed environment for regions, leading in the development of entrepreneurship (Moscow, St. Petersburg, Republic of Tatarstan, Samara, Novosibirsk regions). Appropriate measures are needed to automate and digitalize production in order to increase the competitiveness and demand for products on the way to economic recovery. Moreover, special measures are needed to accelerate and nurture suppliers, to develop venture capital and increase funding for related grants aimed at research and development in cooperation with universities. "Gazelles" are interested in establishing channels for exporting products, which is relevant against Ruble depreciation and a decrease in domestic demand. It is worth to reconsider the role of universities in order to create points of growth in the anti-crisis period and incorporate them into the ecosystem as main agents of change and a generator of innovation and startups[2].

It is reasonable to strengthen cooperation with enterprises and their suppliers, intermediaries, financial institutions, NGOs, development institutions and public companies, international companies and information agencies, auditing and consultancy firms, for regions known for developed small and medium-sized productions (Kaluga, Vladimir, Yaroslavl, Ryazan, Lipetsk, Tomsk regions) aimed to establish and develop clusters. Such a mechanism as increase of support to those companies operating at technological parks, technopolises, accelerators, industrial parks, can be effective[3].

Measures to initiate mass entrepreneurship and to legalize informal employment are needed in the lagging regions with ecosystems of entrepreneurship being not so successful and negative dynamics of entrepreneurship development. This may include measures to reduce the tax burden (for example, the abolition of tax payments for self-employed in rural areas) and consulting support. For regions specializing in agriculture, measures for agricultural cooperation are important. For single-industry towns, measures aimed at direct support of mass entrepreneurship are also relevant (for example, grants for starting a business).

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[1] *Elena Bazanova, Svetlana Yastrebova, Anna Chervonnaya.* The Government prepare plan to support economy due to coronavirus//Vedomosti. March 15, 2020. URL: https://www.vedomosti.ru/economics/articles/2020/03/15/825250-plan-zaschiti.

[2] *Vera Barinova, Stepan Zemtsov, Vladimir Zinov, Vera Kidyaeva, Alexander Krasnoselskykh, Natalia Kurakova., Roza Semenova, Ivan Fedotov, S.Khalimova, Rustam Khafizov, Yulia Tsareva.* National report "Highly technological business in Russia's regions". 2020 / edited by Stepan Zemtsov. M.:RANEPA; AIRR, 2020.

[3] *Maria Antonova, Vera Barinova, Vladimir Gromov, Stepan Zemtsov, Alexander Krasnoselskykh, Nikolay Milogolov, Aleksandra Potapova, Yulia Tsareva*. Development of small and medium-sized entrepreneurship in Russia in the context of national project implementation. M.: Publishing House "Delo" RANEPA, 2020.

In remote regions having adverse business environment, the main focus should be on reducing costs. The state should promote (subsidize, if necessary) the introduction of new technologies, the expansion of renewable wind and solar energy. For remote regions of the Far East, such measures as export stimulation, improvement of customs procedures and infrastructure, and transport benefits, are important.

In many respects, the survival of small business in 2020 will depend on the timeliness and effectiveness of government support measures, however, its subsequent development is impossible without a radical change in business policy, implying the above-described shift in sectoral and territorial emphasis. In the future, support for SMEs should move away from direct financial measures to create comfortable platform for the sustainable growth of small and medium-sized firms.

This includes institutional reforms, expansion of soft services, building-up incentives for interaction with other economic agents (large business, universities, etc.), stimulation of entrepreneurial incentive, especially in innovative sectors of the economy. A similar approach can be called ecosystemic.

4.9. The foreign trade[1]

4.9.1. The State of the global economy and trade

Amid prolonged trade tensions, high political uncertainties and the COVID-19 pandemic, the global growth outlook has become much worse. In the past year, in global economic growth rates there was a dramatic slowdown both of international trade flows and global production activities. The growing tariffs and rapid changes in the trade policy led to the decline of business confidence and, consequently, restrained investment growth in most regions. Sluggish demand affected global prices of primary products, particularly, crude oil and commercial metals.

The outbreak of the coronavirus COVID-19 in Europe which started in March 2020 has brought about a dramatic drop in prices on the world's major markets and a downturn in expectations of global economic growth in 2020. As of mid-March 2020, the assessments by the world's main international financial institutions (the IMF, the World Bank and the OECD) of global economic growth have not been adjusted yet. The most relevant ones are shown below. However, S&P, one of the world's three largest rating agencies reported that global recession was expected as early as 2020[2] with GDP growth rates falling to 1.0–1.5 percent. It is to be noted that for Russia, as an oil-exporting country, the main risk factor is a decrease in demand on energy commodities in developed economies. An additional factor of uncertainty is the prospect of an agreement to be reached on the reduction of oil production within the framework of the OPEC+. Without any agreement, the Brent oil price fell to USD 30 a barrel, the minimum price since the beginning of 2016. Further dynamics of oil prices will depend on the success of negotiations and the extent of the pandemic's effect on the global economy.

Monetary easing measures, including cuts in the US Federal Reserve's and leading central banks' key interest rates did not stop the downturn on the world's largest stock markets. A number of countries, including Russia, already declared that they would allocate additional

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[2] URL: https://www.spglobal.com/ratings/en/research/articles/200317-economic-research-covid-19-macroeconomic-update-the-global-recession-is-here-and-now-11392265.

budget funds to stimulate the economy. At the same time, restrictions on international flights and organization of mass events had undoubtedly a substantial negative effect.

In the IMF's World Economic Outlook[1] (WEO) January issue, it was stated that owing to unexpected negative changes in the economic activity in some countries with emerging markets the global economic growth outlook in the next two years were revised. The assessment of global economic growth rates in 2019 was revised downwards by 0.1 percentage point to 2.9 percent as compared with the October forecast. This index value was the record-low since the global financial crisis and can be explained by growth in trade barriers, growing uncertainties in trade and geopolitics, specific factors creating macroeconomic difficulties in a number of countries with emerging markets, as well as structural conditions, such as low growth rates of productivity and the aging of the population in countries with developed economies. The IMF estimates USD 700 billion worth of losses or 0.8 percent of global GDP to be sustained because of protectionist practices pursued by individual countries and international trade and economic frictions before 2020.

In future, a moderate speed-up of the growth rates is expected while average growth in global gross product is forecasted at the level of 3.3 percent and 3.4 percent in 2020 and 2021, respectively, a decrease of 0.1 and 0.2 percentage point, respectively, as compared with the October issue of the report.

As per the IMF's assessment, as of year-end 2019 global growth in international trade slowed down to the past ten years' record-low: the volume of global trade in goods and services increased by the mere 1 percent. In 2019, a dramatic drop in international trade growth in goods was mainly justified by a decrease in demand in imports to China and other countries with emerging market economies. This reflects largely trade tensions' impact on the region's vast cross-border production chains and the slowdown of internal demand in China. In the US, growth in imports slowed down, too, because the increased tariffs facilitated a two-digit reduction of imports of goods from China during the year. Amid weak business sentiments, slowdown of capital expenditures, as well as setbacks in the motor industry, the euro-zone saw a decrease in demand in imports.

Among other regions, the impact of trade tensions on imports growth was made worse due to country and regional factors. For large exporters of goods, including a few countries of Africa, Western Asia and Latin America, growth in imports remained weak because the depreciation of prices of primary products kept putting pressure on domestic investment activities. In Latin America, deepening of the economic crisis in Argentina led to a drop in demand on imports on the back of a dramatic reduction of capital expenditures. The slowdown of economic growth in India and other large countries of South Asia resulted in decreased demand in imports of goods.

It was expected that growth in the global economy in 2020–2021 would be accompanied by the expansion of global trade volumes (though a more restrained one than it was forecasted in October) owing to growth in internal demand and investments (*Table 36*).

According to the economic forecast of the Organization for Economic Cooperation and Development (OECD), presented in November 2019[2], trade conflicts, weak investments into business and prevailing political uncertainties made a pressure on the global economy and increased the risk of long-term stagnation. Global GDP growth was expected to amount to

[1] URL: https://www.imf.org/en/Publications/WEO/Issues/2020/01/20/weo-update-january2020.
[2] The official website of the OECD. URL: https:/www.oecd.org/economy/economic-outlook-weak-trade-and-investment-threaten-long-term-growth.htm.

2.9 percent in 2019 – the record-low annual index value after the financial crisis – and remain at the level 2.9–3.0 percent in 2020 and 2021. Presenting the forecast in Paris, Lawrence Bun, the OECD's Chief Economist said: "It would be a mistake to consider these changes as temporary factors which can be removed by means of the monetary and fiscal policy: they are of a structural nature. Without coordination in trade and global taxation and clear-cut political lines for the energy transit, the uncertainties will still pose a threat and cause damage to growth outlook."[1]

Table 36

Dynamics of global GDP and international trade (growth rates, % on the previous year)

	2011	2012	2013	2014	2015	2016	2017	2018	IMF forecast* (January 2020)	
									2019	2020
Volume of global GDP	4.3	3.5	3.5	3.6	3.5	3.3	3.8	3.6	2.9	3.3
Countries with developed economies	1.7	1.2	1.4	2.1	2.3	1.7	2.5	2.2	1.7	1.6
United States	1.6	2.2	1.8	2.5	2.9	1.6	2.4	2.9	2.3	2.0
Euro-zone	1.6	-0.9	-0.2	1.4	2.1	1.9	2.5	1.9	1.2	1.3
Germany	3.7	0.7	0.6	2.2	1.5	2.2	2.5	1.5	0.5	1.1
France	2.2	0.3	0.6	1.0	1.0	1.1	2.3	1.7	1.3	1.3
UK	1.6	1.4	2.0	2.9	2.3	1.8	1.7	1.3	1.3	1.4
Countries with emerging markets and developing countries	6.2	5.1	4.7	4.6	4.0	4.3	4.7	4.5	3.7	4.4
Russia	4.3	3.4	1.3	0.6	-3.7	-0.2	1.5	2.3	1.1	1.9
Developing countries of Asia	7.8	6.7	6.6	6.8	6.6	6.4	6.5	6.4	5.6	5.8
China	9.3	7.7	7.7	7.3	6.6	6.7	6.9	6.6	6.1	6.0
India	6.3	4.7	5.0	7.3	7.6	7.1	6.7	6.8	4.8	5.8
Latin America and Carribeans	4.6	2.9	2.7	1.3	0.0	-0.9	1.3	1.1	0.1	1.6
Brazil	2.7	1.0	2.5	0.1	-3.8	-3.6	1.4	1.3	1.2	2.2
Mexico	4.0	4.0	1.1	2.1	2.5	2.3	2.2	2.1	0.0	1.0
Volume of international trade in goods and services	6.1	2.9	3.0	3.3	2.6	2.2	5.2	3.7	1.0	2.9
Countries with developed economies	5.7	2.0	2.4	3.4	3.6	1.8	4.4	3.2	1.3	2.2
Countries with emerging markets and developing countries	6.8	4.6	4.4	2.9	1.3	3.0	6.9	4.6	0.4	4.2

***** The IMF forecast as of January 2020.

Source: The IMF's data. URL: https://www.imf.org/en/Publications/WEO/Issues/2020/01/20/weo-update-january2020.

Late in 2019, global problems were supplemented by the outbreak of the coronavirus (COVID-19), which complicated the already difficult situation in the global economy. In China, the measures aimed at stopping the spread of the virus included the quarantine and wide-spread restrictions on the mobility of the workforce, which led to unplanned delays in the renewal of work of factories after the Lunar New Year holidays and dramatic reduction of numerous types of activities in the services sector. The abovementioned measures caused a substantial reduction of output volumes. The subsequent outbreaks of the infection in other countries led to the same restrictions as the quarantine and closure of the borders.

These developments' negative consequences, including the direct disruption of global supply chains, a decline of final demand on import goods and services and shrinkage of

[1] The official website of the OECD. URL: https:/www.oecd.org/economy/economic-outlook-weak-trade-and-investment-threaten-long-term-growth.htm.

international tourism and business travelling are substantial. Risk aversion increased on the financial markets: the yield on 10-year US Treasury bonds fell to the record-low, share prices fell dramatically and prices of primary products depreciated. As a result, in February 2020 the OECD revised downward its forecast of global economic growth in 2020.[1]

Proceeding from the assumption that epidemic's peaks in China in Q1 2020 and outbreaks of the infection in other countries will turn out to be moderate, global growth may fall by about 0.5 percentage point in 2020 as compared with the economic forecast in November 2019 (to 2.4 percent), while in Q1 2020 growth may be negative. A more extended outbreak of the coronavirus which is spreading widely in the Asian-Pacific Region, Europe and North America will reduce substantially the outlook of global economic growth. In this case, global growth may fell to 1.5 percent in 2020, which is twice as little than before the outbreak of COVID-19.

The outlook for China has been revised substantially: in 2020 growth rates decline to 4.9 percent, while in 2021 recover to 6.4 percent, because output volumes gradually return to the levels forecasted before the outbreak of the coronavirus.

The negative effect of the epidemic on the financial markets and tourism, as well as the breakdown of supply chains were the factors behind the downward revision of the outlook for all G20 economies in 2020, particularly those which were related closely to China, that is, Japan, Korea and Australia.

As expected, in 2020 the US economy will grow by 1.9 percent (2 percent according to the previous forecast), while in 2021, by 2.1 percent instead of 2 percent predicted in November.

The forecast for the euro-zone in the current year was revised downwards to 0.8 percent from 1.1 percent, while in 2021 it was left at the level of 1.2 percent.

As the impact of the coronavirus gets weaker and output is gradually restored in countries exposed to the risk more than others, GDP global growth will recover to 3.3 percent in 2021.

Also, according to the data of the OECD[2], the international trade in the G20's goods (in US Dollars with seasonal fluctuations taken into account) retained its downturn trend during 2019 approaching the two-year minimums. So, in Q3 2019 as compared with Q2 2019 global exports fell by 0.7 percent, while imports, by 0.9 percent, which situation reflects partially a decrease of nearly 20 percent in prices of oil and the depreciation of the exchange rate of main currencies against the US Dollar. In Q4 2019, the international trade in goods kept shrinking. As compared with Q3 2019, exports decreased by 0.1 percent, while imports, by 1.3 percent.

In Q4 2019, among G20 North American countries, Mexico was the worst hit; its exports and imports fell by 3.4 percent and 3.2 percent, respectively. Canada saw a decrease of 1.6 percent and 1.8 percent, respectively, while the US, a decrease of 0.6 percent and 3.2 percent, respectively.

The main G20 European countries fared a little better: exports increased in France (by 1.1 percent), Italy (1.0 percent) and insignificantly in Germany (0.2 percent). Imports fell in France and Italy (0.8 percent and 2.3 percent, respectively), but increased again somewhat in Germany (by 0.2 percent). On the back of strong appreciation of the exchange rate of the pound sterling against the US Dollar, in Q4 2019 exports and imports in the UK rose by 2.4 percent and 1.1 percent, respectively, on the previous quarter.

[1] The official site of the OECD. OECD Interim Economic Assessment. Coronavirus: the world economy at risk. URL: http://www.oecd.org/economic-outlook/#resources.

[2] The official website of the OECD. URL: https://www.oecd.org/newsroom/international-trade-statistics-trends-in-third-quarter-2019.htm

In Asia, the Japanese-Korean trade dispute squeezes the international trade with exports and imports falling dramatically in both the countries: in Japan – by 3.4 percent and 3.6 percent, respectively, while in Korea – by 2.6 percent and 2.4 percent, respectively. In the past two years, Korea's exports and imports decreased by 12.3 percent and 8.0 percent, respectively.

In China, exports and imports increased by 0.4 percent and 2.8 percent, respectively. In India, exports increased by 2.8 percent, while imports fell, by 4.4 percent. In Indonesia, exports remained unchanged, while imports grew by 2.6 percent.

In South America, Argentina's exports rose by 6.2 percent, while imports decreased dramatically by 9.9 percent. Imports fell substantially (8.1 percent) in Brazil, while exports decreased by 1.5 percent.

Considerable disruptions in Asian supply chains related to the outbreak of COVID-19 are evidence of the fact that negative dynamics remained in Q1 2020, too.

In February 2020, the World Trade Organization published the regular Indicator of the World Trade Growth Rates (WTOI)[1], which provides the online information on the trajectory of the global trade. The latest value of the Indicator (95.5 points) is lower than the previous one (96.6 points) registered in November 2019; this index indicates that the global trade growth rates continued to slow down early in 2020. The decrease in the WTOI in the past few months was related to a further drop in the indices of container shipping (94.8) and agricultural primary products (90.9), as well as the stagnation of the output index and the index of car manufacturing (100.0). At the same time, it seems that the decrease in the index of export orders (98.5) and electronic components (92.8) stabilized, while air service weak indicators hit the bottom in 2019. However, the efficiency of recovery of these components of the Index will depend on the extent of effect of COVID-19 and the length of the period of recovery of the global economy.

In H1 2019, global trade growth slowed down with annual growth in trade in goods falling to 0.6 percent from 2.4 percent in H2 2018 owing to growing trade tensions. In response to slower than expected growth rates, on October 1, 2019 the WTO Secretariat revised downwards its forecasts of global trade growth in 2019 and 2020 to 1.2 percent and 2.7 percent, respectively (as compared with the estimates of 2.6 percent and 3.0 percent, respectively, made last April). In H1, economic growth slowed down in major economies partially because of prevailing trade tensions and partially because of cyclic and structural factors. Growth in global real GDP is estimated at 2.3 percent.

4.9.2. The Russian foreign trade situation: prices of main commodities of Russian exports and imports

In the October Commodity Market Outlook,[2] The World Bank states that in Q3 2019 prices of nearly 60 percent of primary products fell because of growing concerns over the global economic growth slowdown. It was a noticeable turn as compared with the World Bank's April Report when a series of shocks related to primary products led to growth in prices of numerous commodities, including oil. The worsening current macroeconomic situation, including the dramatic slowdown of manufacturing and trade in goods affected largely demand in goods.

In Q1 2019, there was monthly growth in prices of oil, but after it reached the peak value of USD 71.7 a barrel in April the dynamics changed for the downturn. The price reduction was justified by growing concerns over the decline of global demand on the back of aggravation of

[1] The official website of the WTO. URL: https://www.wto.org/english/news_e/news20_e/wtoi_17feb20_e.pdf.
[2] The official website of the World Bank. URL: https://www.vsemirnyjbank.org/ru/news/press-release/2019/10/29/commodity-prices-revised-down-as-global-growth-weakens-and-supplies-remain-ample.

trade relations between the US and China, the world's largest oil consumers. A drop in prices was prevented by the over-fulfillment of OPEC+ agreements and the continued reduction of oil production in Iran and Venezuela.

In Q3 2019, prices of energy commodities fell by more than 8 percent on Q2 2019. Crude oil cost on average USD 60 a barrel, a decrease of 8.2 percent as compared with Q2 2019. A drop in prices took place despite an attack on the oil infrastructure of Saudi Arabia; it was the largest upsurge of oil prices within one day since 1988 (when the Brent oil started to be traded on futures markets). On September 13, 2019, the price of Europe Brent Spot was equal to USD 61.25 a barrel, while on September 16, to USD 68.42 a barrel. However, in subsequent days after Saudi Arabia resumed successfully oil production to the normal level, prices fell again. Late in September, concerns over the slowdown of the global economy triggered by weak macroeconomic data and the ongoing trade dispute between the US and China reduced the global demand outlook and pushed oil prices downwards.

Late in 2019, the cost of the OPEC's base basket amounted to USD 66.48 a barrel, the highest monthly value since May 2019. At the end of the year, oil prices grew owing to the improvement of the fundamental indicators of the oil market, including ongoing efforts to stabilize the market carried out within the frameworks of the Declaration on Cooperation with the OPEC+ Countries, as well as easing of trade tensions between the US and China.

In December 2019, prices of ICE Brent oil rose by 5 percent to USD 65.85 a barrel as compared with the previous month, while those of NYMEX WTI oil, by 4.8 percent, to USD 59.80 a barrel. In addition, late in 2019 Brent oil cost 23 percent above the level seen at the end of 2018, while NYMEX WTI oil prices appreciated by 34 percent. However, in 2019 as compared with 2018 average annual oil prices depreciated: ICE Brent oil prices fell by 9.9 percent to USD 64.03 a barrel, while NYMEX WTI oil prices, by 12 percent to USD 57.1 a barrel. At year-end 2019, the average price of Urals oil decreased by 9.17 percent to USD 63.59 a barrel as compared with 2018 when it cost USD 70.01 a barrel. Last December, the average price of Urals oil was equal to USD 64.47 a barrel, an increase of 11 percent on December 2018.

According to the forecast of the US Energy Information Administration (EIA), the slate oil boom facilitated growth in production of natural gas in the United States; in 2019 slate oil production increased by 10 percent after growth of 12 percent in 2018. However, despite sustainable demand on clearer fuel, rapid growth in supplies kept pushing prices downward. If in 2018 an average annual spot price of natural gas increased by 6.6 percent as compared with 2017 (from USD 2.96 per million British thermal units (MBTU) in 2017 to USD 3.16 per MBTU in 2018), in 2019 the price fell by 18.7 percent as compared with 2018.

In December, prices of natural gas at Europe's largest terminal – Title Transfer Facility (TTF) – in the Netherlands fell by 10.3 percent to USD 4.62 per MBTU. The prices were influenced considerably by abnormally warm weather in December. In addition, the announcement of the deal between Russia and Ukraine on the transit of natural gas to Europe removed a substantial source of uncertainty on the market. Also, prices of natural gas were under pressure on the part of growth in liquefied natural gas supplies from the US. The US Energy Information Administration (EIA) forecasts that US natural gas exports will surpass natural gas imports on average by 7.3 billion cubic feet a day and 8.9 billion cubic feet a day in 2020 and 2021, respectively.[1] Growth in US net exports is mainly justified by growth in exports

[1] The official website of the EIA. URL: https://www.eia.gov/todayinenergy/detail.php?id=42575.

of liquefied natural gas and pipelined gas exports to Mexico. In 2019, net exports of natural gas more than doubled as compared with 2018 and the EIA expected it to double again by 2021 as compared with 2019.

The Gazprom was confronted with a dramatic drop in gas prices on the European market. According to the data of the reporting for nine months of 2019[1], in Q3 2019 the average sale price of thousand cubic meters of fuel to the EU was equal to USD 169.8. As compared with Q2 2019 (USD 205.1) Russian gas prices depreciated by 17.2 percent, while as compared with Q3 2019 prices collapsed by 32 percent. So, in Q3 2019 the price of Russian gas in Europe fell to the level seen in 2004 when the average price of thousand cubic meters of fuel amounted to USD 137.7, but in 2005 it increased to over USD 190 per thousand cubic meters following the upsurge in oil prices.

Unlike the European market, Japanese contract prices of liquefied natural gas were declining at a slower rate (*Table 37*).

Table 37

Annual average global prices

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Oil (Brent), USD / barrel	61.86	79.64	110.9	111.97	108.86	98.94	52.37	44.05	54.39	71.07	64.03
Natural gas (USA), USD/ MBTU	3.95	4.39	4.00	2.75	3.72	4.37	2.61	2.49	2.96	3.16	2.57
Natural gas, European market, USD/MBTU	8.71	8.29	10.52	11.47	11.79	10.05	6.82	4.56	5.72	7.68	4.8
Liquefied natural gas (Japan), USD/MBTU	8.94	10.85	14.66	16.55	15.96	16.04	10.93	7.37	8.61	10.67	10.57
Coal (Australia), USD per ton	71.84	98.97	121.45	96.36	84.56	70.13	58.94	66.12	88.52	107.02	77.89
Copper, USD per ton	5 149	7534	8 828	7 962	7 332.1	6 863.4	5 510.5	4 867.9	6 169.9	6 529.8	6 010.1
Aluminum, USD per ton	1 665	2 173	2 401	2 023.3	1 846.7	1 867.4	1 664.7	1 604.2	1 967.7	2 108.5	1 794.5
Nickel, USD per ton	14 655	21 809	22 910	17 557	1 5032	16 893	11 863	9 595.2	10 409	13 114	13 914

Source: calculations based on the data of the World Bank.

Coal prices kept depreciating on the back of ample supply. In the report of the International Energy Agency (IEA)[2], it was stated that in 2019 the quantity of coal consumed in the world, particularly, in countries with developed economies decreased. For example, in the US the coal consumption fell by 17 percent in Q2 2019 on Q2 2018 after a 6 percent decrease last year. It is too early to speak about the overall downturn trend in coal consumption because in some big economies, such as China, the consumption quantity of coal and other fossil fuel sources is just growing.

In December 2019, the energy commodities price index rose by 3.1 percent as compared with November 2019. Overall, in 2019 the energy commodities price index fell by 12.7 percent.

In 2020, prices of energy commodities are expected to depreciate further. According to the World Bank's forecast, prices of non-energy commodities will go down by 5 percent in 2019. The outlook of prices of primary products, particularly, oil and metals are vulnerable to a more significant than expected slowdown of the global economy, especially, in countries with transition economies.

[1] The official website of the PAO Gazprom. URL: https://www.gazprom.ru/f/posts/77/885487/gazprom-ifrs-3q2019-management-report-ru.pdf.
[2] The official website of the IEA. URL: / https://www.iea.org/reports/coal-2019.

In 2020, oil prices are forecasted to decrease to USD 58 a barrel, a decrease of USD 7 a barrel as compared with the previous forecast. The downward revision of the outlook reflects weaker prospects of global growth and, consequently, the demand on oil. As regards supply, though growth in oil production in the US was inconsiderable, it is expected to increase substantially by 2020 as new pipelines are put into operation. The forecast suggests the reduction of oil production by the OPEC and its partners will continue in 2020, as well. If economic growth decreases further, demand in oil may become substantially weak. On the contrary, the attack on Saudi Arabia's oil refinery facilities is a reminder of the fact that geopolitical developments still entail a serious risk.

The World Bank revised downwards its forecast for the outlook of prices of natural gas and coal in 2020. Prices of natural gas are expected to stabilize, while those of coal, to decrease. The slowdown of the global economic growth rates is likely to lead to the reduction of consumption of both the commodities, particularly, with the industrial sector slowing down. However, the outlook for natural gas is somewhat better than that for coal because it is expected that a switchover to natural gas in power generation will continue, particularly, in countries with developed economies. In addition, it is expected that in 2020 growth in production of natural gas, particularly in the US, will be weaker due to the slowdown of the rates of new drilling.

In December 2019, the index of prices of non-energy commodities rose by 1.9 percent on the previous month as a result of inconsiderable growth in the index of prices of base metals and substantial growth in agricultural products. In 2019, the price index of non-energy commodities fell 4.1 percent year on year.

In Q3 2019, most non-energy goods depreciated. In Q3 2019, the World Bank's index of prices of metals and minerals declined by 1.8 percent on Q2 2019 after growth observed during two quarters. This decrease was a reflection of the slowdown of global manufacturing activities, protracted standstill in trade negotiations between China and the United States and smoothing of concerns over supplies of some metals.

Within a year, prices of nonferrous metals were generally depreciating, except for nickel which demonstrated growth of 6.1 percent at year-end because of the closure of exports of nickel ore supplies from Indonesia and substantial reduction of metal stocks at the LME.

In Q3 2019, prices of nickel appreciated by 27.8 percent mainly on the back of unexpected changes in Indonesia's policy. In August, the Indonesian authorities declared that the total ban on exports of nickel ore would come into effect in January 2020 – two years ahead of the schedule. A series of natural disasters in the Sulawesi and Halmahera – Indonesia's key nickel-producing regions – made problems related to supply of raw materials worse. China, the world's largest producer of stainless steel depended largely on exports of Indonesian ore for production of nickel cast iron (NPI). The ban which was imposed ahead of the time intensified concerns over supplies because the production of minerals by other producers, such as the Philippines and New Caledonia failed increasingly to ensure the required level of minerals. The NPI's efforts to increase stockpiles ahead of the ban cause concern. According to forecasts, prices of nickel will appreciate by 4.5 percent in 2020 after growth of 6.1 percent in 2019.

In Q3 2019, prices of aluminum depreciated by 1.7 percent as compared with Q2 2019, that is, a decrease for five quarters in a row. Concerns over supplies of alumina subsided because the world's largest alumina refinery Alunorte in Brazil resumed operations in May after a 14 - month long shutdown in compliance with the court ruling. Due to weak global demand on cars, prices of aluminum sank. However, production of aluminum and melting capacities in China

increased as environment restrictions were less severe than expected. It is forecasted that in 2020 prices of aluminum will fall by 1.7 percent after a decrease of 14.9 percent in 2019 which reflects lower prices of alumina and high excess capacity in China.

In Q3, 2019, prices of copper fell by 5.1 percent on Q2 2019 after a decrease of 1.8 percent in Q2 2019 on Q1 2019. Prices started to depreciate in May when the United States increased further its tariffs on Chinese exports which situation provoked retaliatory measures on the part of China. Manufacturing in China, which accounted for 50 percent of the global consumption of copper slowed down because metalintensive industries (for example, building, power industry and transport) remained weak. Sluggish demand abundantly compensated recent stoppages at the Chilean mine Chukikamata (a two-week long strike of workers and suspension of production of minerals) and the Indonesian mine Grasberg (a working switchover from open mining to underground extraction). As a result, in 2019 copper depreciated by 8.0 percent as compared with 2018. As per the World Bank's forecasts, in 2020 copper prices will appreciate moderately by nearly 2.3 percent because the Chinese government steps up measures to motivate the economy because of the global economic slump and trade war with the US.

According to the World Bank's forecast, in 2020 metal prices will keep falling as the slowdown of global demand exerts high pressure on the market. The highest risk is the global growth slowdown – which is more substantial than expected – especially in China.

Prices of precious metals appreciated in response to trade tensions and easing of the monetary policy in countries with developed economies.

In Q3 2019, most agricultural commodities depreciated because manufacturing expectations were revised upwards and global stockpiles of main grain crops, particularly rice and wheat, remained at the level of multiyear heights. An exception was soya beans, prices of which appreciated on the back of the news that China resumed purchases of harvest in the US. Earlier, owing to trade tensions China switched over its purchases of soya from the US to alternative suppliers and substitute goods (*Fig. 49*).

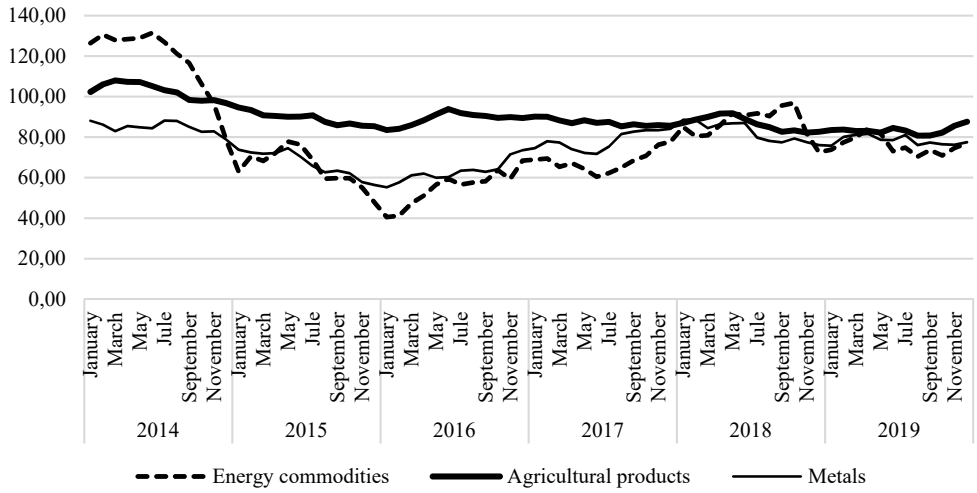


Fig. 49. The World Bank's price indices of primary products (2010 = 100 percent)

Source: URL: http://www.worldbank.org/en/research/commodity-markets#1.

In Q 4 2019, food priced appreciated considerably in the world, having achieved the record-high level in the past two years on the back of growth in international prices of meat and

vegetable oils. The average value of the FAO Food Price Index (FFPI)[1], which reflects on a monthly basis changes in international prices of the main types of food products amounted to 177.2 points in November, an increase of 2.7 percent and 9.5 percent as compared with the October index and the index of the relevant period of the previous year, respectively.

In December 2019, the average value of the FFPI was equal to 181.7 points, a 2.5 percent increase as compared with the November index, that is, growth continued for three months in a row. Owing to dramatic appreciation of prices of vegetable oils, sugar and dairy products, the index hit the maximum level since December 2014. At the same time, at year-end 2019 the average overall value of the FFPI was equal to 171.5 points, an increase of 1.8 percent as compared with 2018, but it was much lower (by 58 points or 25 percent) relative to the peak level of 230 points in 2011.

According to the World Bank's forecasts, in 2020 average prices of food products will remain unchanged. It is expected that the recent natural disasters, such as drought in Australia, will lead to a decrease in grain yield in some regions. However, as grain stocks remain at comfortable levels, such developments are expected to have a limited effect on international grain prices. However, food prices still tend to appreciate in specific regions, particularly, in developing countries.

In 2019, the Bloomberg Commodity Index (BCOM) which includes 22 types of commodities fluctuated in the range of 75 points to 85 points. Having amounted on April 10, 2019 to the year's high of 83.06 points, on August 7, 2019 the BCOM declined to the year's low of 75.97 points, which is evidence of the remaining prevalence of low prices on commodity markets.

4.9.3. The main indicators of the Russian foreign trade

In 2017 and 2018, the Russian trade turnover recovered after a considerable reduction in 2015–2016. In 2019, recovery growth stopped and Russia's foreign trade turnover fell by 2.7 percent to USD 672.8 billion as compared with 2018. It happened on the back of depreciation of global prices of fuel and energy commodities whose supplies accounted for 62 percent and 39 percent of Russian exports and the trade turnover, respectively. The value of exports of these commodities decreased by 8.8 percent with growth in the volume of supplies of liquefied natural gas and stable volumes of supplies of oil, petrochemicals, natural gas and coal. In 2019, the value of exports of other commodities and imports underwent insignificant changes: a decrease of 1.4 percent and growth of 2.2 percent, respectively.

The foreign trade turnover with far abroad countries decreased by 3.3 percent to USD 588.9 billion, while with the CIS states increased by 1.1 percent to USD 83.9 billion.

In 2019, the value of exports of goods abroad fell by 5.5 percent to USD 418.8 billion as compared with the relevant index in 2018, while the value of imports of goods from abroad rose by 2.2 percent to USD 254.1 billion. The existing dynamics of exports and imports led to a substantial reduction of the positive trade balance, which declined by 15.3 percent to USD 164.7 billion (*Fig. 50*).

[1] The official website of the Food and Agriculture Organization of the United Nations. URL: http://www.fao.org/worldfoodsituation/foodpricesindex/ru/

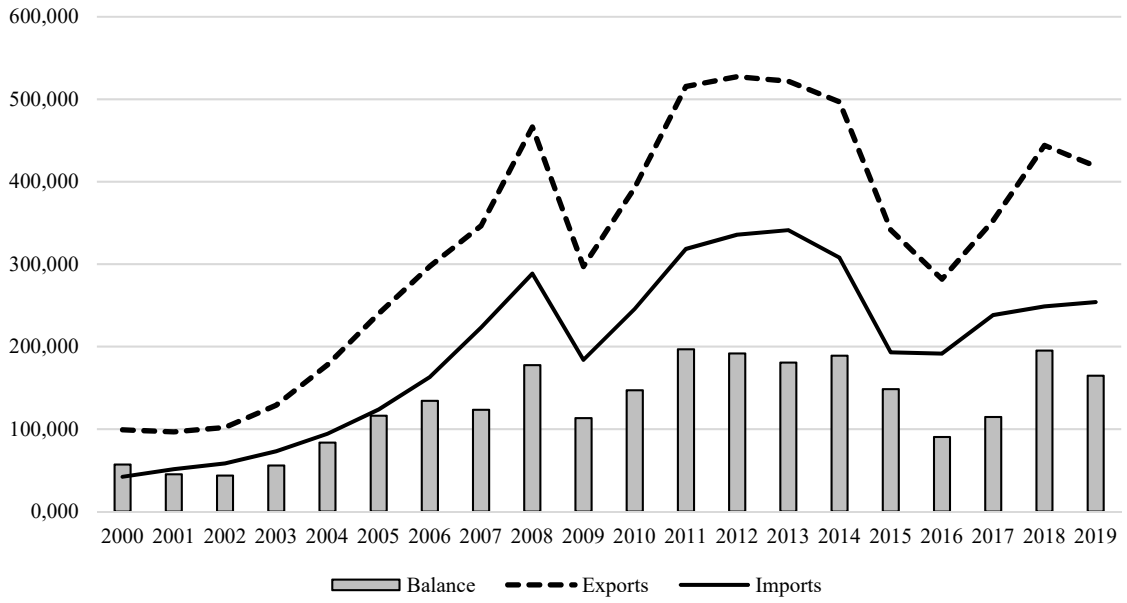


Fig. 50. The main indices of the Russian foreign trade in goods (billion US Dollars)

Source: The Central Bank of the Russian Federation.

Russian exports' negative dynamics is justified both by a decrease in average export prices and shrinkage of volumes of goods exported abroad: in Q3 2019 the index of average export prices and the index of the volume of exports amounted to 96.7 percent and 98.3 percent, respectively. Growth in the value of imports was determined mainly by growth in volumes: in Q3 2019 the index of average import prices amounted to 97.2 percent and the index of the volume of goods supplied to Russia, to 103.6 percent (*Table 38*).

Table 38

The indices of average prices and volumes of the commodity pattern of exports and imports of the Russian Federation in 2019 (% on the relevant quarter of 2018)

EEU's customs commodity code	Name of commodity group	Average price index						Volume index					
		Exports			Imports			Exports			Imports		
		Q1	Q2	Q3	Q1	Q2	Q3	Q1	Q2	Q3	Q1	Q2	Q3
1	2	3	4	5	6	7	8	9	10	11	12	13	14
01–24	Food products and agricultural primary products (except for textile)	107.8	105.1	100.2	96.5	99.4	97.9	84.2	86.8	100.8	98.9	96.8	106.9
25–26	Mineral products	93.5	95.2	95.6	109.6	102.1	101.6	102.8	94.0	92.6	92.8	96.0	96.4
27	Fuel and energy commodities	93.3	95.0	95.8	97.2	95.0	98.2	102.7	93.5	92.0	106.0	117.7	88.5
28–40	Chemical products, raw rubber	100.0	97.2	95.6	98.6	98.3	95.8	93.0	94.9	119.0	100.4	101.6	117.7
41–43	Rawhide, furs and articles made thereof	98.8	86.6	106.9	93.5	89.2	91.9	78.9	99.0	62.3	86.3	92.5	129.2

Cont'd

1	2	3	4	5	6	7	8	9	10	11	12	13	14
44–49	Timber and pulp and paper products	88.2	87.5	93.5	96.7	95.0	94.2	106.0	105.9	103.1	95.7	96.8	102.5
50–67	Textile, textile goods and footwear	91.7	97.3	95.2	99.8	97.1	94.5	123.6	91.6	124.7	104.8	99.8	109.7
72–83	Metals and fabricated metal products	94.0	95.4	94.3	97.6	93.1	93.7	102.0	86.0	98.6	98.3	109.7	112.5
84–90	Machinery, equipment and transport vehicles	97.6	106.2	105.6	99.3	100.3	98.5	72.2	102.1	108.7	96.8	97.9	97.1
68–70 91–97	Other goods	99.6	97.5	95.1	95.2	98.4	99.0	166.5	80.8	152.6	120.5	93.9	84.3

Source: The data of the Federal Customs Service of the Russian Federation.

The Pattern and Dynamics of Exports

After exports' insignificant growth in value terms in February-April 2019, they started to decline. If in Q1 2019 imports of goods increased by 1 percent relative to the same period of the previous year, they fell by 6.5 percent, 7.7 percent and 8.6 percent in Q2 2019, Q3 2019 and Q4 2019, respectively. Overall, in 2019 the value of exports of goods decreased by 5.5 percent to USD 418.8 billion as compared with the relevant index in 2018. Supplies of goods to far abroad countries and the CIS declined by 6.2 percent and 0.4 percent, respectively (*Table 39*).

Table 39

Dynamics of Russian exports

	2008	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Exports, billion USD	466.3	297.2	392.7	515.4	527.4	521.8	496.8	341.4	281.7	353.5	444.0	418.8
Including:												
Far abroad	397.7	252.0	333.6	436.7	443.8	443.8	428.1	292.1	241.7	303.4	387.7	362.5
Growth rates, % on the previous year												
Volume index	105.8	105.0	96.8	97.0	110.0	97.8	99.9	104.9	109.0	103.5	104.7	98.7
Price index	119.7	110.9	137.4	76.4	119.8	132.9	101.6	95.7	58.1	76.9	120.2	92.8

Source: The Central Bank of the Russian Federation.

The main factor behind the shrinkage of Russian exports is the depreciation of prices of energy commodities. In 2019, the average contractual price of crude oil, petrochemicals and natural gas fell by 8.3 percent, 10 percent and 15 percent, respectively, as compared with 2018.

Despite the aggravation of competition on the global market amid stagnating demand, reduction of supply volumes within the frameworks of the Declaration on Cooperation with the OPEC+ and direct opposition on the part of a number of countries, the volume of exports of crude oil and petrochemicals remained at the level of the previous year (410 million tons). Exports of petrochemicals declined, while exports of crude oil increased. So, in 2019 the volume of exports of Russian crude oil reached a historic high of 267.5 million tons, having increased by 2.7 percent or 7 million ton as compared with 2018. However, in 2019 on the back of depreciation of contract prices the value of exports of Russian oil fell by 6 percent as compared with 2018.

In 2019, Russia exported 47.7 percent of produced oil, the maximum value in the past eight years (in 2004 the share of exports in production exceeded 56 percent). In 2019, the unit weight of crude oil exports in the overall volume of Russian exports and exports of fuel and energy

commodities amounted to 28.6 percent and 46.3 percent, respectively (28.7 percent and 45.0 percent, respectively, in 2018).

In 2019, exports of petrochemicals amounted to 142.8 million tons, a decrease of 5 percent or 7 million tons as compared with 2018. This is the minimum index value since 2013; the maximum (171.7 million tons) was achieved in 2015. In the past few years, Russia exported about 55 percent of its petrochemicals.

In 2019, the volume of exports of natural gas amounted to 219.9 billion cubic meters, that is, it remained at the level of the previous year (-0.3 percent). Exports of liquefied natural gas kept growing at a high rate. In 2019, the export volume of liquefied natural gas increased by 78 percent to 65.4 million cubic meters. In 2019, the revenues from exports of liquefied natural gas rose by 49.8 percent to USD 7.92 billion, while incomes from sale of natural gas shrank by 15.3 percent to USD 41.6 billion. According to the data of Russia's export center (REC)[1], at year-end 2019 the total volume of non-oil and gas exports amounted to USD 54.5 billion, an increase of 0.2 percent on the previous year's relevant index which was the record-high as regards the volume of non-oil and gas exports in Russia's recent history. It is to be noted that this increase in non-oil and gas exports is mainly related to a large deal on the sale of monetary gold to the UK, which fact should be regarded as modification of the pattern of Russia's gold and foreign exchange reserves and not as a build-up of exports. The share of non-oil and gas exports in the overall Russian exports rose to 36.5 percent against 34.3 percent in 2018 because of depreciation of prices of fuel commodities, the main portion of Russian exports.

As per the REC's estimate, in 2019 the volume of non-oil and gas exports increased by 2.7 percent. Growth in the volume index was observed in most sectors of non-oil and gas exports, except for exports of grain and fish abroad, a decrease of 27.6 percent and 4.1 percent, respectively, owing to a high base in 2018.

In 2019, the commodity pattern of exports did not virtually change as compared with the previous year: the share of fuel and energy commodities declined by 1.6 percentage points. The share of metals and fabricated metal products decreased by 1 percentage point. The share of food products increased by 0.3 percentage point, while that of precious stones, precious metals and articles made thereof, to 3.6 percent (2.2 percent in 2018) (*Fig. 51*).

The value of exports decreased virtually across all positions of the expanded range of products, except for precious stones, precious metals and articles made thereof (51.1 percent), textile, textile goods and footwear (13.5 percent) and other goods (19.2 percent).

In 2019, exports of precious stones, precious metals and articles made thereof amounted to USD 15.26 billion, which is a new historic high. The previous record of the year 2013 was surpassed by nearly USD 1 billion. This position's main export commodity was gold whose exports exceeded 8.1-fold the relevant index value seen in 2018. Almost the entire volume of gold was exported to the UK. In volume terms, exports of Russian gold to the UK increased 11-fold from 10.4 tons to 113.5 tons. The record-high index of gold exports to the UK can be explained by concerns over the Brexit, as well as global upturn trends in demand on gold and the traditional role of the UK as a center of trade in and safekeeping of gold. In addition to gold, Russia sold to the UK twice as much platinum (USD 936 million) and 2.5 times as much silver (USD 100 million).

[1] The official website of the REC. URL: https://www.exportcenter.ru/press_center/news/obemy-nesyrevogo-neenergeticheskogo-eksporta-vyrosli-v-2019-godu/.

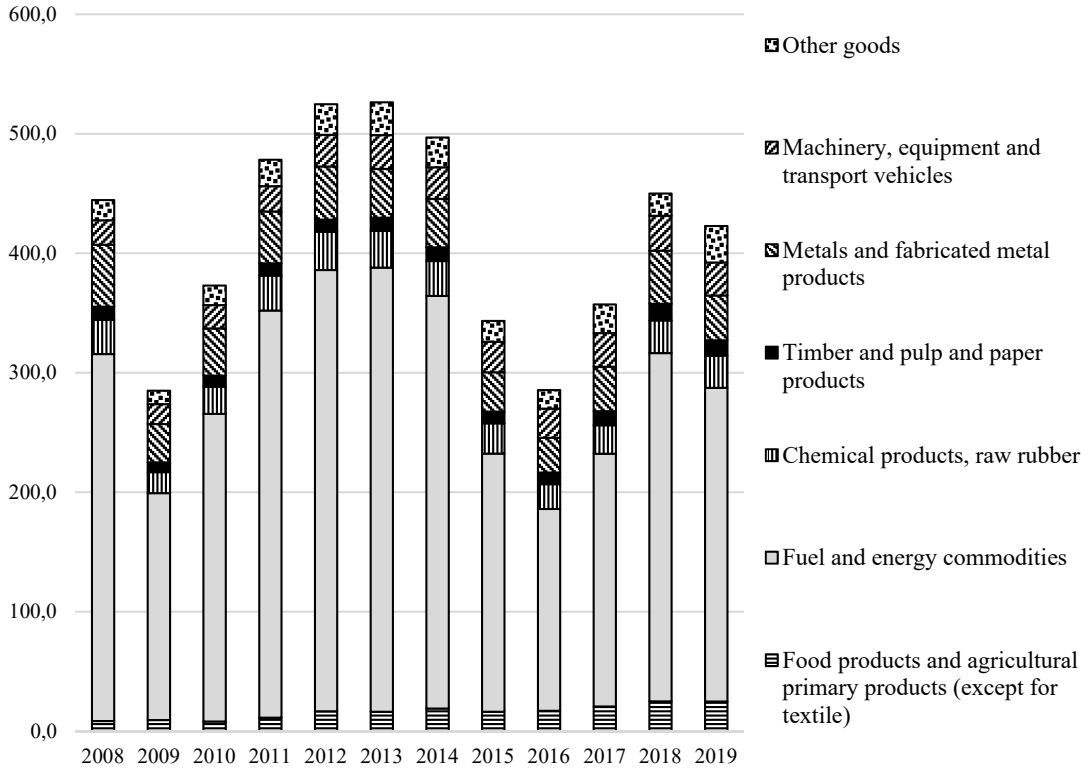


Fig. 51. Dynamics of Russian exports by the commodity (billion USD)

Source: The Federal Customs Service of the Russian Federation.

In 2019, exports of textile, textile goods and foot wear amounted to USD 1.36 billion, the best result since 1993 (without the USD inflation taken into account); growth was observed for three years in a row. Commodities of this group are supplied mainly to CIS countries.

Despite a 0.5 percent decrease in the value of exports of food products and agricultural primary products, plenty of goods in this group demonstrated high results. There was a 74.8 percent growth in exports of living trees and other plants; bulbs, roots and other similar parts of plants; cut flowers and decorative plants; a 45.2 percent growth in exports of meat and food meat by-products; a 32.5 percent growth in exports of oil seeds and horticultural products; medical plants and plants cultivated for technical purposes; straw and fodder; a 28.7 percent growth in exports of fats, butter and vegetable oils; ready edible fats; a 23.6 percent growth in exports of sugar and sugar confectionery.

Exports of machinery and equipment decreased by 4.7 percent with the value of exports of electric equipment and overland transport, except for railway transport, increasing by 12.4 percent and 9.8 percent, respectively. Exports of the Russian car industry increased substantially: car sales grew by 23.6 percent and sales of trucks, by 6.8 percent. Export supplies go mainly to CIS countries – the Republic of Belarus, Kazakhstan and Uzbekistan.

The Pattern and Dynamics of Imports

In 2019, Russian imports increased by 2.2 percent to USD 254.1 billion as compared with 2018. USD 226.5 billion worth of goods was bought in far-abroad countries, a 1.9 percent increase on the relevant index in 2018, while USD 27.6 billion worth of goods was imported from the CIS countries, an increase of 4.4 percent as compared with 2018 (*Table 40*).

Table 40

Dynamics of Russian imports (billion USD)

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Imports, billion USD	288.7	183.9	245.7	318.6	335.8	341.3	307.9	193.0	191.5	238.1	249.1	254.1
Including												
To far-abroad countries	253.8	162.7	213.2	273.8	288.4	295.0	271.9	170.6	170.8	212.8	222.5	226.5
Growth rates, % on previous year												
Volume index	122.4	130.1	127.1	113.5	63.3	135.4	122.2	105.1	97.8	96.6	102.0	100.5
Price index	106.5	105.5	107.6	117.8	99.1	101.6	109.1	97.3	102.5	99.8	102.6	104.9

Source: The Central Bank of the Russian Federation; the Ministry of Economic Development of the Russian Federation.

In Q3 and Q4 2018, as well as in Q1 and Q2 2019, exports were falling, while in Q3 2019 there was growth driven by the revival of domestic demand and appreciation of the ruble's real effective exchange rate, which rose in the currency basket by 1.7 percent and 8.4 percent in December 2019 and over the entire 2019, respectively. Early in October, wages of public sector employees were indexed against the rate of inflation. Growth in real wages with the slowdown of the rate of inflation facilitated consumer demand dynamics.

Growth in the value of imports was observed virtually across all positions of the expanded commodity range, except for positions "timber and pulp and paper products" (imports decreased by 5.5 percent) and "machinery, equipment and transport vehicles" (a decrease of 0.1 percent).

In the imports commodity pattern, machinery and equipment still account for the largest unit weight whose share was equal to 46.2 percent in 2019 (47.3 percent in 2018).

It is to be noted that in the past few months of 2019 upturn dynamics of imports were driven mainly by positive dynamics of purchases of chemical products: growth of 9.6 percent in 2019 as compared with 2018. Purchases of pharmaceutical products grew at advanced rates: in 2019 imports of pharmaceuticals increased by 33 percent as compared with 2018. It is more likely related to the fact that from January 1, 2020 the mandatory marking of pharmaceuticals was planned to be started and pharmaceutical companies sought to buy pharmaceutical products in advance. The deadline for introduction of mandatory marking was postponed till July 1, 2020.

Owing to growth in utilization by Russian agrarian enterprises of mineral fertilizers, their purchases from abroad increased by 12.1 percent. Growth in domestic consumption was facilitated by increased business solvency of agrarians amid a favorable situation on agricultural commodities markets, as well as state policy measures taken to support the agriculture. The main volume of mineral fertilizers is bought in the Republic of Belarus and Kazakhstan.

In 2019, imports of food products and agricultural primary products increased by 0.7 percent as compared with 2018. In the past few years, the share of this commodity group in the overall volume of Russian exports was shrinking. If early in the 2000s, it amounted to over 20 percent, at year-end 2019 in hit the record-low (12.2 percent) over the entire period of observations (*Fig. 52*).

Imports of precious stones, precious metals and articles made thereof increased substantially. In 2019, USD 1,066 million worth of valuables was imported to the Russian Federation, a 40 percent increase relative to the index of 2018. During the past three years, China used to be the leader as regards imports of precious stones, precious metals and articles made thereof to Russia.

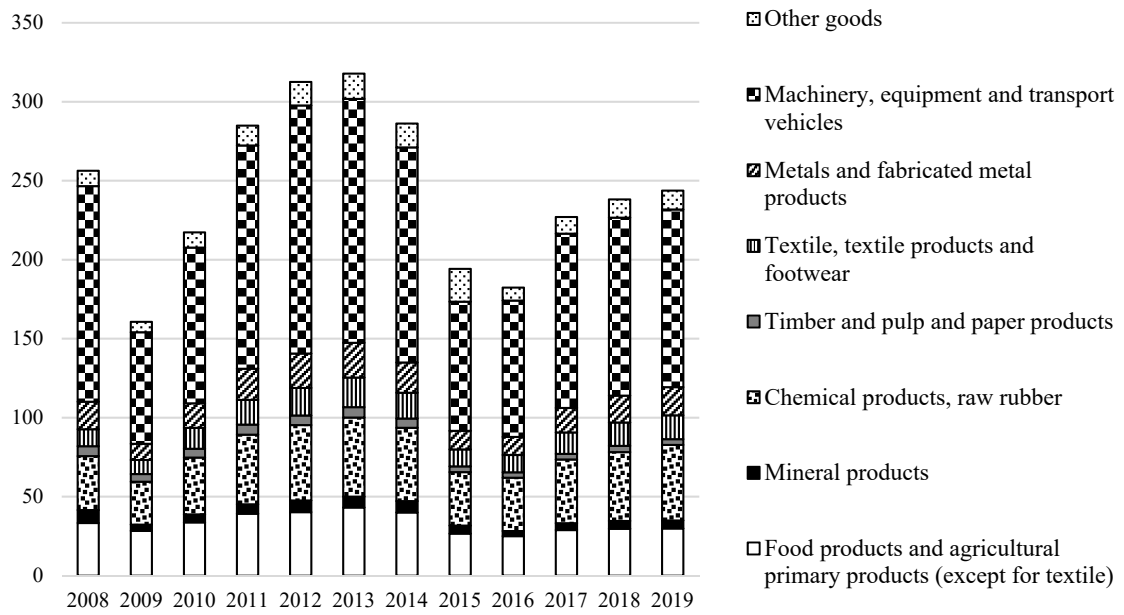


Fig. 52. Dynamics of Russian imports by the commodity (billion USD)

Source: The Federal Customs Service.

However, at year-end 2019 Armenia became the leader which supplied to the Russian Federation USD 140.9 million worth of valuables, while China, only USD 61.8 million worth of valuables. Armenia supplies mainly scrap precious metals to Russia (USD 95.9 million worth) and diamonds (USD 33.2 million worth). In 2019, top five suppliers of valuables were Italy, the UK and Germany.

Within 10 months, there was growth in imports of fresh and frozen meat (50.1 percent), butter (47.5 percent), cheese and cottage cheese (15.3 percent) as compared with the corresponding period of the previous year.

4.9.4. The geographic pattern of the Russian foreign trade

In the geographic pattern of the Russian foreign trade, the trend of growth in the APEC's share in the Russian foreign trade volume continued: in 2019 it rose to 31.8 percent against 31 percent in 2018. At the same time, the share of the CIS increased somewhat from 11.8 percent to 12.1 percent. The share of the EU decreased from 42.8 percent in 2018 to 41.7 percent in 2019 (*Fig. 53*).

The European Union is still the main trade partner of the Russian Federation. In 2019, The Russian foreign trade turnover with EU countries decreased by 5.6 percent with Russian exports and Russian imports falling in value terms by 7.8 percent and 0.8 percent, respectively. It is to be noted that the reduction of Russian foreign trade turnover was observed with all countries, except for Austria, Ireland, Spain, Latvia, the Netherlands, Slovakia and Croatia. The trade turnover with the UK increased by 25.6 percent.

Russia's foreign trade turnover with the APEC countries declined by 0.5 percent. At the same time, there was growth in the foreign trade turnover with China (2.5percent), Australia (4.6 percent), the USA (4.9 percent) and Canada (32.2 percent). The trade turnover with Vietnam and Singapore declined by 19.1 percent and 21.1 percent, respectively.

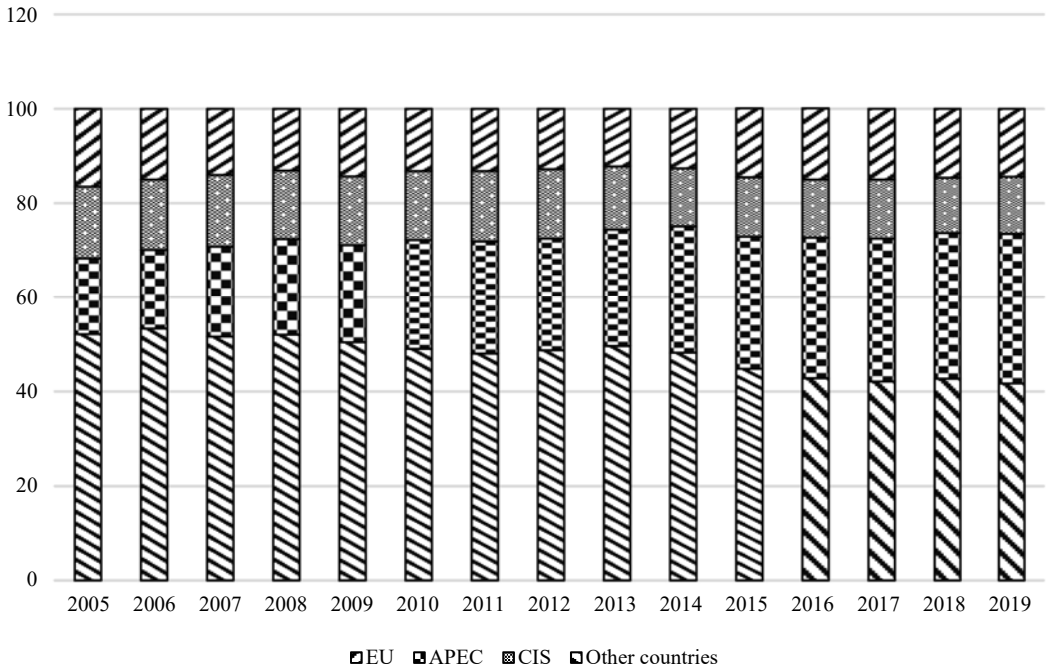


Fig. 53. The geographic pattern of the Russian foreign trade (%)

Source: The Federal Customs Service of the Russian Federation.

Russia's turnover with the Commonwealth of Independent States decreased by 1.3 percent mainly because of the shrinking trade turnover with Ukraine: exports of Russian goods to Ukraine fell by 30.5 percent, while imports of Ukrainian goods to the Russian federation, by 11.5 percent. Russia's trade turnover with Belarus and Kirgizia fell by 3.1 percent and 1.2 percent, respectively. Trade relations with other CIS countries kept restoring.

Among Russia's main trade partners, China has been the leader since 2010; its share in Russia's foreign trade turnover increased to 16.6 percent in 2019 (15.7 percent in 2018). For two years in a raw, the Russian Federation had external surplus: USD 2.7 billion in 2019 (USD 3.8 billion in 2018).

4.9.5. The Russian foreign trade regulation [1]

Tariff regulation

Export customs duties

In 2019, the rates of export customs duties on oil and petrochemicals were calculated in compliance with the methods approved by Resolution No.276 of March 29, 2013 of the Government of the Russian Federation "On Calculation of the Rates of Export Customs Duties on Crude Oil and Individual Categories of Products Made of Oil."

From 2019, the final stage of the tax maneuver in the oil industry started in Russia. The rate of the export duty on oil would be gradually decreasing (down to zero) with simultaneous growth in the rate of the severance tax (*Table 41*).

[1] In preparing this Chapter, materials of the information and legal website GRANAT.RU were used.

Table 41

The rates of export duties on oil and petrochemicals in 2019 (USD per ton)

	Oil	Petrochemicals	
		Light oil	Dark oil products
January 1	89.0	26.7	89.0
February 1	80.7	24.2	80.7
March 1	91.2	27.3	91.2
April 1	97.4	29.2	97.4
May 1	104.6	31.3	104.6
June 1	110.4	33.1	110.4
July 1	100.3	30.0	100.3
August 1	94.1	28.2	94.1
September 1	90.7	27.2	90.7
October 1	87.2	26.1	87.2
November 1	88.3	26.4	88.3
December 1	90.5	27.1	90.5

Source: The Resolution of the Government of the Russian Federation; information of the Ministry of Economic Development of the Russian Federation.

Imports customs duties

In compliance with the obligations of the Russian Federation within the frameworks of the WTO, by Decision No.59 of May 28, 2019 of the Eurasian Economic Commission some FEACN positions and the rates of the single customs tariff (SCT) of the Eurasian Economic Union were changed in respect of individual types of goods from September 1, 2019. The rates of import customs duties of the single customs tariff (SCT) of the Eurasian Economic Union are subject to reduction in respect of 135 tariff lines. In respect of 111 tariff lines (individual types of motor transport vehicles and aircraft), the rates were reduced from September 1, 2019, while in respect of 24 tariff lines (fresh, refrigerated and frozen pork), from January 1, 2020. So, the final stage of reduction of duty rates in compliance with Russia's WTO obligations was carried out.

For new cars, the reduction of ad valorem customs duties amounted on average 2 percentage point (from 17 percent to 15 percent), while the specific component shrank on average by euro 0.05 per 1 cm^3 of the engine capacity. In respect of second-hand cars, the ad valorem portion of customs duty decreased by 5 percentage point (from 22 percent to 17 percent), while the reduction of the specific component was equal to euro 0.06 per 1 cm^3 of the engine capacity. The reduction affected only cars because as regards trucks the transition period in conformity with Russia's obligations to the WTO was over as early as 2017. At present, customs duties in the range of 0–15 percent are in effect in respect of trucks.

According to the data of the Avtostat think tank, despite the reduction of customs duties within the frameworks of the WTO, in the past ten years the volume of imports of second-hand cars in Russia has been falling. If in 2009 imports of such cars amounted to about 500,000 cars, at present they are equal to nearly 50,000 cars and, primarily, in the Far East. It is noteworthy that nearly half of them are specified in documents as dismantled auto parts. Overall, in the first seven months of 2019 the market of second-hand cars amounted to 866,100 cars, a decrease of 1.3 percent as compared with the relevant index of the previous year (877,900 cars).

Tariff rate quotas

By Resolution No. 1134 of August 31, 2019 of the Government of the Russian Federation "On Introduction of Temporary Quantitative Restrictions on Exports of Waste and Ferrous Scrap Outside the Russian Federation to Countries which are not Member-States of the Eurasian Economic Union", quotas on exports of waste and ferrous scrap to countries which were not

member-states of the Eurasian Economic Union were introduced from September 1 till the end of 2019. This quota, equal to just over 1 million tons, will be distributed between exporters of scrap metal on the basis of the volume of their exports of scrap metal in 2016–2018 and with the specific of the export region taken into account. One-time licenses will be issued for quota-based exports of scrap metal. The term of the license is set from the day of its actual issue (but not earlier than September 1, 2019).

By Resolution No.1169 of September 7, 2019 of the Government of the Russian Federation on "Introduction of Changes in the Rates of Export Customs Duties on Goods Exported from the Russian Federation Beyond the Territory of Member-States of the Agreement on the Customs Union", the rate of export customs duty was increased to 13 percent within the quota on the Far Eastern timber.

Non-Tariff Regulation

On November 21, 2019, the WTO issued its report on the G20's[1] trade measures taken by the G20 countries in the period of from May 16, 2019 to October 15, 2019. During that period, new trade limitations and growing trade tensions kept increasing uncertainties over the international trade and global economy. During that period, the G20 countries introduced 28 new trade restrictions, that is, mainly increased tariffs, bans on imports and toughening of customs procedures in respect of imports.

It was specified in the report that the volume of the global trade turnover affected by restrictive measures increased by 37 percent (from USD 335,900 billion to USD 460,400 billion).

According to the WTO' findings, all protectionist measures introduced since 2009 affected 8.8 percent of the G20 states' imports. Late in 2018, by estimates, USD 1.3 trillion worth of imports of goods were affected by limitations introduced by the G20 countries in the past ten years, with the G20 states' overall imports amounting to USD 15.1 trillion. As of the end of October 2019, import limitation measured affected USD 1.6 trillion worth of trade, that is, the number of limitations on imports kept growing.

The initiation of antidumping investigations is still the most widely used trade instrument of legal protection which accounts for over 4/5 of all initiations. According to the latest data (January – June 2019), there is growth of 46 percent in the number of antidumping investigations initiated by the G20 countries as compared with the previous six months (July – December 2018). In the past period, the G20 countries initiated 82 antidumping investigations as compared with 56 investigations in the previous six months.

However, in July 2018 – June 2019 as compared with July 2017 – June 2018 the overall level of initiations decreased substantially (from 202 to 138). Such a reduction can be explained by a decrease in the number of investigations initiated by Australia, Argentina, Brazil, India, Indonesia, Canada, China, Mexico, the Russian Federation, Turkey and the United States as compared with July 2017 – June 2018. In the same period, there was growth in the number of investigations initiated by the European Union (from 8 to 11), the Republic of Korea (from 6 to 7) and Saudi Arabia (from 3 to 5).

Metal products accounted for the largest share (about 25–50 percent) of antidumping investigations. In H2 2017, this sector accounted for 22 initiatives, while in H1 2018, for 28; as in H2 2018, the number of initiations fell to 24 in H1 2019. Steel products (Chapter 72 and

[1] The official website of the World Trade Organization. URL: https://www.wto.org/english/news_e/news19_e/trdev_21nov19_e.htm

Chapter 73 of the Harmonized Commodity Description and Coding System) accounted for most investigations (76 out of 102). In many cases, one importing member of the G20 initiated investigations in respect of one and the same steel product simultaneously from different sources: 7 steel products accounted for 30 investigations in these periods. China is still the main target of antidumping investigations in respect of metal products: in the period between July 2018 and June 2019 17 investigations were carried out in respect of Chinese products, then follows the Republic of Korea with 4 initiations and Turkey and Chinese Taipei with 3 initiations each. The US initiated 12 investigations in this sector in July 2018- June 2019 followed by India with 10 initiations and Canada with 8 initiations.

Though antidumping investigations do not necessarily lead to introduction of antidumping measures, growth in the number of initiated investigations can be the evidence of possible growth in the number of applied measures. It is to be noted that both the number of initiated investigations and the number of measures introduced by the economies of the G20 countries decreased from July 2017 – June 2018 to July 2018 – June 2019 from 202 to 138 and from 166 to 121, respectively.

The volume of trade influenced by the G20's liberalization measures fell from USD 379 billion to USD 93 billion. During the period under review, the G20 countries approved 36 new measures aimed at facilitating trade, including cancelation or reduction of import tariffs and export duties. Liberalization related to the expansion in 2015 of the range of goods covered by the WTO Agreement on Information Technologies paved the way to simplification of trade procedures.

Russian goods encounter growing protectionist barriers with each year. As per the data of the Restrictive Measures Register[1], as of December 1, 2018 170 measures limiting Russian goods' access to foreign markets were identified. They are mostly antidumping duties which accounted for 28.2 percent of the total number of the introduced measures; sanitary and phytosanitary (SPS) measures and special protective duties accounted for 18.2 percent and 12.4 percent, respectively (*Table 42*).

Table 42

Market protective measures applied by third countries in respect of goods from the Russian Federation

Restrictive measure	2014	2015	2016	2017	2018	2019
Antidumping duty	40	39	40	43	48	50
Special protective duty	9	15	17	13	21	26
Compensatory duty	–	1	1	1	1	1
TBT measures	9	9	10	15	14	17
SPS measures	3	7	11	17	31	38
Quotas (including tariff quotas)	2	3	3	3	6	4
Discriminating excises	5	4	5	7	5	4
Bans on imports	4	3	4	6	8	9
Threats to introduce measures	5	5	5	8	7	7
Other non-tariff measures	25	24	29	30	29	36
Total	102	110	125	143	170	192

Source: Restrictive Measures Register as of December 1 of the relevant year.

As of 2020, in respect of Russian goods 15 investigations, including 6 antidumping ones, 9 special protective ones, including 2 investigations for national security reasons, 6 revisions of antidumping measures, as well as 2 agreements on suspension of antidumping investigations in the USA (in respect of uranium products and heavy-gage steel) are being carried out.

[1] URL: http://www.ved.gov.ru/mdb/information/database/.

Within the framework of the sanctions policy of the EU, the US, Japan, Ukraine, Switzerland, Norway, Australia, Iceland, Liechtenstein, Montenegro and Albania, the above countries introduced a ban on imports of goods originating from the Crimea and the city of Sevastopol.

In addition, sanctions because of the developments in the Crimea and in the east of Ukraine were introduced against a number of Russian entities and persons by the European Union, the US, Canada, Japan, Ukraine, Switzerland, Norway, Australia, New Zealand, Iceland, Liechtenstein, Montenegro and Albania.

Domestic market protective measures

Application of protective measures in the Eurasian Economic Union is regulated by Articles 48–50 of the Agreement of May 29, 2014 on the Eurasian Economic Union and the Protocol on Application of Special Protective Antidumping and Compensatory Measures against Third Countries (Annex No. 8 to the Agreement on the Eurasian Economic Union). At present, 19 measures aimed at protecting the domestic market are in effect in the EEU (*Table 43*).

Table 43

The EEU's domestic market protective measures

Position No	Goods	Type of measure	Exporter-country	Expiry date
AD-1	Some types of steel pipes	Antidumping	Ukraine	01.06.2021
AD-8	Polymer coated rolled metal products	Antidumping	China	22.01.2023
AD-11	Cold-deformed weldless stainless steel pipes	Antidumping	China, Malaysia	10.12.2023
AD-7	Forged steel rolls for rolling mills	Antidumping	Ukraine	25.02.2020
AD-15	Citric acid	Antidumping	China	09.04.2020
AD-14	Rust-resisting steel kitchen and table-ware	Antidumping	China	18.06.2020
AD-16	Steel weldless pipes used for drilling and operation of oil and gas wells	Antidumping	China	22.09.2020
AD-17	Tracked bulldozers	Antidumping	China	11.12.2020
AD-18	Truck tires	Antidumping	China	17.12.2020
AD-19	Steel all-rolled wheels	Antidumping	Ukraine	21.01.2021
AD-21	Stainless steel pipes	Antidumping	Ukraine	25.02.2021
AD-13	Wire rods	Antidumping	Ukraine	29.04.2021
AD-20	Ferrosilicon manganese	Antidumping	Ukraine	27.10.2021
AD-22	Angle iron	Antidumping	Ukraine	02.07.2022
AD-3	Rolling bearings	Antidumping	China	20.08.2023
AD-9	Graphitized electrodes	Antidumping	India	24.09.2023
AD-24	Cast-aluminium wheels	Antidumping	China	27.04.2024
AD-23	Weedkillers	Antidumping	EU	19.07.2024
SG-10	Some types of rolled metal products	Special protective	All	30.11.2020

Source: URL: http://www.eurasiancommission.org/ru/act/trade/podm/mery/Pages/default.aspx.

On December 3, 2019, the Board of the Eurasian Economic Commission (EEC) introduced antidumping duties on zinc-coated rolled products from China and Ukraine and weldless pipes from China. By Resolution No.209 of the Board of the Eurasian Economic Commission (EEC), antidumping duties in the range of 12.69 percent to 23.9 percent of the customs value were introduced for five years in respect of zinc-coated rolled products from China and Ukraine. The Decision will become effective 30 calendar days after the day of its official publication.

By Resolution No.218 of the Board of the Eurasian Economic Commission (EEC), an antidumping duty of 15.5 percent of the customs value was introduced for five years in respect of weldless circular cross-section pipes imported from China to the Eurasian Economic Union. The Decision will become effective on February 1, 2020.[1]

[1] The official website of the Eurasian Economic Commission. URL: http://www.eurasiancommission.org/ru/nae/news/Pages/03-12-2019-2.aspx.

Technical regulation

At its meeting on December 3, 2019, the Board of the Eurasian Economic Commission (EEC) introduced a number of changes into the Program of Development of Interstate Standards to the Union's Technical Regulations "On Safety of Toys". These changes envisage the development of seven interstate standards based on the ISO international standards (the International Organization for Standardization), IEC standards (International Electrotechnical Commission) and EN (European norms). Also, it is planned to develop the new interstate standard – "the Guidelines for Age Determination" – in which recommended criteria for determination of the minimum age of a child whom the toy is meant for are to be specified.

The Board of the Eurasian Economic Commission (EEC) updated the lists of standards to the Union's technical regulations "On the Safety of Small Vessels". The list includes interstate standards developed in compliance with the Program of Development of Interstate Standards instead of previous ISO standards.

Changes were introduced into the form of single veterinary health certificates on controlled goods imported to the EEU from third countries. There is no need now to prove that imported animals are not genetically related with the livestock from countries with unfavorable spongiform encephalopathy situation. The update of the form of the veterinary health certificate will facilitate trade in goods liable to veterinary control (supervision) and harmonization of the EEU's regulatory statutory acts with international recommendations. The earlier issued veterinary certificates are valid till December 1, 2020.

Bans and import limitations

By the Executive Order of June 24, 2019 of the President of the Russian Federation "On Extension of Individual Special Economic Measures to Ensure Security of the Russian Federation", retaliatory restrictive measures against the European Union in terms of a ban on imports to Russia of some types of agricultural products, primary products and food products from countries which introduced sanctions against Russia were extended till December 31, 2020.

4.10. Russia's participation in the WTO disputes[1]

The trade dispute settlement mechanism is applied by the WTO under the Understanding on Rules and Procedures Governing the Settlement of Disputes (DSU).[2] Russia, as a member of the WTO, enjoys the right to protect her trade interests by means of this instrument. The dispute settlement procedure applied by the WTO consists of five main successive stages:

- *bilateral consultations* (within 60 days from the moment of filing a request for consultations);
- *establishment of a panel* at the request of any of the parties to a dispute and appointment of panel experts to examine the facts of the case (within 45 days of the request to establish a panel);

[1] This section was written by: *Baeva M.A.*, researcher at the RANEPA Center for International Trade Research, and *Knobel A.Yu.*, Candidate of science (Economics), Director of the RANEPA Center for International Trade Research, Director of the Institute for International Economics and Finance of the RFTA.

[2] URL: https://www.wto.org/english/tratop_e/dispu_e/dispu_e.htm.

- *panel examination* (within 6–9 months after its establishment), presentation of its report to the Dispute Settlement Body (DSB), and issuance of recommendations by the DSB (approximately 60 days from the moment of report presentation by the panel);
- *case examination by the Appellate Body (AB)*, if one of the parties chooses to appeal against the panel report (60–90 days from the moment of filing an appeal), adoption of the report by the Appellate Body of the DSB, and issuance by the DSB of its recommendation to the parties (30 days from the moment of presentation of the Appellate Body's report);
- *control, by the DSB,* of the implementation of its recommendations (not later than 15–18 months after the adoption by the DSB of a report presented by a panel or the Appellate Body).

Russia has been actively participating in the dispute settlement system handled by the WTO. As of the year-end of 2019, Russia had been involved in a total of 96 disputes: in 8 disputes as a complainant, in 9 disputes as a respondent, and in 79 disputes as a third party. In 2019, Russia became a party to 13 new trade disputes in the framework of the WTO: in one as a complainant, and in 12 – in the role of a third party. In 2019, two disputes that Russia was a main party to (DS493 (complainant), DS512 (respondent)) underwent their key stages – Russia won both these disputes over Ukraine (see *Table A-1 in the Annex*).

In the majority of cases Russia is either a complainant or respondent in the WTO disputes with the EU, Ukraine, and the USA. As a complainant, Russia is concerned in the main with anti-dumping investigations and anti-dumping measures, in particular in metallurgy and the chemical industry. Complaints against Russia in the framework of the WTO are filed by its members with respect to the following issues: technical barriers to trade; sanitary and phytosanitary measures; anti-dumping measures; investment measures influencing trade; tariffs; transit restrictions.

As a third party, Russia usually joins the disputes that focus on the products of metallurgy, agriculture, the food industry, the automotive and aircraft industries, as well as renewable energy sources, and lumber and wood products. Special focus is made on those disputes that address anti-dumping investigations and the resulting anti-dumping measures, and also subsidies and countervailing measures. Russia's participation as a third party is usually motivated not only by a strong trade-related interest, but also by the need to gain practical experience of participating in disputes addressing specific themes (in particular, anti-dumping, countervailing and safeguard measures, and underlying investigations), a systemic interest in the procedures governed by the norms and rules of the WTO, and sometimes Russia sides with the respondent (as a rule, with respect to issues of human and animal health protection).

We believe that special emphasis should be put on the crisis of the multilateral trade system (MTS), primarily the WTO, which has been apparent for years. The mechanism for resolving trade disputes by the WTO is still plagued by serious problems. These problems are as follows: first, the extremely slow pace of the dispute settlement process; failure to comply with the time limit recommended for the completion of one or other stage of dispute settlement; second, the member selection crisis of the WTO Appellate Body, whose resolution has been repeatedly blocked by the USA, which has led to an effective paralysis of the WTO Appellate Body. As of the end of 2019, the WTO Appellate Body had had 10 appeals submitted thereto. By then, the second terms for two of the remaining three members had expired (in 2018 and 2019), and thus, in late 2019, the WTO Appellate body was reduced to just one member (from China), whose term will expire on 30 November 2020. The USA has long been blocking the replacement of any of the members of the WTO Appellate Body and rejected numerous

proposals to launch the selection process to fill the remaining vacancies (thus putting the WTO dispute settlement system in a complicated situation where the WTO Appellate Body had to effectively suspend its activities), on the pretext that the WTO dispute settlement system, including the WTO Appellate Body, is in dire need of a cardinal reform. According to the USA, the WTO Appellate Body has persistently overreached and failed to comply with the WTO rules, 'has altered WTO Members' rights and obligations through erroneous interpretations of WTO agreements', and failed to comply with the established timeframe for considering an appeal.[1] As a result of the suspension of the WTO Appellate Body's activities, the WTO dispute settlement mechanism has been put at risk of losing its ability to assess the activities of panels, while parties to disputes will become unable to appeal against their decisions. This state of affairs could give rise to a situation where WTO members will be increasingly resorting to trade protection and refraining from complying with the DSB's decisions, while their opponents, in their turn, will undertake retaliatory measures. Many WTO members are in agreement on the need to reform the WTO. Russia not only opposes any violation of WTO rules and regulations, but also proclaims her devotion to the multilateral system and adherence to the principle of its strengthening and reforming.

Some countries are engaged in trade negotiations or have already concluded bilateral agreements that will enable them to efficiently operate within the framework of the WTO. Thus, such negotiations are currently taking place between Russia and the EU.[2]

The WTO dispute settlement mechanism remains an important instrument for combating protectionist measures. So far, slightly more than half of all disputes have been settled in one or other way, but they by no means always result in the measures at issue being abolished. Sometimes, the outcome of a dispute is such that no further action is required from the respondent, or a complainant requests that retaliatory measures should be imposed if the respondent fails to comply with the DSB's recommendations.

As a rule, a dispute handled by the WTO centers around certain claims, some of which can be upheld by the DSB, while others be denied. The measures may be either specific (e.g., an anti-dumping measure imposed on a certain product) or systemic (e.g., a specific practice of enforcing anti-dumping measures). And this should be taken into consideration when assessing the victory or defeat of parties in a dispute.

There have already been some occasions when Russia had to make her measures consistent with WTO norms and rules – for example, in the dispute, initiated by the EU concerning the tariff treatment of certain agricultural and manufacturing products, when Russia applied ad valorem duty rates in excess of the bound rates set at the time of her accession to the WTO (DS485).

There still remain some serious problems that have to do with the WTO trade dispute settlement mechanism (lengthy procedure, absence of any compensation mechanism that could be applied during the period preceding the issuance of a panel ruling, the crisis currently being experienced by the WTO Appellate Body, etc.). Some members (including Russia and the EU) are negotiating or already actually signing bilateral dispute settlement agreements in the framework of the WTO. Besides, some alternative methods of settling trade disputes are being discussed.

[1] For more details on the crisis of the WTO Appellate Body, see Monitoring of Relevant Events in International Trade. 2019. No 43 (February). URL: https://www.vavt-imef.ru/wp-content/uploads/2020/02/Monitoring_43.pdf.
[2] URL: https://tass.ru/ekonomika/7073958.

The cases when the decisions and recommendations of the DSB are not complied with by complainants (particularly the USA) are becoming increasingly frequent, and so the number of requests filed by complainants to the effect that concessions and other obligations to a respondent should be suspended has also been increasing.

4.10.1. The progress, in 2019, of the trade disputes handled by the WTO where Russia has acted as complainant

In 2019, Russia filed one new complaint with the DSB – against the USA concerning anti-dumping measures on carbon-quality steel from Russia (DS586).[1]

DS493: Ukraine – Anti-dumping measures on ammonium nitrate (Russia)

On May 7, 2015, Russia filed with the WTO a request for consultations with Ukraine in respect of the Ukrainian anti-dumping measures on ammonium nitrate imports from Russia.[2] In summer 2018, the panel presented its report whereby it was established that Ukraine had conducted anti-dumping investigations in violation of WTO norms and rules: Ukraine rejected the information of producers on electric energy prices in Russia, using instead price information from third countries (i.e., resorted to 'energy cost adjustments'). The fact that the panel's decision in that dispute was in favor of Russia has created an important precedent for the other similar disputes between Russia and the EU concerning 'energy cost adjustments' (DS474, DS494 and DS521).

On 23 August 23, 2018, Ukraine appealed to the WTO Appellate Body certain issues of law and legal interpretations in the panel report, and on September 12, 2019 the Appellate Body report, where the panel findings were upheld, was circulated to Members. On September 30, 2019, the DSB adopted the Appellate Body report and panel report, issuing recommendations that Ukraine's measures should be made consistent with the norms and rules of the WTO. On October 28, 2019, Ukraine informed the DSB that it intended to implement the DSB's recommendations and rulings in that dispute, and that it would need a reasonable period of time to do so. On November 21, 2019, Russia requested the reasonable period of time to be determined through binding arbitration pursuant to Article 21.3(c) of the DSU (Surveillance of Implementation of Recommendations and Rulings).

DS521: EU – Anti-dumping measures on certain cold-rolled flat steel products from Russia (Russia)

On January 27, 2017, Russia requested consultations with the EU concerning anti-dumping measures imposed by the EU on Russian imports of certain cold-rolled flat steel products.[3] This is an example of Russia disputing the practice of 'energy cost adjustments' in the course of anti-dumping investigations when the information of Russian producers is replaced by price information from third countries, in spite of the fact that the EU has recognized Russia's status as a market economy.

On March 13, 2019, Russia requested the establishment of a panel, and on April 26, 2019 such a panel was set up. China, India, Japan, the Republic of Korea, Saudi Arabia, Ukraine and the USA joined the dispute as third parties, some of them siding with the complainant, while the others (e.g., Ukraine, which had had a similar dispute with Russia concerning 'energy cost

[1] URL: https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds586_e.htm.
[2] URL: https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds493_e.htm.
[3] URL: https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds521_e.htm.

adjustments' (DS493), which Russia won in late September 2019) – with the respondent. As of late 2019, the dispute undergoes the stage of panel expert appointment.

DS554: USA – Certain measures on steel and aluminum products (Russia)

On June 29, 2018, Russia filed with the DSB a request for consultations with the USA concerning the protective measures on steel and aluminum products imposed in spring 2018.[1] Russia claimed that the USA acted contrary to the WTO's principle of the MFN, introduced restrictions other than duties, taxes or other charges, made effective through quotas, on the importation of products, failed to produce reasoned conclusions and properly substantiate safeguard measures, failed to give notice in writing to the WTO in advance, and failed to afford an opportunity for consultations; besides, the USA acted inconsistently with the Agreement on Safeguards, because the measures were introduced without a preliminary investigation and a published reports on its results and conclusions.[2] The USA claimed that the disputed measures are not safeguards, citing the national security exceptions in Article XXI of the GATT 1994.

In 2017, 13% of Russian steel and aluminum exports went to the USA, while Russia's share in US imports was 32%.[3] Disputes on similar issues were initiated against the USA by China (DS544), India (DS547), the EU (DS548), Canada (DS550), Mexico (DS551), Norway (DS552), Switzerland (DS556), and Turkey (DS564), and Russia joined most of them as a third party (more on this will be said later).

On November 21, 2018, a panel was established, which began the examination process in late January 2019. The panel expects to issue its final report no earlier than autumn 2020.

DS586: USA – Anti-dumping measures on carbon-quality steel from Russia (Russia)

On July 5, 2019, Russia filed with the DSB a request for consultations with the USA regarding the anti-dumping measures imposed by the USA on Russian hot-rolled flat-rolled carbon-quality steel products. Russia claimed that the US measures were inconsistent with the Anti-Dumping Agreement because the USA:[4]

- failed to determine an individual dumping margin for each known exporter or producer concerned of the product under investigation and instead relied on 'all others' rate;
- failed to calculate the costs of production of the product under consideration;
- failed to properly review the need for continued imposition of the anti-dumping duties and to terminate the duties that were not necessary to offset dumping;
- extended the measures at issue relying on flawed dumping margins and on erroneous likelihood of recurrence or continuation of dumping determinations;
- refused to rely on information provided by Russian exporters, whereas the conditions to resort to facts available were not met.

The measure at issue had been imposed from July 12, 1999. After adjustment, over the period from September 16, 2016 through September 15, 2021, an anti-dumping duty rate of 73.59% should have been applied to PAO Severstal, and 184.56% to the other Russian exporters;

[1] URL: https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds554_e.htm.
[2] For further details, see Monitoring of Relevant Events in International Trade. 2018. No 15 (July). URL: http://www.vavt.ru/materials/site/ff38dff389dbda77432582db00452f9e/$file/Monitoring_15.pdf.
[3] UN COMTRADE database. URL: http://comtrade.un.org/.
[4] URL: https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds586_e.htm.

however, from January 5, 2017 the same anti-dumping duty rate of 184.56% has been established for all Russian companies.[1]

4.10.2. The progress, in 2019, of the trade disputes handled by the WTO where Russia has acted as respondent

No new complaints against Russia were filed with the DSB in 2019.

DS512: Russia – Measures concerning traffic in transit (Ukraine)

On September 14, 2016, Ukraine filed with the DSB a request for consultations with Russia regarding alleged multiple restrictions on traffic in transit from Ukraine through RF territory to third countries (countries in Central/Eastern Asia and the Caucasus).[2] In summer 2016, Russia introduced requirements that all international cargo transit by road and rail from the territory of Ukraine destined for the Republic of Kazakhstan or the Kyrgyz Republic, through the territory of the Russian Federation, be carried out exclusively from the Belarus-Russia border, and comply with a number of additional conditions related to identification seals and registration cards at specific border control points, the application of special identification means (seals), including those functioning on the basis of the technology of global satellite navigation system GLONASS, and the use of certain registration cards for drivers when entering and leaving the RF territory. Additionally, Russia imposed a ban on all road and rail transit of goods which were subject to non-zero import duties according to the Common Customs Tariff of the EEU, as well as of goods falling under the import ban.[3]

Ukraine claimed that the measures at issue were introduced by Russia since the application of the EU – Ukraine Deep and Comprehensive Free Trade Area (from January 1,2016); those measures were inconsistent with the WTO provisions on freedom of transit because, by imposing a ban on transit of certain goods, Russia denied freedom of transit through its territory via the routes most convenient for international transit, for traffic in transit from the territory of Ukraine, and because it made distinctions based on the place of origin, departure, entry, exit or destination. Russia failed to accord to traffic in transit from the territory of Ukraine treatment no less favorable than the treatment accorded to traffic in transit from any third country. Ukraine complained that the relevant normative legal acts concerning the measures at issue had not been published promptly in such a manner as to enable the Ukrainian Government and traders to become acquainted with them. Ukraine believed that those measures were inconsistent with the WTO provisions on general elimination of quantitative restrictions, as well as the Protocol on the Accession of the Russian Federation to the WTO. According to Ukraine, after the measures that restricted traffic in transit had been introduced, the volume of trade between Ukraine and countries in Central/Eastern Asia and the Caucasus over the period of January – June 2016 shank by 35.1% relative to the corresponding period of 2015.

On February 9, 2017, Ukraine requested the establishment of a panel. At its meeting on March 21, 2017, the DSB set up such a panel. The panel examination started from November17,

[1] Monitoring of Relevant Events in International Trade. 2019. No 35 (September). URL: https://www.vavt-imef.ru/wp-content/uploads/2019/09/Monitoring_35.pdf.
[2] URL: https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds512_e.htm.
[3] Executive Order of the President of the Russian Federation No. 1 dated January 1, 2016 'On measures to ensure economic security and national interests of the Russian Federation in international cargo transit from the territory of Ukraine to the territory of the Republic of Kazakhstan through the territory of the Russian Federation', with corresponding amendments.

2017, and on April 5, 2019, the panel report was circulated, where the panel upheld Russia's position.[1] Russia asserted that the measures were among those that it considered necessary for the protection of its essential security interests, which it took in response to the emergency in international relations that occurred in 2014, and which presented threats to Russia's essential security interests. Russia therefore invoked the provisions of Article XXI(b)(iii) ('Security Exceptions') of the GATT 1994.

The panel found that WTO panels have jurisdiction to review aspects of a Member's invocation of Article XXI(b)(iii), and that Russia had met the requirements for invoking Article XXI(b)(iii) in relation to the measures at issue. Based on the particular circumstances affecting relations between Russia and Ukraine, the panel determined from the evidence before it that the situation between Ukraine and Russia since 2014 was an 'emergency in international relations'. The panel also determined that the challenged transit bans and restrictions were taken in 2014 and 2016, and therefore were 'taken in time of" this 2014 emergency.

The panel found that 'essential security interests' could be generally understood as referring to those interests relating to the quintessential functions of the state. The panel observed that the specific interests at issue will depend on the particular situation and perceptions of the state in question and can be expected to vary with changing circumstances. For these reasons, the panel held that it is left in general to every Member to define what it considers to be its essential security interests, and that it was for a Member itself to decide on the 'necessity' of its actions for the protection of its essential security interests.

The panel considered that the 2014 emergency said to threaten Russia's essential security interests was very close to the 'hard core' of war or armed conflict. In these circumstances, the panel was satisfied of the veracity of Russia's designation of its essential security interests, upheld Russia's right for exception from the rules of the WTO, and did not consider it necessary to address Ukraine's claims of violation. An appeal against the panel ruling was not filed. Over the course of the dispute settlement procedure, Russia was extending the period of restrictions by means of repeatedly issued executive orders of the President. From July 1, 2019, Executive Orders No 1 of the President, dated January 1, 2016 was no longer in force,[2] and traffic in transit from Ukraine through Russian territory was permitted on condition that goods be shipped by automobile or railway transport with special identification means (seals) functioning on the basis of the technology of global satellite navigation system GLONASS.[3] So, the WTO does not consider national security issues. However, a panel may assess, on receiving a corresponding request, the lawfulness of a member of the WTO invoking a security exception. The panel ruling has established a precedent for interpreting Article XXI ('Security Exceptions') of the GATT 1994, which does not prevent members of the WTO from taking any action 'for the protection of its essential security interests… in time of war or other emergency in international relations'; previously, no such interpretation had ever been referred to.

According to Maxim Oreshkin, Russia's then Minister for Economic Development, the panel ruling in the dispute initiated by Ukraine against Russia is very important, among other things, from the point of view of settling Russia's trade disputes with the USA, the latter having raised the duties on steel and aluminum products, citing the provisions of Article XXI of the GATT. In June 2018, several countries, Russia including (DS554), filed their requests for consultations

[1] Monitoring of Relevant Events in International Trade. 2019. No 27 (April) URL: http://www.vavt.ru/materials/site/658fe4e4867c8bb7432583d90027106f/$file/Monitoring_27.pdf.
[2] URL: http://docs.cntd.ru/document/420327325.
[3] URL: http://docs.cntd.ru/document/564085014.

with the DSB. The Minister also noted that Russia's victory in this dispute is of high systemic importance for the future reform of the WTO.[1]

DS566: Russia – Additional duties on certain products from the United States (USA)

On August 27, 2018, the USA filed with the DSB a request for consultations with Russia concerning the introduction of import tariffs on some types of products manufactured in the USA.[2] The USA argued that these measures were inconsistent with WTO norms and rules, because Russia did not impose the additional duties measure on like products originating in the territory of any other WTO member, and also granted the USA a less favorable regime than that set out in Russia's schedule of concession. In accordance with RF Government Decree No. 788 dated July 6, 2018, from August 2018 onwards Russia raised the rates of import customs duties on forklift trucks and other trucks equipped with lifting or loading-unloading devices, graders, tamping machines, tools for cutting optical fiber, etc. The new customs duty rates amount to 25, 30 and 40 percent of customs value, depending on product type. According to the RF Ministry of Economic Development, Russia was acting in the framework of the Agreement on Safeguards, having introduced those measures by way of compensating for the injury resulting from the US safeguard measures against the importation of steel and aluminum products from other countries, Russia including. The USA noted that these were not safeguard measures, and so did not fell within the scope of the Agreement on Safeguards. Similar requests were filed by the USA against Canada (DS557), China (DS558), the EU (DS559), Mexico (DS560), Turkey (DS561), and India (DS585), and Russia joined those disputes as a third party. The said countries raised their customs tariffs on certain US products in response to the safeguard measures introduced by the USA against steel and aluminum imports. Previously, these measures imposed by the USA had already been disputed with the WTO by some countries, Russia including (DS554) (see the section on the trade disputes here Russia has acted as complainant).[3]

On November 22, 2018, the USA filed a request for the establishment of a panel, which was set up accordingly on December 18, 2018. From late January 2019, the panel examination was launched, and the panel expects to issue its final report in H2 2020.

4.10.3. The progress, in 2019, of the trade disputes handled by the WTO where Russia has acted as third party

From the moment of its accession to the WTO, Russia has already participated in 79 disputes as a third party. About 30% of these disputes have already been settled; in 35% of disputes, the main dispute settlement procedures have been completed; and in 4% of disputes, the DSB ruled in favor of the respondent (DS458, DS467, DS487). The classification of the main themes of disputes where Russia claimed its status of a third party is presented in the Annex (*Table A-2)*. The following themes are singled out: a ban or restrictions on imports; safeguard investigations and measures (anti-dumping or countervailing measures and safeguards); restrictions on exports; intellectual property rights; subsidies (including those related to tax exemptions and other preferential treatments); tariffs and tariff-rate quotas; and economic sanctions. Overall,

[1] Monitoring of Relevant Events in International Trade. 2019. No 27 (April). URL: http://www.vavt.ru/materials/site/658fe4e4867c8bb7432583d90027106f/$file/Monitoring_27.pdf.
[2] URL: https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds566_e.htm.
[3] Monitoring of Relevant Events in International Trade No 16 (September) 2018. URL: http://www.vavt.ru/materials/site/e8f1eec062f6adde43258306004d0d6f/$file/Monitoring_16.pdf.

Russia has joined the following trade disputes initiated by the USA (15 out of 79 disputes), China (9 disputes), the EU (8 disputes), and Japan (7 disputes). EC (6 disputes), as well as Canada and the Republic of Korea (4 disputes each); and those initiated against the USA (25 disputes), China (11 disputes), the EU (8 disputes), Australia and Canada (4 disputes each). Russia's role as a third party is usually motivated not only by a significant trade-related interest, but also by practical considerations related to certain specific issues and by systemic considerations that have to do with the implementation of certain norms and rules of the WTO. It sometimes so happens that formally different disputes that have been initiated by different complainants focus on one and the same measure imposed by the respondent (later, we are going to discuss some 'unique cases' – these are 56 out of 79 disputes). As far as the products at issue are concerned, Russia has joined, most frequently, the disputes that have to do with measures addressing agriculture and the food industry (13 out of the 56 'unique cases'), metallurgy (11), machine-building (6), and the chemical industry and renewable energy sources (4 cases each).

As far as the agreements covering the disputes where Russia acted as a third party are concerned (one dispute is usually covered by several agreements), their by-theme distribution is shown in *Fig. 54* (only 'unique' disputes were selected – that is, the duplication of those measures that gave rise to several disputes was removed). The majority of these disputes have to do with the GATT, the Anti-Dumping Agreement, and the Agreement on Subsidies and Countervailing Measures (ASCM). Besides, Russia's concerns also targeted inconsistencies with the Agreement Establishing the WTO and the Agreement on Safeguards.

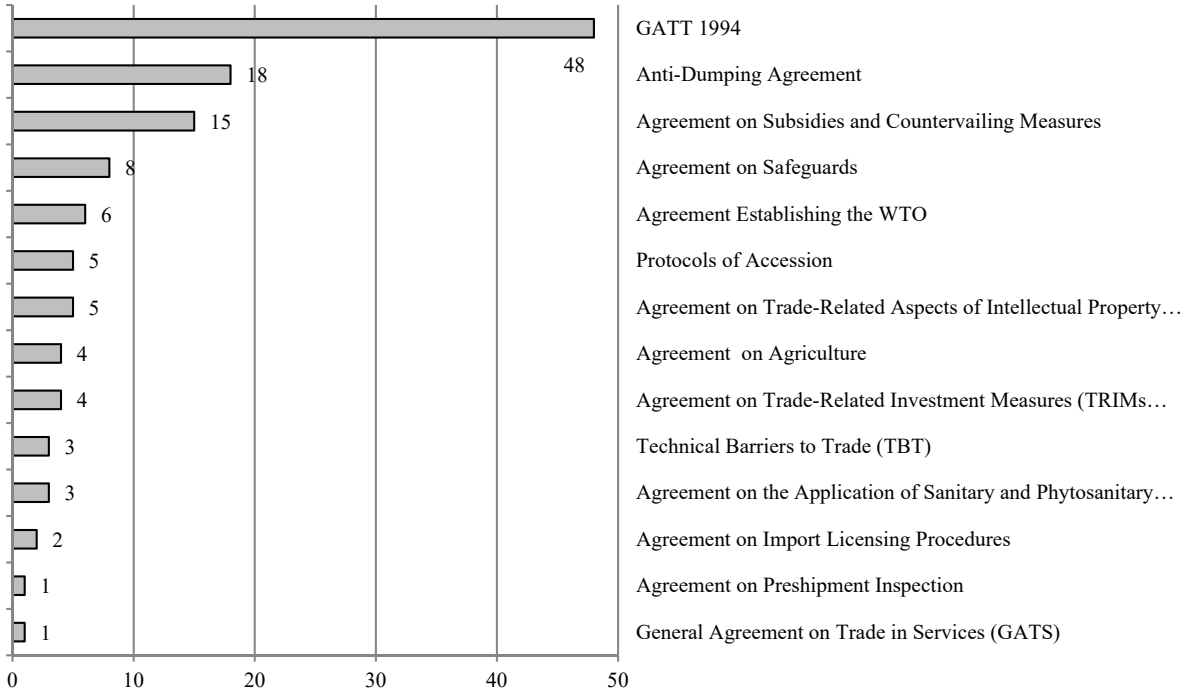


Fig. 54. The themes of WTO disputes where Russia acted as a third party

Source: own compilation based on data published on the WTO's official website: URL: https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds462_e.htm.

First of all, let us review the changes that occurred over the past year in the 22 unique disputes that Russia had joined as a third party prior to 2019.

DS437: United States – Countervailing duty measures on certain products from China

In late May 2012,[1] China initiated a dispute against the USA regarding the countervailing measures that affected Chinese products. China claimed that it encountered various difficulties when trying to access the results of investigations by USA that had served as the grounds for US countervailing measures against China. China cited approximately 20 such investigations conducted by the USA and targeting in the main the products of metallurgy and the steel industry (for example, tubes and pipes, steel wheels, steel wire, etc.). China believed that the USA acted on an incorrect allegation that state-owned enterprises were 'public bodies' that were conferring countervailable subsidies through their sales of inputs to downstream producers. Besides, China pointed out that the US Department of Commerce (USDOC) initiated its investigation based on erroneous findings, in particular it failed to provide sufficient evidence that the subsidy would be specific for a given enterprise or industry. Also, the USDOC improperly calculated the alleged amount of benefit based on the prevailing market conditions in China. China won the dispute – it was recommended that the measures at issue should be made properly consistent by April 1, 2016. From late July 2016, the panel examined the implementation, by the respondent, of the DSB's recommendations, and issued its report in late March 2018. The USA and China both appealed against the panel ruling. On July 16, 2019 the WTO Appellate Body circulated its report, where it generally upheld the panel findings. The Appellate Body found that the panel correctly assessed the scope of the measures falling within its terms of reference in these proceedings. The Appellate Body **upheld** the panel's conclusions that Article 1.1(a)(1) (Definition of a Subsidy) of the Agreement on Subsidies and Countervailing Measures (SCM Agreement) does not prescribe a connection of a particular degree or nature that must necessarily be established between an identified government function and the particular financial contribution at issue. The Appellate Body also upheld the panel's finding that the USDOC's public body determinations at issue were not based on an improper legal standard.

The Appellate Body upheld the panel's finding that Article 14(d) (Calculation of the Amount of a Subsidy in Terms of the Benefit to the Recipient) of the SCM Agreement does not limit the possibility of resorting to out-of-country prices to the situation in which the government effectively determines the price at which the good is sold.

The Appellate Body found that there may be different ways of demonstrating that prices were actually distorted, including a quantitative assessment, price comparison methodology, a counterfactual, or a qualitative analysis. While evidence of direct impact of government intervention on prices may make a finding of price distortion likely, evidence of indirect impact may also be relevant. At the same time, establishing a nexus between such indirect impact of government intervention and price distortion may require more detailed analysis and explanation. Independently of the method chosen by the investigating authority, it had to adequately take into account the arguments and evidence supplied by the petitioners and respondents, together with all other information on the record, so that its determination of how prices in the specific markets at issue were in fact distorted as a result of government

[1] URL: https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds437_e.htm.

intervention be based on positive evidence. The WTO Appellate Body considered that the panel's reasoning was consonant with its interpretation of Article 14(d).

The Appellate Body found that the United States had not established that the panel erred in its interpretation and application of Article 14(d) of the SCM Agreement in finding that the USDOC had failed to explain, in the OCTG, Solar Panels, Pressure Pipe, and Line Pipe Section 129 proceedings, how government intervention in the market resulted in domestic prices for the inputs at issue deviating from a market-determined price.

The WTO Appellate Body ruled that, in its reasoning, the panel rightly contrasted the USDOC's failure to explain 'systematic activity … regarding the existence of an unwritten subsidy program' with information before the USDOC merely indicating 'repeated transactions'. The Appellate Body upheld the panel's finding that the United States acted inconsistently with Article 2.1(c) of the SCM Agreement in 11 proceedings at issue in this dispute. In mid-August 2019, the DSB adopted the Appellate Body report and the panel report, as upheld by the Appellate Body.

On October 17, 2019 China requested the authorization of the DSB to suspend concessions or other obligations pursuant to Article 22.2 of the DSU on the grounds that the USA had failed to comply with the DSB's recommendations and rulings within the reasonable period of time provided in agreed procedures under Articles 21 (Surveillance of Implementation of Recommendations and Rulings) and 22 (Compensation and the Suspension of Concessions) of the DSU (sequencing agreement). On October 25, 2019, the USA informed the DSB that it objected to China's proposed level of suspension of concessions. At the DSB meeting on October 28, 2019, the matter was referred to arbitration pursuant to Article 22.6 of the DSU.

Russia's concerns associated with this dispute can be explained not only by the significant commercial interests (trade in the products of metallurgy and steelmaking), but also the need to gain practical experience of participating in disputed regarding subsidies and countervailing measures (including during the stages of panel examination and control, by the DSB, of compliance with its recommendations) and to study the legal enforcement practices of the WTO with regard to subsidies (in particular, *prohibited subsidies*); this matter interests Russia from the point of view of supporting domestic producers in compliance with the norms and rules of the WTO. Also of interest are the WTO Appellate Body's conclusions concerning the USDOC's public body determinations and the USDOC's failure to explain 'systematic activity … regarding the existence of an unwritten subsidy program' when determining the specificity of *subsidies*.

DS471: USA – Certain methodologies and their application to anti-dumping proceedings involving China (China)

In late 2013, China filed with DSB a request for consultations with the USA regarding the 'zeroing' methodology[1] that the USA used in its anti-dumping investigations (as a basis for its request, China included a total of 25 different products from China).[2] China claimed that the methodology was inconsistent with the Anti-Dumping Agreement in that it incorrectly determined the fact and evidence of dumping and led to incorrect calculation and levying of anti-dumping duties. The panel upheld nearly all of the claims presented by China. In May

[1] A weighted average export price that was above or equal to a weighted average normal value was treated as zero, thus being disregarded when determining a margin of dumping for the product as a whole, and so the margin was inflated.

[2] URL: https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds471_e.htm.

2017, the DSB, having adopted the Appellate Body's report, recommended that the USA should make its measures properly consistent by August 22, 2018.

On 9 September 2018, China requested DSB authorization to suspend concessions or other obligations to the United States with respect to trade in goods in the amount of USD 7.043 billion, arguing that this was equivalent to the level of nullification or impairment caused by the USA' failure to implement the DSB recommendations and rulings. The USA informed the DSB that it objected to China's proposed level of suspension of concessions. In late September 2018, the matter raised by the USA was referred to arbitration; the arbitrator was composed by the original panel members. In early November 2019, the decision by the arbitrator was circulated to Members. It was determined that the level of nullification or impairment was USD 3.579 billion. The arbitrator concluded that, in accordance with Article 22.4 of the DSU (Compensation and the Suspension of Concessions), China may request authorization from the DSB to suspend concessions or other obligations at a level not exceeding USD 3.579 billion annually.[1]

Anti-dumping investigations and anti-dumping measures are at issue in the majority of disputes initiated by Russia, thus underlining Russia's systemic interest in such matters. In April 2017, the USA initiated an anti-dumping investigation against imports of hot-rolled bars originating in Russia. Therefore, the anti-dumping investigation methodologies applied by the USA are causing concern for Russia – thus, in July 2019 Russia filed with the DSB a complaint against the anti-dumping measures imposed by the USA on the hot-rolled flat-rolled carbon-quality steel products supplied by Russian companies (DS586).

DS472, DS497: Brazil – Certain measures concerning taxation and charges (EU, Japan)

In 2013, the EU,[2] and in 2015, Japan[3] filed with the DSB a request for consultations with Brazil regarding the provision of government subsidies. According to the complainants, by means of establishing certain government programs in the automotive and electronics sectors, Brazil provided preferences and support to domestic producers and exporters (in particular, tax advantages conditioned to the use of domestic intermediate goods and export contingent subsidies), which was inconsistent with one of the core principles maintained by the WTO – that of 'national treatment'. Overall, the panel upheld the complainants' claims to Brazil and recognized the measures at issue to be inconsistent with the WTO norms. The panel determined that the discriminatory aspects of the government programs could indeed conduce to the establishment of competitive and sustainable domestic industry capable of supplying the domestic market. However, Brazil did not demonstrate that such measures were indeed necessary for capacity-building of suppliers, because imports were not taken into consideration. The panel concluded that the alternative approaches (such as non-discriminatory subsidies or lowered trade barriers for imports of digital television transmitters) suggested by the complainant were not inconsistent with the WTO norms and were more compatible with the declared goals.

In autumn 2017, Brazil and the EU appealed against the panel ruling. On December 13, 2018, the AB presented its report. The WTO Appellate Body agreed with the panel's conclusions that the government tax incentive programs for the automotive and electronics sectors were discriminatory in some of their aspects and inconsistent with the GATT 1994 and

[1] URL: https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds471_e.htm.
[2] URL: https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds472_e.htm.
[3] URL: https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds497_e.htm.

the TRIMs Agreement. The Appellate Body concluded that none of the measures at issue in the dispute could be justified within the meaning of Article III:8 (b) of the GATT 1994 (National Treatment on Internal Taxation and Regulation). The Appellate Body reversed the panel's findings that the tax suspensions granted to registered or accredited companies under the government programs constituted financial contributions in the form of export subsidies. As for the import substituting subsidies, the Appellate Body upheld the panel findings for some programs, while reversing the findings for other programs. The Appellate Body reversed the panel's conclusions that Brazil withdrew the prohibited subsidies found to exist within 90 days because the underlying reasoning was not related to the specific circumstances of this case.

At its meeting in early January 2019, the DSB adopted the Appellate Body report and the panel reports, as modified by the Appellate Body report. On February 20, 2019, the EU and Brazil informed the DSB that they were conducting consultations with respect to the reasonable period of time within which Brazil should comply with the DSB's recommendations and rulings. On May 10, 2019, the EU and Brazil informed the DSB that they had agreed that the reasonable period of time for Brazil to implement the DSB's recommendations and rulings would be 11 months and 20 days, set to expire on 31 December 2019. In their communication, the EU and Brazil noted that with regard to the subsidies that were found to be prohibited, they had agreed that the time-period within which such measures must be withdrawn would be five months and 10 days. This time-period expired on 21 June 2019.

This dispute is of interest to Russia from the point of view of taxation practices and the settlement of disputes arising in this connection. The participation in this dispute is also important for Russia in the context of providing support to domestic producers and granting subsidies in compliance with the norms and rules of the WTO, with correct understanding of the issue of prohibited subsidies.

DS484: Indonesia – Measures concerning the importation of chicken meat and chicken products (Brazil)

In October 2014, Brazil filed with the DSB a request for consultations with Indonesia concerning the restrictive administrative procedures and measures on the importation of chicken meat and chicken products to the Indonesian poultry market.[1] Brazil complained of the non-approval, by Indonesia, of the provided health certificate; of the imposition of a non-automatic import licensing regime to Brazilian imports; of the requirement of a prior recommendation from the Indonesian Ministry of Agriculture for the product imports at issue, the imposition of transit restrictions, etc. On November 17, 2017, the DSB adopted the panel report and issued recommendations that Indonesia should bring its measures into conformity with its WTO obligations. In June 2019, Brazil requested the establishment of a compliance panel. The DSB agreed to refer the matter to the original panel. Australia, Canada, China, the EU, India, Japan, Korea, New Zealand, Norway, Russia, Saudi Arabia, and the USA reserved their third-party rights.

Russia does not export chicken meat and chicken product to Indonesia, probably because of the restrictions on imports imposed by Indonesia, and so their removal or adjustment can result in new contracts for supplies of the products at issue. Russia's participation in this dispute was motivated by an interest in SPS and TBT measures implemented in proper conformity with the norms and rules of the WTO and the practices of settling such disputes.

[1] URL: https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds484_e.htm.

DS488: USA – Anti-dumping measures on certain oil country tubular goods from Korea (Republic of Korea)

In late 2014, the Republic of Korea filed a request with the DSB for consultations with the USA regarding anti-dumping measures. The Republic of Korea claimed that the anti-dumping measures on oil country tubular goods and the underlying investigation by the USA were inconsistent with the WTO norms. In November 2017, the panel presented its report, where it rejected 7 out of 8 Korea's claims, and agreed that the USA had indeed failed to use actual data of the Korean respondents to determine their constructed value (CV) profit rate. The panel rejected the requests with respect to consistency with the norms and provisions of the WTO of US laws on normal value and export price calculation, procedural acts, and public notification procedures. On January 12, 2018, the DSB adopted the panel report. On February 9, 2018, the USA informed the DSB of its intention to implement the DSB's recommendations and rulings and that it would need a reasonable period of time to do so. The reasonable period of time was set to expire on January 12, 2019, and then was extended until July 12, 2019.

On July 29, 2019, the Republic of Korea requested the authorization of the DSB to suspend concessions or other obligations pursuant to Article 22.2 of the DSU (Compensation and the Suspension of Concessions) on the grounds that the USA had failed to comply with the DSB's recommendations and rulings within the reasonable period of time. On August 8, 2019, the USA objected to Korea's proposed level of suspension of concessions pursuant to Article 22.6 of the DSU (Compensation and the Suspension of Concessions). On August 9, 2019, the matter was referred to arbitration pursuant to Article 22.2 of the DSU (Compensation and the Suspension of Concessions) .

The dispute has to do with the issues of anti-dumping investigation methodologies, and so it is of systemic importance for Russia. The relative share of products at issue in Russia's exports to the USA is 35 percent, and in total imports into the USA – 4 percent.[1]

DS490, DS496: Indonesia – Safeguards on certain iron or steel products (Chinese Taipei, Viet Nam)

In 2015, Chinese Taipei[2] and Viet Nam[3] filed a request with the DSB for consultations with Indonesia concerning the safeguard measures on imports of certain flat-rolled product of iron or non-alloy steel that the complainants claimed were inconsistent with the WTO norms. Indonesia provided no reasoned and adequate explanation concerning investigated imports and failed to properly demonstrate how increased imports could cause or threaten to cause serious injury to the domestic industry, and also failed to provide an opportunity for consultations. The measures imposed by Indonesia were inconsistent with the general principle of MFN, because they were applied only to products originating in certain countries, and Indonesia excluded from the said measures 120 developing countries, Russia including. On August 18, 2017, the panel presented its report, whereby it ruled that the measures at issue did not qualify as safeguards, and recommended that they should be made consistent with the MFN. In autumn 2017, each of the parties filed an appellee's submission. The WTO Appellate Body in its report, presented in mid-August 2018, agreed with the panel findings. The parties agreed that Indonesia would bring its measures into conformity with its obligations by March 27, 2019. On April 15, 2019

[1] UN COMTRADE database, URL: http://comtrade.un.org/
[2] URL: https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds490_e.htm.
[3] URL: https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds496_e.htm.

Indonesia informed the DSB that it had adopted a regulation, removing the safeguard measure challenged in this dispute, which it considered ensured full implementation of the DSB recommendations and rulings in this dispute.

For Russia, the relevant aspects of the dispute were the practices of settling matters related to safeguards and conducting an investigation thereof. Russia's interest in such a dispute could be indirectly stirred by the anti-dumping measures introduced by Indonesia over the period from December 27, 2013 through December 26, 2018 against imports of hot-rolled flat products of steel originating in Russia (the import duties for some companies were as high as 20 percent). In March 2019, the period for introducing the anti-dumping measures on certain flat-rolled product of iron or non-alloy steel originating in Russia was extended for 5 more years – from April 2, 2019 through April 1, 2024.

DS492: EU – Measures affecting tariff concessions on certain poultry meat products (China)

In April 2015, China filed a request with the DSB for consultations with the EU, because the EU undertook tariff modification negotiations with Thailand and Brazil concerning certain poultry meat products, in which these two countries have a significant vested interest, while China was denied an opportunity for such negotiations. The tariff rate quotas were almost entirely reserved for Brazil and/or Thailand, and out-of-quota bound rates were significantly in excess of the pre-modification bound rates. In March 2017, the panel presented its report, where the complainant's claims were upheld only with regard to 2 out of 10 tariff quotas at issue. The panel found that the EU's allocation of TRQ shares among the supplying countries was inconsistent with the requirements of the GATT 1994, and upheld China's claim that its increased ability to export poultry products to the EU following the relaxation of the SPS measures in July 2008 was a 'special factor' that had to be taken into account by the EU when determining which countries had a 'substantial interest' in supplying the products concerned, or when determining the TRQ shares to be allocated to the category of 'all other' countries that were not recognized as substantial suppliers (including China). All the other claims presented by China were rejected. The DSB recommended the EU to bring its measures into conformity with the WTO norms within a reasonable period of time.

On May 30, 2019, the EU and China informed the DSB that they had reached a mutually agreed solution, which was that the EU should grant market access to three poultry meat products supplied by China, in the form of tariff quotas.

The dispute is interesting from the point of view of changes in the list of bound rates of tariffs, understanding of the negotiating procedure, etc. The EU has also introduced a tariff rate quota for Russia, but it is quite low (about 30,000 t of poultry meat products).[1]

DS495: Republic of Korea – Import bans, and testing and certification requirements for radionuclides (Japan)

In May 2015, Japan filed with the DSB a request for consultations with the Republic of Korea regarding the measures adopted by the latter subsequent to the accident at the Fukushima Daiichi nuclear power plant: import bans on certain food products; additional testing and certification requirements regarding the presence of certain radionuclides; and a number of alleged omissions concerning transparency obligations. On February 22, 2018, the panel

[1] Overview of existing restrictions on access of Russian products to foreign markets. URL: http://www.ved.gov.ru/rus_export/partners_search/torg_exp/

presented its report, where the claims of neither of the parties were upheld in full. It was found that the Korean measures were generally consistent with the WTO norms, but that they were more trade-restrictive than required; besides, it was found that Korea failed to comply with its transparency obligations with respect to the publication of all the measures.

In April 2018, the parties appealed and cross-appealed the panel decisions, and a year later the WTO Appellate Body issued its report whereby it concluded that the panel had overstepped its powers, and thus reversed some of its findings. In particular, the panel concluded that the Korean measures were inconsistent with Article 5.6 of the SPS Agreement (Assessment of Risk and Determination of the Appropriate Level of Sanitary or Phytosanitary Protection) because they were 'more trade-restrictive than required'. The WTO Appellate Body concluded that, having identified all elements of Korea's appropriate level of protection (ALOP), the panel erred by not accounting for all of these elements in its assessment, and its analysis of the alternative measure proposed by Japan effectively focused only on the quantitative element.

The Appellate Body found that the panel erred in its interpretation of Article 2.3 of the SPS Agreement (Basic Rights and Obligations) by considering that relevant 'conditions' under this provision may be exclusively limited to 'the risk present in products', to the exclusion of other conditions, including territorial conditions that may not yet have manifested in products but are relevant in light of the regulatory objective and specific SPS risks at issue. The Appellate Body thus reversed the panel findings under Article 2.3. In light of the reversal, the Appellate Body did not consider it necessary to address Korea's additional claims of error regarding arbitrary or unjustifiable discrimination, and whether Korea's measures constitute disguised restrictions on international trade.

The Appellate Body noted that, before the panel, Japan had not made a claim of inconsistency under Article 5.7 (Assessment of Risk and Determination of the Appropriate Level of Sanitary or Phytosanitary Protection), and that Korea did not invoke Article 5.7 as a defense, so the AB considered that, by making these findings under Article 5.7, the panel exceeded its mandate, and for this reason, the Appellate Body declared the panel's findings under Article 5.7 moot and of no legal effect.

The Appellate Body modified the panel's finding concerning publication obligations, and found instead that whether a publication under Annex B(1) of the SPS Agreement (Transparency Of Sanitary And Phytosanitary Regulations) needs to include the "specific principles and methods" may only be determined with reference to the specific circumstances of each case, such as the nature of the SPS regulation at issue, the products covered, and the nature of the SPS risks involved. The Appellate Body agreed with the panel that the press release at issue did not include the full product coverage of the measure. The Appellate Body reversed the panel findings, pointing out that the panel erred in its interpretation and application of Annex B(3) (Enquiry Points) in finding that Korea acted inconsistently with this provision because its SPS enquiry point provided an incomplete response to one request for information by Japan and failed to respond to another. The Appellate Body considered that a single failure of an enquiry point to respond would not automatically result in an inconsistency with Annex B(3).

In general upholding the panel findings at issue, the Appellate Body found that the panel did not err in declining to presume that Japanese products and Korean domestic products are "like", is spite of some questions as to whether a procedure under Annex C(1)(a) of the SPS Agreement (Control, Inspection and Approval Procedures) is at all capable of distinguishing between products based exclusively on their origin.

At its meeting on April 26, 2019, the DSB adopted the Appellate Body report and the panel report, as modified by the Appellate Body report. In early June 2019, Korea informed the DSB that it had completed the implementation of the recommendations and rulings of the DSB in this dispute as of May 30, 2019 by way of re-publishing the details of the relevant measures.

Russia, in addition to the interest in the procedural aspects of the dispute settlement practices concerning the introduction of measures in the sanitary and phytosanitary field in accordance with WTO norms and rules, has also a direct interest in such matters. The reason for this interest is that, after the accident at the Fukushima Daiichi nuclear power plant in 2011, Russia also imposed a ban on fish imports from Japan, which was lifted by the Federal Service for Veterinary and Phytosanitary Surveillance of Russia only as late as summer 2015.

DS510: USA – Certain measures relating to the renewable energy sector (India)

In 2016, India filed with the DSB a request for consultations with the USA regarding certain measures of the USA relating to domestic content requirements and subsidies instituted by the governments of several US states by way of providing performance-based incentives for the use of domestic components in the renewable energy sector (in particular, a renewable energy cost recovery incentive for customers of light and power businesses for generating electricity from renewable sources, self-generation and hydropower systems, solar photovoltaic (PV) systems), and also tax incentive for ethanol production and tax credit for biodiesel blending and storage, etc.

On June 27, 2019, the panel presented its report, where it was found that all of the measures at issue were inconsistent with Article III:4 of the GATT 1994 because they provided an advantage for the use of domestic products, which amounted to less favorable treatment for like imported products. In mid-August 2019, the USA and India appealed and cross-appealed to the WTO Appellate Body. On October 14, 2019, the Chair of the Appellate Body informed the DSB that it would not be able to circulate a report in this case within the required 90 days, as there was a queue of appeals pending as a result of a crisis in the Appellate Body caused by the persistent blockage, by the USA, of the rotation of its members.[1]

The outcome of the dispute, as well as of the similar dispute between the USA and India (DS456),[2] also joined by Russia, will be relevant for Russia because they offer a potential for increasing the volume of exports of the products at issue to these countries. The relative share of Russian exports of the products at issue to India in Russia's total exports shrank from approximately 8 percent in 2013 to 5 percent in 2016.[3] Besides, due to the high importance of the goal of developing alternative energy sources for Russia, it is necessary to give consideration to the use of domestic content in the production process, and also to subsidize production in such a way that would not be inconsistent with the norms and rules of the WTO, because Russia has some similar programs of production localization.

DS511: China – Domestic support for agricultural producers (USA)

In September 2016, the USA requested consultations with China regarding certain measures through which China appeared to provide domestic support in favor of agricultural producers.[4]

[1] For more details on the crisis in the WTO Appellate Body, see Monitoring of Relevant Events in International Trade. 2019. No 43 (February). URL: https://www.vavt-imef.ru/wp-content/uploads/2020/02/Monitoring_43.pdf.
[2] URL: https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds456_e.htm.
[3] UN COMTRADE database, URL: http://comtrade.un.org/.
[4] URL: https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds511_e.htm.

The USA disputes several normative legal acts adopted by China in 2011–2016 and addressing innovations in agricultural science and technology, the potential for increasing guaranteed supplies of agricultural products, development of agricultural regions, and advancing reform in the grain distribution system. This dispute concerns China's provision of domestic support in the form of market price support (MPS). The central element of this dispute was the calculation of the value of China's market price support (MPS) provided to producers of wheat, rice and corn, etc. According to the USA, China was not in compliance with its obligations under the WTO rules, because the level of domestic support of agricultural producers exceeded the level of obligations assumed by China in the course of its accession to the WTO.

From June 27, 2017, the panel examination was underway, and on February 28, 2019, the panel report was circulated to members. The central element of this dispute was the calculation of the value of China's market price support (MPS) provided to producers of wheat, rice and corn. Under Annex 3 (Domestic support – Calculation of Aggregate Measurement of Support) of the Agreement on Agriculture (AoA), MPS is calculated using a mathematical formula composed of three variables: the applied administered price (AAP), the fixed external reference price (FERP) and the quantity of production eligible to receive the AAP (QEP). The budgetary funding covering the difference between the two prices (shipment and storage costs) are not included in AAP. The panel found that, in China's case, the FERP should be based on years 1996-1998, drawn from Part IV of China's Schedule, rather than the years 1986-1988, set out in paragraph 9 of Annex 3 of the AoA (Domestic support – Calculation of Aggregate Measurement of Support).

For the purposes of the present case, the resulting value of MPS is compared against China's 8.5% *de minimis* commitment. To allow for this comparison, the MPS is expressed as a percentage of the total value of production of the commodity at issue. In the present dispute, if such percentage is greater than China's 8.5% *de minimis* commitment, then China would not be in compliance with its obligations under Articles 6.3 and 3.2 of the AoA. The panel performed the calculation and found that in each of the years 2012-2015, China exceeded its 8.5% *de minimis* level of support for each of these products. The panel then found that because China's level of support exceeded the *de minimis l*evel, it was also in excess of China's commitment level of 'nil' specified in Section I of Part IV of China's Schedule CLII. On that basis, the panel concluded that China acted inconsistently with its obligations under Articles 3.2 (Incorporation of Concessions and Commitments) and 6.3 (Domestic Support Commitments) of the AoA.

At its meeting on April 26, 2019, the DSB adopted the panel report and recommended that China should make its measures consistent with its WTO obligations. On June 10, 2019, the United States and China informed the DSB that they had agreed that the reasonable period of time for China to implement the DSB's recommendations and rulings would be 11 months and 5 days, set to expire on March 31, 2020.

Russia is interested in this dispute because over the period during which the Chinese normative legal acts designed to support domestic agricultural producers (disputed by the USA) were introduced, the share of products at issue exported from Russia to China in the total volume of Russian exports of these products shrank from 7 percent in 2012 to 0.2 percent in 2016, and the share of rice shrank from 16 to 0.7 percent.[1]

[1] UN COMTRADE database. URL: // http://comtrade.un.org/.

DS517: China – Tariff rate quotas for certain agricultural products (USA)

In late 2016, the USA requested consultations with China concerning China's administration of its tariff rate quotas, including those for wheat, some types of rice, and corn.[1] The USA claimed that China acted contrary to its obligations assumed under the Protocol of Accession to the WTO, because its tariff-rate quotas (TRQ) for wheat, rice and corn were not transparent and predictable. The USA believed that China acted inconsistently with some provisions of the GATT 1994 by introducing prohibitions and restrictions on imports other than duties, taxes or other types of levies and failing to provide public notice of quantities permitted to be imported under each TRQ and of changes to these quantities. On February 12, 2018, a panel was established, and on 18 April 18, 2019 it presented its report.

The panel found that China's administration of tariff rate quotas was inconsistent with the obligations to administer them on a transparent, predictable, and fair basis, using clearly specified requirements, and in a manner that would not inhibit the filling of each tariff rate quota.

The Panel rejected some of the USA' claims, in particular with respect to the claim under Article XIII:3(b) of the GATT 1994 (Non-discriminatory Administration of Quantitative Restrictions) because it found that this provision required public notice of the total amounts of tariff rate quotas available for allocation and any changes thereto, not public notice of the total amounts of tariff rate quotas actually allocated and any changes thereto.

In late May 2019, the DSB adopted the panel report and recommended that China should make its measures consistent with its WTO obligations. On July 9, 2019, the USA and China informed the DSB that they had agreed that the reasonable period of time for China to implement the DSB's recommendations and rulings was set to expire on December 31, 2019.

For Russia, the progress of this dispute is of great interest, because the relative share of the products at issue exported from Russia to China in Russia's total exports of these products shrank from 7 percent in 2012 to 0.2 percent in 2016, and that of rice – from 16 to 0.7 percent[2].

DS523: USA – Countervailing measures on certain pipe and tube products (Turkey)

In March 2017, Turkey filed with the DSB a request for consultations with the USA concerning the countervailing measures imposed by the USA on certain types of pipe and tube products from Turkey.[3] Turkey essentially claimed that the measures introduced by the USA appeared to be inconsistent with the Agreement on Subsidies and Countervailing Measures ('SCM Agreement') and the GATT 1994, in particular the USA's determination that certain entities were 'public bodies', and the determination regarding the specificity of a subsidy (a failure to substantiate it on the basis of positive evidence).

On December 18, 2018, the panel report was presented; the panel rejected Turkey's claims concerning public body determinations, and the claims in relation to benefit determination and likelihood-of-injury determinations, but upheld the claims concerning 'specificity determinations' and 'resort to the use of facts available' by the USA.

On January 25, 2019, the USA appealed, and on January 30, 2019, Turkey cross-appealed to the WTO Appellate Body certain issues of law and legal interpretations in the panel report.

[1] URL: https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds517_e.htm.
[2] UN COMTRADE database, URL: http://comtrade.un.org/.
[3] URL: https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds523_e.htm.

On March 25, 2019, the Appellate Body informed the DSB that it would not be able to circulate its report in this appeal by the end of the 60-day period, nor within the 90-day time-frame.

In addition to the practices of imposing countervailing measures and conducting underlying investigation, and the practices of disputing such measures when they are inconsistent with WTO norms, Russia is also interested in the outcome of the dispute from a practical point of view. In 2016, Russian exports of the products at issue to the USA lost almost 60 percent relative to 2015, while the relative share of exports to the USA in Russia's exports shrank from 14 percent in 2015 to 6 percent in 2016.[1]

DS524: Costa Rica – Measures concerning the importation of fresh avocados from Mexico (Mexico)

In early March 2017, Mexico filed with the WTO a request for consultations with Costa Rica with respect to certain measures allegedly restricting or prohibiting the importation of fresh avocados for consumption from Mexico.[2] The process of appointing panel experts took six months, most probably because of the complexity and specificity of the disputed issue. On May 16, 2019, the panel was composed; it expected to issue its final report to the parties by the second half of 2020. Canada, China, the European Union, El Salvador, Honduras, India, Panama, Russia and the USA reserved their third-party rights.

Russia's interest in this dispute was motivated mostly by the practical aspects of participating in disputes focused on SPS measures and the need to systematically study the relevant provisions. Russia is a respondent in a similar dispute initiated by the EU with respect to imports of pork and live pigs (DS475).

DS529: Australia – Anti-dumping measures on a4 copy paper (Indonesia)

In September 2017, Indonesia requested consultations with Australia with respect to its refusal to use the Indonesian exporters' home market price as the normal value of raw material (lumber) and the imposition of an anti-dumping order on A4 copy paper, because it found that a particular market situation existed, and the Government of Indonesia had been implementing policies that increased the supply of timber, which allegedly resulted in lower paper prices due to lower timber prices.[3] On July 12, 2018, the panel was composed, and in early December 2019, its report was issued. One of Indonesia's claims in this dispute concerned the second clause of Article 2.2 of the Anti-Dumping Agreement (Determination of Dumping), which provides for the discarding of domestic sales as the basis for normal value when 'because of a particular market situation, … such sales do not permit a proper comparison.' Australia found a 'particular market situation' to exist in Indonesia's A4 copy paper market because certain alleged government-induced distortions affected Indonesia's pulp and paper industries, and the price of Indonesia's A4 copy paper was lower than regional benchmarks. Indonesia contested Australia's determination of the 'particular market situation' because, in its view, the proper interpretation of that expression necessarily excludes:

- situations where input costs of the product are allegedly distorted;
- situations that affect both domestic market sales and export sales of the product;
- situations arising from government action.

[1] UN COMTRADE database, URL: http://comtrade.un.org/.
[2] URL: https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds524_e.htm.
[3] URL: https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds529_e.htm.

The panel found that none of these situations were necessarily excluded from constituting a 'particular market situation' and, on that basis, concluded that Indonesia did not demonstrate that Australia had acted inconsistently with Article 2.2 when establishing that a 'particular market situation' existed in the Indonesian domestic market for A4 copy paper. In respect of the requirement to examine whether the domestic sales affected by the 'particular market situation' 'permit a proper comparison', the panel concluded that Australia had acted inconsistently with Article 2.2 because it did not conduct the required analysis and disregarded domestic sales of A4 copy paper without properly determining that such sales did 'not permit a proper comparison'. The panel found that Australia was not permitted to disregard the exporter's records of pulp costs because it had not established that the prerequisite express conditions in Article 2.2.1.1 of the Anti-Dumping Agreement were satisfied. The panel also found that a reasoned and adequate explanation was lacking as to why, with regard to the integrated producer's cost of producing pulp internally, the investigating authority did not utilize substitute woodchips costs in conjunction with the other recorded costs of producing pulp internally which were not affected by the particular market situation instead of utilizing substituted pulp costs.

The panel recommended that Australia bring its measure into conformity with its obligations under the Anti-Dumping Agreement but denied Indonesia's request to suggest ways in which Australia could implement the Panel's recommendations.

This complaint by Indonesia resembles Russia's claims to the EU (DS474, DS494 and DS521) and Ukraine (DS493), and this was the reason for Russia to join the dispute as a third party.

DS534: USA – Anti-dumping measures applying differential pricing methodology to softwood lumber from Canada (Canada)

In late November 2018, Canada filed a request for consultations with the USA with respect to the US anti-dumping measures applying the differential pricing methodology to softwood lumber products from Canada.[1] Canada claimed that, in applying the weighted-average-to-transaction (W-T) calculation methodology, the USA improperly aggregated random and unrelated price variations and therefore failed to identify a pattern of export prices, and applied zeroing in its W-T calculation methodology, while zeroing in the W-T methodology did not account for all of the purported pattern transactions in calculating the margin of dumping, and so did not lead to a fair comparison of export prices.

The panel began its examination procedure in late May 2018, and on April 9, 2019 circulated its report to the parties.

With respect to the USDOC's use of zeroing under the challenged W-T methodology, Canada considered such type of zeroing to be inconsistent with Article 2.4.2 (Determination of Dumping), as interpreted in past cases. For its part, the United States considered such type of zeroing to be permissible under the second sentence. The panel agreed with the United States that such type of zeroing is permissible under the second sentence of Article 2.4.2: 'A normal value established on a weighted average basis may be compared to prices of individual export transactions if the authorities find a pattern of export prices which differ significantly among different purchasers, regions or time periods, and if an explanation is provided as to why such differences cannot be taken into account appropriately by the use of a weighted average-to-

[1] URL: https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds534_e.htm.

weighted average or transaction-to-transaction comparison', and thus rejected Canada's claim. In making its finding, the panel noted that the second sentence of Article 2.4.2 would become inutile if zeroing was prohibited under the W-T methodology, as this methodology, which is designed to unmask targeted dumping, would not be able to do so. Taking into account this finding, the panel also rejected Canada's claim under Article 2.4 of the Anti-Dumping Agreement (Determination of Dumping) challenging the use of zeroing under the W-T methodology.

On June 4, 2019, Canada appealed to the WTO Appellate Body certain issues in the panel report. On August 2, 2019, the Chair of the Appellate Body informed the DSB that it would not be able to circulate a report in this case within the required 90 days because it had suspended its activities.

Similarly to the dispute between Canada and the USA concerning countervailing measures with respect to softwood lumber products (DS533), Russia's participation in this dispute was determined not only by an interest in the practical aspects of a dispute concerning countervailing measures, but also by significant trade-related interests. The relative share of the USA in Russia's exports of softwood lumber products (FEACN 440910) in 2017 amounted to 7 percent, and their share in US imports was less than 1 percent.[1]

DS538: Pakistan – Anti-dumping measures on biaxially oriented polypropylene film from the United Arab Emirates (UAE)

In late January 2018, the UAE filed a request for consultations with Pakistan concerning Pakistan's anti-dumping measures on imports of biaxially oriented polypropylene film from the UAE (BOPP film).[2] The UAE claimed that the anti-dumping investigation and the following anti-dumping measures were inconsistent with the GATT 1994 and the Anti-Dumping Agreement. For example, there was insufficient accurate and adequate evidence to justify the initiation of the anti-dumping investigation, and the application filed by Pakistan should therefore have been rejected.

From early May 2019, the panel examination was launched, and on October 23, 2019, the panel announced that its final report would be presented not earlier than H2 2020.

Anti-dumping investigations were also initiated by Pakistan against certain Russian companies, but the corresponding measures were not imposed on Russian imports of hot-rolled steel sheets (proceedings started in early April 2009 and ended in late February 2011) and p*hthalic anhydride* (proceedings started in mid-February 2016 and ended in mid-December 2017). [3]

DS541: India – Export related measures (USA)

In March 2018, the USA filed a request for consultations with India concerning certain alleged export subsidy measures that the USA believed to be inconsistent with Articles 3.1(a) and 3.2 (Prohibition) of the Agreement on Subsidies and Countervailing Measures (SCM Agreement). The USA claimed that India provided export subsidies through its Export Oriented Units Scheme and sector specific schemes, including electronics hardware technology parks scheme, the merchandise exports from India scheme, the export promotion capital goods scheme, special economic zones, and a duty-free import for exporters program.

[1] UN COMTRADE database. URL: // http://comtrade.un.org/.
[2] URL: https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds538_e.htm.
[3] URL: http://i-tip.wto.org/goods/

In July 2018, the panel began to examine the case, and presented its report in late October 2019. India argued before the panel that the special and differential treatment provisions of Article 27 of the SCM Agreement (Special and Differential Treatment of Developing Country Members) still excluded it from the application of the prohibition on export subsidies. However, the parties did not dispute that India had graduated from the special and differential treatment provision that it originally fell under, and the panel found that no further transition period under Article 27.2(b) was available to India after graduation: Article 27 therefore no longer excluded India from the application of the prohibition on export subsidies and from the corresponding dispute settlement procedures, laid out in Articles 3 (Prohibition) and 4 (Remedies) of the SCM Agreement, respectively.

India also argued that all the schemes at issue (except for the SEZ Scheme) fell within footnote 1 of the SCM Agreement, which carves out from the definition of a subsidy, under certain conditions, the exemption from or remission of duties or taxes on an exported product. On these grounds, the panel rejected the USA's claims regarding certain challenged customs duty exemptions under DFIS, and regarding the challenged exemption from excise duties under the Export Oriented Units (EOU) /Electronic Hardware Technology Parks (EHTP) /Bio-Technology Parks (BTP) Schemes. However, the panel found that the remaining measures under the four schemes did not meet the conditions of footnote 1, read together with the relevant paragraphs of Annex I (Illustrative List of Export Subsidies) of the SCM Agreement, in particular because of the nature of the goods for which the customs duty exemptions were available and, in the case of exports from India (MEIS), because of the entire design, structure and operation of the measure.

For these measures, and for the exemptions and deductions under the SEZ Scheme, for which footnote 1 was not invoked, the panel then found that the USA had established the existence of a financial contribution (in the form of revenue foregone, in the case of the exemptions and deductions from duties and other taxes, and in the form of a direct transfer of funds, for the provision of scrips under MEIS) through which a benefit was conferred on the recipient. Further, the panel also found that the USA had established that each of those measures was contingent in law upon export performance. The panel therefore concluded that the USA had demonstrated the existence of prohibited export subsidies, inconsistent with Articles 3.1(a) and 3.2 (Prohibition) of the SCM Agreement.

The panel recommended that India withdraw the prohibited subsidies under DFIS within 90 days from adoption of the report; that it withdraw the prohibited subsidies under the EOU/EHTP/BTP Schemes, EPCG Scheme, and MEIS, within 120 days from adoption of the report; and that it withdraw the prohibited subsidies under the SEZ Scheme within 180 days from adoption of the report. On November 19, 2019, India appealed to the Appellate Body certain issues in the panel report.

Probably, Russia joined this dispute not so much because of its trade-related interests (Russia's total exports to India in 2017 amounted to approximately 2 percent of Russia's total exports), as its interest in the practical aspects of various export promotion schemes and their potential *disputability* in the framework of the WTO dispute settlement mechanism.

DS542: China – Certain measures concerning the protection of intellectual property rights (USA)

On March 23, 2018, the USA filed with the DSB a request for consultations with China concerning certain Chinese measures pertaining to the protection of intellectual property rights.

The essence of the USA's claims is that China denied foreign patent holders the ability to enforce their patent rights against a Chinese joint-venture party after a technology transfer contract ended. China also imposed mandatory adverse contract terms that discriminated against and were less favorable for imported foreign technology. Therefore, China deprived foreign intellectual property rights holders of the ability to protect their intellectual property rights in China, as well as to freely negotiate market-based terms in licensing and other technology-related contracts.

From mid-January 2019, the panel examination was launched, but then in early June 2019 the USA filed a request to the panel that the examination should be suspended until December 31, 2019, and China agreed to that request. The panel informed the DSB of its decision to satisfy the request filed by the USA and to suspend the examination procedure. In its communication the panel noted that pursuant to Article 12.12 (Panel Procedures) of the DSU, the authority of the panel should lapse after 12 months of the suspension of its work. On December 23, 2019, the USA requested the panel to further suspend its work until February 29, 2020, and the panel accepted that request.

Russia's participation in this dispute can be explained not only by an interest in analyzing the outcome of the trade war between the USA and China, where Russia has also taken some part (with respect to steel and aluminum), but also by Russia's significant interest in contracts with China that have to do with technologies and the protection of intellectual property rights of Russian suppliers.

DS544, DS547, DS548, DS550, DS551, DS552, DS556, DS564: United States – Certain measures on steel and aluminum products (China, India, EU, Canada, Mexico, Norway, Switzerland, Turkey)

On April 5, 2018, China; on May 18, 2018, India; on June 1, 2018, the EU and Canada; on June 5, 2018, Mexico; on June 12, 2018, Norway; and on August 15, 2018, Turkey filed their requests for consultations with the USA concerning certain measures on steel and aluminum products imposed by the USA. In autumn 2018, the complainants filed a request for the establishment of a panel for examining the disputed issues, and on January 25, 2019 the panel examination was launched; its report is expected to be presented not earlier than autumn 2020.

In late June 2018, Russia also filed a similar complaint with the DSB against the USA concerning the measures at issue (DS554) (see earlier).

DS546: United States – Safeguard measures on imports of large residential washers (Republic of Korea)

In mid-May 2018, the Republic of Korea filed with the DSB a request for consultations with the USA concerning definitive safeguard measures imposed by the United States on imports of large residential washers, which Korea believed to be inconsistent with certain provisions of the Agreement on Safeguards and the GATT 1994, because the USA failed to make a determination regarding the existence of unforeseen developments resulting in increased imports, and the effect of the obligations incurred under the GATT 1994.

In mid-August 2018, Korea filed a request for the establishment of a panel, and it was established on September 26, 2018. On July 1, 2019, the panel examination was launched.

Russia joined this dispute as a third party, because safeguard measures imply protection against all countries, Russia including. Besides, Russia wants to gain some experience in

handling disputes with the USA with respect to safeguards, because Russia itself has initiated a similar dispute (DS554).

DS553: Republic of Korea – Sunset review of anti-dumping duties on stainless steel bars (Japan)

On June 18, 2018, Japan filed with the DSB request for consultations with the Republic of Korea concerning the latter's determination to continue the imposition of anti-dumping duties on stainless steel bars (SSB) from Japan as a conclusion in the third sunset review. Japan believed that the measures at issue were inconsistent with Korea's obligations under certain provisions of the Anti-Dumping Agreement and the GATT 1994 because, in particular but not limited to, Korea failed to properly determine, as the basis to continue the imposition of anti-dumping duties on the imports from Japan, that the expiry of the duties would be likely to lead to continuation or recurrence of injury. Korea failed to demonstrate the nexus between the expiry of the duties and a continuation or recurrence of injury, and to comply with the fundamental requirement that such determination should rest on a sufficient factual basis and reasoned and adequate conclusions.

In late October 2018, a panel was established, but then in late November 2019 its chairperson noted that the panel examination was postponed for shortage of secretariat staff properly qualified to conduct the dispute in question, and so the panel planned to issue its final report in mid-2020

Over the period from October 27, 2008 to April 9, 2015 Korea imposed anti-dumping duties on kraft paper imports by certain Russian companies. Russia's interest in this dispute can be explained by the need to gain practical experience in measures designed to protect the domestic market.

DS557: Canada, DS558: China, DS559: EU, DS560: Mexico, DS561: Turkey, DS585: India, – Additional duties on certain products from the United States (USA)

On July 16, 2018, the USA filed with the DSB requests for consultations with Canada, China, the EU, Mexico, and Turkey, and on July 3, 2019 – with India concerning the imposition of additional duties (that is, increased duties with respect to certain products originating in the USA in response to the imposition, by the USA, of safeguard measures with respect to steel and aluminum products). In late 2018 (in the dispute with India, in September 2019) the USA requested that a panel be composed. At its meeting on January 25, 2019, the DSB established a panel for the disputes against Canada, China, the EU, and Mexico, and on February 28, 2019 - for the dispute against Turkey. The panel reports are expected to be issued in H2 2020. As of the year-end of 2019, the panel appointment process in the dispute against India had not yet been completed. The USA reached mutually agreed solutions with its NAFTA and USMCA partners (the revised version of the latter having not entered into force as of the year-end of 2019) in the framework of its disputes with Canada (DS557) and Mexico (DS560), which consisted on the elimination of their surtaxes on imports of certain products from the USA. In late May 2019, the parties jointly wrote to the panel advising it of their mutually agreed solution.

Besides, the USA also filed a complaint concerning similar measures against Russia (DS566) (see earlier). As of the year-end 2019, the dispute undergoes the panel examination stage, and the panel expects to issue its final report in H2 2020.

DS567: Saudi Arabia – Measures concerning the protection of intellectual property rights (Qatar)

In early October 2018, Qatar filed with the DSB a request for consultations with Saudi Arabia concerning Saudi Arabia's alleged failure to provide adequate protection of intellectual property rights held by or applied for legal entities based in Qatar.

In June 2017, Saudi Arabia imposed a scheme of diplomatic, political, and economic measures against Qatar. Such measures impacted, inter alia, the ability of Qatari nationals to protect intellectual property rights in Saudi Arabia. The multiple Qatari companies severely impacted by these measures included beIN Media Group LLC and affiliates ('beIN'). Saudi Arabia prohibited beIN from broadcasting its content in Saudi Arabia. A circular issued by Saudi Arabia stated that distribution of beIN media content and charging of related fees in Saudi Arabia 'shall result in the imposition of penalties and fines and the loss of the legal right to protect any related intellectual property rights ....'. Soon thereafter, in early August 2017, a sophisticated broadcast pirate named 'beoutQ' emerged, taking beIN's copyrighted media content (along with beIN's trademarks) without authorization, and making it accessible on beoutQ platforms, via the Internet and satellite broadcasting. BeoutQ's unauthorized satellite broadcasts were transmitted via satellites of the Saudi-based Arab Satellite Communications Organization ('Arabsat') to beoutQ's subscribers. To enable receipt of the satellite broadcasts, beoutQ (an entity based in Saudi Arabia) was selling set-top decoder boxes throughout Saudi Arabia. As a result, beoutQ's unauthorized Internet and satellite broadcasting of beIN's content became available on a commercial scale. Despite extensive evidence of involvement of Saudi nationals, entities and facilities in the distribution of beoutQ throughout Saudi Arabia (and beyond), the Saudi authorities refused to take any effective action against beoutQ. Instead, the Government of Saudi Arabia (including both the central and municipal governments) supported beoutQ, including by denouncing beIN's requests to investigate and prevent the pirate's unauthorized broadcasts, and by promoting public gatherings with screenings of beoutQ's unauthorized broadcasts. The Saudi authorities' support of beoutQ was also provided in the form of restrictions on, or other acts or omission that frustrated beIN's ability to pursue civil actions before the Saudi courts.

Qatar considered that the measures at issue taken by Saudi Arabia were inconsistent, in particular, with Saudi Arabia's obligations under the WTO covered TRIPS agreements:

- Article 3.1 (National Treatment) and Article 4 (Most-Favored-Nation Treatment), because Saudi Arabia created obstacles for Qatari nationals, which were not faced by Saudi nationals or the nationals of other countries, that hindered or blocked their ability to protect their intellectual property rights (including copyrights, broadcasting rights, trademarks and other forms of intellectual property) in the territory of Saudi Arabia;
- Article 9 (Relation to the Berne Convention), because Saudi Arabia failed to provide authors of works (including pre-recorded and live programming) with the exclusive rights of authorizing, inter alia, the reproduction, broadcasting, rebroadcasting, public performances or public recitation of their works, as required by the Berne Convention for the Protection of Literary and Artistic Works (1971), as incorporated into the TRIPS Agreement;[1]
- Article 14.3 (Protection of Performers, Producers of Phonograms (Sound Recordings) and Broadcasting Organizations), because Saudi Arabia failed to provide broadcasting

[1] Berne Convention for the Protection of Literary and Artistic Works (1971). URL: https://rupto.ru/ru/documents/bernskaya-konvenciya-ob-ohrane-literaturnyh-i-hudozhestvennyh-proizvedeniy.

organizations (and the owners of copyright in the subject matter of the broadcasts) with the right to prohibit unauthorized fixation, reproduction of fixation, and rebroadcasting by wireless means of broadcasts;

- Article 16.1 (Rights Conferred), because Saudi Arabia failed to provide the owners of registered trademarks (including, in particular, Qatari owners) with the exclusive right to prevent all third parties not having the owner's consent from using identical or similar signs for goods or services which are identical or similar to those in respect of which the trademark is registered;
- Article 41.1 (General Obligations), because by restricting intellectual property right holders (including Qatari rights holders) from pursuing civil actions before Saudi courts (or otherwise frustrating their ability to do so), Saudi Arabia failed to ensure that enforcement procedures against infringement of their intellectual property were available so as to permit effective action against such acts of infringement;
- Article 42 (Fair and Equitable Procedures), because, by preventing intellectual property right holders (including Qatari rights holders) from bringing enforcement procedures against infringement of their intellectual property, Saudi Arabia failed to make available to right holders civil judicial procedures concerning the enforcement of intellectual property rights;
- Article 61 (Criminal Procedures), because Saudi Arabia failed to provide for criminal procedures and penalties to be applied in cases of willful trademark counterfeiting or copyright piracy on a commercial scale.

On October 12, 2018 Russia requested to join the consultations. From February 18, 2019, the panel examination has been underway, and the panel expects to issue its final report in Q1 2020.

In the request to join the consultations in the framework of that dispute, Russia noted its systemic interest therein. Russia is also interested in developing its TV broadcasting network in the region. So, the measures at issue significantly affect Russia's commercial interests. Besides, Russia has also faced some problems that had to do with restrictions imposed on its national TV channel (Russia Today) by some states. Previously, Russia had already joined the dispute initiated by Qatar against the UAE, including with regard to the issue of property rights protection (DS526).

Below we discuss the disputes that were joined by Russia as a third party only in 2019 (two of them have already been described earlier: the USA vs Turkey (DS561) and the USA vs India (DS585) concerning additional duties on certain products).

DS543: USA – Tariff measures on certain goods from China

In April 2018, China filed with the DSB a request for consultations with the USA as a result of the expansion of the extraordinary tariffs (10 or 25 percent additional tariffs, depending on particular products) being imposed on imports of Chinese goods, including machines and electronics (DS543). China claimed that the measures at issue were inconsistent with one of the central principles of the WTO – most-favored-nation treatment (MFN), and with Article 23 (Strengthening of the Multilateral System) of the DSU. In January 2019, a panel was established, on June 3, 2019 it started the examination procedure, and in late September, further to a request from China, a new panelist was appointed.

Beside Russia, their third-party rights in this dispute were reserved by Australia, Brazil, Canada, the European Union, India, Indonesia, Japan, Kazakhstan, the Republic of Korea, New

Zealand, Norway, Singapore, Chinese Taipei, and Ukraine. Some of these countries, as well as Russia and China, initiated disputes with the USA concerning US measures on steel and aluminum products, which the latter claimed were not safeguards and instead explained that their introduction had been motivated solely by national security concerns. It can be assumed that Russia's interest in this dispute has to do with the said claims: in the dispute between China and the USA it sided with the complainant. The dispute initiated by the USA against Turkey concerning the imposition of additional duties by the latter certain products originating in the USA in response to the imposition, by the USA, of safeguard measures with respect to steel and aluminum products (DS561) is similar to the dispute initiated by the USA against Russia concerning the same issue (DS566), and this is the reason why Russia also participates in this one as third party.[1]

DS562: USA – Safeguard measure on imports of crystalline silicon photovoltaic products (China)

On August 14, 2018 China filed with the DSB a request for consultations with the USA concerning the definitive safeguard measure (tariff-rate quota for a period of 4 years) imposed by the United States on imports of certain crystalline silicon photovoltaic products, whether or not partially or fully assembled into other products (including, but not limited to, modules, laminates, panels, and building-integrated materials) ('CSPV products'), of which the USA notified the WTO in late January 2018.[2] Subsequently, on 18 February 2018, USTR established additional procedures for interested parties to request that certain products be excluded from the safeguard measure on CSPV products. As of 8 July 2019, 53 individual exclusion requests were submitted to the United States Trade Representative (USTR); 11 of those requests had been granted, while all other requests were denied.

China considered that the safeguard measure was inconsistent with the GATT 1994 and the Agreement on Safeguards, because the USA:

- failed to establish that the increases in imports were the result of 'unforeseen developments' and were the 'effect of obligations incurred' under the GATT 1994 by the USA;
- failed to establish the required 'causal link' between the increased imports and the serious injury found to exist ;
- failed to ensure that injury caused by other factors was not attributed to increased imports;
- did not provide the interested parties with sufficient opportunities to participate in the investigation.

On July 11, 2019, China filed with the DSB a request for the establishment of a panel. In mid-August 2019 that panel was composed, and the panel examination was launched on October 24, 2019.

Russia's interest in this dispute is motivated primarily by the fact that the measures at issue also affect imports from Russia. Besides, Russia is participating as a main party in two disputes with the USA concerning safeguard measures with respect to steel and aluminum products (DS554 and DS566).

[1] Monitoring of Relevant Events in International Trade. 2019. No 35 (September). URL: https://www.vavt-imef.ru/wp-content/uploads/2019/09/Monitoring_35.pdf.
[2] URL: https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds562_e.htm.

DS573: Additional duties on imports of air conditioning machines from Thailand (Thailand)

In early December 2018, Thailand filed with the DSB a request for consultations with Turkey concerning the additional duty imposed by Turkey on imports of air-conditioning machines from Thailand in early September 2017 at a rate of 9.27% for 3 years.[1] In imposing this measure, Turkey acted in response to the extension of a safeguard measure adopted by Thailand on imports of non-alloy hot rolled steel flat products in coils and not in coils, which was to be applied for three years, from June 2017 through June 2020. Thailand claimed that Turkey was not an 'affected exporting Member' with a 'substantial interest' in the safeguard measure, and was thus not entitled to suspend the application of concessions or other obligations under the GATT 1994, while the additional duty in any event exceeded what constituted 'substantially equivalent' concessions. Besides, Turkey acted inconsistently with the MFN principle by imposing the additional duty only on air-conditioning machines from Thailand. In mid-February 2019, Thailand filed with the DSB a request for the establishment of a panel, and on April 11, 2019 it was established. The panel examination has been underway since June 28, 2019; the panel report is expected in H1 2020.

Russia's interest in this dispute evidently has to do with other disputes with the USA concerning safeguards and additional duties (DS554 and DS566).

DS576: Qatar – Certain measures concerning goods from the United Arab Emirates (UAE)

On January 28 2019, the UAE filed with the DSB a request for consultations with Qatar concerning measures maintained by Qatar that prohibited sales outlets in Qatar (including distributors, agents, retailers, and pharmacies) from importing, stocking, distributing, marketing or selling goods, medicines, and other products originating in or exported from the UAE. 2 The UAE claimed that the measures at issue were inconsistent with some of the central principles of the WTO – the MFN treatment and the national treatment; besides, the measures were designed to introduce or maintain restrictions other than duties, taxes, or other levies on products imported from the UAE. The measures had not been published promptly in such manner as to enable governments and traders to become acquainted with them. There was also a violation of Article 23 (Strengthening of the Multilateral System) of the DSU, because through the measures Qatar was seeking the redress of an alleged violation of obligations without having recourse to, and abide by, the rules and procedures of the DSU. On April 11, 2019, the UAE filed with the DSB a request for the establishment of a panel, and it was established in late May 2019. On a communication dated August 8, 2019, the UAE requested the Chair of the DSB to circulate a communication where it indicated that it no longer considered it necessary to pursue its complaint in DS576, due to Qatar's public withdrawal of the measures in question, and so there was no need to compose the panel, and the matter was concluded.

Russia's interest in this dispute, beside the intention to strengthen the multilateral trade system, is probably motivated by the launch of a dispute against Ukraine concerning restrictions in respect of trade in Russian goods and services (DS525), which was initiated by Russia on May 19, 2017 and is undergoing the stage of consultations.

[1] URL: https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds573_e.htm.
[2] URL: https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds576_e.htm.

DS577: USA – Anti-dumping and countervailing duties on ripe olives from Spain (EU)

Russia also joined the dispute against the USA concerning the imposition of countervailing and anti-dumping duties on ripe olives from Spain initiated by the EU in late January 2019.[1] The main claims presented by the EU are as follows: the USA did not prove that the subsidy measures that is was countervailing were in fact specific; the countervailing duties imposed by the USA were in excess of the amount of any subsidy found to exist with respect to ripe olives; the USA did not demonstrate the required causal relationship between subsidized imports and injury to the domestic industry (the same was true for the anti-dumping measures); the calculation of the final subsidy rate for the producer company was erroneous, and so the amount of the countervailing duties imposed was erroneous, inappropriate and excessive; the interested party was not given notice of the information required or ample opportunity to present evidence considered relevant, and the US authorities did not properly satisfy themselves as to the accuracy of the relevant information.

On May 16, 2019, the EU filed with the DSB a request for the establishment of a panel, it was established on June 24, in mid-October the panel experts were appointed, and the panel examination was launched.

Russia's interest in this dispute is motivated primarily by the initiation of another dispute with the USA (described earlier) concerning anti-dumping measures (DS586). Besides, Russia frequently asserts third-party rights in disputes concerning countervailing measures and subsidies.

DS578: Morocco – Definitive anti-dumping measures on school exercise books from Tunisia (Tunisia)

On February 21, 2019, Tunisia filed with the DSB a request for consultations with Morocco concerning definitive anti-dumping duties imposed by Morocco on imports of school exercise books.[2] This is the second consultations request submitted by Tunisia against Morocco on a similar matter (see DS555, concerning provisional anti-dumping duties imposed by Morocco on imports of school exercise books from Tunisia). On September 19, 2019, Tunisia filed with the DSB a request for the establishment of a panel, which was established on October 28.

The anti-dumping measures were introduced from January 4, 2019. The rates of anti-dumping duties for companies from Tunisia were as follows:

- for SOTEFI – 27.71%;
- for SITPEC – 15.69%;
- for other Tunisian exporters – 27.71%.

Tunisia claimed that, firstly, the application for the conduct of anti-dumping investigations did not contain sufficient evidence of dumping, injury or a causal link, and secondly, the investigating authority did not conduct a satisfactory examination of the accuracy and adequacy of the evidence of provided in the application, and committed errors leading to the calculation of an artificially high normal value and the resulting duties, which was inconsistent with WTO norms and rules.

Russia's interest in this dispute is motivated primarily by the fact that the bulk of WTO disputes that Russia has been party to have to do with anti-dumping and countervailing

[1] URL: https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds577_e.htm.
[2] URL: https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds578_e.htm.

measures, and so regards the practical experience of imposing such measures in compliance with the norms and rules of the WTO to be important.

DS579: Brazil, DS580: Australia, DS581: Guatemala – measures concerning sugar and sugarcane (India)

On February 27 2019, Brazil[1] and Australia,[2] and on March 15, 2019, Guatemala[3] filed with the DSB a request for consultations with India concerning domestic support measures allegedly maintained by India in favor of producers of sugarcane and sugar (domestic support measures), as well as all export subsidies that India allegedly provides for sugarcane and sugar (export subsidy measures). On July 11, 2019, Brazil, Australia and Guatemala filed with the DSB requests for the establishment of a panel, it was established in mid-August 2019, and the panel examination started in late October 2019. Australia, as complainant in the framework of these three disputes, presented the longest list of violations allegedly committed by India, and so we will consider in detail Australia's claims.

In the request for the establishment of a panel submitted by Australia, it was noted that India provided domestic support in favor of producers of sugarcane and sugar through a series of measures that included: a system of administered mandatory minimum prices for sugarcane and sugar which operate at the federal level through the 'Fair and Remunerative Price' (FRP) and 'Minimum Selling Price' (MSP) of sugar, and, in the case of certain Indian states, at the state level through the 'State Advised Price' (SAP), as well as through measures maintained at the federal and state levels for sugarcane and sugar which include production-based subsidies, soft loans, subsidies to maintain stocks of sugar, and tax rebates or exemptions. India also maintained export subsidies for sugarcane and sugar, which took the form of subsidies contingent on export through 'Minimum Indicative Export Quotas' (MIEQ) or other sugar export incentives.

Australia considered that India's domestic support was inconsistent with India's obligations under the Agreement on Agriculture, because it exceeded the de minimis level of 10 percent of the value of production. India's export subsidies were inconsistent with the Agreement on Agriculture and were prohibited under the SCM Agreement. India failed to notify any of its annual domestic support for sugarcane and sugar subsequent to 1995-1996, had not submitted an export subsidy notification since 2009-2010, and thereby acted inconsistently with its obligations under the aforesaid Agreements and the GATT 1994.

For Russia, the participation in disputes concerning subsidies is very important, among other things, from the point of view of domestic support measures in compliance with WTO norms and rules.

DS583: Turkey – Certain measures concerning the production, importation and marketing of pharmaceutical products (EU)

On April 2, 2019, the EU filed with the DSB a request for consultations with Turkey regarding various measures concerning the production, importation and marketing of pharmaceutical products. The measures identified by the EU include the following alleged acts: a localization requirement, a technology transfer requirement, an import ban on localized products, and a prioritization measure. The EU claimed that:

[1] URL: https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds579_e.htm.
[2] URL: https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds580_e.htm.
[3] URL: https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds581_e.htm.

1) The localization requirement and the prioritization measure appeared to be inconsistent with Article III:4 of the GATT 1994 ('National Treatment on Internal Taxation and Regulation');

2) The localization requirement, the technology transfer requirement, and the prioritization measure appear to be inconsistent with Articles X:1 and X:3(a) of the GATT 1994 ('Publication and Administration of Trade Regulations);

3) All four categories of challenged measures appear to be inconsistent with Article X:2 of the GATT 1994 ('Publication and Administration of Trade Regulations');

4) The import ban on localized products appears to be inconsistent with Article XI:1 of the GATT 1994 ('General Elimination of Quantitative Restrictions');

5) The localization requirement appears to be inconsistent with Article 2.1 ('National Treatment and Quantitative Restrictions') of the TRIMS Agreement and Article 3.1 (b) ('Prohibition') of the SCM Agreement;

6) The technology transfer requirement appears to be inconsistent with Article 3.1 ('National Treatment'), Article 27.1 ('Patentable Subject Matter'), Article 28.2 ('Rights Conferred'), Article 39.1 и 39.2 ('Protection of Undisclosed Information') of the TRIPS Agreement.

In early August 2019, the EU filed with the DSB a request for the establishment of a panel, which was established in late September. Brazil, Canada, China, India, Indonesia, Japan, Russia, Switzerland, Ukraine and the USA reserved their third-party rights.

Russia's interest in this dispute has probably been motivated both by the importance of the pharmaceuticals market and the need to gain practical experience of participating in disputes concerning localization requirements, which are also applied in Russia's other sectors (for example, in the automotive industry).

Annex

Table A-1

Trade disputes brought to the WTO that Russia has been a party to (complainant or respondent)

Dispute	Claim	Current stage (as of year end 2019)
1	2	3
As complainant		
DS474: EU – Cost Adjustment Methodologies and Certain Anti-Dumping Measures on Imports from Russia (23.12.2013[1])	The EU used 'cost adjustment' methodologies in its anti-dumping investigations and reviews for calculating dumping margins, and while doing so, rejected the cost and price information of Russian producers and exporters. The EU investigated the terms for anti-dumping measures without considering the effect of such rejection of cost and price data on the determination of dumping margins and injury caused by dumped imports.	Appointment of panel experts (22.07.2014)
DS476: EU – Certain Measures Relating to the Energy Sector (30.04.2014)	EU Third Energy Package: producers of natural gas are not allowed to own trunk lines situated in EU territory. The operators controlled by foreign persons must undergo special certification procedure.	Examination by Appellate Body (AB) (21.09.2018)
DS493: Ukraine – Anti-Dumping Measures on Ammonium Nitrate (07.05.2015)	While conducting anti-dumping investigations on imports of ammonium nitrate originating in Russia, Ukraine rejected the information of producers on electric energy prices in Russia, using instead price information from third countries (energy cost adjustments).	Russia's request that the reasonable period of time be determined through binding arbitration (21.11.2019)

[1] The date in brackets is the date on which the Request for Consultations was received.

Cont'd

1	2	3
DS494: EU – Cost Adjustment Methodologies and Certain Anti-dumping Measures on Imports from Russia (07.05.2015)	While conducting anti-dumping investigations on imports of certain welded and seamless tubes and pipes and ammonium nitrate originating in Russia for calculation of dumping margins, the EU rejects the cost and price information of producers and exporters, using instead price information from third countries (energy cost adjustments).	Panel examination (17.12.2018)
DS521: EU – Anti-Dumping Measures on Certain Cold-Rolled Flat Steel Products from Russia (27.01.2017)	While conducting anti-dumping investigations, the EU rejects the cost and price information of Russian producers, relying instead on unsubstantiated data and incorrect calculations.	Appointment of panel experts (26.04.2019)
DS525: Ukraine – Measures Relating to Trade in Goods and Services (19.05.2017)	Comprehensive complaint against Ukraine's restrictive measures in respect of trade in goods and services originating in Russia.	Consultations (19.05.2017)
DS554: USA – Certain Measures on Steel and Aluminum Products (29.06.2018)	Russia claims that the USA introduced these measures in spring 2018 in violation of provisions of the GATT 1994 and the Agreement on Safeguards. In particular, the USA acted contrary to the WTO's MFN principle by granting to some countries certain advantages and treatments that were denied other countries, introduced restrictions on imports other than duties, taxes or other charges made effective through quotas, failed to properly substantiate its emergency action on imports of particular products, failed to give notice in writing to the parties to the dispute that have a vested interest as exporters of relevant products, and failed to comply with the existing consultation obligations.	Panel examination (25.01.2019)
DS586: Russia – Anti-Dumping Measures on Carbon-Quality Steel from *Russia* (USA)	Russia claimed that the USA failed to determine an individual dumping margin for each known exporter or producer concerned of the product under investigation, failed to calculate the costs of its production, failed to properly review the need for continued imposition of the anti-dumping duties and to terminate the duties that were not necessary to offset dumping, extended the measures at issue relying on flawed dumping margins and on erroneous likelihood of recurrence or continuation of dumping determinations, and refused to rely on information provided by Russian exporters, whereas the conditions to resort to facts available were not met, and so the US measures were inconsistent with the Anti-Dumping Agreement of the WTO.	Consultations (05.07.2019)
As respondent		
DS462: Russia – Recycling Fee on Motor Vehicles (EU, 09.07.2013)	Russia imposed a charge ('recycling fee') on imported motor vehicles, while exempting domestic vehicles from that payment, under certain conditions. The 'recycling fee' steeply increases for certain categories of vehicles (new or second-hand ones).	Appointment of panel experts (25.11.2013)
DS463: Russia – Recycling Fee on Motor Vehicles (Japan, 24.07.2013)	Russia imposed additional charge ('recycling fee') on imported motor vehicles, while in actual practice exempting domestic vehicles from that payment, under certain conditions.	Consultations (24.07.2013)
DS475: Russia –f Live Pigs, Pork and Other Pig Products from the EU (EU, 08.04.2014)	The ban on imports of live pigs, pork and other pig products from the EU is a disproportional measure, introduced following several cases of ASF[1] in wild boar near the border with Belarus, which were promptly controlled. The EU disputes the way Russia treats the regionalization measures against the spread of ASF.	Request for measures, arbitration (03.01.2018). Control of the respondent's compliance with the DSB's recommendations (21.11.2018)
DS479: Russia – Anti-Dumping Duties on Light Commercial Vehicles from Germany and Italy (EU, 21.05.2014)	While conducting anti-dumping investigations on imports and calculating dumping margins on light commercial vehicles, Russia failed to comply with the WTO rules for the determination of the existence of dumping and injury determination, incorrectly defined the domestic industry, and failed to provide all relevant information and explanations.	Respondent complied with the DSB's recommendations (to bring measures in conformity) (20.06.2018)
DS485: Russia – Tariff Treatment of Certain Agricultural and Manufacturing Products - (EU, 31.10.2014)	For paper and paperboard, Russia applied ad valorem duty rates of 15 or 10 percent, thus exceeding the ad valorem bound rate of 5 percent. For certain other goods, in cases where the customs value is below a certain level, duties were levied in excess of the bound rates.	Respondent complied with the DSB's recommendations (08.06.2017)

[1] ASF is African swine fever.

Cont'd

1	2	3
DS499: Russia – Measures Affecting the Importation of Railway Equipment and Parts Thereof (Ukraine, 21.10.2015)	Russia suspended the conformity assessment certificates issued to producers of railway rolling stock, railroad switches, other railroad equipment, and parts thereof prior to entry into force of the new Technical Regulations, and rejected new applications for certificates pursuant to the new procedures.	Examination by the Appellate Body (27.08.2018)
DS512: Russia – Measures Concerning Traffic in Transit (Ukraine, 14.09.2016)	Russia adopted restrictions on international automobile and railway traffic in transit of Ukrainian exports to the Republic of Kazakhstan and the Kyrgyz Republic: the international road and railway transit of goods from Ukraine through the territory of Russia can be carried out only from the territory of the Republic of Belarus, on certain specific conditions. Additional measures include ban of transit of goods affected by the tariffs rates higher than zero, and ban of transit of goods which are under embargo.	Reports have been received, no further action is required (26.04.2019)
DS532: Russia – Measures Concerning the Importation and Transit of Certain Ukrainian Products (Ukraine, 13.10.2017)	Russia introduced measures affecting traffic in transit of Ukrainian juice products, beer, beer-based beverages and other alcoholic beverages, confectionery products, wallpaper and similar wall coverings to third countries. Exports of these products from Ukraine to Russia were significantly restricted, and some products were banned.	Consultations (13.10.2017)
DS566: Russia – Additional Duties on Certain Products from the United States (USA, 27.08.2017)	The USA claimed that these measures were inconsistent with Articles I:1 (General Most-Favored-Nation Treatment), II:1(a), and II:1(b) (Schedules of Concessions) of the GATT 1994, because Russia failed to extend to products of the USA the treatment granted by Russia with respect to customs duties and charges of any kind imposed on or in connection with the importation of products originating in the territory of other WTO members, and accorded less favorable treatment to products originating in the USA than that provided for in Russia's schedule of concessions. In accordance with RF Government Decree No. 788 dated July 6, 2018, from August 2018 Russia raised the rates of import customs duties on forklift trucks and other trucks equipped with lifting or loading-unloading devices, graders, tamping machines, tools for cutting optical fiber, etc. The new rates amount to 25, 30 and 40 percent of customs value, depending on product type.	Panel examination (25.01.2019)

Source: Own compilation based on data published on the WTO's official website. URL: https://www.wto.org/english/tratop_e/dispu_e/dispu_by_country_e.htm.

Table A-2

WTO disputes where Russia has been a third party

Theme	Disputes
1. Ban or restrictions on imports (environmental protection or other reasons).	DS400, DS401, DS469, DS484, DS495, DS524, DS531, DS537, DS576
2. Safeguard investigation and measures (antidumping or countervailing measures and safeguards).	DS414, DS437, DS449, DS454, 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
3. Restrictions on exports.	DS431, DS432, DS433, DS508, DS509, DS541
4. Intellectual property rights.	DS441, DS458, DS467, DS542, DS567
5. Subsidies (including those related to tax exemptions and other preferential treatments).	DS456, DS472, DS487, DS497, DS489, DS502, DS510, DS511, DS522, DS579, DS580, DS581, DS583
6. Tariffs and tariff-rate quotas.	DS492, DS517, DS543, DS557, DS558, DS559, DS560, DS561, DS585
7. Economic sanctions.	DS526

Source: data derived from: *Baeva M. A.* Russian participation in the WTO trade disputes and dispute settlement // Russian Foreign Economic Journal. 2015. No 3. P. 75–90.

Section 5. Social sphere

5.1. Incomes of the population and assessment of financial situation[1]

5.1.1. Dynamics of incomes of population and their components

In 2019, the real disposable cash income increased by 0.8 percent relative to the same period of the previous year, the real gross payroll went up by 2.9 percent, and the actual amount of allocated pensions moved up by 1.5 percent (*Fig. 1*).

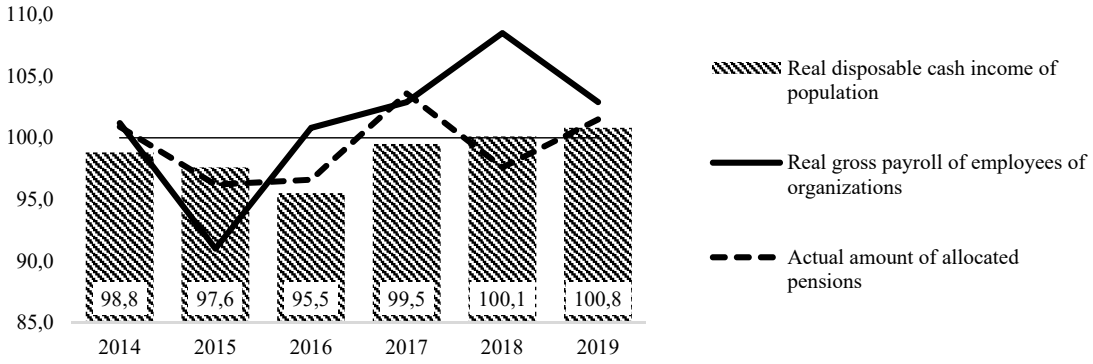


Fig. 1. Dynamics of the real disposable cash income of the population, real gross payroll and salaries and the actual amount of allocated pensions in 2014–2019, in % year-on-year

Source: Rosstat.

Despite a small growth of the real disposable cash income of the population seen in 2018–2019, so far there has been no recovery to the cash income of the population seen in 2013 in the wake of their decrease seen in 2014-2016. The real disposable cash income in 2019 came

[1] The sections 5.1–5.6 were written by *Burdyak A.Ya.*, senior researcher, INSAP, RANEPA; *Grishina E.E.*, Candidate of science (Economics), leading researcher, Head of Center "Quality of life and social safety net", INSAP, RANEPA; *Eliseeva M.A.*, researcher, INSAP, RANEPA; *Lyashok V.Yu.*, Candidate of science (Economics), senior researcher, Head of Center "Labor market and labor relations", INSAP, RANEPA; *Maleva T.M.*, Candidate of science (Economics), Director of INSAP, RANEPA; *Mkrtchyan N.V.*, Candidate of science (Geography), leading researcher, INSAP, RANEPA; *Florinskaya Yu.F.*, Candidate of science (Geography) leading researcher, INSAP, RANEPA; *Khasanova R.R.*, Candidate of science (Economics), senior researcher, INSAP, RANEPA.

to barely 92.5 percent of the 2013 level. Also there was no recovery growth of the average amount of allocated pensions: in 2019 they came to 96.2 percent in real terms of the 2013 level. For comparison, the real wage recovered relative to the 2013 level even in 2018, and in 2019 it amounted to 106.6 percent against the 2013 level.

The total amount of cash income of the population increased in real terms in 2019 by 1.5 percent to the 2018 level. At the same time, compensation of employees went up in real terms by 2.7 percent, welfare payments – by 1.0 percent, income from entrepreneurial activity – by 1.5 percent (*Fig. 2*). At the same time, returns to property and the amount of other cash returns contracted in real terms in 2019 relative to 2018 by 2.9 percent and 1.7 percent, respectively.

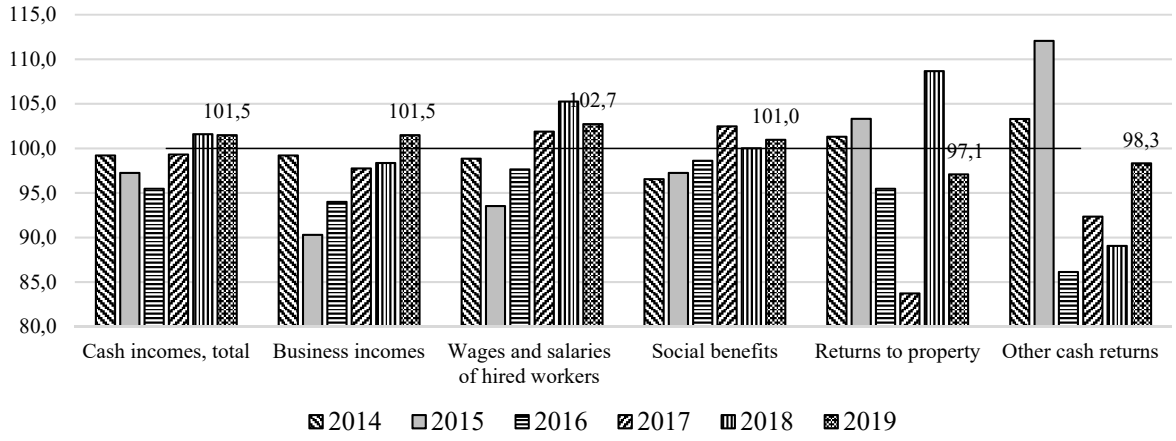


Fig. 2. Dynamics of the total real cash incomes of the population and its components in real terms in 2014-2019, in % year-on-year

Source: own calculations based on Rosstat data

Compensation of employees beside organizations in 2019 decreased by 0.2 percent in real terms relative to 2018, and the wages of employees of organizations in real terms on the contrary went up by 4.1 percent (*Fig. 3*).

Fig. 3. Dynamics of compensation of employees in 2019, in % year-on-year

Source: Rosstat.

This being said, the data released by the Treasury of Russia[1] demonstrate that the growth of PIT in 2019 in real terms relative to 2018 came to 3.6 percent, which is more than the growth of the total volume of income in real terms. This fact can affirm that the growth of the wages of employees of organizations was due to a transfer from the informal part of the payroll fund to the formal one.

The proportion of cash income of the population diverted for purchases of goods and services in 2019 relative to the previous year went up slightly from 80.7 to 81.2 percent (*Fig. 4*).

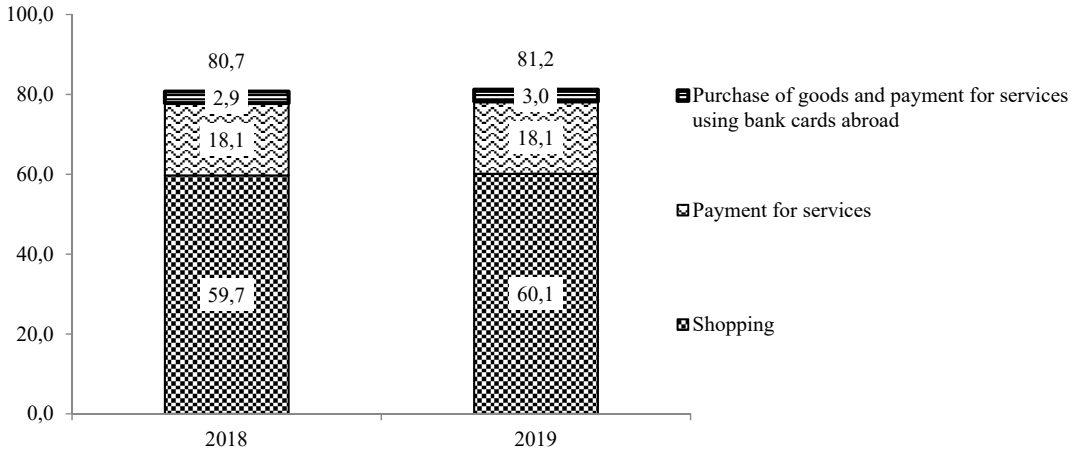


Fig. 4. Proportion of cash income of the population diverted for purchases of goods and services in 2018–2019, %

Source: Rosstat.

2019 saw a reduction of savings increment of the population from 4.2 percent seen in 2018 to 3.4 percent in 2019. At the same time, savings increment in deposits and securities went up and came to 4.3 percent (to compare: in 2018 – 3.1 percent) cash in hand decreased from 2.5 percent seen in 2018 to 0.5 percent in 2019.

5.1.2. Dynamics of subjective and monetary poverty

In 2019 the number of subjectively poor population who perceive their financial situation as "bad" or "very bad" improved insignificantly relative to the previous year and hit 25.8 percent (*Fig. 5*). Having said that the share of individuals who positively asses their financial situation has come to 9.7 percent, which is above the level seen in 2018. Thus, 2019 has demonstrated small differentiation of the population according to subjective perception of their wellbeing.

Data on absolute monetary poverty rate as a whole for 2019 so far are unavailable. However, in January-September 2019, the proportion of the population with cash earnings below the subsistence rates lightly increased relative to the same period of the previous year – 13.1 percent against 13.0 percent (*Fig. 6*). To note, in 2016–2018 the same reduction of the poverty rate occurred in January-September relative the same period of the previous years.

[1] Consolidated budget of the Russian Federation and the budgets of state extra budgetary funds /Treasury of Russia. URL: https://roskazna.ru/ispolnenie-byudzhetov/konsolidirovannyj-byudzhet/191/

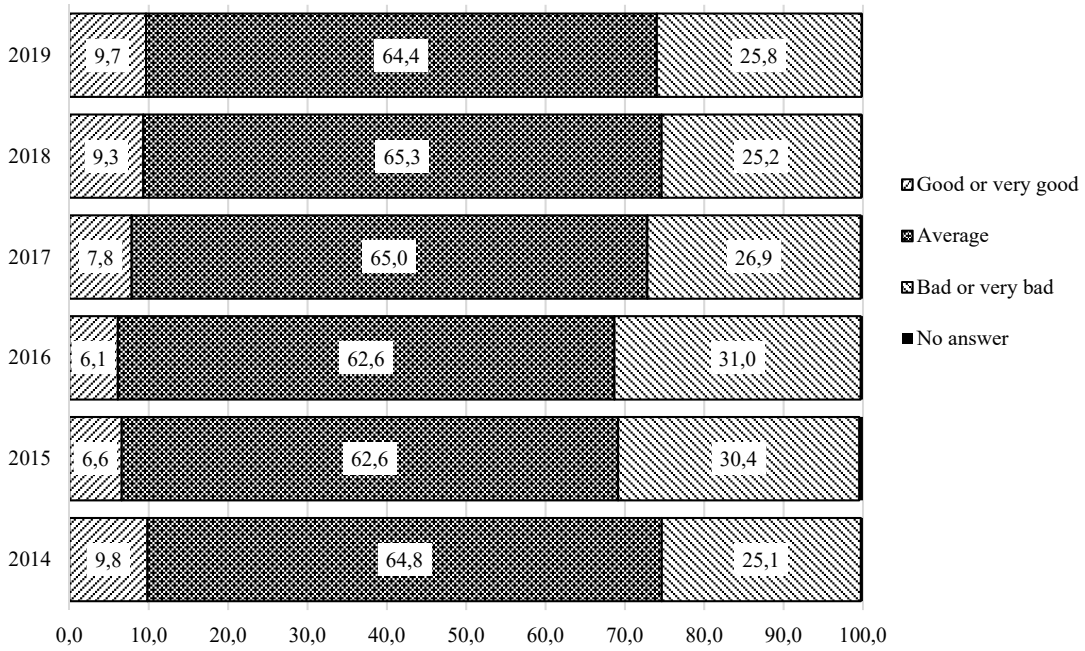


Fig. 5. Perception of the population of the current financial situation in 2014–2019, %

Source: Rosstat.

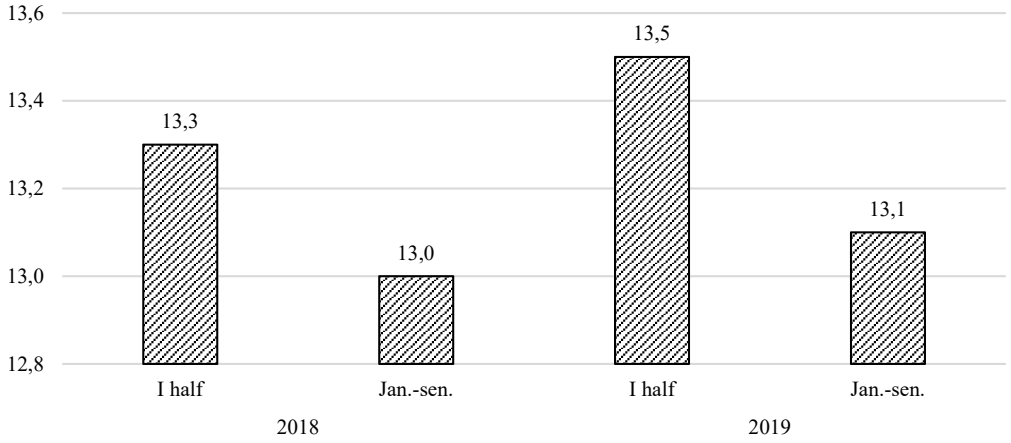


Fig. 6. Proportion of the population with cash incomes below the subsistence rate, %

Source: Rosstat.

In 2019, per capita cash incomes of the population practically stayed flat relative the subsistence rate for entire population as a whole, meanwhile the average monthly wages of employees of organizations increased relative to the subsistence minimum for the able-bodied population from 393 to 402 percent (*Fig. 7*). Per capita cash incomes have contracted by 28 percent of the subsistence minimum relative to 2013, and average amount of allocated pensions down 8 percent.

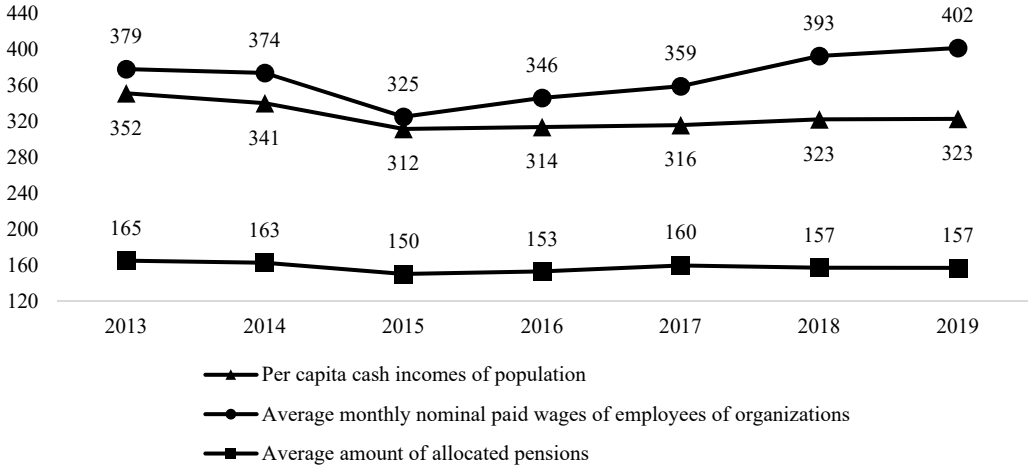


Fig. 7. Correlation of cash incomes of the population, wages and pensions with the subsistence minimum in 2013–2019, %

Source: Rosstat.

5.1.3. Dynamics of the income inequality

Dynamics of R/P 10% and Jinni Coefficient demonstrate that the level of income inequality of the population in 2019 did not change against the 2018 level (*Fig. 8*). On the whole, the level of income inequality has stayed above the 2015–2017 level, however it was below the 2013–2014 level.

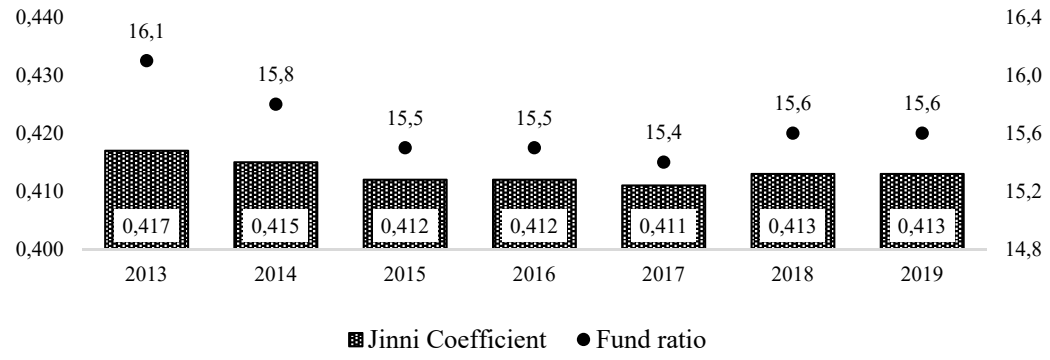


Fig. 8. Jinni Coefficient and R/P 10% in January-September 2018–2019

Source: Rosstat.

5.1.4. Risk factors of decrease of incomes and increase of the poverty rate in 2020

The coronavirus pandemic and reduction of crude oil prices seen in 2020 can create risk for a decrease of incomes and increase of the poverty rate.

For example, amid the putting in place restrictions on attendance of institutions of supplementary education, culture and entertainment, physical fitness and sports within the measures to fight coronavirus pandemic, as well as decrease of visits of catering facilities and

putting in place restrictions on tourism and air travel abroad, incomes of certain employees of mentioned institutions can fall because part of the workers can be sent in administrative holidays, and part–on sick leave. This being said, the share of workers who may face risks of reduction of earned income and profundity of income reduction will depend on the length of the restrictions period.

However, even after the coronavirus pandemic the Russian economy can face significant difficulties amid the decline of the oil prices and reduction of economic growth rates in all countries. This can lead to a contraction of income and bankruptcy of certain organizations and increase risks of income decline and increase of the poverty rate.

5.2. Loans and retail bank deposits

The amount of retail bank deposits during 2019 according to the Bank of Russia data increased by RUB 2.1 trillion (+7.3 percent) and as of January 1, 2020 amounted to RUB 30.7 trillion (*Fig. 9*), deposits denominated in foreign currency and precious metals calculated in rubles amounted to RUB 6.1 trillion. The ruble equivalent of retail currency deposits over the year has contracted by 2 percent (as of January 1, 2019 it stood at RUB 6.2 trillion), whereupon the exchange rate of foreign currencies has decreased over the same period more significantly – USD down 10.9 percent and euro – down 12.7 percent[1]. The share of retail currency deposits hit maximum for the last ten years in 2015 (29.7 percent of all retail deposits), then it fell to 21–22 percent in 2017–2018, and at the year-end results of 2019 amounted to 19.9 percent of the total volume of retail deposits.

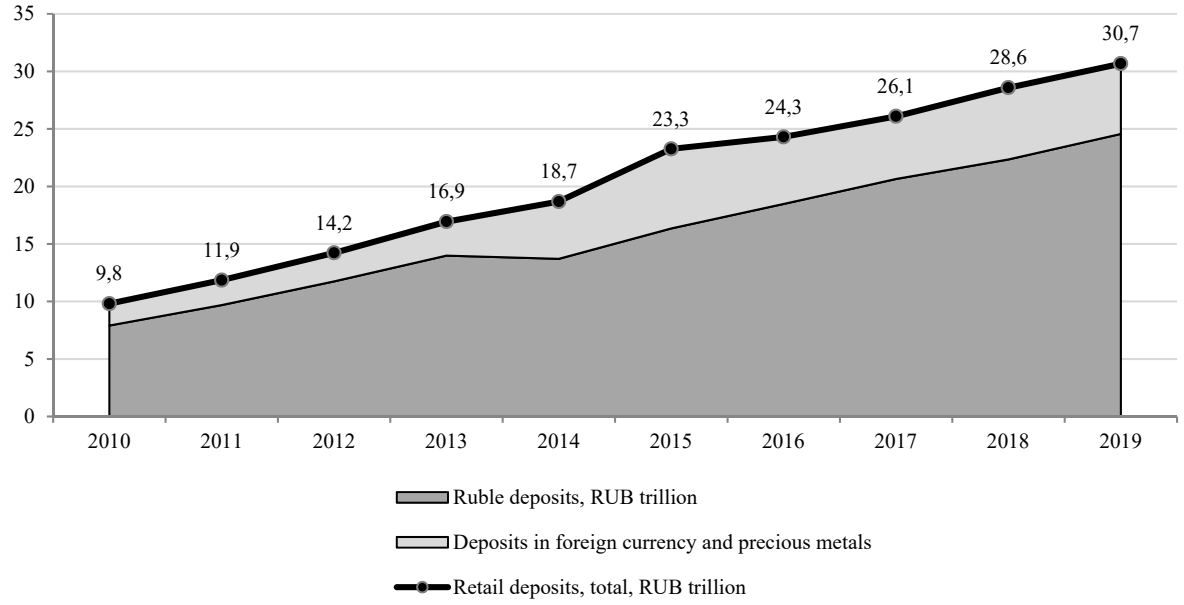
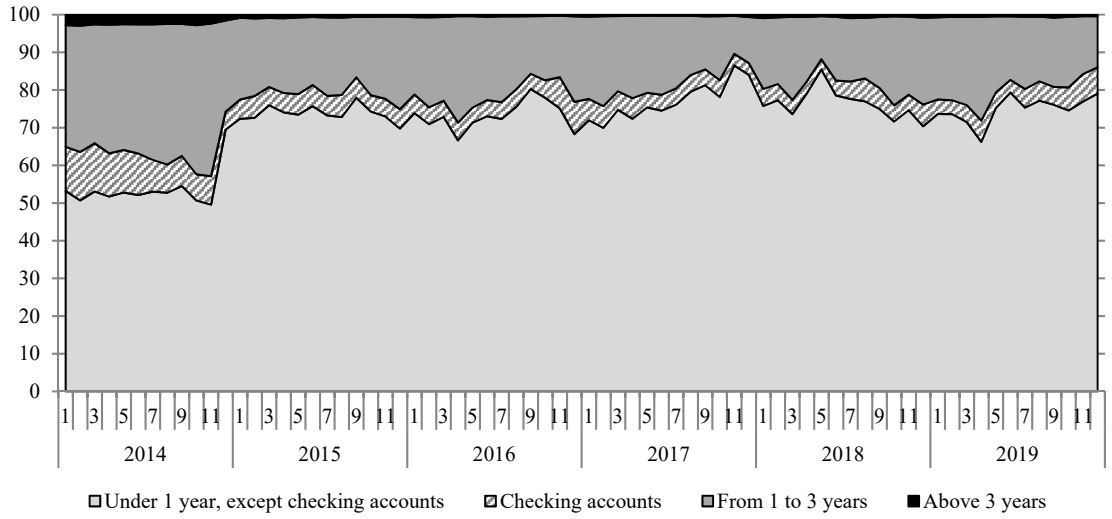


Fig. 9. Amount of retail bank deposits in rubles and foreign currency

Source: Bank of Russia data.

[1] As of January 1, 2019 Bank of Russia set the exchange rate of foreign currencies at: RUB 69.4706/USD and RUB 79.4605/EUR. As of January 1, 2020 the rate amounted to RUB 61.9057/USD and RUB 69,3777/EUR, falling by 10,9 percent and 12.7 percent, respectively.

On the whole, population opens bank fixed-term deposits for under 1 year, and up to 70–80 percent of ruble deposits are open for this fixed-term (*Fig. 10*). In 2014, fixed-term deposits for under 1 year constituted roughly half of retail ruble deposits, around 35 percent of deposits were opened for a fixed-term from one to three years, however in 2015 the term of deposits contracted and the structure has taken the current shape.



Note. Share of deposits on each term attracted in reported month, in total amount of attracted retail deposits in reported month.

Fig. 10. Structure of retail ruble deposits by terms, %

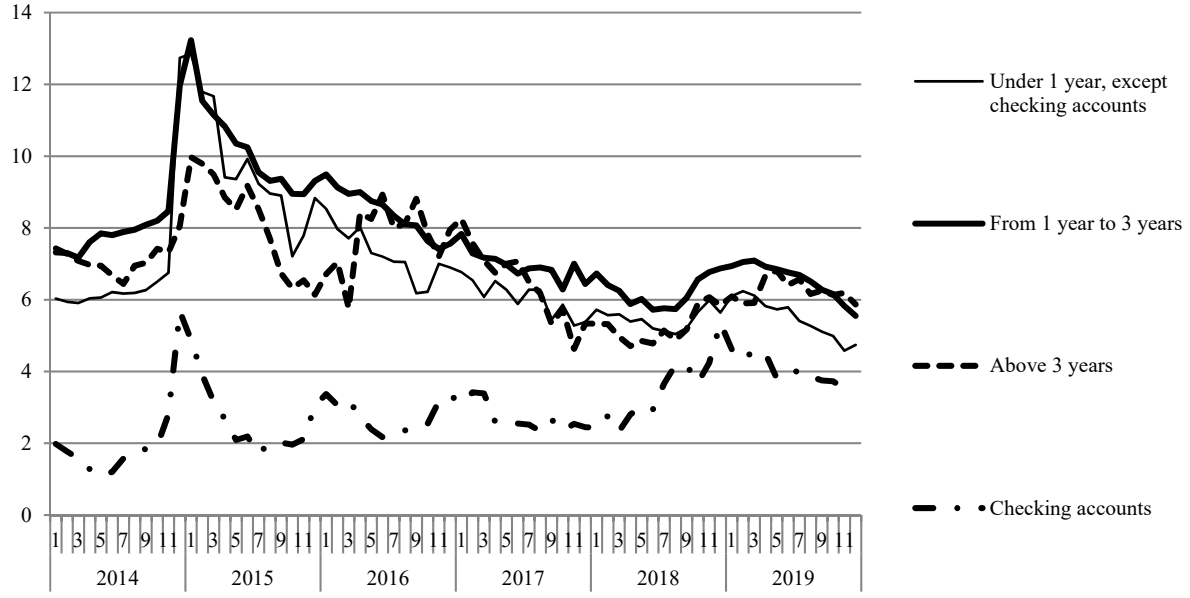
Source: Bank of Russia data.

First of all, this was driven by increased uncertainty and change of the banks' policy: from mid-2014 rates on long-term deposits were cut and they became less attractive for investors (*Fig. 11*). In H2 2016-H1 2017 performance of holdings for 3-year term was comparable with deposits for a fixed-term from 1 to 3 years, but in 2018 rates on "long-term" deposits again became below than on deposits for a shorter term. Over December 2019, 86 percent of the total amount of attracted retail bank ruble deposits were for under 1 year fixed-term, which is close to a record indicator of 89.6 percent of deposits opened for a fixed-term of under 1 year (including checking accounts) recorded in November 2017.

Annual amount of cash income of the population over 2019 in nominal terms went up by 6.0 percent relative to the previous year (calculated on the new Rosstat methodology), the retail bank savings moved up by 7.3 percent (comparison on January 1). As in 2018, savings growth exceeded income growth of the population and at the period-end results for 2019, the volume of bank deposits totaled 49.5 percent of the annual amount of cash incomes (a year earlier – 48.9 percent). Thus, funds of individuals deposited in banks in late 2019 were equal half of the annual income of the Russian population.

Credit exposure of the population before banks has also significantly exceeded the income growth of the population. Household debt on loans as of January 1, 2020 hit record value of RUB 17.56 trillion. During 2019, it rose by RUB 2.7 trillion or by 18.5 percent (increment

during 2018 amounted to 22.4 percent) [1]. In the total amount of all loans provided to the population 4.2 percent[2] account for past-due debt, which is significantly less than it was recorded in 2018 (5.1 percent); in nominal terms the volume of past-due debt compared to the 2018 situation has also decreased. Mortgages amounted to 42.7 percent of the credit portfolio of all loans originated for the population (as of January 1, 2020). The share of past-due debt on mortgages comes to 0.97 percent.



Note. Weighted average interest rates in annual terms are calculated on the back of annual interest rates set in deposit contracts and volumes of attracted in reporting period deposits. Dynamics of the indicator is determined both by the level of interest rates and by the volume of attracted funds.

Fig. 11. Weighted average rates on retail ruble bank deposits by term, % annual

Source: Bank of Russia data.

In contrast with 2018, when mortgage and unsecured consumer lending were growing practically at the same pace (23.1 percent and 22.7 percent, respectively), in 2019 mortgage loans went up by 17.1 percent and growth of unsecured consumer loans constituted 20.8 percent. Consequently, unsecured consumer loans were outstripping all other types of consumer lending in 2019. Auto lending legging behind the general trend in 2018 (up by 14.5 percent), in 2019 caught up with dynamics of other retail loans and moved up by 17.0 percent.

The structure of the retail credit portfolio in presented on *Fig. 12.* Loans for one-year term constituted 78 percent in January 2014, 80 percent – in January 2016, and at December-end 2019 hit 89 percent of all loans originated to the population in rubles. The amount of auto loans during the period under review was in the range of 7–9 percent. As a year before, loans for a sort-term (for one year) account for around 3 percent of the credit portfolio.

[1] In the development of the banking sector of the Russian Federation in January 2020. URL: http://www.cbr.ru/Collection/Collection/File/27385/razv_bs_20_01.pdf

[2] Calculated on data released by the Bank of Russia of January 1, 2020. Information on credits originated to individuals-residents. URL: http://old.cbr.ru/statistics/pdko/sors/

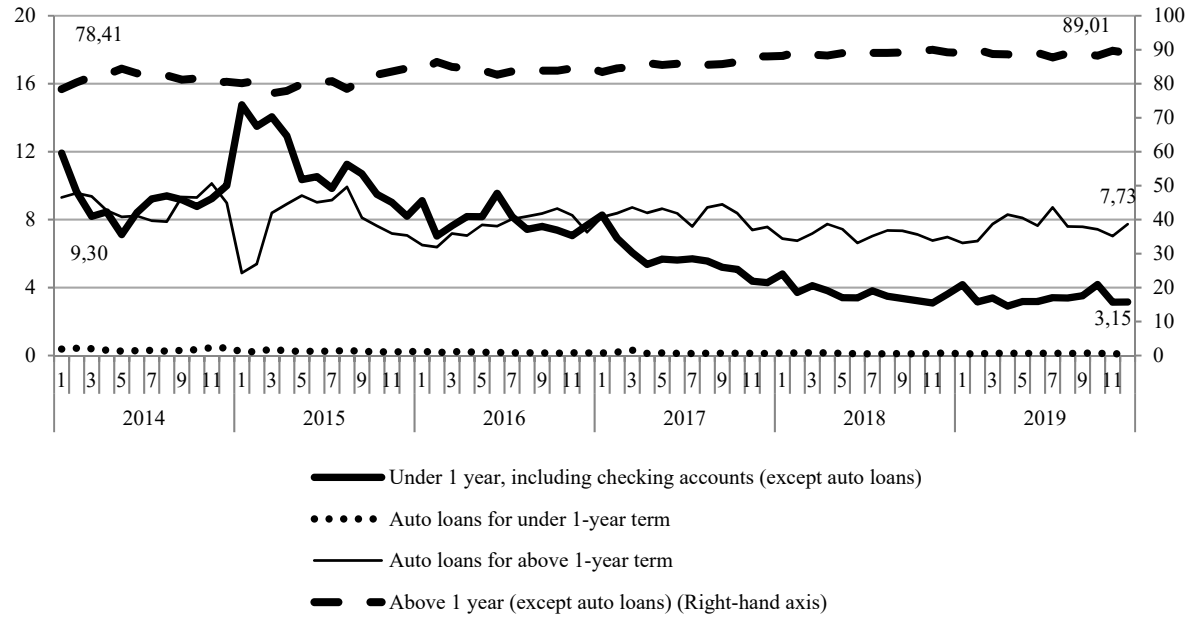


Fig. 12. Turnover structure of ruble loans originated by credit institutions to individuals, by maturity term, %

Source: Bank of Russia data.

This effect has been partly achieved by measured taken by the Bank of Russia which regulates the activity of microfinance organizations and origination to the population of exceptionally expensive "payday" credits as well as increased attention to the issue of household debt load. Banks were proactively combating bad loan debts during Q2 and Q3 which on the whole improved the quality of the credit portfolio. Besides, from October 1, 2019, increased additional changes to risk coefficients on the unsecured consumer loans with high index of debt burden came into force when the ration of payments on all credits to income exceeds 50 percent.

Dynamic of interest rates on credits represents an important feature of recent years. Interest rates were decreasing both on short-term consumer credits and on loans for a term above one year from mid-2015 through 2018 (*Fig. 13*). Prior to 2017 auto credits were more attractive from the point of view of the interest rates against loans for a term above one year, however in 2018–2019 we do not observe the same advantage in weighted average interest rates. In H2 2019, interest rates on consumer loans were gradually falling on the back of a reduction of the key rate of the Bank of Russia.

Reduction of interest rates on credits was one of the key factors of lending growth seen in 2018 when the credits were accessible to wider groups of population on the back of a decrease of credits service cost and amount of amount of monthly contribution. A number of borrowers in previous years refinanced their debts on a more favorable conditions. In H1 2019, mortgage rates slightly increased to 9.9–10.6 percent, but remained below those seen in 2017 and refinancing continued affecting the statistics of origination of new credits. The share of refinancing decreased from 11.5 percent reported in 2018 to 6.9 percent in 2019.

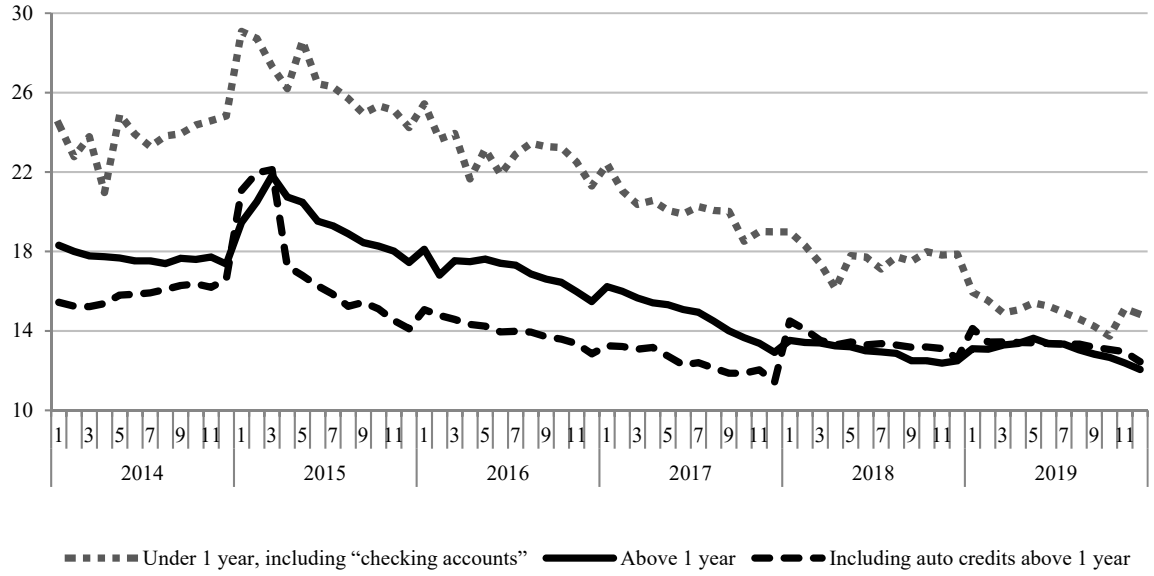


Fig. 13. Weighted average interest rates on ruble retail credits originated by credit institutions, %

Source: Bank of Russia data.

In 2019, 1.3 million mortgage loans totaling to RUB 2.85 trillion were originated. This was down by 13.8 percent than in the previous year in the quantitative terms and by 5.5 percent in monetary terms. Origination of new mortgage loans has practically remained on the level of the previous year amounting to 1.2 million loans to the tune of RUB 2.65 trillion (in 2018– 1.3 million credits to the tune of 2.67 trillion).

Mortgage lending remains the best segment of retail lending in qualitative terms: the debt on mortgage loans with 90 and more days past due constitutes 1.4 percent (on other retail loans – 7 percent).

The share of loans for new construction in 2019 went up from 28.9 to 32.4 percent and on the backs of mortgage loans 17.6 million sq. m of apartment blocks have been constructed. In 2019, the structure of mortgage portfolio practically did not change compared to the previous year: 72 percent are loans for new construction after commissioning, 18 percent are loans against security of co-investment contracts, 7 percent are loans against mortgage-backed securities, and 3 percent are acquired rights.

In 2019, mortgage interest rates averaged 9.9 percent, the targeted value of national project "Housing and urban environment" comes to 8.9 percent. Supply mortgage rates hit 9.0 percent in late 2019 which was the minimum for the entire period of the mortgage market. Growing popularity of the "family mortgage" program significantly contributed to the reduction of rates which amount to 5 percent and below originated by major banks. Without this program, mortgage rates on new construction in December 2019 hit 8.9–9.0 percent (December 2018 – 9.5 percent), rate on mortgage loans on the secondary market decreased to 9.3 percent (December 2018 – 9.7 percent. In Q4 2019, mortgage loans on "family mortgage" program constituted around 20 percent of the overall number of mortgages on new construction.

5.3. Retail sales and consumer prices

The retail turnover in the Russian Federation in December 2019 hit RUB 3.47 trillion[1] and increased at comparable prices by 1.9 percent year-on year. The indicator peaked in November (2.3 percent) similar to 2018. Nevertheless, in December compared to November, increased growth rates of retail sales of food products, beverages and tobacco products (1.8 percent against 1.6 percent), meanwhile sales growth of non-food products, on the contrary, slowed down (2.1 percent against 3 percent) (*Fig. 14*). For comparison, in December 2018, the retail sales growth was faster – year-on-year amounting to 2.7 percent including 2 percent accounted for food sales and 3.4 percent for non-food products.

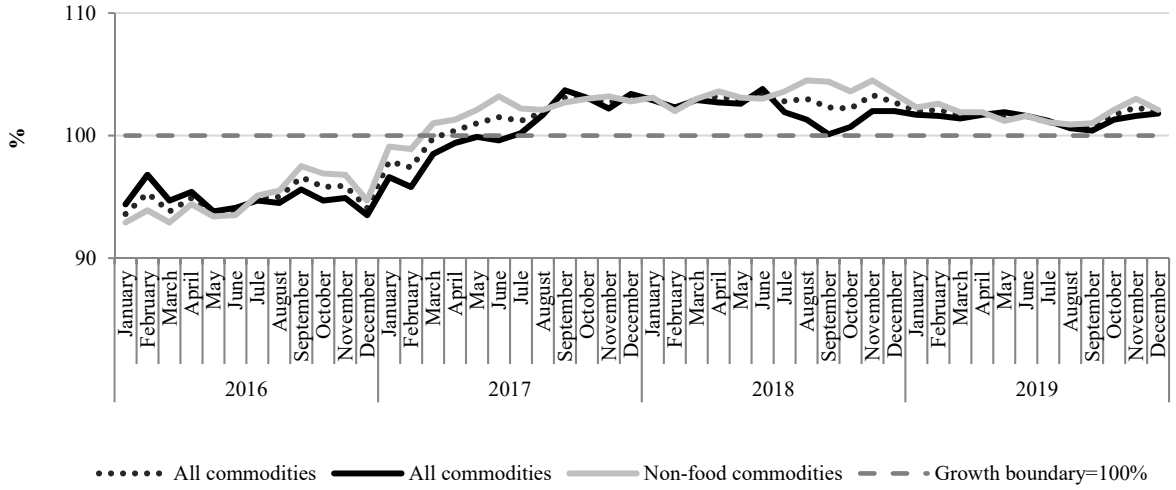


Fig. 14. Monthly dynamics of retail turnover and its components at comparable prices, in % month-on-month

Source: Rosstat.

Over 2019 as a whole, retail sales turnover hit RUB 33.53 trillion. Compared to the same period of 2018, the increment constituted 1.6 percent as a whole (a year earlier it was 2.8 percent) in comparable prices, including sales of food products increased by 1.4 percent including beverages and tobacco products, and non-food products went up by 1.8 percent (in 2018 – up by 2.1 and 3.5 percent, respectively). Thus, increase of the retail sales turnover in 2019 has slowed down both as a whole and across each of its components. Despite a decline of retail sales turnover growth rates, its dynamics year-on-year in comparable prices remains positive both as a whole and separately regarding food products (including beverages and tobacco products) and non-food products.

The structure of retail sales turnover over time changes insignificantly over the entire period of observation (from 2013), in particular, the share of foodstuffs, beverages and tobacco products accounts for a shade under half of total turnover. In 2019, the share of foodstuffs hit

[1] Socio-economic situation of Russia in January-December of 2019 / Rosstat. URL: https://gks.ru/storage/mediabank/osn-12-2019.pdf

47.9 percent, in 2018, for comparison it came to 47.7 percent. In December 2019, the share of food products was the same as that seen in December 2018 – 48.1 percent.

In Q1, 2019, growth of consumer prices was observed, which was due to a reaction of producers to the VAT rate rise. Nevertheless, from March the price growth rate fell and from mid-year the consumer inflation was far below than seen during the same months of 2018 (*Fig. 15*).

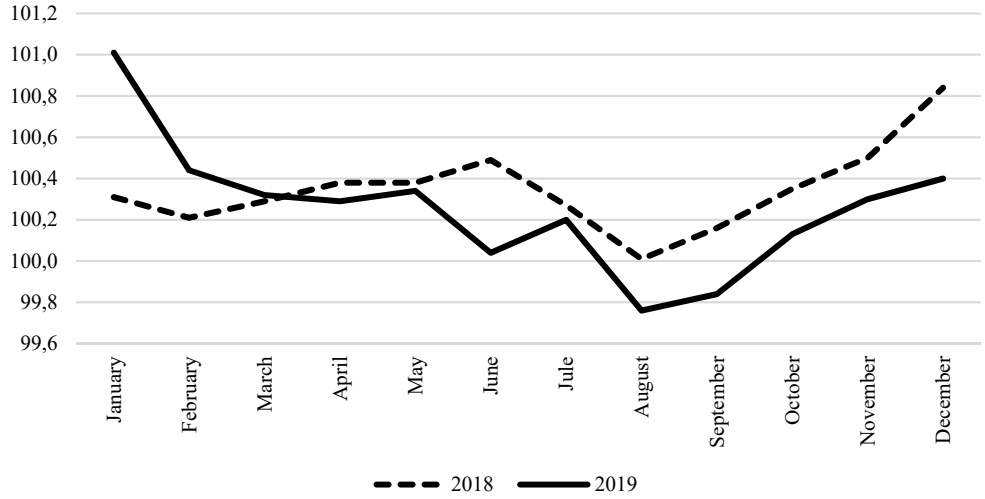


Fig. 15. Consumer price index (CPI), in % month-on month

Source: Rosstat.

Foodstuffs' prices were growing at faster rates solely in January, February and May 2019 than in 2018. Commencing from August, the CPI on foodstuffs in relation to the previous month was significantly less than in the previous year (difference 0.4-1.0 percentage points) (*Fig. 16*).

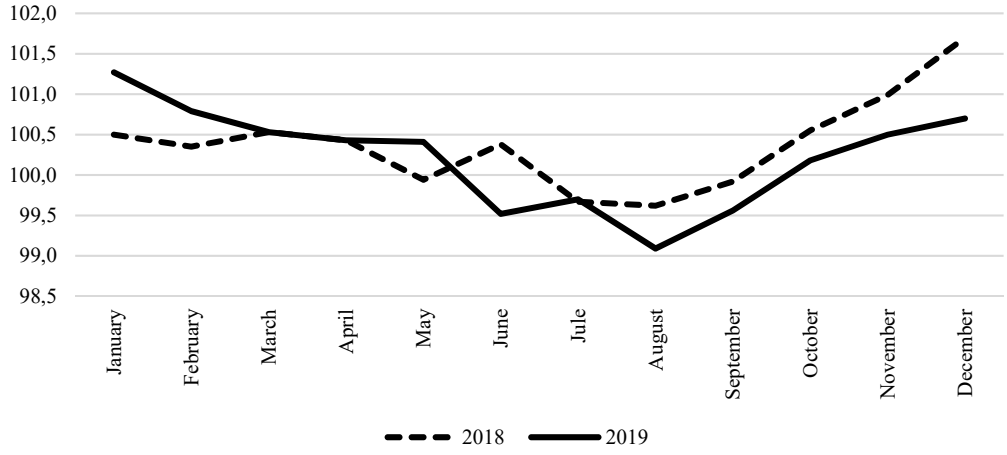


Fig. 16. Consumer price index on food products, in % month-on month

Source: Rosstat

As distinct from 2018 when April to June exhibited a significant price growth, in 2019, prices on non-food products month-on-month commencing from February demonstrated a rather flat dynamic (*Fig. 17*).

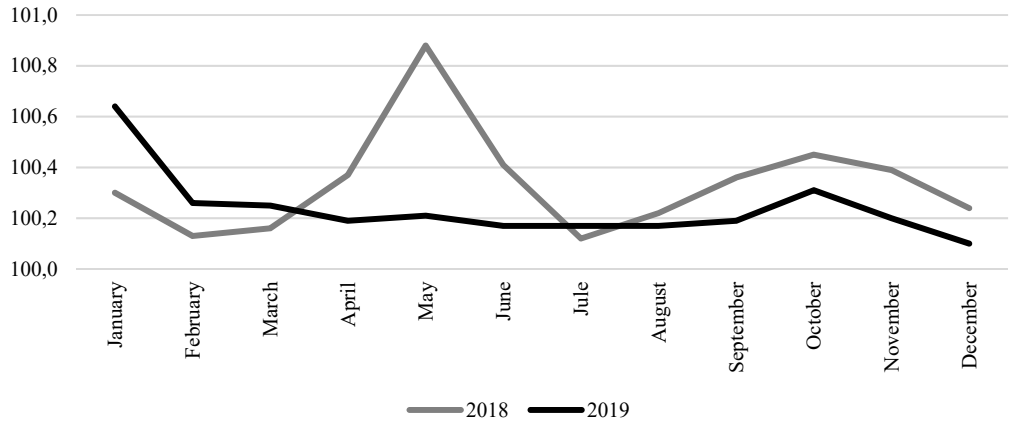


Fig. 17. Consumer price index on non-food products, in % month-on-month

Source: Rosstat.

In 2019, tariffs growth on housing and utility services occurred in two stages at the start of the year and in mid-year in summer. This was a key factor influencing the general price dynamic on services month-on-month. *Fig. 18* exhibits price hikes on services in January and July.

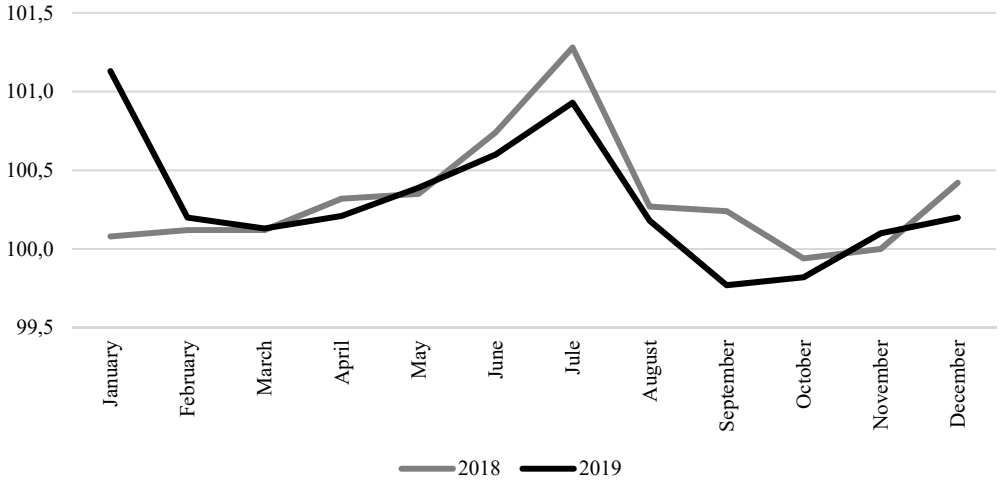


Fig. 18. Consumer price index in services, in % month-on-month

Source: Rosstat.

December 2019 demonstrated gradual slide of consumer inflation year-on-year, which commenced in March: relative to December 2018 consumer prices increased by 3 percent, including by 2.6 percent on foodstuffs, by 3 percent on non-food products, and by 3 percent on services. For comparison, in December 2018 relative to December 2017 the index as a whole amounted to 4.3 percent (*Fig. 19*).

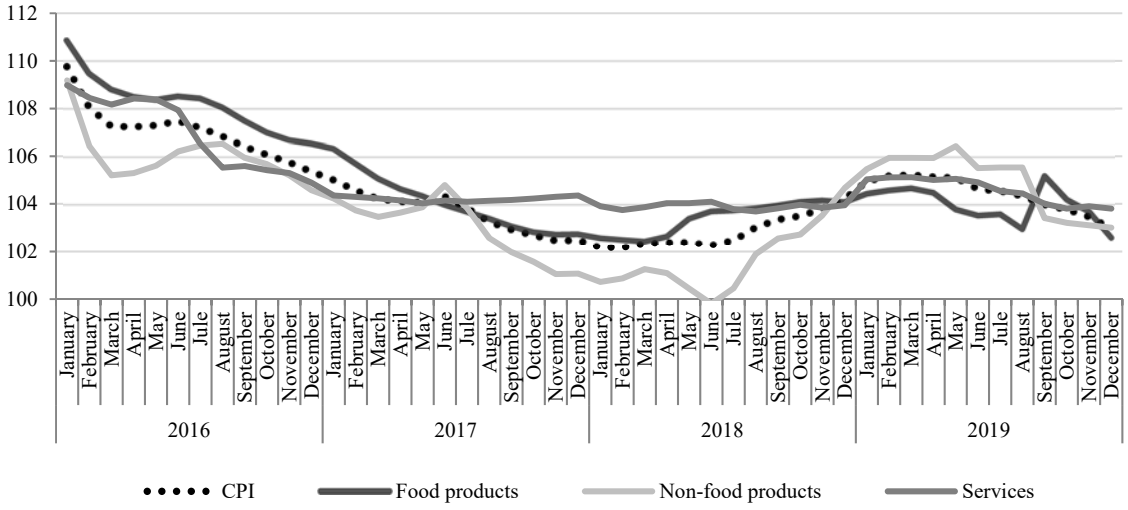


Fig. 19. Composite consumer price index (CPI), indexes of prices on foodstuffs, non-food products and services, in % year-on-year

Source: Rosstat.

Rosstat also releases data on inflation in Russia and certain EU countries. In 2019, price were growing in the Russian Federation at a faster pace than in the majority of European countries. The higher CPI was recorded only in five of European countries – Hungary, Rumania, Slovakia, Czechia, and Bulgaria (103.1–104.1 percent to December 2018). In the meantime, it should be noted that seven European countries (Luxemburg, Austria, Greece, Belgium, Portugal, and Ireland) with Russia posted lower CPI on food products than the CPI index as a whole (*Fig. 20*).

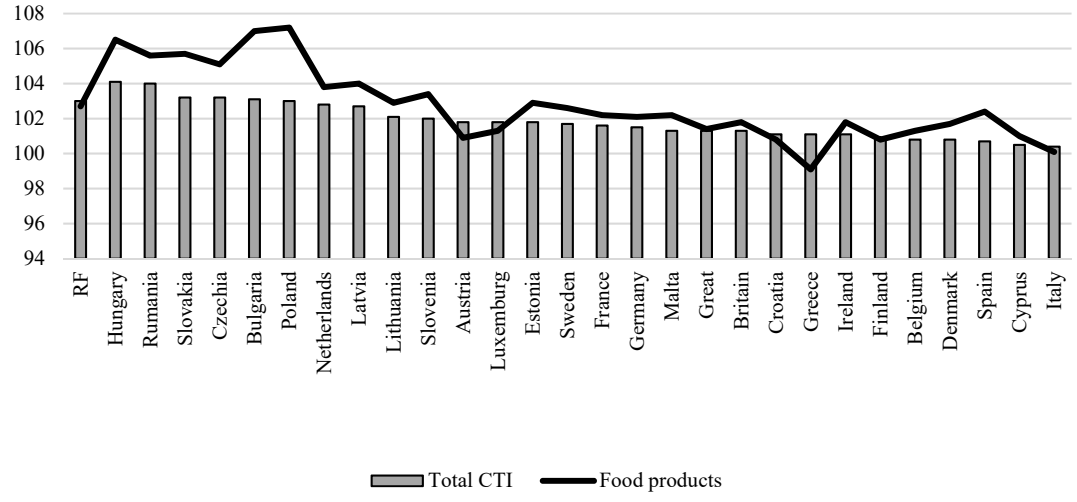


Fig. 20. CPI in Russia and EU countries in December 2019 relative to December 2018, %

Source: Rosstat.

Regarding growth rates of consumer price index on foodstuffs Russia takes twelfth place among all review countries. Noteworthy that in Poland CPI as a whole equal that of Russia (103 percent), however, prices on food products have grown more than in Russia (107.2 percent) than on non-food products of the consumer basket.

5.4. Labor market dynamics

In 2019 as a whole, the work market remained stable. All changes took far back rooted trends. The most serious changes were due to a reduction of the work force number: on average per annum the reduction amounted to 792 thousand persons or 1 percent of the 2018 level. Although, a downward trend has been dominating throughout already a decade, this is the sharpest annual decrease for the given period. Furthermore, if before 2019 decline of the work force supply was due, first of all, to a reduction of the unemployed number, then in 2019 the number of employed fell significantly (*Fig. 21*).

The level of economic activity of the population aged 15 and above declined by 0.6 percentage points due to both changes in the demographic structure of the population (population number aged 20–29 has decreased by 1.3 percent) and a reduction of the level of economic activity of those aged 25–50 by 0.6–0.8 percentage points depending on the age group.

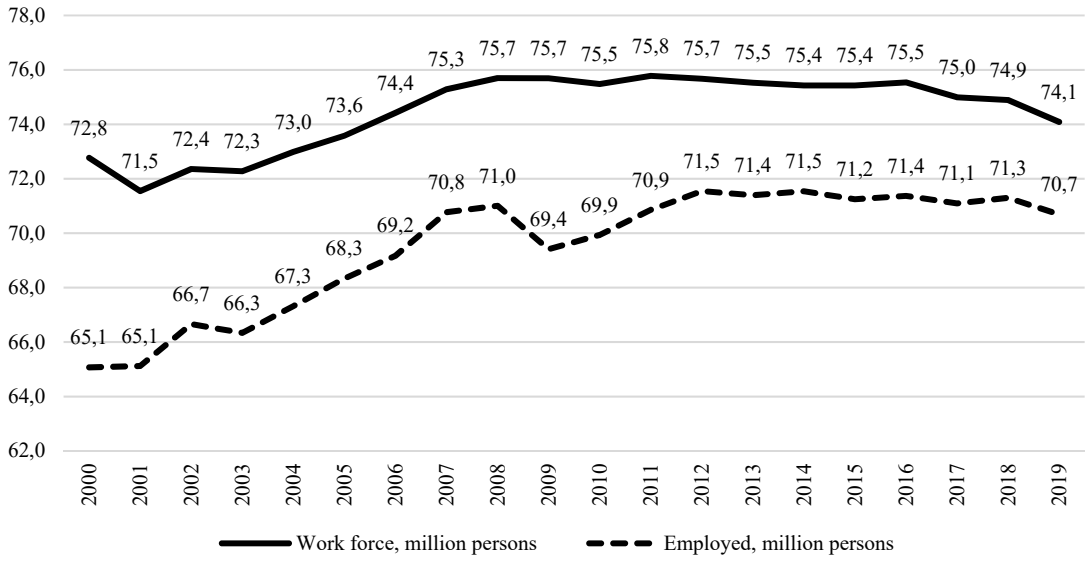


Fig. 21. Number of work force and employed aged 15–72 (minus Crimea), million persons

Source: Rosstat.

In the context of a sluggish economic growth the decrease of the work force has been accompanied both by a reduction of the number of unemployed (according to the WLO methodology) and by the number of employed. In the meantime, the number of supplied workplaces in large and medium-sized organizations has even moved up by 0.8 percent hitting 33.2 million persons. Of that number, the headcount minus external part-time workers accounted for 31.8 million, external part-time workers accounted for 0.5 million, and those working on civil law contracts account for 0.9 million. At the same time, the number of workers in the informal sector of the economy has gone up by 1.5 percent according to the sample survey

data. Thus, employment decline should be observed, first of all, in the sphere of small and medium-sized enterprises.

The unemployment rate hit 4.6 percent in 2019 updating the all-time minimum. Alongside this, the number of jobless registered in employment agencies went up slightly hitting 733 thousand persons, which is evidently due to the increased amount of unemployment benefits by roughly two-fold last year. Possibly, new programs developed by Rostrud contributed somewhat which were aimed at the training of pre-retirement citizens. Nevertheless, such contribution should be considered limited because the proportion of those registered in the employment agencies remains small relative to the total number of jobless – 21.7 percent. Meanwhile, demand for the work force by employees registered in the employment agencies increased slightly in 2019. As a result, the proportion of the non-working population per year per 100 vacancies went up per 1 jobless and hit 54.4 individuals in that group.

Positive changes were observed in the composition of unemployed (according to the WLO methodology): the share of those seeking employment during 12 months and more among all jobless declined during the year from 28.5 to 23.8 percent, and the average period of seeking employment fell by 0.5 months.

Unfortunately, in the context of a decrease of the number of work places, reduction of the official unemployment was taking place not only due to much rapid obtaining employment but also owing to exit from the labor market of pat of unemployed which is attested by the dynamic of the potential work force. In the first place, it consists of non-working not engaged in seeking employment but ready to work individuals.[1] Formally, this group does not pertain to the work force and is not beyond the labor market. Nevertheless, their representatives can be taken as reserve, which is holding back a reduction of the work force. The number of this category moved up last year by 473 thousand persons. At the same time, the number of the so called discouraged workers has increased by 284 thousand persons by over 1.5-fold.

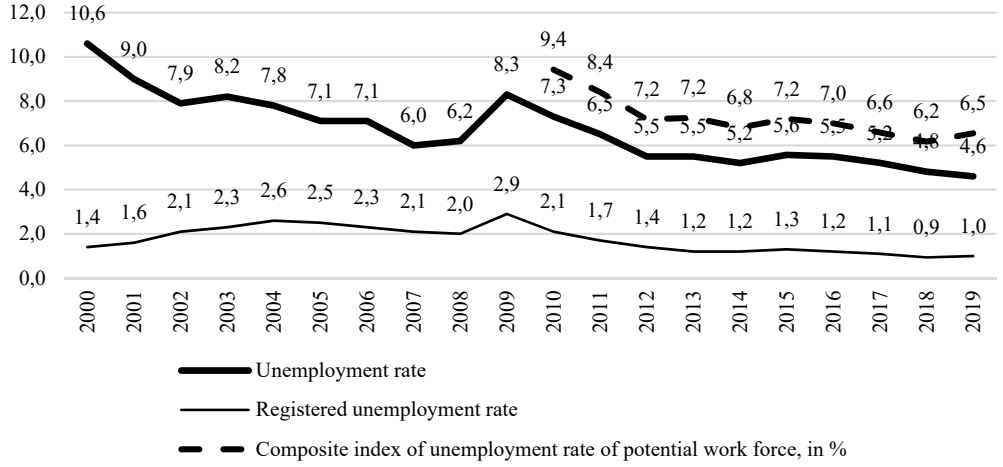


Fig. 22. Dynamics of unemployment, %

Source: Rosstat.

[1] Besides, this category comprises non-working, seeking employment but not available for work in the near future. The share of the latter constitutes roughly 5 percent.

The effect from the retirement age rise was practically unobserved on the labor market in 2019. On the other hand, the number of new pensioners in 2019 was less by 355 thousand persons than that without the measure[1]. The major part of them constituted men of 60 and women of 55. According to the data released by Rosstat, these age groups reported 51.5 percent working men and 66.9 percent working women in 2018. Correspondingly, additional influx to the labor market could not have totaled more than 100–150 thousand persons or 0.1–0.2 percent of the entire work force. The Rosstat data exhibits an increase of the economic activity in the retirement age, especially regarding women (*Fig. 23*). For instance, the rate of working women in the age group of 55–59 has gone up by 1.1 percentage points and in the group of 60–69 by 0.5 percentage points. Working men in the age group of 60–69 demonstrated growth by 0.7 percentage points. It should be pointed out that the main growth of economic activity of men and women of the retirement age was observed in the last quarter of 2019. Although partly this data could have been driven by the rise of the retirement age, the economic activity growth of the elderly population had been observed before 2019. Herewith, the dynamic of the unemployment rate across certain age groups helps to reveal that the retirement age rise has not led to the unemployment growth both neither among elderly population nor among other age groups.

The highest economic activity growth over the year has been observed in the 20–24 age group. Such dynamics can reflect changes taken place in the structure of education, decline of the number entering higher educational establishments and popularity of secondary vocational education that requires a shorter training time than in the higher education. Thus, 2019 was marked by additional influx elderly population to the labor market amid a decline of economic activity of the main able bodied age groups.

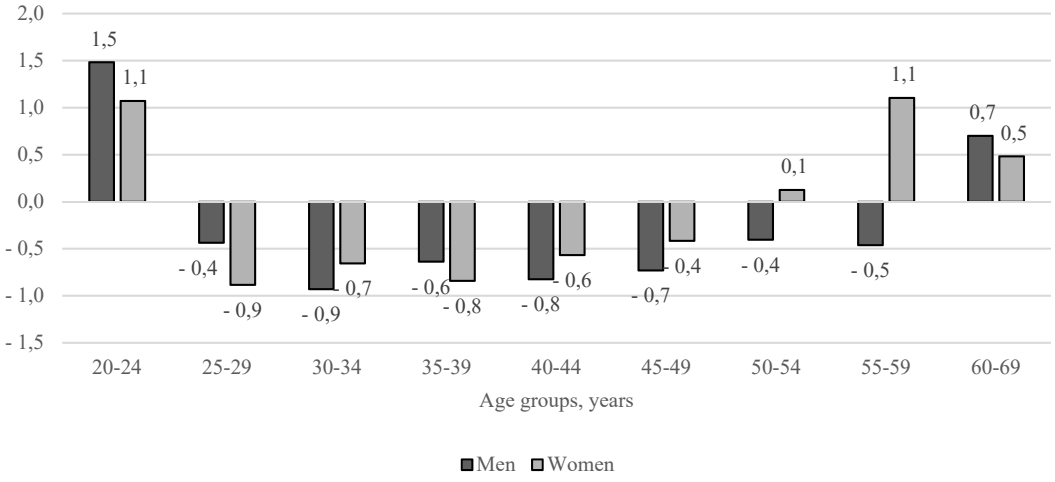


Fig. 23. Changes in the economic activity rate between 2019 and 2018 in various age groups, percentage point

Source: Rosstat, own calculations.

[1] Rossyiskaya Gazeta. The Head if PFR briefed on the falling number of pensioners. URL: https://rg.ru/2020/01/21/glava-pfr-rasskazal-ob-umenshenii-chisla-pensionerov-iz-za-pensionnyj-reformy.html

Following a significant growth posted in 2019, a slowdown of the wages growth rates in real terms was observed (*Fig. 24*). On average in 2019, the monthly average wages of corporate employees according to preliminary data released by Rosstat stood at RUB 47,468, which in real terms is by 2.9 percent above the year before last level. The slowdown of the growth rates is due to several factors. Whereas in 2018 the minimum wage rise and raise of wages for a number of categories of the public sector employees was pushing wages up, in 2019 raising of VAT has produced a contrary effect. Herewith, wages rise in the public sector contrary to 2018 although was above the inflation rate but became the main driver of wages growth in the country. Nevertheless, the real wage growth seen in the last year was twice as high as GDP growth. Even amid a decline on the number of employed, this indicator grew at a faster pace than the productivity rate.

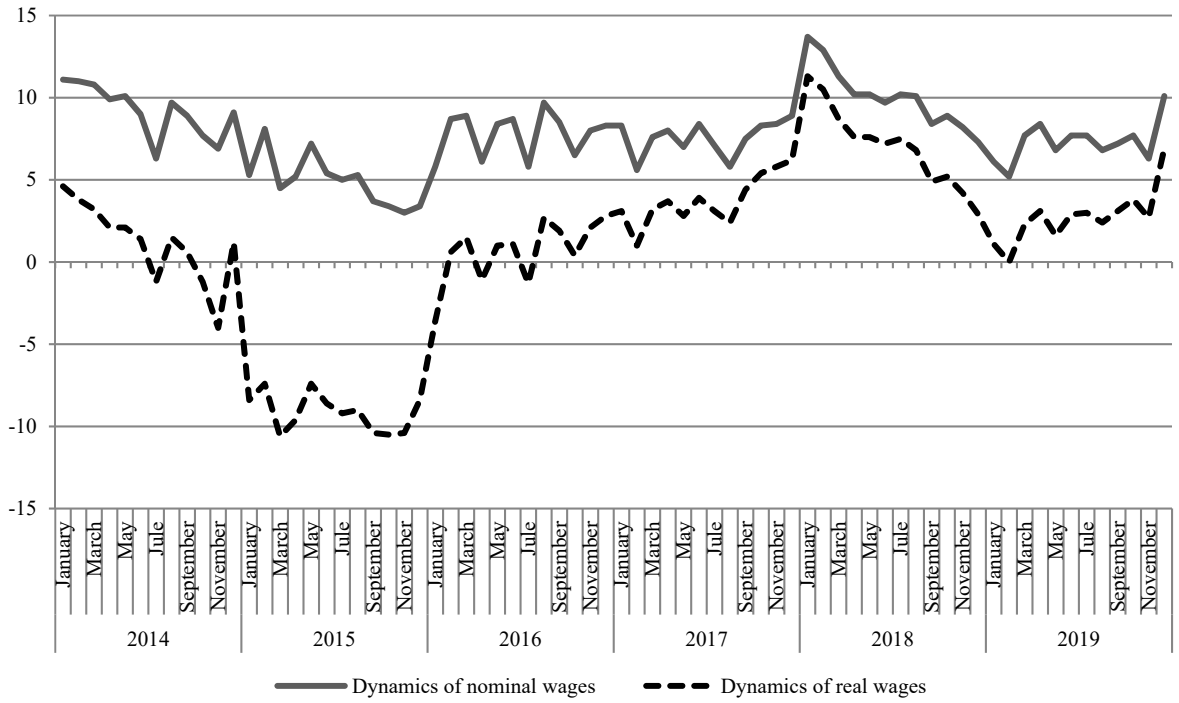


Fig. 24. Growth in nominal and real wages, year-on year, in %

Source: Rosstat.

The highest wage growth was observed in the financial insurance sectors (up by 11.7 percent in nominal terms), paper and paper products manufacturing (up by 11.0 percent), mining (up by 10.7 percent), professional, scientific and technical sectors (up by 9.2 percent). At the same time, wages in oil refining average wages fell by 7.1 percent, in publishing sector down by 0.1 percent. In services sluggish growth was observed in hotel and catering sectors (up by 5.2 percent, sports, recreation and entertainment (up by 2.1 percent). In education and healthcare wages were growing by 0.1–0.2 percentage points mora than on average in the economy.

5.5. Migration processes

5.5.1. Long-term migration

During 2019 positive migration balance in Russia surged year-on-year totaling 285.8 persons. It has exceeded values of recent years and moreover those reported in the year before last when it plummeted to 124.9 thousand persons. Inter alia, low net migration rate posted in 2018 was due to the problems arisen with the transfer of data from the Ministry of Internal Affairs to Rosstat. From 2019 onwards this issue was resolved but it remained unclear whether net migration rate returned to values seen in mid-2010s or it was a regular surge. Migrants count remains unbalanced, registration methodology suffers from a number of serious problems[1].

Q4 2019 saw a surge of arrivals to Russia while the number of leavers remained flat quarter-on-quarter. As a result, positive migration balance in Q4 hit an all-time high and has even surpassed values seen 2011 and 2014 (*Fig. 25*). Before recent months of 2019, one could expect that the dynamics of the long-term migration indexes which were disrupted by migration count in 2018 would be stable in the course of the year. A surge of migration growth posted in Q1 2019 was regarded as a result of a plummet seen in the previous period. A hike in the rate reported at the year-end was not due to the same reason, the growth rate of arrivals is similar to that observed in mid-2014.

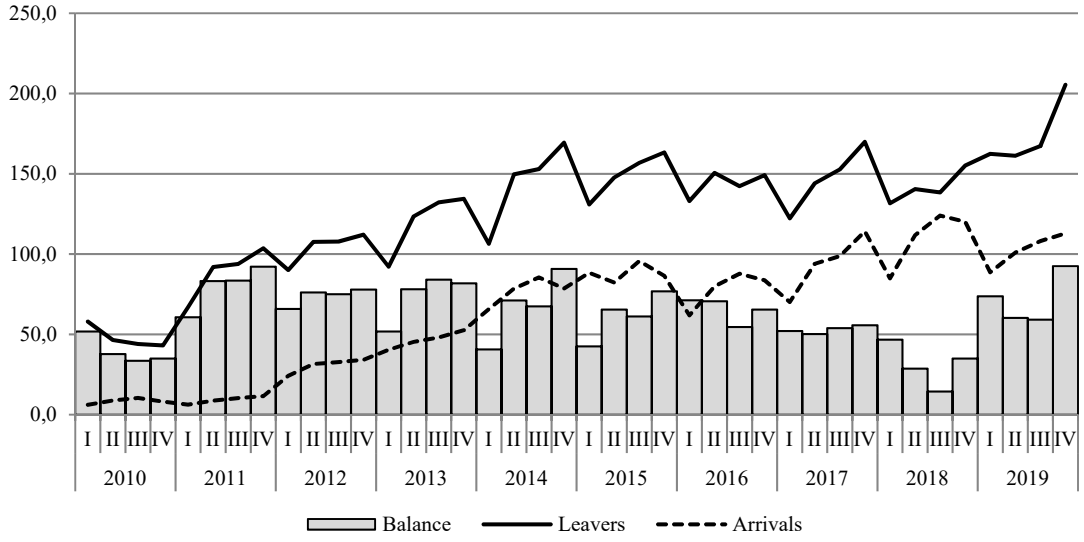


Fig. 25. International long-term migration in Russia, Q-o-Q, thousand persons

Source: Rosstat.

In 2019, even a surge in net migration rate would not have offset the ongoing natural population decline in Russia. At the year-end, migration offset natural population decline by 90.4 percent. Meanwhile, total offset of the natural population decline was reported in H2 2019

[1] Chudinovskikh O.S. On Revision of the UN Recommendation of 1998 on Migration Statistics in Russian Context // Voprosy statistiki 2019. Vol.26, No.8, pp. 61–76

(*Fig. 26*). Without the net migration rate, Russia would have seen a more drastic population decline in 2019.

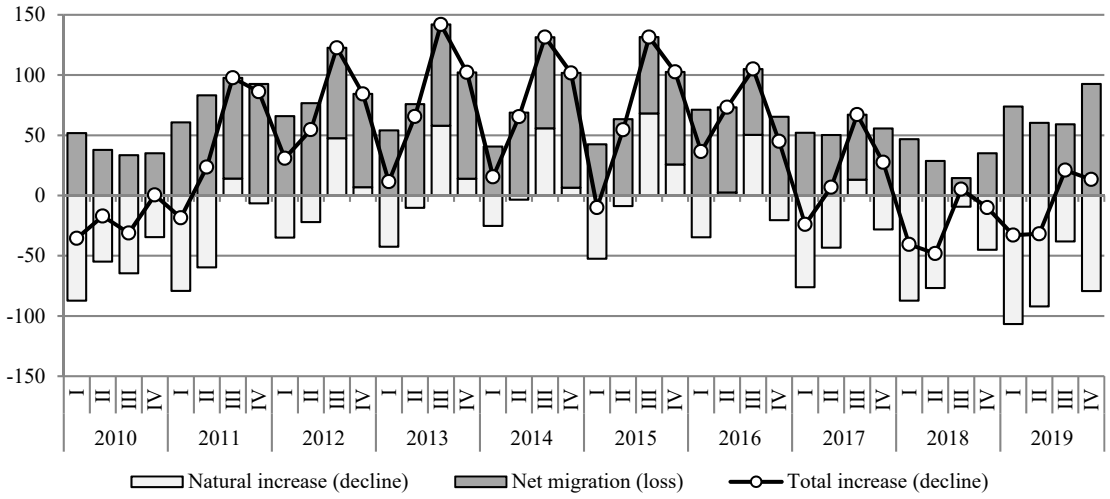


Fig. 26. Components of the change of Russia's population count, 2010–2019, Q-o-Q

Source: Rosstat.

According to various data for 2010s, net migration rate in Russia in 2019 trails only to indexes for 2011–2013. Compared to 2018, net migration rate in Russia went up with all countries except Belorussia and Moldova. The highest migration growth was registered with Ukraine; it has surpassed not only data for the last year but very significantly data for 2013, which has triggered migration surge (*Table 1*). The highest net migration rate with Ukraine occurred at the year-end, only in Q4 it totaled 30.7 thousand persons–slightly less than during the first three quarters of the year.

It is still unclear, whether simplified procedure for Russian naturalization adopted in 2019 has triggered the surge. For a second time in this decade Ukraine has become the main donor country for long-term migration.

Table 1

Positive (negative) migration balance in Russia due to international migration, by countries, 2012–2019, thousand persons

	2012	2013	2014	2015	2016	2017	2018	2019
International migration, total	294.9	295.9	280.3	245.9	261.9	211.9	124.9	285.8
Including with CIS countries	268.4	274.9	270.2	237.8	255.3	203.4	129.1	256.4
including:								
Azerbaijan	18.1	17.2	12.4	10.7	10.4	8.6	8.7	16.8
Armenia	32	32.2	24	20.6	12	14	14.4	35.5
Belarus	10.2	3.7	6.8	4.9	2.1	11.8	7.2	6.3
Kazakhstan	36.7	40.1	40.8	34.8	37.1	32.7	26.5	39.1
Kirgizia	24.1	19.8	15.3	10	11	19.4	8.8	14.9
Moldova	18.6	20.6	17.6	17.4	14.4	9.6	7.7	5.5
Tajikistan	31.4	33.6	19.4	11.4	27.3	34.6	31	47.8
Turkmenia	3.9	3.8	2.6	2.3	2.4	2.9	3	6.2
Uzbekistan	56.3	67.3	37.1	-20.4	19.7	22.2	6.8	19.1
Ukraine	37	36.4	94.4	146.1	118.8	47.7	14.8	65.1
Other countries	26.5	21	10.1	8.2	6.7	8.4	-4.2	29.4

Source: Rosstat.

In 2019, net migration rate with Uzbekistan also went up, however compared to 2013 it is still low. Net migration rate with Armenia, Tajikistan, and Turkmenistan in 2019 was the highest during recent years, net migration rate with Kazakhstan is close to record values.

Russia's immigrant population growth was due to such far abroad countries – China, Vietnam, India, and Syria. Whereas, immigration balance with developed western countries remained flat. It should be noted that the long-term migration from this group of countries has been counted unsatisfactorily, data released by statistics agencies of those countries differ from the Russian data several-fold or even by ten times.

In 2019 compared to the previous year the number of internal long-term migrants contracted by 298.2 thousand persons or by 6.9 percent. Such fluctuations has been repeatedly noted, for example, in 2018 indicator increased by 3.8 percent. On the whole, the scale of migration within the country after two-fold growth in 2011–2012 due to a change of count methodology.

Data across regions for January-November 2019 demonstrate a significant reduction of net migration rate in Moscow and St. Petersburg against the corresponding period of the previous year. At the same time, net migration rate in Moscow and Leningrad regions has not changed. Many Russian regions on the back of a surge of positive migration balance due to international migration has improved net migration rates. If in January-November 2018 Russia boasted of solely 20 regions with total net migration, then in 2019 their number moved up to 39. The sharpest growth of net migration rate was reported in Rostov region, Stavropol krai, Samara and Nizhniy Novgorod regions. However, However, There's no point to come to conclusions on the change of priority migration strands. Possibly, this is due to already mentioned increased growth from Ukraine of by other factors. Partly situation can be revealed by more detailed data but it has not been released yet.

Significantly feel negative migration balance in Far East federal district (-10.3 against -29.8 thousand persons for corresponding period of 2018), even despite the entry into it of two regions with stable migration loss – Zabaikalsky krai and Republic of Buryatia. Migration loss has also contracted from Siberian district. However, it still remains unclear what role in the population balance of the district has been played by internal and international migration including with China and other countries of Asia. The migration balance with these countries is highly unstable and is marked by sharp spikes, growth in one year is replaced with a loss in another one. To what extent has changed the key index – outflow of population from the Far East westbound – will be clear solely following the release od the data on internal and international migration.

5.5.2. Temporary migration

In 2019, the number of temporary arrivals of foreign citizens to Russia notably increased Y-o-Y. During the year the number of arrivals fluctuated in the range of 9.5 million to 11.2 million persons, in certain months, indexes exceeded the 2015 – 2017 data, however the 2013 – 2014 level has not been reached so far. At year – end of 2019, Russia hosted 10.4 million foreign citizens (at late 2018 – 9.7 million), maximum values (11.2 million) were observed in late September-early October (in 2018 recorded 10.2 million at the same time). The highest contribution to the index growth was made by tourists, migrant workers and arrivals for private purposes.

The vast majority of temporary arrivals were citizens of CIS, as of end of 2019 they numbered 8.23 million persons (as of end of 2018 – 8.19 million), which is 79 percent the total number of arrivals. Top three countries remain unchanged so far – Uzbekistan, Ukraine, and Tajikistan (*Table 2*), however Ukraine is already second to Uzbekistan.

Table 2

Arrivals of CIS citizens to the Russian Federation as of date, persons

	05.11.14	05.11.15	01.11.16	01.11.17	01.11.18	01.11.19
Azerbaijan	610327	532321	527615	597938	660314	759095
Armenia	514663	504971	509070	507790	507557	497685
Belarus	498878	634861	744653	699463	656815	690265
Kazakhstan	575400	685841	607044	545852	545592	559033
Kirgizia	552014	526502	581197	619498	654892	737769
Moldova	586122	517692	495463	448728	361397	315484
Tajikistan	1105500	933155	964030	1037729	1155114	1292240
Uzbekistan	2335960	1943384	1671931	1793664	1961814	2083452
Ukraine	2651109	2566377	2590568	2217642	1987752	1795225
Total	*9429973*	*8845104*	*8691571*	*8468304*	*8491247*	*8730248*

Sources: data released by FMS RF and General Administration for Migration Issues MIA RF.

Trends of growth and contraction of stay of CIS citizens does not practically change over recent years. Migration from the EAEU countries was stable except from Kirgizia–the number of citizens of that country in Russia exceeds the 2014 value by one third. Year-on-year migration from Azerbaijan, Tajikistan, and Uzbekistan demonstrates an upward trend. Having said that, regarding first two countries the pre-crisis stay values have been surpassed and the number of citizens from Uzbekistan so far is below the pre-crisis level by 10–12 percent. Simultaneously, the number of temporary arrivals from Moldova and Ukraine demonstrate downward trend.

2019 for the first time recorded a notable growth of arrivals from developed countries (*Table 3*); tourists have contributed most to this growth, although their number is only half of the number seen in the pre-crisis years. Compared to the previous year, the number of arrivals with other purposes increased y-o-y, for example, the number of arrivals with employment purpose increase by one third from 23 thousand to 31 thousand persons (end-year data).

Table 3

Arrivals of foreign citizens from several countries of EU and USA to Russia as of date, persons

	13.11.13	01.11.15	01.11.16	01.11.17	01.11.18	01.11.19
EU as a whole	1177829	481567	516368	448566	462276	696208
Germany	352335	122131	115425	111792	108591	153018
Spain	77200	15864	15579	14337	16127	31579
Italy	77193	30489	28244	24388	25761	43751
Great Britain	174061	38637	29142	23944	23020	30216
Finland	108312	46513	99065	73715	64819	87517
France	65559	35968	29268	26963	30010	54560
USA	220086	50638	52840	44370	46988	60612

Source: data released by FMS RF and General Administration for Migration Issues MIA RF.

As of late 2019, Russia hosted 3.9 million migrant workers (as of late 2018 – 3.76 million), the CIS citizens account for 3.77 million (97 percent), and citizens from far abroad – 131 thousand persons. The number of migrant workers in Russia demonstrates an upward trend, although y-o-y growth is moderate – 3–5 percent. CIS countries minus Ukraine and Moldova account for the major part of the migrant workers increase. The latter citizens oftener choose European countries for work.

For the third year in a row the share of migrant workers in Russia with authorization documents stays flat: at 2019 year-end 1.73 million had effective papers for employment (work permits and patents) and 1.1 million were eligible for hire without papers (EAEU citizens), i.e. 72 percent of migrant workers could officially get employment in the Russian Federation (this

proportion fluctuated around 70 percent in previous years. The lack of significant progress in the sphere of migrant workers' authorization demonstrates inefficiency of legislative and law-enforcement novations in current economic environment.

The index of new authorization documents for migrant workers moved up slightly compared to two previous years and still accounts for a half of the 2014 level (*Table 4*).

Таблица 4

Filing of authorization documents for migrant workers in RF, January-December, persons

		2014	2015	2016	2017	2018	2019
Work permits for foreign citizens (FC)*		1334899	177175	133215	139595	120666	117452
Including:	WP for qualified specialists (QS)*	158644	22099	14775	17333	19360	16877
	PWork permits for highly qualified specialists	34225	41829	25469	21363	25845	31754
Patents**		2379374	1779796	1492203	1658119	1649121	1686418
Total		3714273	1956971	1625418	1797714	1769787	1803870

* – From January 1, 2015 issued for from visa regime countries.

** – From January 1, 2015 issued from visa-free regime countries for hire by physical and legal entities.

Migrant workers continue notably replenish regions' budgets: during 2019 advance payments for patents totaled RUB 60.4 billion (in 2018 – 57.3 billion). To a higher degree than before migrants from Uzbekistan and Tajikistan account for over 90 percent of issued patents (in 2018 – 88 percent, and in 2017 – 86 percent). Each year there are fewer citizens from Ukraine account who obtain patents – 4.7 percent (in 2018 – 6.5 percent, and in 2017 – 7.9 percent).

Analysis of the flow of migrant workers to Russia in 2019 demonstrates that the interest towards the labor market in Russia has not been lost by the majority of our neighbors. Having said that, one should acknowledge that migrant workers from the countries that have alternative strands of migrant employment (Ukraine and Moldova) prefer to choose otherwise than Russia. The inflow of migrant workers in 2020 will be adversely affected by the restrictions put in place amid the spread of the coronavirus pandemic. The amount of the inflow for time-wise will undoubtedly depend on the timeframe of the restrictions put in place but in any case will see a decrease in annual terms. This been said, pandemic induced economic recession will somewhat reduce the demand for the migrant workers.

5.6. Demographic situation

The number of resident population in Russia as of January 1, 2020 (by preliminary data released by Rosstat) totals 146.7 million persons (*Fig. 27*). This index is below that seen for 2019 by 35.6 thousand. Contraction of the total number of Russia's population has been ongoing for a second year in a row. For 2018–2019, the total population loss numbered 135.3 thousand persons. The average population of Russia for 2019 hit 146.8 million persons. That index is below the one seen in 2018 by 0.05 percent or by 67.7 thousand persons.

Contraction of the total population is due to a natural population loss, the net migration stopped offsetting it. In 2019, deaths outnumbered live births by 316.2 thousand persons (*Fig. 28*), this value exceeds the one seen in 2018 by 41.7 percent (by 93 thousand persons). Last time such population loss was observed in 2008 (362 thousand persons). Natural population growth (loss) rate in 2019 stood at -2.2‰ less than seen in 2018 by 37.5 percent

(-1.6‰). Natural population decline currently is due both to the ongoing significant birth rate contraction and insignificant reduction in death rates.

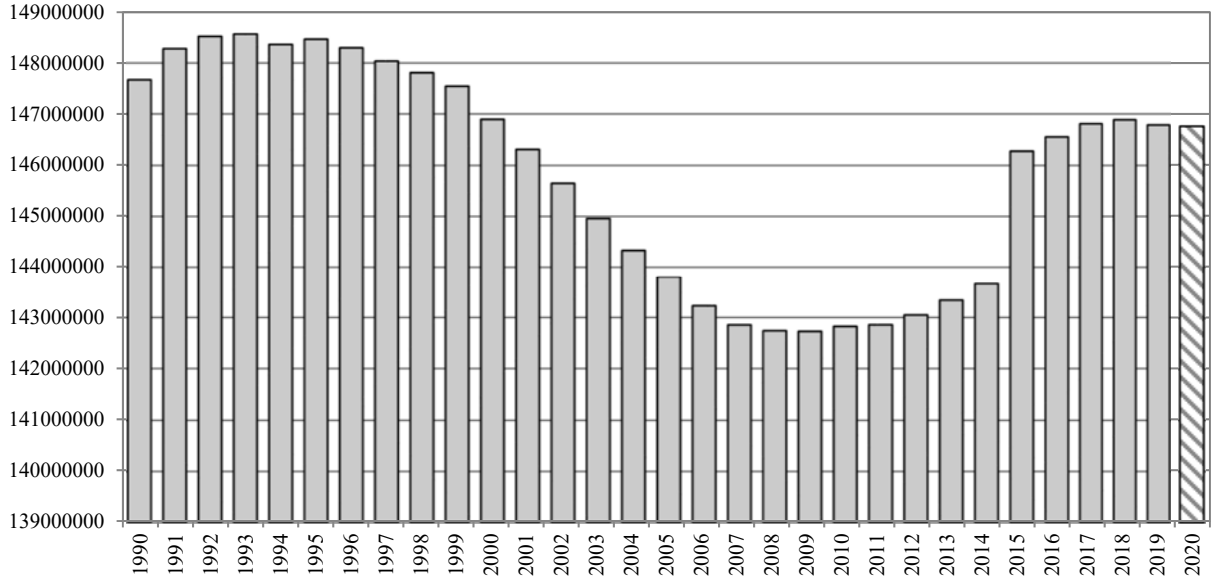


Fig. 27. Number of resident population as of January 1, 1990–2019, persons

Source: data released by Rosstat.

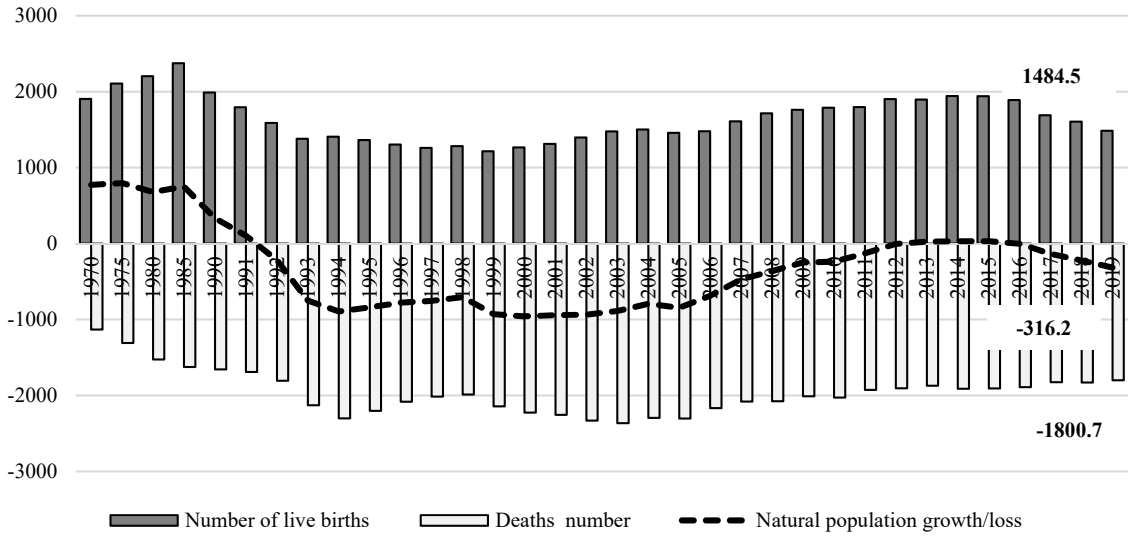


Fig. 28. Number of live births, deaths and natural population growth (loss), 1970-2018, thousand persons

Sources: Unified Interdepartmental Statistical Information System (UISIS), flash data released by Rosstat.

Population decline has been observed in the majority of Russia's regions. However, there are regions with a population increase (*Fig. 29*). Maximum values of natural population loss have still been observed in Pskov (-8.4‰), Tula (-8.3‰), Ivanovo (-7.9‰), Novgorod (-7.7‰),

Tver (-7.7‰), Vladimir and Smolensk regions (-7.5‰). The highest natural population increase has been recorded in North Caucasus regions (but even there dynamic is negative – growth stood at 6.2 percent against 6.9‰ seen in 2018 across North Caucasus Federal District on average), in Republics of Tyva and Sakha, Tyumen region and its autonomous districts.

Fig. 29. Natural population growth (loss), 2019

Source: flash information released by Rosstat.

2019 demonstrates contraction of both births and the crude birth-rate. Number of live births in 2019 hit 1,484.5 thousand persons down by 7.5 percent (down by 120 thousand persons) year-on-year. Live births peaked in July (*Fig. 30*) with 140.7 thousand births. The bottom index was observed in February (113 thousand persons).

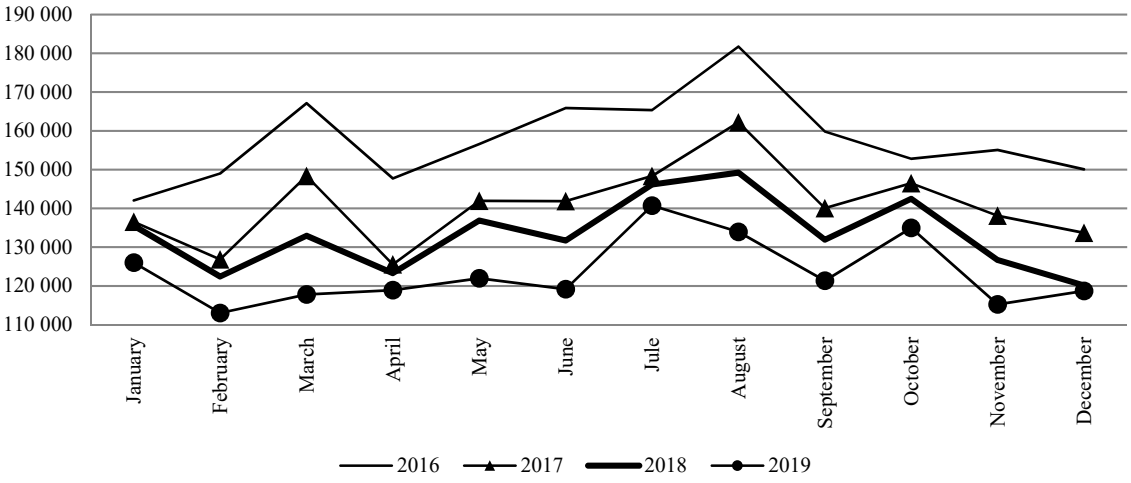


Fig. 30. Number of live births, January-December 2016–2019, persons

Sources: UISIS, flash data released by Rosstat.

In 2019, crude birth-rate stood at 10.1 percent which is down by 7.3 percent against the 2018 index (10.9‰). Rate reduction has been demonstrated by practically all the Russian regions except Karachaevo-Cherkassia Republic, Moscow and Republic of Ingushetia. The number of live births in those regions went up by 2.7 percent (by 133 live births), by 2.5 percent (per 3.4 thousand births) and 1.9 percent (by 60 live births), respectively.

The total fertility rate (TFR) is being used as the most truthful integral description of the birth rate. This rate demonstrates average number of births per woman in a hypothetical generation for her entire life while retaining existing birth rates in each age group independent of death rate of age composition. In 2019, the total fertility rate in Russia numbered 1.51 child births per woman of reproductive age. This is by 4.4 percent less than the 2018 level (1.58). This index has been falling from 2016. According to UISIS, this indicator's decline has been observed in all regions except Karachaevo-Cherkassia Republic (by 5 percent), Kamchatka krai (by 1 percent), and city of Moscow (by 7 percent). This index demonstrates the highest contraction in Chukotka autonomous district (by 17 percent), Kaluga, Ivanovo, Moscow, Vladimir regions and Republic of Altai (by 9 percent).

The highest total fertility rate during 2019 was exhibited by Republic of Tyva (2.97 live births per woman of reproductive rate), Chechen Republic (2.6), Republic of Altai (2.35), Nenets AD (2.24), Republic of Buryatia (2.04), Chukotka AD (2.02), Sakhalin region (1.95), and Ymal-Nenets AD (1.9) (*Fig. 31*).

Fig. 31. Crude birth-rate, 2019, per woman of reproductive age

Source: UISIS.

The feature of the current situation consists not so much in the overall birth rate decline as in dynamic of its components regarding sequence of births. Reduction of the total fertility rate stems from a decline of number of births across all birth order. At 2019 year-end, total first births rate averaged at 0.65 per woman. This is below the same rate for 2018 by 2 percent (in 2018 – 0.66). The reduction is drastic against the backdrop of 2010–2015 when it fluctuated at relatively high rate of 0.8 births. Such low rate of first births was observed in Russia only once in 1999 at the "bottom" of the birth rate downward trend. Reduction of the first births rate has been observed in the majority of Russian regions. Eight regions demonstrate growth of this rate, in nine regions it has remained at the 2018 level (*Fig. 32*).

Fig. 32. Cumulative first live births rate, 2019, per woman of reproductive age

Source: UISIS.

Aggregate second births rate commenced declining in 2016 and in 2019 stood at 0.53 live births. This index is lower than that seen in 2018 by 9 percent (in 2016 it stood at 0.69, in 2017 – 0.6, and in 2018 – 0.58 live births). Reduction of second births number has been observed in all regions except Kamchatka krai (up by 11 percent against 2018), Moscow (by 4 percent), Sebastopol (by 2 percent), and Republic of Ingushetia (retains 2018 level).

Republic of Tyva (0.84), Nenets AD (0.74), Sakhalin region (0.7), Khanty-Mansi AD (0.66), Jewish AD (0.65), and Republic of Altai (0.64) demonstrate the highest second births rates (*Fig. 33*). The lowest second births rates have been observed in the Republic of Ingushetia (0.37), Leningrad region (0.39), Karachaevo-Cherkassia Republic (0.44), Voronezh, Smolensk, Tula, and Tomsk regions (0.45).

Fig. 33. Cumulative second live births rate, 2019, per woman of reproductive age

Source: UISIS.

Rate of third and subsequent live births in 2019 stood at 0.33 live births. This is lower than that seen in 2018 by 3 percent (in 2018 – 0.34 live births, in 2017 – 0.31 live births). Reduction of cumulative third and subsequent live births has been observed in 26 regions, in 29 regions it stayed at the 2018 level, and the rest of the regions demonstrate rate growth. The highest rates have been noted in Chechen Republic (1.25), Republics of Tyva (1.15), Ingushetia (1), Altai (0.79), Dagestan (0.68), Sakha (0.62), and Nenets AD (0.71). The bottom rate of third and subsequent live births are being demonstrated by Sebastopol (0.2), Belgorod, Smolensk, Voronezh, Leningrad regions, Republic of Mordovia (0.21), St. Petersburg (0.22), Briansk, Penza, and Ivanovo regions (0.23) (*Fig. 34*).

Fig. 34. Cumulative rate of third and subsequent live births, 2019, per woman of reproductive age

Source: UISIS.

Besides a change in the number of women of reproductive age, a change in the age related birth rate profile. Recently, there was a shift in the birth rate towards women of older age. In 2018[1] the highest fertility rate was observed among 20–24, 25–29, and 30–34 age groups. The mean maternal age has been growing, most significantly the shift occurred at the mean age of the mother at first birth, in 2018 it came to 25.9 years (second child – 29.6, and third – 32 years).

2019 demonstrated a contraction both in the death rate and in crude death rate. Absolute mortality rate in 2019 stood at 1,800.7 thousand cases down by 1.5 percent (by 27.2 thousand) against the same period y-o-y. The highest mortality rate was recorded in January (172.4 thousand persons) and the minimum absolute mortality rates were reported in June (137.3 thousand persons) (*Fig. 35*).

The crude mortality rate in 2019 stood at 12.3 per 1,000 of population. This is by 1.6 percent lower than that of 2018 (12.5‰). By flash data released by Rosstat, in 2019 the gap between the minimum and maximum crude mortality rate in Russian regions constituted 14 permille. The highest rate has been demonstrated by Pskov region (16.9‰), and the lowest – Republic of Ingushetia (2.9‰). The crude mortality rate peaks in regions with high proportion of old age population (Pskov, Novgorod, Tver, Tula, Ivanovo, and Vladimir regions). Low rates have been

[1] Detailed information on age composition of birth rate for 2019 will be available solely in August 2020.

commonly demonstrated by regions with younger population composition (Republic of Ingushetia, Chechen Republic, Republic of Dagestan, Yamal-Nenets AD, and Khanty-Mansi AD).

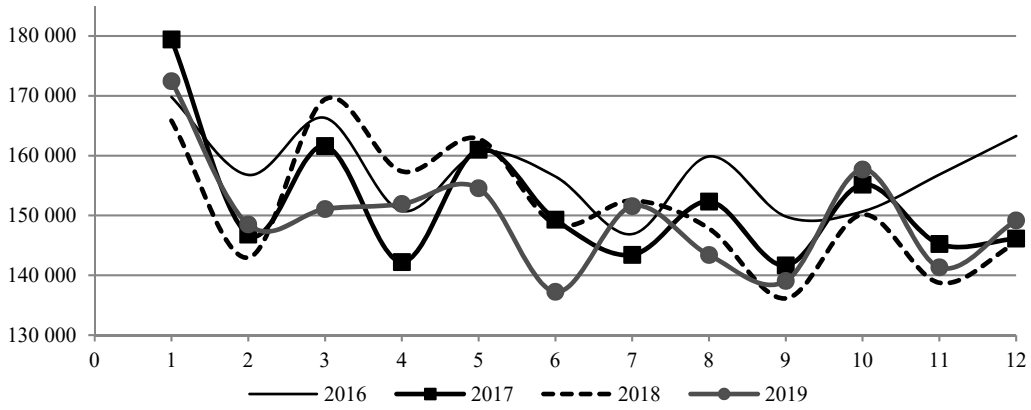


Fig. 35. Mortality rate, January-December of 2016–2019, cases.

Sources: UISIS, flash data released by Rosstat.

Compared to the same period of 2018, in 2019 growth of the crude mortality rate growth was observed in 18 regions (from 0.8 to 5.5 percent), in 6 regions it remained at the 2018 level, and in the remaining regions – declined. The highest growth of the index is observed in Khabarovsk krai (by 5.5 percent), Amur region (by 5.3 percent), Jewish AD (by 5.2 percent), Republic of Buryatia (by 3.7 percent) (*Fig. 36*). A significant decline in the mortality rate is demonstrated by Chukotka AD (by 7.1 percent), Republic of Ingushetia (by 6.2 percent), Chechen Republic (by 8.7 percent), Kabardino-Balkar Republic ((by 9.4 percent), Nenets AD (by 6.6 percent), Tyva (by 5.7 percent), Mariy El (by 4.7 percent), and Tatarstan (by 4.3 percent).

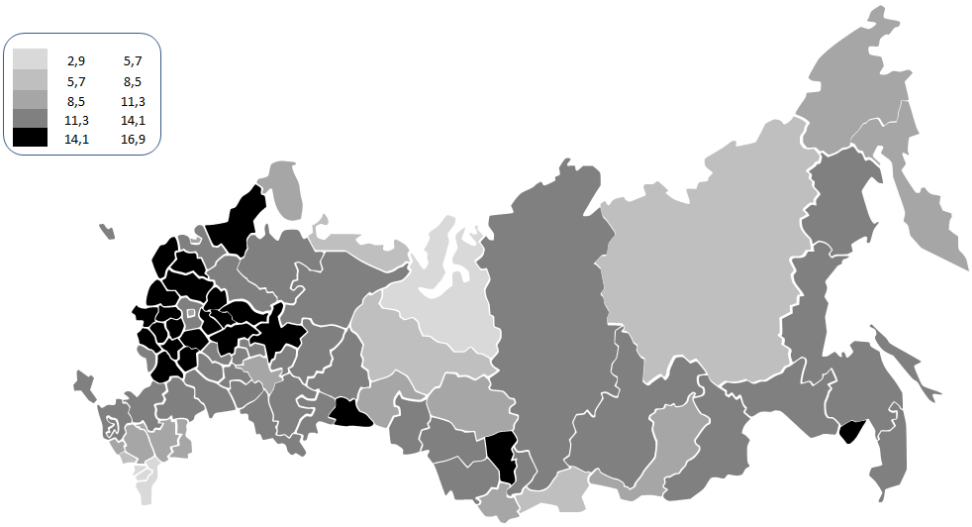


Fig. 36. Crude mortality rate region-wise, 2019, in percent

Source: flash data released by Rosstat.

The crude mortality rate gives a change to swiftly but very approximately to assess mortality trends in the country. As far as the mortality rate to a significant extent depends on age and gender, the crude mortality rate value is also strongly affected by the age composition of the population. More detailed information on mortality rate gender- and age-wise are released based on the findings of annual statistics, and they were unavailable for 2019 at the date of preparation of the review.

The infant mortality rate is the number of deaths of under one year of age per 1,000 live births remains an important mortality index and of a quality of life as well. The infant mortality rate continues falling. During 2019, the index stood at 4.9 cases per 1,000 live births. This was lower by 3.9 percent than that in 2018. The regional divide in the infant mortality rate has increased. Over 2019, it came to 11.3 percent. In 2018, this index stood at 9.5 percent. The regional divide increase between the minimum and maximum indexes triggered an increase in the maximum index (11.1 percent – in 2018 against 12.7 percent – in 2019).

The highest infant mortality rate of children under one tear of age has been observed in Chukotka AD (12.7‰), Republic of Altai (11.2‰), Jewish AD (9.3‰), Kamchatka krai (8.4‰), Republic of Dagestan (7.5‰), and Kostroma region (7.4‰). Republic of Kalmykia (1.4‰), Nenets AD (1.7‰), Lipetsk region (2.9‰), Leningrad region (2.9‰), Belgorod region (3‰), Kirov region (3.1‰), and Chuvash Republic (3.3‰) boast of minimum infant mortality rates.

35 regions recorded growth of the infant mortality rate (compared to the same index in 2018), 4 regions reported the rate at the 2018 level, and in the remaining regions it decreased. The highest growth was recorded in Magadan region (by 79 percent), Sakhalin region (by 53.6 percent), Kamchatka krai (by 47 percent), Tambov region (by 46 percent), and Khanty-Mansi AD (by 41 percent (*Fig. 37*).

Fig. 37. Infant mortality rate, 2019 in % to 2018

Source: flash data released by Rosstat.

One of the key factors of Russia staying behind the developed countries regarding life expectancy at birth is high premature mortality. It is due among other to mortality from

noninfectious diseases (diseases of cardiovascular system, tumors, respiratory system, endocrine system, nutrition disorders and metabolic disorder). In 2019, these diseases caused 68.7 percent of the total number of deaths (in 2018 – 68.3 percent). Among the reasons of mortality by causes of death still dominate cardiovascular diseases (46.7 percent), hereafter in the descending order follow tumors (16.4 percent), other types of diseases (11.5 percent), external causes (7.1 percent), nervous system disorders (5.6 percent), digestive system diseases (5.4 percent), diseases of respiratory system (3.2 percent), endocrine system diseases, nutrition disorders and metabolic diseases (2.4 percent), infectious and parasitic diseases (1.7 percent).

Compared to the same period of 2018, the mortality rates demonstrate reduction from external causes (by 4.9 percent), respiratory system diseases (by 3.7 percent), blood circulation diseases (by 1 percent), from infectious and parasitic diseases (by 3.6 percent), from nervous system diseases (by 10.5 percent). However, not all causes of death demonstrate an upward trend. Causes of death from endocrine system diseases, nutrition disorders and metabolic disorders (by 0.7 percent), digestion system diseases (by 3.4 percent), tumors (by 0.7 percent) were higher in 2018 against 2018.

One of the key integral mortality rates is life expectancy. At present, data on life expectancy for 2019 is not available yet. However, Russia for the first time commenced to define healthy life expectancy in 2019. Healthy life expectancy defines as how long at a certain age a person has healthy life, i.e. without any serious health problems. This indicator has been proactively used by the WHO for monitoring the situation in the healthcare system in different countries and development of practical proposals for an increase or decrease of regional divide. According to Rosstat data, in 2019 life expectancy in Russia stood at 60.3 year. This is lower than that seen in 2018 by 12.6 years. According to previous estimates made by the WHO[1] (2016) healthy life expectancy indicator equaled 63.5 years (*Fig. 38*). Despite the discrepancy in the indicator released by Rosstat (2019) and by WHO (2016), it should be noted that Russia is way below the countries of Western and Eastern Europe both by life expectancy and by healthy life expectancy. At present, the index calculated by Rosstat is the most reliable of all available.

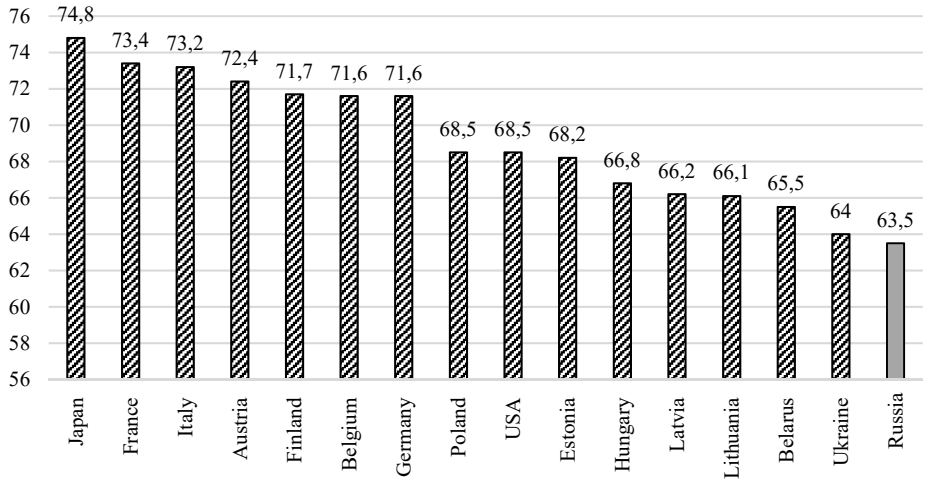


Fig. 38. Healthy life expectancy, 2016 years

Source: WHOO3.

[1]Healthy life expectancy (HALE). URL: http://apps.who.int/gho/data/view.main.HALEXv?lang=en.

The Rosstat data allows to assess the regional divide of healthy life expectancy (*Fig. 39*). The discrepancy between the maximum and the minimum healthy life expectancy rate stood at 18 years in 2019. Republics of Ingushetia (67.2 years), Dagestan (66.2 years), Tatarstan (65.4 years), Chechen Republic (66.1 years), and Moscow (65.1 years) demonstrate the highest healthy life expectancy rates (*Fig. 39).* The minimum healthy life expectancy rate is recorded in Chukotka AD (49 years), Jewish AD (53 years), Orel region, Nenets AD, Briansk region (55.7 years), Sebastopol (55.9 years), Republic of Mari El (56 years), Magadan region (56.1 years), Yamal-Nenets AD (56.5 years), Altai krai (56.8 years), and Pskov region (56.9 years).

Fig. 39. Healthy life expectancy rate, 2019, years

Source: UISIS.

Separately one should note the trend regarding marriages and divorces. According to 2019 data, the number of registered marriages went up by 2.5 percent (22.8 thousand) compared to 2018, and the number of registered divorces contracted by 10.6 percent (-62.8 percent). Crude marriage rate came to 6.3 percent, which is above the 2018 index by 3.3 percent (*Fig. 40*). Divorce rate contracted by 10 percent and in 2019 stood at 3.6 per 1,000 of population. Change in the number of marriages and divorces as in the number of births to a certain extent is also due to demographic wave. To date thin generation born in the 1990s are reaching the proactive marriage and reproductive age, the share of unregistered marriages has been growing too.

Thus, at present Russia's demographic situation is noted by the ongoing natural population loss. The situation is adversely affected by 2-year contraction of the total number of population. Ongoing significant contraction of the number of births has been driven by a small number of women of reproductive age and changes in birth order rate. High mortality rates and their weak decline is another factor of the natural population loss growth. Spread of the new coronavirus pandemic COVID-2019 globally and in Russia creates an emergency situation for the public health system, which can also tell on the morbidity and mortality rates.

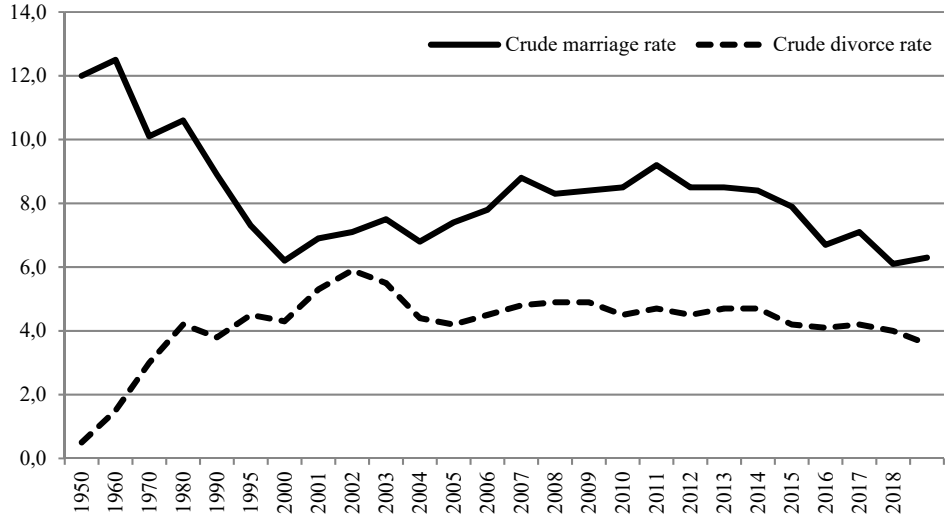


Fig. 40. Crude marriage and divorce rates, 1950–2019, per 1,000 persons

Source: Rosstat.

5.7. The main issues of the state policy in education in 2019[1]

In 2019, the implementation of the "Education" national project began in the education sector. If in 2012–2018 the state policy's main objective was to raise wages of teaching employees, now within the next six years it is necessary to carry out ten federal projects – included in the specified national project – which set the lines of the long-term development of this sector.

The second issue which attracted considerable public attention and gave rise to fierce debates is the adoption of new federal state educational standards (hereinafter FSES) of the elementary, basic and general secondary education. The advocates of new standards regard them as a guarantee facilitating the cohesion of Russia's educational space, while the opponents, as a return to the Soviet school with its overregulation and a denial of all achievements made in the Russian education in the past 30 years.

The third issue which is widely discussed in the education sector is the "regulatory guillotine", that is, clearing the regulatory and legal environment of excessive regulation and supervision in respect of educational establishments' activities.

The fourth issue is the development of the Russian education system in 2020 amid the outbreak of the coronavirus.

5.7.1. The "Education" National Project

The "Education" national project started to be formed in summer 2019 after Executive Order No.204 of the President of the Russian Federation "On National Goals and Strategic Objectives of the Development of the Russian Federation in the Period till 2024" was issued. As national goals for the education system, the following objectives were set:

[1] This Section was written by *Klyachko T.L.,* Doctor of science (Economics), Director of the Center for Continuing Education Economics, IAES, RANEPA.

– Facilitation of global competitiveness of the Russian education, entering by the Russian Federation the rating of the world's top ten countries as regards the standard of education;
– Upbringing of a harmoniously developed and socially responsible personality on the basis of moral and spiritual values of peoples of the Russian Federation and historic, national and cultural traditions.

To achieve the specified objectives, within the frameworks of the "Education" national project ten federal projects worth RUB 784.5 billion for the term of six years were formed. The volume of financing of each federal project and its share in the overall volume of funds allocated to the specified national project are presented in *Table 5*.

Table 5

The volume of funding of federal projects within the framework of the "Education" national project

	Federal project	Volume of funding, billion RUB	Share in overall volume of allocated funds, %
1	Modern School	295.1	37.6
2	Success of Each Child	80.5	10.3
3	Support of Families with Children	8.6	1.1
4	Digital Education Environment	79.8	10.2
5	Teacher of Future	15.4	2.0
6	Young Professionals	156.2	19.9
7	New Opportunities for Each Person	9.2	1.2
8	Social Activity	27.3	3.5
9	Exports of Education	107.5	13.6
10	Social Lifts	4.4	0.6

Source: own calculations based on the data of the "Education" national project: URL: https://edu.gov.ru/national-project/

So, the main funds of the "Education" national project were invested in three federal projects – "Modern School", "Young Professionals" and "Exports of Education" – on which 71.1 percent of all allocated funds will be spent, while with two more federal projects – "Success of Each Child" and "Digital Education Environment" – taken into account, it will amount to 91.6 percent. Thus, it is expected to spend the mere 8.4 percent of the funds on the other half of federal projects.

Such a pattern of funding of federal projects highlights the main line of utilization of allocated funds, that is, the development of the infrastructure of the education system, namely:
– Creation of new places at schools (building and modernization of school buildings) to liquidate the third shift and reduce the share of students of the second shift;
– Formation of conditions for the development of extended education for children and the youth (the "Quantorium" children's technology parks, the "Talent and Success" educational centers, rural schools' playgrounds and other);
– Establishment of centers for advanced professional training in the system of the secondary vocational training and equipment thereof with modern facilities;
– Building of hostels for foreign students and students from other cities.

The "Education" national project's orientation mainly on the development of the infrastructure can be justified, on one side, by the general orientation of all national projects on this goal, while, on the other side, by the fact that educational establishments experience acute shortages of funds to develop their material and technical base. Thanks to the efforts taken in the past six years to raise teachers' wages, at present they account for 75-80 percent and sometimes even 85 percent of the budgets of preschool, general and secondary vocational training establishments. With public utility payments taken into account, educational

establishments financed out of regional and municipal budgets lack funds for other needs. Further, most of them do not virtually have any possibility to attract extra-budgetary resources. With few exceptions, regions are not able to finance the required development of the educational infrastructure because they have not been relieved from the duties to support wages of social services workers at the fixed level, thought the interest to this issue has waned somewhat.

Accordingly, the federal budget has actually taken upon itself the required modernization of the material, technical and information base without participation of the regional education systems through the implementation of the "Education' national project.

To what extent is it feasible to achieve this goal? With teachers' average pay increased, teachers' wages have become much more diversified both across and inside the regions. At the same time, according to the Monitoring of School Efficiency (which has been carried out on a regular basis by the Center for Permanent Education Economics IAES RANEPA since 2013) two-thirds of school teachers did not even notice any pay rise, which situation on the backdrop of the official data on wage hikes leads to growth in social tensions in this sector.

Another negative factor, which emerged last year, is related to the fact that parents who in 2013-2015 started to regard teachers as representatives of the middle class after many years of attributing them to low-income people on the basis of the mass media's reports about teachers' low wages started to reduce again the estimate of the latter's social status. As a consequence, a teacher is regarded almost everywhere as a "loser" and the society believes that such teachers will not able to educate a successful person of the future.

Also, the worsening of schools' material and technical base has become a serious problem in the past few years. If the population at large is unsatisfied with the general education system[1], parents specifically believe that the school where their child (children) goes to is quite all right and meets its obligations. There are 84–86 percent of such parents depending on the region or populated area. However, the conditions in which children study arouse more and more criticism. According to the survey carried out by the All-Russian Public Opinion Research Center (VCIOM) [2], over 32 percent of parents point to the poor state of schools' material and technical base and a lack of renovation for a long period of time, which factors cannot, but affect children. At the same time, the Monitoring of School Efficiency did not identify such high discontent (*Fig. 41*).

As seen from *Fig. 41*, across three regions where the Monitoring was carried out the technical equipment of schools – 21.7 percent (the Pskov Region which is a highly subsidized subject of the Russian Federation) and the condition of school buildings – 10.8 percent (the Samara Region which is a donor region) accounted for the highest degree of parents' discontent.[3] At the same time, most parents (35–40 percent) are "more likely satisfied" with the state of school premises and technical equipment of schools (45–48 percent). In other words, they are not satisfied with everything as regards educational establishments' material and technical base.

[1] According to the data of various opinion polls, up to 38 percent of respondents say that there are more problems in the general education system. See, for example, URL: https://wciom.ru/index.php?id=236&uid=9874.
[2] URL: https://wciom.ru/index.php?id=236&uid=9874.
[3] The Monitoring of School Efficiency of the Center for Permanent Education Economics, IAES RANEPA includes regions which differ by the social and economic situation and are representative of the aggregate of Russia's regions.

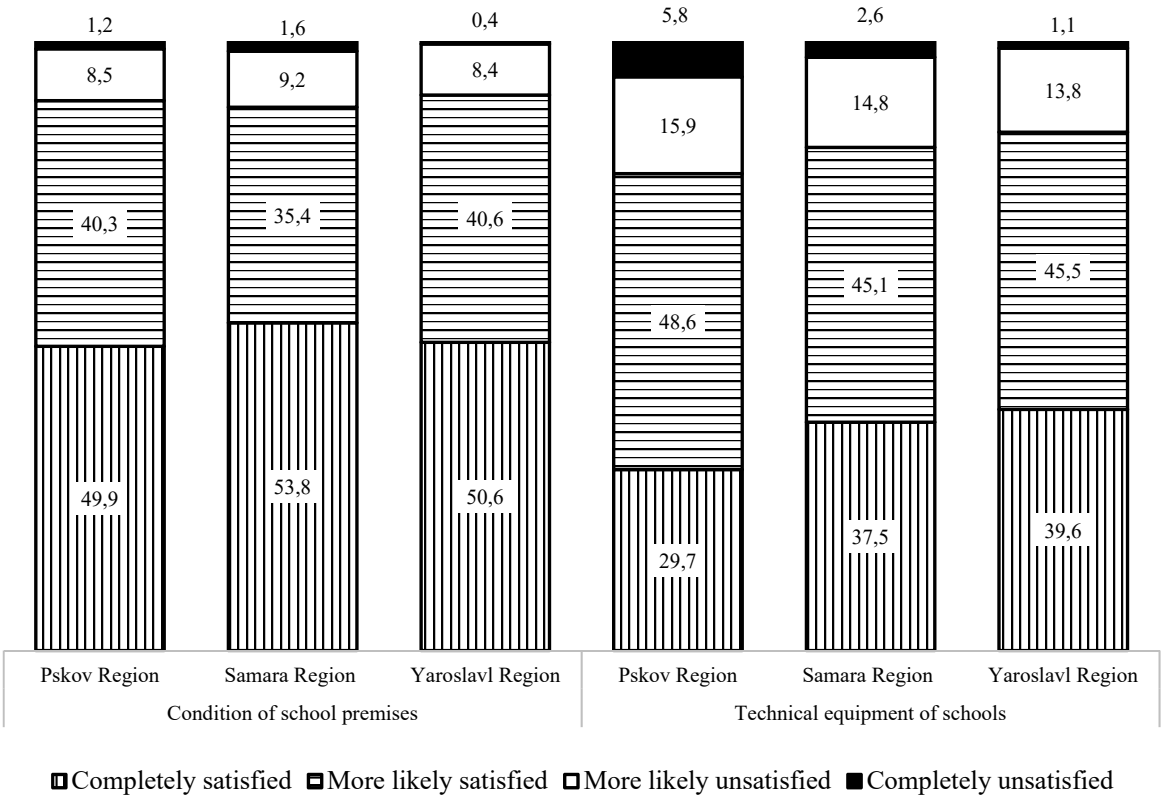


Fig. 41. Parents' satisfaction with the material and technical base of the school, which their child goes to, %

Source: The Monitoring of School Efficiency of the Center for Permanent Education Economics, IAES RANEPA.

As a result, in 2019 the issues related to the worsening of the learning environment took the forefront, having left behind even parents' discontent with a lack of subject teachers at some school (*Fig. 42*).

Generally, a lack of teachers is more typical of rural schools; to solve this problem, one teacher has to conduct classes in different subjects. However, the discontent with staffing of schools with teachers is more explicit in regional capitals and cities where 12.5–12.4 percent of parents are "completely or more likely dissatisfied", against 11.8 percent in rural areas (as you can see the difference is not very big). However, the problems related to shortage of teachers become more acute and soon are likely come to the top of agenda. According to our calculations, schools need minimum 250,000 teachers, which situation creates a serious overburden for the existing staff.

At present, regions started to conduct on-line learning because of a lack of teachers in schools with relatively high-speed internet. The tasks of the Digital Education Environment federal project include the digitalization of education, introduction of new digital education technologies and connection of all schools to the high-speed internet; the work on these lines is being actively carried out at schools. However, the utilization of new technologies is sometimes urgently required by virtue of the existing shortage of teachers.

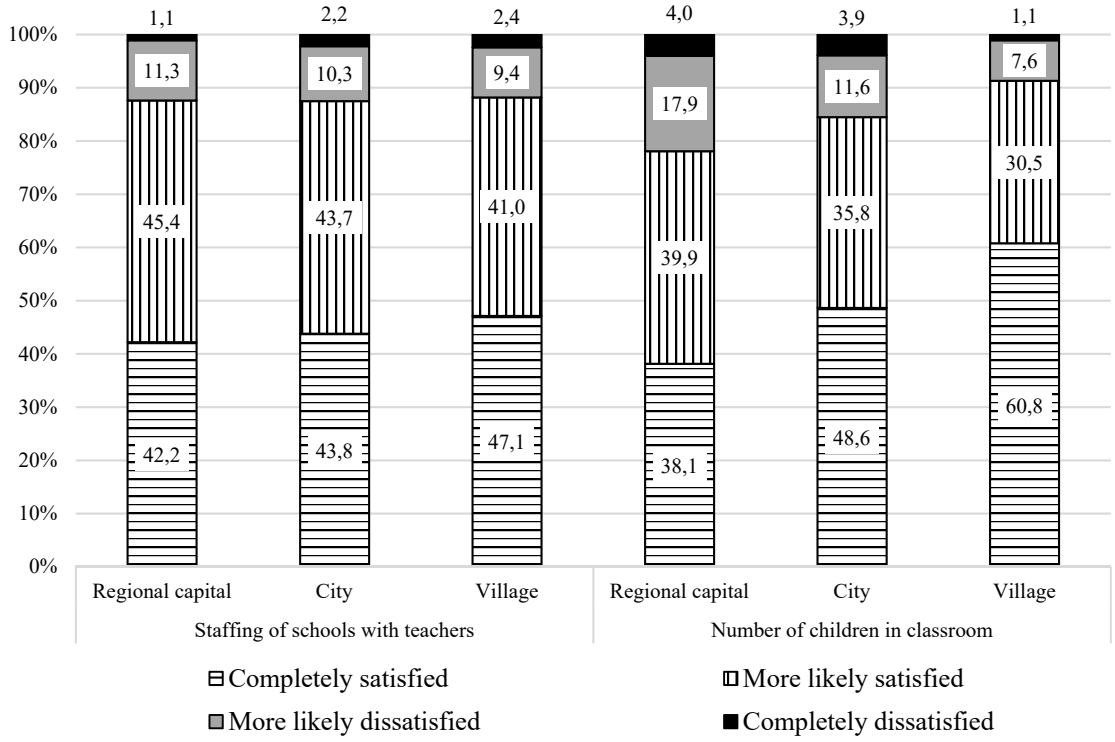


Fig. 42. Parents' satisfaction with staffing of schools where their children study with teachers, %

Source: The Monitoring of School Efficiency of the Center for Permanent Education Economics, IAES RANEPA.

Overall, the "Education" national project deals with a limited range of issues and, in our view, it can be explained by the fact that its implementation, generally speaking, is stalled because the essential problems of the education system are getting worse.

It is worthwhile to mention another important thing which results from the distribution of budget funds across federal projects included in the "Education" national project. Despite all talks about the importance of the human capital, the education management system is aimed at building up the physical capital of this sector, while it pays less attention to the human capital. The "Teacher of the Future" federal project accounts for the mere 2 percent of the total volume of this national project's expenditures (see *Table 5*). At the same time, the human capital and development of this country depend a lot on the standard of the teaching staff (attention is mainly paid to its number).

This relates to the development of vocational education and training in Russia, too. In the "Young Professionals" federal project, an emphasis is made on the development in the Russian Federation of WorldSkills technologies which are used in developed countries in training of the personnel. Russia, which used to lag behind in WorldSkills global championships from competitor-countries, has advanced to the leading positions in the past few years. However, it does not mean that everything is all right in the system of secondary vocational education (hereinafter, SVE) which deals with training of workers. Russia is likely to have switched over as usual to the training of a small number of students who can perform well, while the rest of the SVE system is plunging into a serious crisis. In SVE, the number of students is rapidly growing; in numerous regions after completion of year nine at school over 50 percent of pupils

go the SVE system (*Fig. 43*). At the same time, its funding does not grow, while technical and technological equipment becomes obsolete. The teaching personnel is getting older, too (particularly, vocational training foremen), which makes it infeasible in principle for SVE institutions to prepare innovative workers and mid-tier employees.

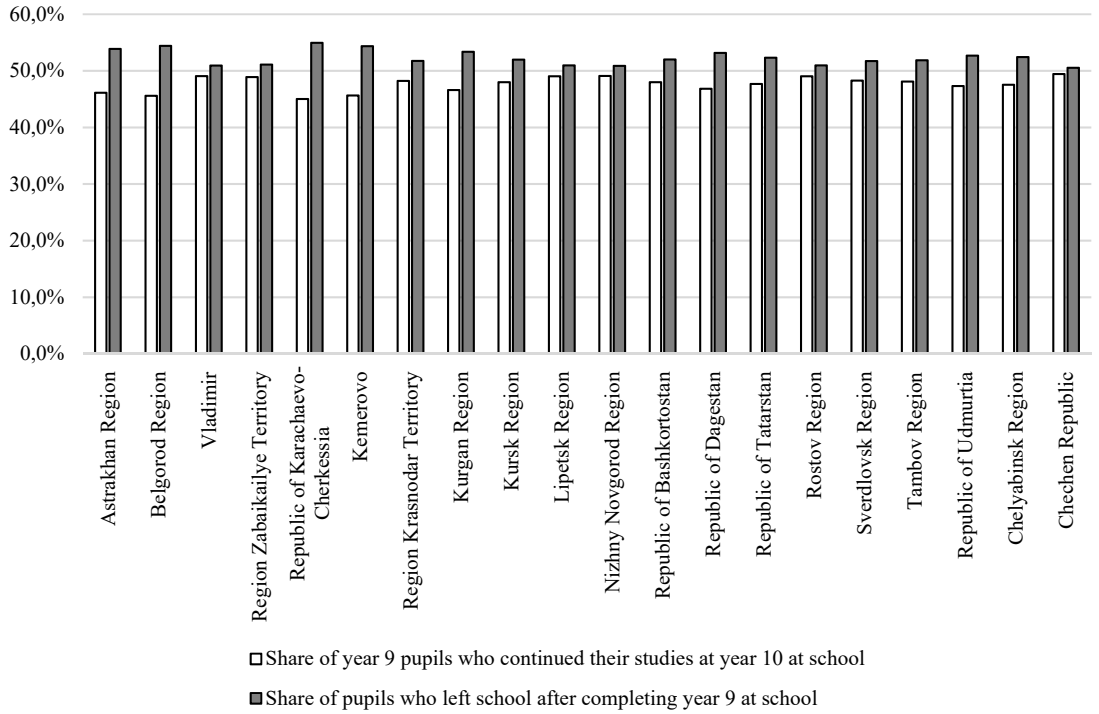


Fig. 43. Subjects of the Russian Federation where over 50 percent of pupils go to SVE institutions after completing year nine at school, 2018, %

Source: calculations based on the data of the RF Ministry of Education. URL: https://edu.gov.ru/activity/statistics/

In 2018,[1] in Russia one SVE student accounted on average for RUB 83,700, while one student of a higher education establishment, for RUB 135,200.[2] With taking into account the practice-oriented nature of training personnel in the SVE system, such funds are not enough. Consequently, SVE institutions differentiate into those which provide more or less the required standard of training and those where this standard is rather low. As a result, employers' attitude to the SVE system is getting worse. First, regional authorities try to make business predict their need in personnel and then employ the trained workforce; second, SVE institutions switch over mainly to training of mid-tier employees specializing in accounting, design and other, which does not require a modern technical base. This situation prompted regional authorities to obligate employers to hand over to colleges and secondary technical schools modern equipment so that the latter could train personnel and, in addition, produce goods on orders of the business to compensate the latter's costs on purchasing of the equipment. The business is unlikely to agree on it because modern equipment is quite expensive and it is also needed to train first those

[1]As of the date of preparation of this section, the official data on administration of the 2019 consolidated budget were unavailable.
[2] Calculated on the basis of the data of the RF Federal Treasury and the Rosstat.

who will teach students. Again, it is quite a large sum of money, which employers cannot take without detriment to their own economic activity.

As regards the higher education, the "Young Professionals" federal project (a "Global Competitiveness of Higher Education" subproject) actually tries to expand somewhat the well-established practice of the 5/100 project where universities receive substantial funding to enter the global institutional ratings. If earlier it was required that minimum five Russian universities should enter the top-100, at present the goal is reduced to enter the top-500 and increase the presence in subject ratings. The number of higher education establishments involved in this task is expected to be increased from 21 universities which have already participated in the 5/100 project to 30 universities and it is likely that a small rotation of participants which jointed the project earlier will take place.

The above-listed measures permit, on one side, to finance out of the budget those higher education establishments (or at least most of them) which entered the5/100 project in the previous years, while, on the other side, increase somewhat their number in order to give some impetus to the project. The risk related to this approach consists in the fact that in the system of vocational training the "elite sport" will prevail over the orderly promotion of the standard of personnel training.

5.7.2. The new FSES in general education

In 2019, the issue of new federal state education standards has become very topical. A portion of the pedagogical community and those experts who developed the previous FSES insisted that schools should be orientated at developing metasubject competences, which were regarded as competences of the 21th century, that is, creativity, critical thinking, interpersonal skills and teamwork (ability to work in a team). In addition, it is important to teach children and teen-agers to work independently, look for the required information and systemize it. The emphasis is made on the design work which can be done both individually (each student works on his/her own project) and in groups in case a team works on the project.

This approach is based on the perception that in the modern world the specific knowledge becomes very quickly outdated, so it is necessary to orient students at something which is nontemporal. In addition, amid the growing information flow it is necessary to teach students to orientate themselves and find the data they need.

The other portion of the pedagogical community and experts believed that it was important to give students the domain knowledge because without it the creativity and critical thinking had no foundation to rely on and such an approach would lead to negative consequences where a new generation of young people without proper knowledge on the subject would be ready to discuss and modify it.

Actually, this dispute stems from the correlation in the modern world of *soft skills* (that is, "flexible" and "soft" skills) and *hard skills* ("hard" and "tough" skills) or a more profound thing, that is, prevalence of socialization and upbringing or professionalism and education. At the same time, both the sides have tried and still try to appeal to employers. According to numerous sociological surveys, the modern employer needs primarily workers with soft skills; for example, graduates of the secondary vocational education institutions lack such skills. At the same time, employers seek to employ a practice-orientated specialist or worker with the specific knowledge and skills which help him/her get integrated into the working process. However, it is ignored that due to rapid technological progress this orientation on practice becomes outdated because permanent retraining is required and, consequently, a worker with

vocational training should have a base, that is, hard skills, a nucleus, which new knowledge is based on. Obviously, in new conditions the worker has to look for the required information singlehandedly. But it is also important for him/her to differ the professional and trustworthy information from the incorrect one. But it is impossible to do that without professional knowledge and skills based on the fundamental education. When they say that children should not be overloaded with information because it is available in Google or Yandex they forget that someone should first receive (get) knowledge and then place the relevant information into modern databases and search engines.

At the same time, the school seems to have stuck between these two approaches: as a consequence students become overloaded because instructors try to cultivate with them as many as possible soft and hard skills simultaneously. Students lose interest in their studies and low-performing pupils fall virtually out of the education process. As was stated above, in the past few years this situation has led to growth in the flow of year nine pupils to vocational training institutions. It is noteworthy that schools oriented at high grades to be received by their pupils at single state exams – the criteria by which schools are regarded successful – try to get rid of low-performing pupils, rather than bring them up at least to the average level of learning. Most teachers of year nine pupils believe that 15–20 percent of their pupils are unable to learn the school curricula. Though this estimate in respect of year ten pupils is lower, teachers say that 5–10 percent of their pupils are unable to study at high school.[1]

As seen from the school efficiency monitoring, in addition to the fact that both parents and teachers would like to see a higher stability of school educational programs they believe that children's interest in learning can be increased primarily by means of modification of the educational content. Note that only 36.6 percent of parents are completely satisfied with the content of school programs, 52 percent are more likely satisfied, while 9.6 percent and 1.8 percent are unsatisfied and completely unsatisfied.[2]

Like parents, most teachers (73.6 percent) and primarily rural school teachers (77 percent) believe that the content of educational programs needs to be changed (*Fig. 44*). This need is pointed out not only by teachers of ordinary schools (74.8 percent), but also those who work at upper secondary schools, lysees and schools with advanced study of subjects (70.1 percent).

The more experience teachers have, the larger number of teachers is in favor of modification of educational programs and fewer teachers doubt the correctness of this answer: 83.5 percent of teachers with minimum 30-year long record of service at schools are confident that the content of subjects, as well as the methods of teaching should be changed.[3]

It is noteworthy that two-thirds of teachers (67.5 percent) believe that instruction based on the utilization of single textbooks is more effective and this approach is supported more widely by rural school teachers (72.9 percent), rather than school teacher in regional capitals (62.1 percent). So, teachers are not ready for variability and innovation: they prefer the uniformity of education programs. Probably, the problem consists in the fact that teachers are overburdened as over 61.3 percent of teachers say that they have to take 1.5 paid positions or even or more.

[1] The Monitoring of School Efficiency. The Center for Permanent Education Economics, IAES RANEPA, November 2018.
[2] The Monitoring of School Efficiency. The Center for Permanent Education Economics, IAES RANEPA, September 2019.
[3] Ibid.

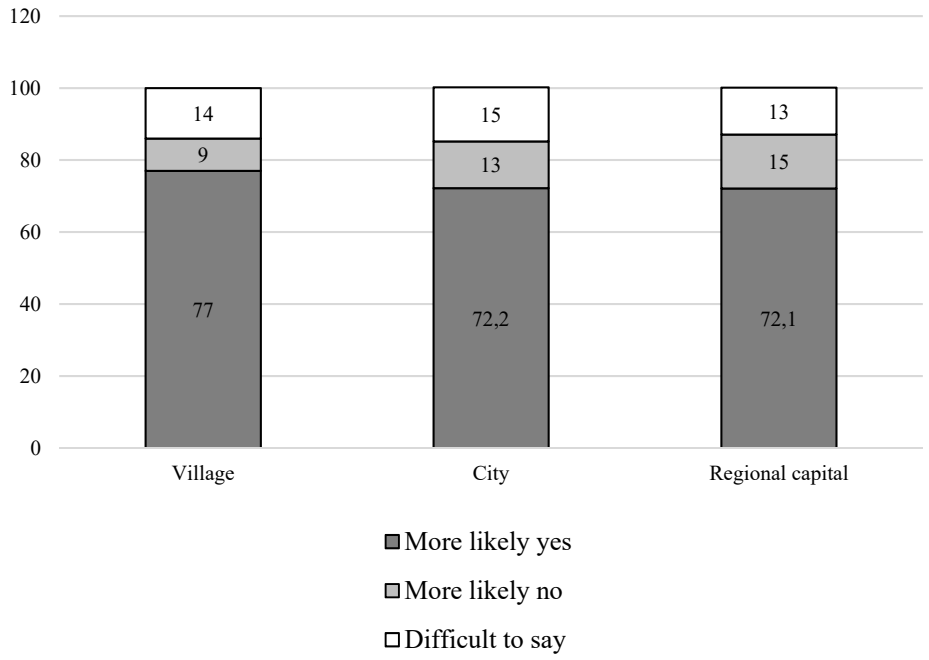


Fig. 44. Teachers' opinion as regards the need to upgrade the content of educational programs; type of settlement, 2019, %

Source: The Monitoring of School Efficiency. The Center for Permanent Education Economics, IAES RANEPA.

In developing the new FSES, the Ministry of Education paid attention in many respects to the collective request both of teachers and parents. After the change of top officials in the Ministry of Education, the issue of FSES is again on the agenda. The problem is not in educational standards alone; despite all efforts to modernize the teaching personnel, the "teacher of the future" represents a teacher of the present or even of the past who is overloaded, among other things, with numerous bureaucratic requirements. For the development (or before the development) of the new FSES, it is important to understand what content the general education should have amid the ongoing technological and social changes. It is believed that with the emphasis made on the fundamental nature of education the younger generation will be able to adapt itself more quickly to the growing "uncertainties of the future."

5.7.3. The "Regulatory Guillotine" and accreditation of higher education institutions

Growth in a bureaucratic burden causes considerable damage to the development of the economy and the society. So, the need to decrease this burden by means of the "regulatory guillotine", that is, to give up the excessive control in all spheres was accepted positively.

In the education sector, growth both in the red tape and burden on teachers prevents this sector from developing properly. The costs which educational establishments encounter at all levels of education are growing constantly, while the standard of training is more likely declining because of growth in supervision.

In the higher education, the issue of reduction of the administrative control has become particularly topical in a situation where the accreditation was withdrawn from two higher education establishments whose standards of training and research were never put into question

by the expert community. Those two institutions were the European University of St. Petersburg (both the accreditation and license were withdrawn from it, but later renewed) and the Moscow School of Social and Economic Sciences – the renowned "Shaninka" (its accreditation[1] was cancelled, but not the license).

However, the problem consists in the fact that the system of state accreditation deals not only with the higher education, but also its other levels and is linked with the FSES; furthermore, the availability of accreditation permits to solve many important issues (for example, in the higher education it is draft exemption, the prospect for a private higher education establishment to receive admission quotas, that is budget funding and other), so the deadlock is quite difficult to untangle.

In principle, the issue of the state accreditation of educational institutions highlights the fact that it is easy to establish a bureaucratic system, but difficult to change it.

The main idea, which is widely debated at present, deals with the shifting of the emphasis from accreditation to licensing of educational institutions. In principle, a higher attention paid to licensing and toughening of regulation thereof is the evidence of the fact that the emphasis in regulation has shifted to the process of admission of new participants to the education system (the education market). However, as before, the licensing procedure applied to state-owned kindergartens, schools, SVE institutions and higher education establishments is not quite clear. As regards municipal educational establishments, the licensing procedure was clear because under the Constitution the municipal level is not included into the system of state authorities and, consequently, may not comply with any state requirements. Municipal educational establishments (like municipal medical institutions, municipal institutions of culture and other) are actually quasi-state institutions: they are established by agreement with regions and funded partially (and often completely) out of regional budgets though budget subventions, subsidies and transfers pass officially through municipal budgets. Eventually, this factor is behind the intension of many subjects of the Russian Federation to make at least all schools be state-owned. Accordingly, the word "establishment" in cases where the state "establishes" a kindergarten, school or higher education establishment" defines more precisely the relations and nature of engagement between the state and a state educational establishment. In this case, granting of a license to a school or higher education establishment is a strange action because the state establishes them for carrying out functions it needs. Also controversial is the practice of accreditation of state educational establishments, that is, granting by the state of a "credit" (credit of trust): the state has already established a state educational establishment, defined its functions, sets objectives to it and finances fulfillment thereof. In this context, it is absolutely unclear what they verify in the process of accreditation: the standard of education or the standard of management of the educational establishment by the appointed state manager, no matter whether he/she is a school principal or rector of the higher education establishment. It seems the standard of management should be meant here and, consequently, the standard of the HR policy of the state in education when this refers to state educational establishments (institutions). However, the objective of accreditation is neither set nor formulated this way.

In case of private educational establishments, both licensing and accreditation have a somewhat different meaning. By issuing a license, the state takes responsibility for fulfillment by the educational establishment of its functions and for this reason verifies whether the private (non-state) founder is able to ensure the required training conditions and has the required

[1] In March 2020 the accreditation was returned. URL: http://obrnadzor.gov.ru/common/upload/ doc_list/ Zakluchenie_oano_vo_Moskovskaya_vysshaya_shkola_sotsialnykh_i_ekonomicheskikh_nauk_1.pdf.

personnel to carry out the declared educational programs, while in the process of accreditation they check whether the educational establishment complies with the requirements set to its activity and personnel.

It is noteworthy that in case of both state (municipal) and private educational establishments the issue of "conversion" of conditions of training (material and technical facilities, information resources and other) and the existing personnel into the proper quality of education remains open. In principle, a larger volume of resources should lead to a higher standard of education (the principle of transition of quantity to quality is widely known), but it does not happen often in reality. According to Mikhail Agranovich, the method of assessment of the condition of the education system based on the volume of costs starts to fail from a certain moment (the level of such costs).[1] So, neither an increase in the share of expenditures on education in GDP, nor a high level of teachers' or professors' wages, or expenditures per school pupil or student of a higher education establishment permit to judge unambiguously about the quality of education and development of the education system. All these factors put into question the idea that growth in the level of control may facilitate growth in the standard of education as much as a decrease in regulatory zeal. The more so, it is not expected to decrease substantially: in 2018 Russia's results which used to grow[2] in the PISA international comparative study declined and Russia may face the prospect of not being included into the top-10 leading countries as regards the standard of general (school) education (one of the goals of implementation of the "Education" national project). This may lead to growth in the number of inspections and audits. At the same time, it will be thought that the regulatory control has been relaxed because regulatory documents and, probably, some laws which were never complied with have been removed from the regulatory environment.

5.7.4. The coronavirus pandemic and the measures applied in the Russian education system: challenges for 2020.

The education systems of virtually all countries around the world faced new serious challenges due to the coronavirus SARS-Cov19 outbreak which started in China late in 2019. The problems which have arisen are not completely comprehended so far; solution are yet to be found by numerous pedagogical, managerial and economic mechanisms. Much will depend on the situation and it is hard to tell which measures are going to be effective. At present, almost all countries around the globe close down kindergartens (pre-school educational institutions), schools, vocational training institutions of pre-higher education level and universities. Overall, nearly 1.5 billion children and the youth do not go to educational establishments because of the quarantine being imposed. Russia is not an exception here. At first, the authorities provided parents with a choice, either to send children to kindergartens and schools or leave them at home, having organized home schooling for them. By virtue of the fact that, parents whose children go to pre-school educational institutions and schools, have to go to work, this choice was almost unambiguous: the children kept visiting schools. According to the mass media's reports, about 2 percent of parents, for example in Moscow, left their children at home, while across Russia the rate was even lower. So, the decision was taken to close pre-school

[1] Agranovich M.L. Resources in Education: Saturation or Oversaturation? //Voprosy Obrazovania (The Issues of Education), 2019. Issue No. 4. p. 254–275.
[2] The data on the results received by Russian 15 year old school pupils became available only late in 2019.

educational institutions, schools and supplementary education facilities, extend holidays for school children and then switch them over to online training.

Similar measures were taken in the systems of vocational education and higher education: SVE institutions, supplementary vocational education institutions and higher education establishments switched over to the online format with a broad utilization of massive open online courses (MOOC). According to the data of the RF Ministry of Education and Science, by the end of March 80 percent of higher education establishments succeeded in switching over to online learning.

The main problems which have already been revealed are as follows:

Except for Moscow, St. Petersburg and a number of other large cities, schools are not prepared for a switchover to online learning; it concerns both teachers and students. The main problem is a lack of the required content and teachers' skills to work with it. In a number of regions (for example, the Kirov Region), some experience has been amassed in this field because due to a lack of subject teachers in rural areas and urban-type settlements the online learning was introduced some time ago for pupils of rural and village schools. However, such measures have not been introduced on a large scale, nor have the quality and efficiency thereof been tested. As was stated above, parents are becoming increasingly discontent with a lack of subject teachers, which factor is the indirect evidence of low efficiency of the current format of online learning. It is also clear that for pupils of the elementary school, particularly year one and year two pupils, it is difficult to organize the online learning without participation of parents. It is likely that teachers will be sending assignments to their pupils by e-mail or put them in electronic diaries (in case such diaries are available) and specify what sections of the textbook pupils should read. In addition, there is evidence of the revival of TV lessens because unlike PCs TV sets can be found in all Russian families.

A switch-over to the online format of training is expected to require a greater involvement of parents into education of their children. The children from the families with a low social and cultural capital where parents cannot help their children are the worst hit. However, these children are in the risk group, anyway. But if in the normal situation, the school could compensate it somehow, it is highly unlikely to achieve it in the online mode.

In the SVE practice-oriented system, the switch-over to the online format of learning entails the risk that the quality of training of the working personnel may decline if the online learning continues for a long time because of the coronavirus pandemic.

In the system of higher education, the loss of quality may be insignificant as students have better skills of individual work than students of other levels of education and with proper consulting work organized by the academic teaching staff in the online mode and active utilization of MOOC, the quality of training is likely to be the same as before or get worse just a little. In this situation, the risk group includes year one students who have not acquired yet the skills of individual work, but this risk in case of organization of webinars can be substantially lower. At the same time, technical equipment of higher education establishments and availability of the required software as well as notebooks or PCs with students at home or a hostel are crucially important at this stage of education.

Higher education establishments may face a serious problem with organization of exams unless the issue of online identification of students is resolved and implementation by students of team projects which have become an important part of the academic activity is made feasible. In addition, the extension of the coronavirus pandemic will put in question higher education establishments' admissions campaigns, including those to the master course and post-graduate

school. Another negative consequence of the pandemic may become the reduction of the number of foreign students at Russian higher education establishments both by virtue of problems related to the organization of admissions of foreign students and by virtue of the outflow of those foreign students who had to leave for their home countries and whose return to Russia under new conditions can be complicated for economic reasons. At the same time, the depreciation of the ruble is likely to have a favorable effect on their inflow to Russia as it happened after the depreciation of the Russian currency in 2014.

What is known for certain is that the arrangement of single state exams (SSE) and basic state exams (BSE) has been postponed, but not for long (just for 1–2 weeks). However, it is not clear how these two exams will be conducted (unless the pandemic subsides completely), nor is it clear in what way the new situation may influence year 9 pupils' and year 11 pupils' (school leavers) choice of their further educational trajectory.

* * *

In 2019, the three issues which prevailed in the public consciousness - national projects, in particular, the "Education" national project, new FSES in general education and the "regulatory guillotine" – highlighted the common dominator of the state education policy, that is, the government cannot facilitate the development of the education system, it can only compensate to regions those costs which the subjects of the Russian Federation incurred before, but which failed to improve substantially the situation in this sector. The issue of adoption of the new FSES in a situation where the system does not evolve, but experiences a growing shortage of resources (particularly, human resources) resembles a "tempest in a teapot": teachers and schools do their job as they can, while parents who studied earlier and at present are appealed for to compensate as much as possible the shortage of teachers (the poor standard of training) by way of participating in education of their children or through hiring of private tutors choose what they know the best and what they are accustomed to. Put simply, neither changes in the FSES, nor the infusion of funds into the obsolete system (to be precise, they are not invested so much), or the "regulatory guillotine" modify anything substantially in education. One should not interfere in the development of strong institutions (there are few of them). As regards the rest of the education system, it will adapt itself within a few months to any system of reporting as it is well aware of the fact that there is nothing to replace it. So, it is only the private sector, which is likely to be affected by the activities of the state, though it is already shrinking at a high rate, anyway.

The coronavirus pandemic has started to change the customary models of education, in particular, it may speed up the development of online modes of learning and the required content. At the same time, for some territories where the high-speed Internet (the provision of the Internet was planned within the framework of the "Digital Educational Environment" national project) is not available yet, the decisions which are currently taken will lead to serious problems both for schools and families, particularly, low-income families where parents have a low educational level.

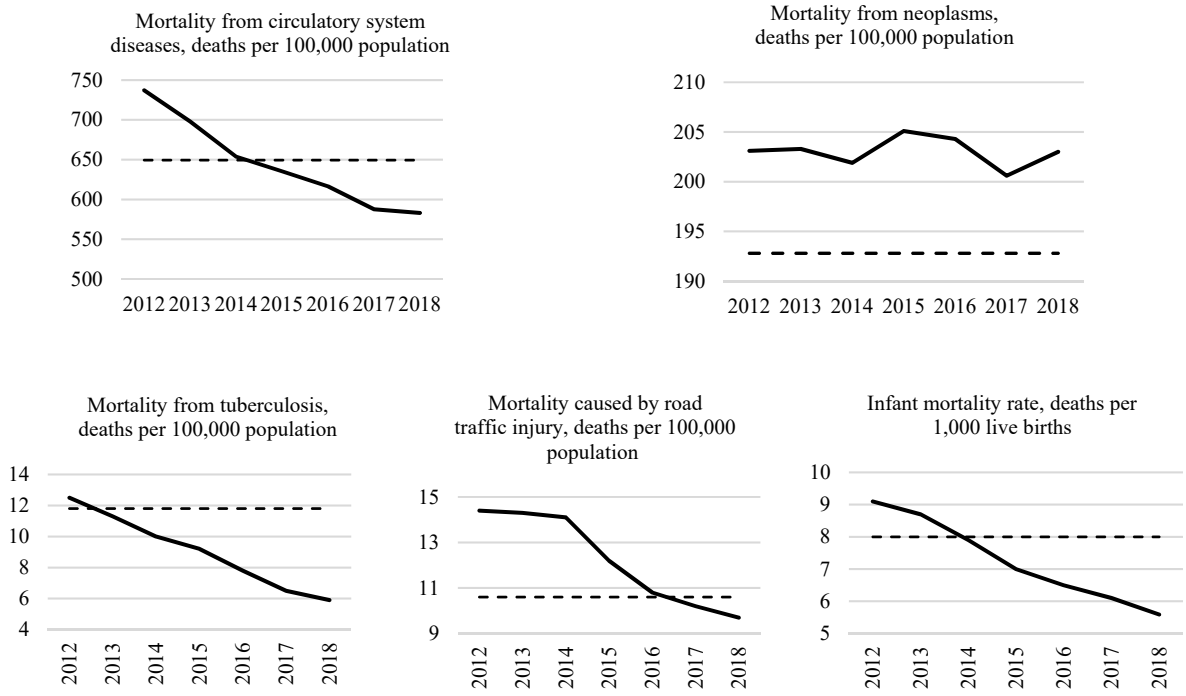
In the vocational training system, the coronavirus pandemic has caused numerous problems, too, particularly, the arrangement of exams and organization of admissions campaigns at higher education establishments.

5.8. The creation of a unified national health system [1]

In many ways, the year 2019 was supposed to be a watershed for Russia's healthcare system. This was the final year of the ambitious six-year program set forth in the May 2012 Executive Orders of the President, to be followed by even more substantial transformations under the new national project 'Healthcare'. Meanwhile, the burgeoning unified national health system was continually evolving, its goal being to provide the entire nation with guaranteed equal rights to medical care.

5.8.1. The outcome of the implementation of the May 2012 executive orders of the President

The majority of targets set in the May Executive Order that addressed the health care system and directly aimed at improving the health of the people, were achieved within the first few years of its implementation. One exception was the neoplasm mortality rate, including deaths from malignant neoplasms, where even a moderate but steady downward trend could not be achieved (*Fig. 45*).



Note. The dotted line indicates the targets for 2018.

Fig. 45. Reduction in mortality from key causes, 2012–2018

[1] This section was written by *Avksentiev N.A.*, Advisor to Director of the FRI of the RF Ministry of Finance, researcher at the INSAP, RANEPA; *Nazarov V. S.*, Candidate of Sciences (Economics), Director of the FRI of the RF Ministry of Finance, Deputy Director of the INSAP, RANEPA, senior researcher at the Center for Macro-Economics and Finance, Gaidar Institute; *Sisigina N.N.,* junior researcher at the FRI of the RF Ministry of Finance, researcher at the INSAP, RANEPA.

The failure to reduce mortality from neoplasms can be explained by both the weakness of the specialized medical service and the objective rise in oncological morbidity alongside the declining rates of mortality from other causes (primarily from diseases of the circulatory system) and the increased life expectancy, which is a characteristic feature of all developed countries. Nevertheless, the lack of positive results in this area probably played a significant role in determining the priorities of the new national project.

The instruction to raise the salaries of medical workers, those of medical doctors to 200%, and those of secondary and junior medical personnel to 100% of the average salary for a given region, turned out to be less successful. According to official data, as of year beginning 2019, the established targets had been achieved, or nearly achieved, by the majority of subjects of the Russian Federation.[1] However, in many cases, these results were not backed by adequate financing and could be achieved only on a temporary basis, by reducing the number of employees[2] and by redistributing in favor of salaries the funds earmarked for some other expenditures.[3] The relaxation of control led to a rapid decline of the salary level below its target. According to our calculations based on the year-end results of 2019, the ratio of medical worker salaries moved beyond the target values (with due regard for the permissible deviation of 5 percentage points):[4]

- according to our estimates, the salaries of medical doctors are lower than 95% of the national economy's average in 11 of 85 subjects of the Russian Federation (in 2018, there were 5 such regions), and a decline in the ratio between the salaries of medical doctors and the average salary for a given region's economy is possible in 60 subjects of the Russian Federation;
- the salaries of secondary medical personnel are lower than 95% of the national economy's average in 2 subjects of the Russian Federation (in 2018, there were no such regions), and a decline in the ratio between the salaries of this category of workers and the average salary for a given region's economy is possible in 57 regions;
- the salaries of junior medical personnel are lower than 95% of the national economy's average in 26 subjects of the Russian Federation (in 2018, this was the case in 4 subjects of the Russian Federation), and a decline in the ratio between the salaries of this category of workers and the average salary for a given region's economy is possible in 75 regions.

An obvious sign of the deteriorating situation were the large-scale protests of medical doctors employed by state hospitals, who were complaining of their unacceptably low salaries. In its turn, the RF Ministry of Health insists that the healthcare sector's resources are sufficient

[1] Results of federal statistical monitoring of the remuneration levels of certain categories of employees in the social sphere and the science sector over January - December 2018. URL: http://www.gks.ru/free_doc/new_site/population/trud/itog_monitor/itog-monitor06-18.html.

[2] *Lopatina, M., Lyashok, V.* Implementation of the May 2012 Executive Orders of the President: the consequences for the public sector // Monitoring of Russia's economic outlook. No 15 (76). P. 19–24.

[3] *Nevinnaya, I.* The salary of doctors amounted to 80% of the budget of medical organizations // The Russian Newspaper. 2017. URL: https://rg.ru/2017/11/10/zarplata-vrachej-sostavila-80-procentov-biudzheta-medicinskih-organizacij.html.

[4] By the time of writing this section, Rosstat had published data on the average salaries of medical doctors, and secondary and junior medical personnel across subjects of the Russian Federation for January – December 2019; the information on the average monthly charged salary of the personnel employed by organizations, individual entrepreneurs, and individuals will become available only by April 15, 2020. The preliminary forecast values were calculated on the basis of the assumption that in each region, the ratio between the salaries of all personnel employed by organizations, individual entrepreneurs, and individuals and the salaries of all employees in all categories of organizations will remain at the level of 2018.

for the declared salary level, and attributes the existing unsatisfactory state of affairs solely to the unsubstantiated differentiation in the levels of remuneration. As a measure designed to eliminate the possibility of violations, a new industry-wide remuneration system has been suggested, which will strictly regulate the structure and size of healthcare worker salaries. During the first phase of reform, which is to be launched in 2020, it is planned to limit the possibilities for salary differentiation by cutting the variable salary component, and to guarantee a minimum salary for the key categories of healthcare workers. According to the estimates released by the RF Ministry of Health, these measures will make it possible to reduce the differences in the salary levels of healthcare workers with comparable labor inputs (position, qualification, standard working hours) from the current ratio of 7–9 times[1] to 1.2–1.3 times, solely by redistributing the available resources inside the system, without any additional financing.[2]

It was suggested that the minimum standard for the guaranteed part of salary could be set at 55% of total salary; from 2015, it was established as the recommended norm.[3] In 2019, in the majority of territories, the guaranteed minimum amounted to 40–50% of salary, in 10 subjects of the Russian Federation it was above 50%, and in 4 regions it was at the level of 20–30%.[4] Simultaneously with the mandatory minimum salary, unified lists of incentives and compensations will be introduced, where the amounts of these payments and the grounds for their assignation will be specified.

To prevent the risk of only a formal salary raise, which could be introduced simultaneously with cuts on incentive payments, it is planned that the guaranteed total amount of earnings should be introduced gradually. The RF Ministry of Health suggests that during the first phase of reform, the ratio between the salaries of key categories of healthcare workers and the national economy's average should be fixed at 170% for primary care medical doctors and narrow medical specialists, at 200% for medical doctors in the emergency care system, at 70% for primary care nurses, and at 120% for paramedics who perform some functions of a medical doctor (in all cases, at a second-job pay rate of 1.2).[5]

The joint implementation of both measures should guarantee to these categories of healthcare workers their minimum and average salary levels. It is expected that this will ensure an acceptable level of income for young and experienced professionals alike. However, the Russian government has already declared that an attempt to establish minimum salary standards for certain categories of healthcare workers can be viewed as discrimination in their remuneration levels, which is prohibited by law. In addition, in its commentary on the relevant

[1] Minister Veronika Skvortsova held a live broadcast with the people. RF Ministry of Health, 2019. URL: https://www.rosminzdrav.ru/news/2019/09/13/12480-ministr-veronika-skvortsova-provela-pryamoy-efir-s-naseleniem.

[2] Meeting on the issues of primary health care modernization. August 20, 2019. URL: http://kremlin.ru/events/president/transcripts/61340.

[3] Uniform guidelines for the introduction, at the federal, regional and local levels, of the systems of remuneration of the employees of state and municipal institutions for 2015 (approved by decision of the Russian tripartite commission for the regulation of social and labor relations, as of December 24, 2014, Minutes No. 11).

[4] Meeting on the issues of primary health care modernization. August 20, 2019. URL: http://kremlin.ru/events/president/transcripts/61340.

[5] Ibid.

draft law, the government pointed out that in order to actually implement this proposal, some additional budget allocations would be required.[1]

Even if a proper solution to these problems should be found, the impact of the new remuneration system on the healthcare sector may be controversial. The imposition of constraints on the size of incentive payments can reduce the motivation of healthcare workers and lead to an outflow of the best-qualified specialists from the public healthcare sector. It appears that a more effective long-run approach would be to create the incentives for head physicians to optimize their healthcare institutions, the necessary condition for such optimization being a strengthened control over the volume and quality of medical care.

5.8.2. The launch of the national project 'Healthcare'

The relative success of the May 2012 package of Executive Orders of the President served as an impetus for the adoption of a new, more extensive healthcare system development program for the next six years. By Executive Order of the President of the Russian Federation No. 204 dated May 7, 2018 'On National Goals and Strategic Objectives of the Russian Federation through to 2024', the healthcare system not only was assigned a new set of mortality reduction targets, but also a number of tasks concerning the transformation of its structure. The national project 'Healthcare' represents the largest investment in the healthcare sector since the regional health modernization programs implemented in 2011–2013. *Fig. 46* shows Russia's current consolidated budget expenditures earmarked for healthcare in real 2020 prices, with due regard for the national project implementation, as well as the initial trend laid down in the main directions of fiscal policy for 2018–2020, which were prepared by the Russian Ministry of Finance in 2017, prior to the announcement of the forthcoming launch of national projects.

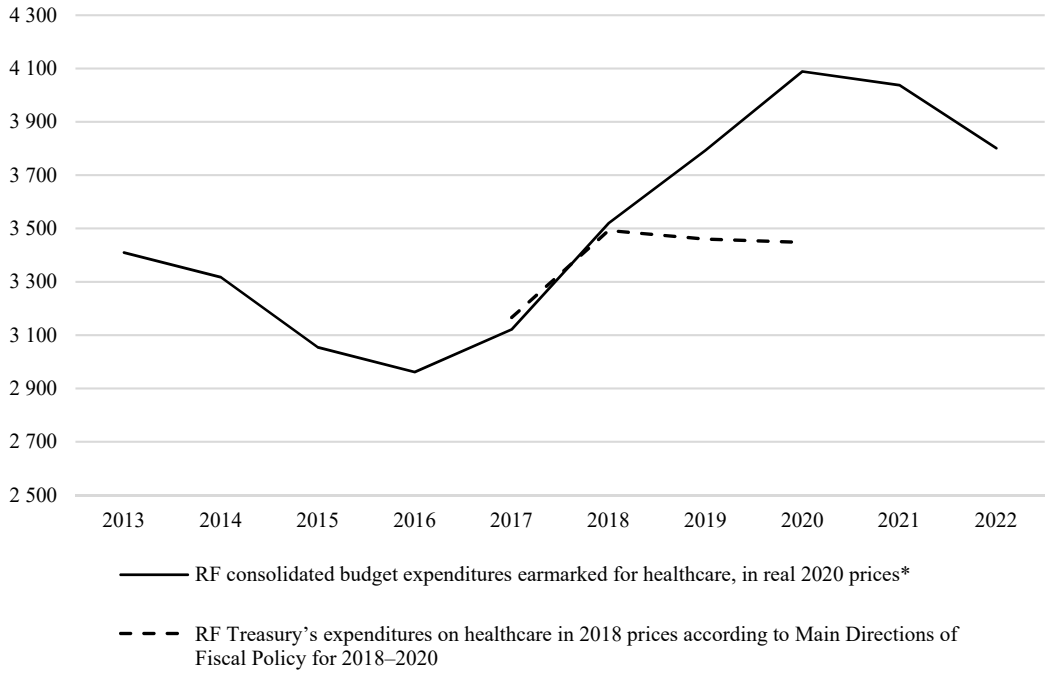
Much of the additional allocations will be earmarked for the fight against cancer – 62% of the total budget projection, including 48.3% for the provision of medical care in accordance with clinical recommendations.[2] The exceptionally high priority given to the oncological service can be explained by the fact that malignant neoplasms represent the only cause of death among the other leading causes of death in regard of which no stable survival statistics improvement could be achieved so far.

The measures that involve altering the medical care tariffs in the field of oncology so as to make them consistent with the actual needs of the oncology branch of the healthcare system can be viewed as a pilot project, and the payment mechanism thus tested can later be implemented in the treatment of other relevant diseases. The previous medical care tariff model based on the actual costs of medical institutions, in spite of some obvious advantages (its simplicity and reliance on easily accessible source data), has two important limitations:

- the actual costs of medical institutions, in fact, depended on the medical care tariffs (it was impossible to spend more money than had actually been allocated);
- the cases with clinical similarities within one diagnosis-related group may vary significantly by the cost of treatment, which was, and still is, determined by the specific therapy administered in each particular case.

[1] Draft Law No 898575-7 'On the introduction of amendments to the Labor Code of the Russian Federation in the part of establishing the minimum salary for certain categories of medical personnel'.

[2] Certificate of the National Project 'Healthcare', approved by the Presidential Council for Strategic Development and National Projects (Protocol No 16 dated December 24, 2018); Certificate of the Federal Project 'The Combat against Oncological Diseases' (approved in the summary record of the meeting of the Project Committee on the National Project 'Healthcare' No 3 dated December 14, 2018).



* Prior to 2018 – the graph is based on data released by the RF Treasury, adjusted by the established medical insurance contribution coefficients for non-working population; for the period 2019–2022, it is based on data provided in the Main Directions of the Budget, Tax and Customs Tariff Policy for 2020–2022.
** Adjusted by the established medical insurance contribution coefficients for non-working population.

Fig. 46. The RF consolidated budget expenditures earmarked for healthcare, 2013–2022, billions of rubles

Source: own calculations based on data released by the RF Treasury[1], and on data provided in the Main Directions of the Budget, Tax and Customs Tariff Policy for 2018–2020[2] and the period 2020–2022[3] and in the draft law on the budget of the Federal Compulsory Medical Insurance Fund for the period 2018–2020.[4]

From 2018 onwards, the cost-effectiveness coefficients for the provision of medical care for malignant neoplasms, which determine the tariffs applied in the system of clinical statistical groups (CSG), are calculated with due regard for the actual cost of medical therapy regimens administered in accordance with the national clinical recommendations. In 2018, 3 medical therapy cost levels were established for day hospital care and inpatient care regimens; from 2019, 10 medical therapy cost levels were introduced. The payment is bound to the specific medication administered in each case, and its amount depends on the cost of the medication. Ultimately, this approach makes more accessible for patients the effective medical therapy methods prescribed in the latest clinical recommendations.

[1] RF Treasury. Execution of budgets. URL: http://www.roskazna.ru/ispolnenie-byudzhetov/.
[2] Main Directions of the Budget, Tax and Customs Tariff Policy for 2018 and the planning period 2019-2020. URL: https://www.minfin.ru/common/upload/library/2017/10/main/ONBNTTP_2018–2020.docx.
[3] Main Directions of the Budget, Tax and Customs Tariff Policy for 2020 and the planning period 2021-2022. URL: http://www.roskazna.ru/ispolnenie-byudzhetov/https://www.minfin.ru/common/upload/library/2019/10/main/ONBNiTTP_2020–2022.pdf.
[4] Explanatory note to draft law No 274620-7 'On the budget of the Federal Compulsory Medical Insurance Fund for 2018 and the planning period 2019-2020'. URL: http://sozd.duma.gov.ru/download/D6AD2F89-22D6-4E08-A7E5-EE37491BABDB.

The possibility of extending the practice of tariff-setting based on clinical recommendations to other groups of diseases and medical conditions, as well as to other categories of costs (for example, the equipment necessary for diagnosing and treating some specific diseases in accordance with clinical recommendations) is stipulated in Executive Order of the President No. 204; however, at present its actual implementation is constrained by the following two factors:

- the absence, or low quality, of the existing clinical recommendations for the majority of diseases. Some active efforts to update the clinical recommendations were launched in 2019, after the RF Ministry of Health approved the requirements for their elaboration. It is planned that by 2022, state-of-the-art clinical recommendations will be introduced for all the major nosologies;
- the insufficient financial backing for the established state guarantees. The introduction of new approaches with regard to medical therapy for malignant neoplasms (other than lymphoid and hematopoietic tissue neoplasms) alone required an additional allocation of RUB 70 billion in 2019, RUB 120 billion in 2020, and RUB 140 billion in 2021. It is obvious that in order to apply these practices to other diseases and other categories of costs, even more money will be required.

When assessing the intermediate results of the national project, it should be borne in mind that, as far as most of its directions were concerned, the first year of its implementation was fully or in part spent only on the organizational and methodological activities. By referring to this fact, we can to a certain extent explain why 3 out of the national project's 4 key targets set for 2019 (reduction of the working-age population mortality, mortality from circulatory system diseases, and mortality from neoplasms) were not met (according to preliminary data released by the RF Ministry of Health).[1] At the same time, the failure to meet the intermediate targets may indicate that the healthcare system is not ready for dealing with the complex problems requiring complex intervention.

5.8.3. Centralization of the system of state guarantees

The initially introduced decentralized model of state guarantees, which delegates to the subjects of the Russian Federation broad powers to independently regulate the set of medical care services to be covered by compulsory medical insurance and their financing, has been increasingly the target of criticism over recent years. The main source of dissatisfaction has been the varying quality and accessibility of medical care services across the subjects of the Russian Federation, as well as in the prices for medical services, with little justification for such differences.

In spite of the existence of federal recommendations concerning the most controversial issues, the RF Ministry of Health, until recently, has had no opportunity to influence the decisions made by the subjects of the Russian Federation, whenever these ran contrary to the established standards. In 2018, the key element of the future unified model was established, i.e., the mandatory clinical recommendations, on the basis of which the RF Ministry of Health could now introduce its general requirements to the quality of medical services.[2] In 2019, the model

[1] RF Ministry of Health: eight targets of the national project 'Healthcare' were achieved in 2019 // Future Russia. 2019. URL: https://futurerussia.gov.ru/nacionalnye-proekty/minzdrav-vosem-pokazatelej-nacproekta-zdravoohranenie-dostignuty-v-2019-godu.

[2] Federal Law No 323-FZ dated November 21, 2011 'On the fundamental principles of protecting of the health of citizens in the Russian Federation'.

was further centralized, in the part of regulating the financial support of the territorial programs for the implementation of state guarantees.

The most important new mechanism introduced in the compulsory medical insurance system was the mandatory coordination with the Federal Compulsory Medical Insurance (CMI) Fund of the tariff agreements concluded by the subjects of the Russian Federation.[1] The regions do not have the right to approve a tariff agreement without receiving a prior confirmation thereof from the Federal CMI Fund. The latter, thanks to this mechanism, can now control all the attempts to apply the methods of payment for medical care services that have not been properly coordinated, as well as the instances of some unreasonably low or high tariffs being set. From 2021 onwards, legal liability will be established for the failure, on the part of relevant legal entities, to comply with the requirements for proper coordination of tariff agreements; however, the prospects for this norm being actually applied have become dubious after the draft law on administrative responsibility in the healthcare sector was voted down.

By way of protecting the coordinated amount of financial support, attempts have been made to reduce the cost overruns in cases when medical care is provided in excess of the planned volumes. The new CMI rules impose restrictions on the right of medical institutions to submit their registers of accounts to medical insurance organizations (hereinafter – MIOs), which now should be reduced to the volume of medical care assigned to a given medical institution by the Commission for the development of the territorial CMI program. In its turn, medical institutions and MIOs are obliged to appeal to the Commission whenever they identify a possible instance of medical services being delivered in excess of the planned medical care volume, so that its volume could be redistributed. The Commission's powers to redistribute the volume of medical care over the course of one year have been fully legalized, and have become one of its principal functions. The requirements to the allocation to a MIO of funding to cover the excess medical care costs from the insurance reserves held by the territorial funds, for which specific norms are established, have been toughened, and they now require that a general detailed report on the use of funds during the said year should be submitted.[2]

Nevertheless, the said provisions are by no means new in terms of their fundamental principles, and it is unlikely that they can prevent all the instances of overspending in excess of the planned volume. The norm whereby the coverage of medical care costs should be limited to the planned volume of funding was already stipulated in the Federal Law 'On compulsory medical insurance', but it is not recognized by judicial practice.

Alongside all these financial issues, the new CMI Rules also regulate the powers of MIOs and commissions. The MIOs have been delegated the responsibilities of providing insured individuals with information support and exercising additional control over certain types of medical care (the provision of medical care to patients with confirmed or suspected oncological diseases, the keeping of dispensary records, routine medical examinations, hospitalizations, telemedicine consultations). The new responsibilities are consistent with the general strategy of transforming MIOs into administrative control subjects that are not allowed to exercise any independent powers to finance the medical care system. Nevertheless, even in this form, MIOs retain the important role of a professional participant in the healthcare system, which acts independently of the State.

[1] Federal Law No 437-FZ dated November 28, 2018 'On introducing alterations into the Federal Law 'On compulsory health insurance in the Russian Federation''.
[2] Order of the RF Ministry of Health No 108n dated February 28, 2019 'On approving the Compulsory Medical Insurance Rules'.

As far as the activity of commissions is concerned, some new requirements have been established that address their functions of planning and distributing the assigned medical care volumes, including the responsibility to review the information submitted by the healthcare authorities concerning the current needs for medical care, to apply the established set of criteria when distributing the assigned medical care volumes, and to publish the final medical care distribution schedule. Taken together, these measures increase the transparency of medical care distribution and reduce the risk of subjective decision-making, but do not completely rule out that risk.

Simultaneously with the new MHI Rules, some other documents have been adopted that regulate the activities of healthcare system subjects in some other areas. In particular, a mandatory minimum of requirements was established for medical organizations that has to do with the organization and conduct of internal control of the quality and safety of their medical activities; previously, in half of the medical institutions, such quality and safety control procedures were either non-existent or dysfunctional.[1]

For a long time, the budget-funded component of the territorial state guarantees programs has remained an exclusive responsibility of subjects of the Russian Federation. In 2017, a deficit in the budget-funded component of the territorial state guarantees programs was observed in 62 regions; in 2018, in more than 40 regions. In 2019, the formation and approval of deficit-free territorial programs was established as a mandatory requirement for receiving transfers from the federal budget to fund the implementation of regional primary health care modernization programs.[2] In early 2020, that norm was relaxed, and it was allowed to provide the funding on condition that the subject of the Russian Federation should approve the schedule for eliminating the existing financial deficit.[3] As of January 1, 2020, the territorial programs with a deficit in their budget component were approved in 28 subjects of the Russian Federation.[4]

The toughening of requirements for the provision of medical care should have been followed by the introduction of no less stringent administrative responsibility for non-compliance with those requirements. The draft amendments to the Code of Administrative Offenses envisaged the imposition of large fines on medical organizations and their employees for violating the requirements established by legislation in the field of healthcare, including non-compliance with the established procedures for the provision of medical care, medical expert's estimations, and violation of citizen rights in the field of health protection.[5] The penalties included fines of up to RUB 40,000 for individuals, and fines of up to RUB 500,000 and temporary suspension of activities for legal entities.

The sizable fines were one of the reasons for the rejection of the draft law by the State Duma. For state medical organizations, which do not provide paid medical services, or provide them

[1] Internal control remains a weak spot in many medical organizations // Medical Herald. 2017. URL: https://medvestnik.ru/content/news/Vnutrennii-kontrol-ostaetsya-uyazvimym-mestom-medorganizacii.html.

[2] Decree of the RF Government No 1304 dated October 9, 2019 'On approving the principles of primary health care modernization in the Russian Federation.'

[3] Decree of the RF Government No 72 dated February 3, 2020 'On the introduction of alterations into Decree of the RF Government No 1304 dated October 9, 2019.'

[4] *Kamaev D.* In 28 regions, the territorial state guarantees programs were adopted with a deficit // Vademecum. 2020. URL: https://vademec.ru/news/2020/02/28/defitsit-po-terprogrammam-gosgarantiy-imeyut-28-regionov/.

[5] Draft Federal Law No 1093620-6 'On the introduction of alterations into the Code of Administrative Offenses of the Russian Federation in the part of improving administrative responsibility provisions in the field of healthcare'. URL: https://sozd.duma.gov.ru/bill/1093620-6.

only on a small scale, the payment of fines in the amount suggested in the draft law could have translated into a shortage of funding to cover the costs of their core activities. Another unresolved legal problem that arose in connection with the proposed amendments was the poorly substantiated transfer of legal liability: from the empowered healthcare authorities to medical organizations, for their failure to properly comply with the established procedures for providing medical care; and from medical organizations (legal entities) to their employees (individuals), for violations of citizen rights in the field of healthcare. The second draft law that was elaborated at the same time by the RF Ministry of Health, on the introduction of administrative responsibility for the officials representing the bodies of authority in the public healthcare sector and medical organizations for their failure to create proper conditions for the provision of high-quality accessible medical care, was criticized along similar lines during the phase of its public discussion, and so it was not submitted to the State Duma.[1]

And finally, one more attempt to centralize the healthcare management system was the introduction, from January 1, 2019, of a new procedure for determining the initial contract price cap (ICPC), based on the so-called reference price (the weighted average purchase price over the past 12 months). It was assumed that this would lead to more equitable pricing, because previously that there had often been instances when one and the same pharmaceutical was purchased by neighboring regions at different prices over the course of one year. However, the introduction of new requirements for the formation of ICPC produced the situation where, in the framework of the government purchases, the price cap frequently was set below the economically feasible level, because the previously reduced price applied as the benchmark was set relative to the supplies of pharmaceuticals that were approaching their expiration dates, or could be explained by the special preferential conditions offered by the manufacturers to certain buyers, etc. As a result, a significant number of planned pharmaceutical procurement deals in 2019 did not take place due to lack of offers, which led to significant delays in the supply of pharmaceuticals and the impossibility of their timely delivery both to outpatients and to hospitals.

* * *

The most important outcome of the year 2019 was the approval of new components of the unified national healthcare system: the new requirements to clinical recommendations and the pilot study of the mechanism for their use in tariff-setting (so far, only in the medical treatment of oncological diseases); the introduction of mandatory coordination of CMI tariff agreements with the Federal CMI Fund and a tougher regulation of medical care delivery in excess of its planned volume; and stronger regulation of the activities of the key subjects of the CMI system. It should be noted that most of these changes have been pushing the existing healthcare system still farther away from the classical medical insurance principles, which were originally laid down when the CMI model was considered to be the best choice for this country. Federal regulation has been switching over to an increasingly detailed control of the performance of medical institutions,

[1] Draft Federal Law 'On the introduction of alterations into the Code of Administrative Offenses of the Russian Federation in the part of establishing administrative responsibility for a failure to create proper conditions for ensuring medical care quality and accessibility (prepared by the RF Ministry of Health, Project ID 02/04/02-19/00088338).

which to a certain extent can protect the system from direct violations of citizen rights, while at the same time preventing it from upgrading its performance level.

It is expected that next year, a sector-specific remuneration system will be introduced as part of regulation of the financial backing of state guarantees;[1] and a pilot program of the supply of pharmaceuticals to the outpatients being followed after an acute altered cerebral blood circulation episode, myocardial infarction, or other acute cardiovascular diseases or cardiovascular surgery.[2] The mechanisms of the actual implementation of the latter have not yet been determined. From our point of view, when implementing the program, it would be worthwhile to test the cost recovery mechanism, which implies that the patient purchases the prescribed pharmaceutical in a commercial pharmacy. For its part, the pharmacy receives compensation from the State in the amount of the reference price of the delivered pharmaceutical, and the price difference (if any) is covered out of the patient's pocket. The cost recovery mechanism makes it possible to more flexibly adjust to the patient's personal interests and preferences, because the latter will be able to buy generic drugs, while receiving a subsidy from the state. In addition, this mechanism eliminates the public procurement issues, which became especially relevant in 2019 after the entry into force of the new rules for determining the initial contract price cap (ICPC).

Under the national project 'Healthcare', the year 2020 was to see the start of full-scale implementation of the most complex infrastructure measures, as well as the measures designed to transform the existing medical care system. However, it has already become obvious that the spread of the coronavirus (COVID-19) and the resulting preventive measures will require some significant adjustments to the planned transformations. A new priority in the healthcare system development, at least for H1 2020, will become the organization of its performance in an epidemic, including the preparation of isolated wards, the purchase of resuscitation equipment, and the provision of medical institutions with laboratory equipment and supplies, disinfectants and personal protective equipment.

As of the end of March, preventive medical examinations and checkups of certain groups of the adult population had been suspended, and it was recommended that the planned in-hospital and day hospital care and medical procedures should be postponed until later periods.[3] There is no information that the previously approved organizational reforms might be cancelled or postponed, but as a result of the redistribution of resources in favor of anti-epidemiological measures, the government may be forced to abandon some of the most costly measures.

[1] List of instructions based on the results of the meeting addressing the primary healthcare system modernization (approved by the RF President on October 8, 2019, No Pr-2064). The RF Ministry of Health is planning to prepare, by April, a plan for a new medical worker remuneration system // TASS. 2020. URL: https://tass.ru/obschestvo/7605301.

[2] Federal Law No 380-FZ dated December 2, 2019 'On the federal budget for 2020 and the planning period 2021-2022'.

[3] Order of the RF Ministry of Health No 171 dated March 16, 2020 "On the temporary procedure for organizing the operation of medical institutions for the purpose of implementing the measures designed to prevent and reduce the risks of the spread of the new coronavirus infection (COVID-19).'

5.9. The housing market in Russia's cities [1]

In 2019, the macroeconomic indicators directly affecting the housing market were the following.

The consumer price index stood at 3 percent, households' income movement which is important for the housing market in the course of the major part of the year (after a plunge in Q1) posted positive. Over 2019 as a whole, the real disposable cash income of the population gained less than 1percent.

The RF Central Bank repeatedly reduced its key rate over the course of last year hitting 6.25 percent in December 2019. Nevertheless, borrowers' activity and the amount of housing mortgage lending (HML) was below that seen last year.

According to the Bank of Russia, in 2019 Russia saw a total of 1.27 million extended mortgages to the tune of RUB 2.85 trillion against 1.47 million totaling RUB 3.01 trillion in 2018, in other words the decline came to 13.6 percent in loans-terms and 5.3 percent in volume-terms. The share of mortgage loans originated for shared-equity construction in the total volume of extended loans of all types constituted in 2019 6.6 percent against 7 percent in 2018. That said, the share of mortgages issued for shared-equity construction in the aggregate volume of solely mortgage loans went up from 28.8 to 32.4 percent.

According to experts of Metrium company[2], Russia's mortgage market failed to repeat in 2019 successes achieved last year due to the short-term rise of credit rates on the cusp of 2018-2019 and due to a notable growth of the housing price in the course of 2019. In H2 2019, the number of mortgage deals declined monthly by 10-30 percent year-on-year. Having said that, the monthly weighted average rate on mortgage loans exceeded 10 percent from February to August and from September gradually slid to 9 percent at the year-end. In other words, demand for mortgages in December 2019 was lower than a year earlier when rates were above 9.66 percent. Decline of mortgage rates posted in H2 2019 not so much boosted demand as prevented its 10 percent further decline. Positive effect of declined rates has been leveled by housing price growth against the backdrop of ongoing stagnation of incomes.

Preferential mortgage loans extended to households with two children and more have not played a major role. According to estimates of Metrium Group experts made on the basis of the data released by the Finance Ministry of Russia, 38.6 thousand loans were originated under this program totaling RUB 94.9 billion which came to 3.3 percent of the overall HML. If from February (the launch of the program) through December 2019 monthly average origination came to around 400 preferential bank loans, then in 2019 (including November) banks extended 3,500 such loans.

Outstanding mortgage debt has remained small. According to data released by Rosstat as on January 1, 2020 it amounted to RUB 72.6 billion (1.0 percent of the total housing mortgage debt outstanding) and declined year-on-year by 0.4 percent.

[1] This section was written by: *Malginov G.N.,* Candidate of Sciences (Economics), Head of Ownership Issues and Corporate Governance Department, Gaidar Institute; leading researcher, Analysis of Institutes and Financial Markets, IAES RANEPA; *Sternik S.G.,* Doctor of Sciences (Economics), Professor, Financial Institute under the RF Government, Chairman of the Committee on Analysis and Consulting of Moscow Association of Realtors.
[2] URL: www.metrium.ru/research (according to data released by the Bank of Russia).

5.9.1. The movement of housing market prices

The main indices describing the movement patterns of prices on the secondary housing market across Russia's cities can be seen in *Table 6.*[1]

The study sample consists of 23 cities, including 17 capitals of RF subjects, with the total population of over 33 million.

If this index is to be applied as a classification criterion, the sample appears to be as follows:

- the city of Москва (12.6 million);
- the city of St. Petersburg (5.4 million);
- 7 cities with the population of more than 1 million (Novosibirsk, Yekaterinburg, Omsk, Samara, Krasnoyarsk, Perm, Voronezh) with over 8.6 million in total;
- 8 cities with the population between 500 thousand and 1 million (Tyumen Togliatti, Barnaul, Irkutsk, Khabarovsk, Yaroslavl, Vladivostok, and Kemerovo) with over 5.1 million in total;
- 2 cities with the population between 200,000 and 500,000 (Stavropol, Surgut) (more than 1.0 million in total);
- 4 cities with the population of less than 200,000 (Syzran, Pervouralsk, Novy Urengoy, Tobolsk) (more than 0.5 million in total).

Table 6

Prices on the secondary housing market in Russian cities in 2017–2019

City (region)	Average per unit asking price, thousands of rubles per m²			Price index in December 2019 relative to December 2018		Price index in December 2019 relative to December 2018	
				in nominal terms	in real terms (IGS)	in nominal terms	in real terms (IGS)
	December 2017	December 2018	December 2019				
1	2	3	4	5	6	7	8
Moscow	210.2	222.0	232.0	1.056	1.013	1.045	1.015
St. Petersburg	107.4	114.0	127.7	1.061	1.017	1.120	1.087
Vladivostok	95.9	109.6	121.8	1.143	1.096	1.111	1.079
Novy Urengoy (Tyumen Region)	89.2	93.5	102.9	1.048	1.005	1.101	1.069
Khabarovsk	82.2	82.8	85.5	1.007	0.965	1.033	1.003
Surgut (Tyumen Region)	69.8	75.5	78.6	1.082	1.037	1.041	1.011
Yekaterinburg	67.3	71.0	72.5	1.055	1.012	1.021	0.991
Samara	59.6	60.4	60.3	1.013	0.971	0.998	0.969
Tyumen	59.3	63.2	68.0	1.066	1.022	1.076	1.045
Novosibirsk	58.5	63.4	70.0	1.084	1.039	1.104	1.072
Irkutsk	56.4	61.0	63.6	1.082	1.037	1.043	1.013
Krasnoyarsk	52.6	56.2	60.4	1.068	1.024	1.075	1.044
Perm	49.3	53.3	57.3	1.081	1.036	1.075	1.044
Tobolsk (Tyumen Region)	49.3	43.3	45.3	0.878	0.842	1.046	1.016
Yaroslavl	48.6	51.6	54.0	1.062	1.018	1.047	1.017
Kemerovo	44.3	43.9	46.4	0.991	0.950	1.057	1.026

[1] The sources of secondary market data are the companies included in the Public Graph of Secondary Realty Market Prices Dynamics in Russia's Cities (http://realtymarket.ru/Publi-nii-grafik-cen-vtori-noi-nedvijimosti-gorodo/); the sources of primary market data are listed in the Note to *Table 7*.
Data processing and interpretation was done in accordance with the guidelines described in: *Sternik G.M., Sternik S.G.* Real Estate Market Analysis for Professionals. Moscow: Ekonomika, 2009; *Sternik G.M., Sternik S.G.* Methodology of Housing Market Modeling and Projection. Moscow: RG-Press, 2018.

Cont'd

1	2	3	4	5	6	7	8
Barnaul	44.0	45.4	47.5	1.032	0.989	1.046	1.016
Voronezh	43.6	46.3	48.6	1.062	1.018	1.050	1.019
Omsk	43.2	45.6	47.5	1.056	1.012	1.042	1.012
Stavropol	39.5	42.9	44.8	1.086	1.041	1.044	1.014
Togliatti (Samara region	39.3	40.1	40.5	1.020	0.978	1.010	0.981
Syzran (Samara Region)	36.7	35.7	34.6	0.973	0.933	0.969	0.941
Pervouralsk (Sverdlovsk Region)	36.1	36.3	36.8	1.006	0.965	1.014	0.984

Source: calculation based on sample data.

The year 2019 was marked, practically everywhere, by rising prices on the secondary housing market. The highest growth indices (by 10–12 percent) were observed in St. Petersburg, Vladivostok, Novosibirsk, and Novy Urengoy. In Tyumen, Krasnoyarsk, Perm, Kemerovo, and Voronezh prices gained more than 5–7 percent. The most numerous group of the "average range" posting 4–5 percent alongside Moscow (3.5 percent) included Yaroslavl, Tobolsk, Stavropol, Irkutsk, Omsk, and Surgut. Just barely Khabarovsk with 3.3 percent can be part of the latter. A significantly lower growth rate (within the rage of 1–2 percent) was noted in Ekaterinburg, Pervouralsk and Togliatti, and clear outsiders were Samara (stagnation) and Syzran (decline in absolute terms).

Compared to 2019, the major part of the sample demonstrated a slowdown in price dynamics, although in many cities (St. Petersburg, Novy Urengoy, Khabarovsk, Tyumen, Novosibirsk, Krasnoyarsk, Kemerovo, Barnaul, Tobolsk, and Pervouralsk) an opposite situation was observed including trend change from decline to growth.

At the same time, in the majority of cities included in the sample, housing prices increased in real terms (excluding inflation on the consumer market) (IGS-index).[1]

In St. Petersburg, their growth came to 8.7 percent, in Vladivostok, Novosibirsk and Novy Urengoy, it was 7–8 percent, in Tyumen, Krasnoyarsk, and Perm, it was approximately 4.5 percent, in Kemerovo and Voronezh – around 2–2.5 percent. In the group of cities in the "average range", the growth index was in the range of 1–1.7, including Moscow with its growth index of 1.5 percent. In all the other cities across our sample stagnation was observed (Khabarovsk) or a decline in real housing prices was most notably observed in Samara and Syzran (by 3 and 6 percent, respectively). In the major part of our sample (except Vladivostok, Surgut, Ekaterinburg, Samara, Irkutsk, Yaroslavl, Omsk, and Stavropol) the dynamic of the real housing prices was better than in 2018.

Data on primary housing market prices is available for 8 cities and Moscow Oblast (*Table 7*).

The primary housing market was demonstrating continuing growth almost in every city.

An absolute leader was Ekaterinburg, where housing prices gained approximately 15 percent. In Tyumen and Novosibirsk its value exceeded 7–8 percent, and in Moscow, St. Petersburg and Tobolsk it stayed in the range of 5–6 percent. In Yaroslavl and Stavropol, the prices were increasing at a slower pace (by 3–4 percent). Price comparison with those in 2018 demonstrate that in one half of sample (Moscow, Novosibirsk, Tyumen, and Stavropol) price growth slowed down and in the other half (St. Petersburg, Ekaterinburg, and Tobolsk) there was a trend change from decline to growth (Yaroslavl).

[1] The IGS-index was calculated by applying the formula IGS=HPI/CPI, where HPI is the housing price index in rubles, and CPI is the consumer price index.

Table 7

Prices on the primary housing market in Russian cities in 2017–2019

City (region)	Mean unit asking price, thousands of rubles per m²			Price index in December 2018 relative to December 2017		Price index in December 2019 relative to December 2018	
				in nominal terms	in real terms (IGS)	in nominal terms	in real terms (IGS)
	December 2017	December 2018	December 2019				
Moscow	179.9	202.0	212.0	1.123	1.077	1.050	1.019
St. Petersburg	100.6	106.0	112.0	1.054	1.011	1.057	1.026
Ekaterinburg	63.3	63.3	72.6	1.000	0.959	1.147	1.114
Novosibirsk	59.9	66.3	71.3	1.107	1.061	1.075	1.044
Tyumen	56.6	62.1	67.5	1.097	1.052	1.087	1.055
Yaroslavl	50.6	49.7	51.9	0.982	0.942	1.044	1.014
Tobolsk (Tyumen region)	49.3	50.2	53.1	1.018	0.976	1.058	1.027
Stavropol	36.3	40.7	42.1	1.121	1.075	1.034	1.004

Source: for Moscow – Moscow Association of Realtors Committee on Analysis and Consulting (data released by Miel Group, Miel 'Novostroiki'; JSC Sterniks Consulting); for the city of St. Petersburg – Group of Companies "Real Estate Bulletin"; for Ekaterinburg – IRTS UPN; for Novosibirsk – RID Analytics; for Tobolsk – Federal Real Estate Agency "Etazhi"; for Tyumen – "UPCConsAllt"lt, Federal Real Estate Agency 'Etazhi'; for Yaroslavl – LLC "Metro-Otsenka"; and for Stavropol – LLC 'Small Enterprises Development Center 'Ilekta'.

Indexes of the real housing price (IGS-index) went up in all cities in 2019.

Ekaterinburg posted the highest growth (above 11 percent), Novosibirsk and Tyumen registered growth of more than 4 and 5 percent, respectively. Moscow, St. Petersburg, and Tobolsk reported IGS-index growth in the range of 2–3 percent, and in Yaroslavl and Stavropol it was even less. Dynamic of the real housing price in the majority of cities (except Moscow, Novosibirsk, and Stavropol) was better in 2018, whereby in Ekaterinburg, Yaroslavl, and Tobolsk there was a trend change from decline to growth.

Consequently, following the 2017 stabilization, the asking prices on the housing market were on the rise to a second year in a row. This was especially true for the primary market in 2019 despite that fact that the temporary mortgage rate rise against the backdrop of implementation of the cost sharing construction reform resulted in the reduction in the number of apartment purchase deals under co-investment agreements by 1.6 percent to 783,000 (approximately by 8 percent below the peak level seen in 2014).

Let us analyze in further detail the situation in this segment in Moscow.[1]

According to data for Q4 2019, the supply volume within the previously established city borders amounted to 33,200 apartments of which around 51 percent belonged to mass housing, 42.6 percent belonged to the business class, 4.6 percent – to the premium class, and 2 percent – to elite housing (*Table 8*).

Year-on-year, the number of supply has gone up by 2.1 percent, however with respect to the total floor area (2.3 million m²) the supply growth has constituted barely 0.6 percent which demonstrates a severe reduction in the average apartment floor area in the 2019 supply. Notable growth in the number of offers was related to mass housing (up by 12.5 percent) and elite class (by more than one third) amid the collapse in the average price range, especially in the premium

[1] According to data released by the Committee on Analysis and Consulting of the Moscow Association of Realtors (MAR).

class (by more than 38 percent). The business class supply has dropped by 2 percentage points against 3 percentage points drop reported in the premium class housing.

Table 8

Dynamic of apartments supply on the primary market of Old Moscow in 2018–2019, units

Period	Total		Mass housing		Business class		Premium class		Elite class	
	unit	%	unit	%	unit	%	unit	%	unit	%
Q4 2018	32525	100.0	14990	46.1	14550	44.7	2485	7.65	500	1.55
Q1 2019	33620	100.0	16760	49.9	14230	42.3	2090	6.2	540	1.6
Q2 2019	32845	100.0	16550	50.4	13850	42.2	1920	5.8	525	1.6
Q3 2019	33155	100.0	16950	51.1	13905	41.9	1635	4.9	665	2.0
Q4 2019	33195	100.0	16860	50.8	14140	42.6	1535	4.6	660	2.0

Source: Committee on Analysis and Consulting MAR.

Precisely there the asking prices have gone up (by around 21 percent) the most over the year amid the spike in Q4 (by around 11 percent) (*Table 9*).

Table 9

Dynamic of average per unit asking prices on the primary market of Old Moscow in 2018–2019

Period	Mass class			Business class			Premium class			Elite class		
	RUB/ m²	% to		RUB/ m²	% to		RUB/ m²	% to		RUB/ m²	% to	
		Q-o-Q	Q4 2018		Q-o-Q	Q4 2018		Q-o-Q	Q4 2018		Q-o-Q	Q4 2018
Q4 2018	162 090	…	100	228 100	…	100	459 395	…	100	1 032 895	…	100
Q1 2019	165 700	102.2	102.2	230 390	101.0	101.0	479 100	104.3	104.3	1 016 070	98.4	98.4
Q2 2019	167 820	101.3	103.5	235805	102.4	103.4	488 805	102.0	106.4	1 062 165	104.5	102.8
Q3 2019	171 555	102.2	105.8	237 925	100.9	104.3	501 265	102.5	109.1	1 080 700	101.7	104.6
Q4 2019	174 760	101.9	107.8	241 745	101.6	106.0	554 375	110.6	120.7	1 007 130	93.2	97.5

Source: Committee on Analysis and Consulting MAR.

Dynamic of housing prices in elite class has also stayed within the corridor of classical patterns. The spike in supply was accompanied by negative growth in Q1 (by 1.6 percent) and Q4 (by 6.8 percent) as well as end-of-year period as a whole (by 2.5 percent). Housing price movement in lower price bracket (mass class and business class) which accounted for over 90 percent of supply was similar (growth by 6–8 percent for entire period) despite differently directed trends in the change in its absolute volume. If in mass class the supply has notably increased (by 12.5 percent) then in business class – moderately declined (by approximately 3 percent).

In respect to demand, Moscow within the previously established city borders (also less Zelenograd administrative okrug) registered 47,600 co-investment agreements with individuals up by 6 percent against the 2018 indicator. Nekrasovka reported record high number of co-investment agreements (1,926). Regarding floor area, the demand constituted in 2019 2.7 million m² up by 3.7 percent against 2018 which once more attests to the downward trend in the average apartment floor area supply. The share of mortgage deals in mass class housing accounted for 56 percent, in business class – 45 percent, in premium class – 29 percent, and in elite class – 16 percent.

Quarter-over-quarter dynamic of satisfied demand is of interest (registered co-investment agreements) (*Table 10*).

Table 10

Comparable quarter-over-quarter dynamic of co-investment agreements registration for apartments in Old Moscow in 2018–2019, thousand units

Period	Q1			Q2			Q3			Q4		
	Total	% to		Total	% to		Total	% to		Total	% to	
		Q-o-Q	Y-o-Y		Q-o-Q	Y-o-Y		Q-o-Q	Y-o-Y		Q-o-Q	Y-o-Y
2018	8.8	…	…	10.1	114.8	…	11.2	110.9	…	14.8	132.1	…
2019	11.7	79.1	133.0	12.0	102.6	118.8	11.1	92.5	99.1	12.8	115.3	86.5

Source: Committee on Analysis and Consulting MAR.

In 2018, the demand was gradually growing due to a gradual reduction in the mortgage rates except December 2018,[1] when they went up. The latter resulted in the registered demand decline in Q1 2019 by 21 percent. Two more peaks were observed in the course of 2019.

One of them (in Q4) was a normal reaction of the market to the reduction in mortgage rates. The other happened earlier in Q1–Q2 when developers carried out accelerated purchase of apartments for sale to the name of top managers and trustees in order to mark sales at above 10 percent of the total floor area of the housing under construction to obtain the right not to switchover from July 1 to escrow accounts and have the right to continue financing through co-investment agreements.

Let's brief on the situation in the territory within the previously established city borders (Old Moscow) whereas on late 2019 twenty-seven tenement building complexes totaling 182 blocks were under construction, which amounts to supply of 9,753 apartments with total floor area of 541,358 m².

At end-of-year the average price in mass class housing stood at RUB 121,000 per m², in business class – RUB 174,500 m², down by about 30 percent compared to the same indexes seen in Old Moscow. It is worth noting that till July 2019 asking price growth in business class housing was steady and flat, and in July the average price came to RUB 135,500 per m². However, August 2019 saw a spike in the average asking price in business class by 36 percent (up to RUB 184,200 per m²) due to purchases by developers seen in July. Already in September it declined by around 7 percent (down to RUB 172,000 per m² and did not return to H1 level.

5.9.2. The construction, commissioning, and supply of new housing units

According to preliminary data for 2019, the total volume of housing stock put into operation amounted to 79.4 million m², which is 4.9 more than in 2018 (*Table 11*)[2].

[1] End-of-Q4 as a whole increment came just short of 1/3.

[2] The 2019 data also provides the amount of housing commissioning to the tune of 80.3 million m² (including commissioning of residential buildings on land plots provided for gardening). Prior to August 2019 such buildings were not taken into account. Changes in the accounting were due to fact that provisions of the Federal Law dated July 29, 2017 No. 217-FZ "On gardening for privet needs and introduction of amendments into certain legislative acts of the Russian Federation" fully entered into force.

For comparison with data for the previous periods, it is proper to use the amount of commissioning of residential buildings without those commissioned on the land plots for gardening. Moreover, so far this category represents a small rderpart of proportion of aggregate commissioning of residential housing as of end-of-year 2019: 0.9 million

Table 11

The rate of commissioning of residential buildings across Russia in 1999–2019

Year	Total area, millions of meters^2	Growth rate, percent	
		Year-on-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	80.3/79.4*	106.1/104.9*	265/262.0*

* Less building commissioned on garden plots.
Sources: Rosstat; own calculations.

Interim results for the past year have demonstrated that transition to the new financing mechanism deployed in housing construction (from co-investment agreements to the project-tied bank lending through escrow accounts for accumulating of buyers' funds) went on better than expected.

Contrary to concerns, volumes of housing commissioning countrywide moved up compared to 2018 by around 5 percent which is due to the permission to finish construction of part of facilities according to former rules and concentration of developers' efforts to complete construction of buildings with high degree of completion and successes of individual housing construction. In doing so, they managed to terminate a three-year-long period of decline (2016–2018) in housing construction.

A less bright situation has been observed with regard to developer projects involving multi-apartment residential buildings.[1] The volume of housing stock put into operation in this segment has also been on decline for a third year in a row, at an accelerated rate (2016 – 3.4 percent, in 2017 – 4.5 percent, and in 2018 – 7.3 percent). Its volume (43.5 million m²) stabilized practically at the previous year level when in 2019 individual developers put into operation houses totaling 36.8 m² up by 10.7 percent against 2018. Their share in the total volume of housing commissioning came to about 46 percent.

Positive movement patterns in the housing construction sector were observed in the majority of regions (*Table 12*).

m^2 (or around 1percent). When we take such residential buildings into account growth comes to 6.1 percent against 2018.

[1] The official Rosstat reporting this index. However, it can be calculated as a difference between total volume of housing commissioning and housing commissioning by population carried out at their own and raised funds.

Table 12

The dynamic of commissioning of residential housing in Russia's regions in 2019 (ranked in descending order)

Region	Housing stock put into operation, percent relative to 2018
Moscow	141.8
Lipetsk region	139.1
Stavropol krai	123.0
Sverdlovsk region	114.2
Tyumen region (with autonomous districts)	114.2
Tatarstan	111.0
Voronezh region	110.2
PRostov region	109.5
Nizhny Novgorod region	104.3
Ulyanovsk region	103.9
Krasnoyarsk krai	103.4
Bashkortostan	103.2
Perm krai	102.8
Belgorod region	101.5
Krasnodar krai	101.0
Novosibirsk region	100.4
Saratov region	98.9
Samara region	95.6
Moscow region	95.2
Chelyabinsk region	94.9
Leningrad region	92.2
St. Petersburg	87.9

Source: Rosstat.

As follows from *Table 12*, the movement pattern displayed by the index of the total volume of housing stock put into operation, which considerably exceeded Russia's average (by more than 5 percent), was noted in Moscow, Lipetsk region, Stavropol krai, Sverdlovsk and Tyumen regions, Tatarstan, Voronezh and Rostov regions. Another 8 regions demonstrated positive movement patterns of that index, but its actual value was less than average across the country.

At the same time, shrinking volumes of housing stock put into operation were seen in 6 regions, including Saratov region, Samara region, Moscow, Chelyabinsk, Leningrad regions and St. Petersburg. Half of this group included regions which in 2018 were among 5 leaders (outer Moscow, St. Petersburg, and Leningrad region). That said, the deepest plunge (over 12 percent) was reported in St. Petersburg.

Moscow region demonstrated a decline (around 5%), although it retained its leading position among Russian regions on the back of the total volume of housing stock put into operation in absolute terms (over 8.4 million m²). The city of Moscow demonstrated novel growth rates (around 42 percent) overtaking St. Petersburg (about 3.5 million m²). However, by its total volume of housing stock put into operation in absolute terms, which was above 3.5 million m², it still fell behind the city of St. Petersburg (about 4.0 million m²), where the rate of housing stock put into operation was the highest (11.7 percent). The group of top five leaders was also joined by Krasnodar krai (approximately 4.5 million m²) and Tatarstan (around (2.7 million m²). The share of the capital region in the total volume of housing construction in the country amounted to around 17 percent (including Moscow region – 10.6 percent and Moscow – 6.3 percent) exceeding the value of the index seen in 2017–2018.

This being said, it is worth noting that the dynamic of mortgage lending by no means always was the key factor in housing construction regions-wise. Against the background of practically across-the-board reduction in the number of mortgage contracts (down by 10–15 percent) even the outstripping contraction of demand for mortgages (down by 20–24 percent according to

data released by Metrium Group[1]) did not stop Tatarstan and Ulyanovsk region not only to stay in the group of regions with housing commissioning over 1 million m² but also demonstrate an upward dynamic (especially Tatarstan). Even greater growth (over 22 percent) amid deep decline of mortgage volumes was observed in Khanty-Mansi autonomous okrug, although the absolute value of housing commissioning in that region was below 1 million m².

At the same time, significant growth in the number of mortgage deals compared to 2018 was reported in Chechnya and Dagestan (by 26 and 16 percent, respectively) where in light of the existence of great number of families with many children the government expanded to the upmost accessibility of mortgage lending through mortgage interest rates subsidization. However, neither housing commissioning in absolute terms nor its growth did not impress much. Similar picture was observed in Crimea with its growing tourist attraction.

In relation to the reform of the financing mechanism employed in housing construction then from July 1, 2019 the use of escrow accounts had to be mandatory for all projects. However, authorities in dialogue with the professional community developed a number of criteria which allowed developers to work according to old rules even after that date. According to the adopted version of the RF government resolution dated April 22, 2019 No. 480,[2] such projects should correspond the following criteria:

- the building is completed by more than 30 percent (on criterion of accrued costs), there are decreasing coefficients for complex construction projects (0.5x) and companies on the list of systemic organizations (0.2x);
- construction facilities with co-investment agreements totaling no less than 10 percent of their aggregate floor area.

The government was boosting early transition to the mechanism of escrow accounts in return of lifting part of requirements for developers, for example, contribute 1.2 percent of price from every shared construction agreement to the Fund for protections of rights of citizens participating in shared-equity construction. Having said that, application of IFSR accounting standards was expected which would ease a number of restrictions in relation to indirect costs.

Despite those measures, developers were in no hurry to switchover to the new mechanism of dealing with the participants' funds. Factors hampering the process are the following:

- low level of financial competences with developers which on many occasions does not allow to stand up the project before banks;
- inadequacy of the major part of small size developers to banks' requirements presented to the quality of borrowers;
- insufficient number of bank specialists who are competent in the construction segment;
- unwillingness of banks to deal with lending to developers due to reputation of developers as a "shady" business.

[1] URL: www.metrium.ru/research.

[2] This document has approved (1) criteria which determine the grade of completion of an apartment block and (or) other real estate construction facility (construction project) and the number of co-investment agreements on condition of the correspondence the developer receives the right to raise funds from participants in shared-equity construction without using accounts envisaged by Art 15.4 of the Federal law "On participation in shred-equity construction of apartment blocks and other real estate facilities and on the introduction of amendments in certain legislative acts of the Russian Federation", on co-investment construction agreements submitted for the state registration after July 1, 2019 (2) methodology to determine conformity of apartment block and (or) other real estate facility (construction project) to indicated criteria, and (3) list of accompanied documents submitted by developer.

As on late 2019, projects implemented via escrow accounts account for 24 percent of the total construction through raising the equity construction investors' funds. The regions with the highest share of such projects are Kalmykia (76 percent), Kurgan region (68 percent) and Chelyabinsk region (59 percent). It is worth noting that the latter belonging to the group of regions with the housing commission above 1 million m^2 demonstrated at year-end of 2019 a decline by around 5 percent. As for the other two regions, amid positive dynamic related to the absolute value of housing commissioning, they belonged to the group of outsiders.

According to data released by the Bank of Russia as of early 2020:

– signed within project-tied lending total number of 778 loan agreements to the tune of RUB 921.82 billion.;
– total number of opened escrow accounts 44,180;
– escrow accounts balance totaled RUB 147.74 billion;
– closed escrow accounts (in operation to putting into operation of financed facilities) totaling 2,547;
– the sum of transferred funds from those accounts totaled RUB 5.43 billion.

So far developers boast of a large backlog of projects which correspond to the criteria of the decree of the RF government for continuing construction on former rules. However, as far as this resource is running out and the developer is getting higher affordability, the volume of funds raised from the co-investment agreements will be declining for construction financing. Gradually, they will be phased out by more conventional sources of debt capital. Meanwhile, major market stakeholders raised loan-based funding cheaper over recent years than the funds generated by the co-investment agreements. The reasons for that lie in the interaction of institutional lease factors (affiliation with system companies) and business features (large scale and vertical integration) which have opened access to bank lending on preferential terms and issuance of bonded debt on the basis of credit ratings (for instance, "PIK", "LSR", and "ETALON").

Main challenge for business model developers when the new rules are in force becomes growing debt burden because the funds generated from housing sales at the construction stage will be frozen on escrow accounts till the completion of construction. In return a company will receive project-tied financing on preferential bank rate. That said, developers with diversified project portfolio and considerable amount of own capital boast of a larger safety cushion. Nevertheless, the share of debt servicing payments in the structure of operational income is spiking (EBIT to Interest rate).

In the course of last decades, the main investment attractiveness of the housing construction was the implementation of rather large projects at the expense of funds raised from equity construction investors on the back of small own investments.

In order to restore return on invested capital (in the context of a need for raising the share of own funds after the reform) price growth was required which was observed on the market last year, especially in Q3 2019. The point is that the price growth reported over that period resulted from a spike in volumes of absorption of co-investment agreements in late Q2 by large and medium-sized developers in large cities. As noted above, they set a goal to mark the sale of more than 10 percent of the total floor area in project-tied housing construction in order to receive the right not to switchover to escrow accounts from July 1 and have a chance to proceed with financing according to the co-investment agreements mechanism. With that in mind, they exercised purchase of apartments for sale in the name of top managers and trustees of developers.

On the whole, complete risk elimination for equity construction investors regarding the loss of their funds as proclaimed target for the introduction of the new mechanism is paid by rising developers' price both due to price growth on completed housing and to the discount reduction at the construction stage because of the introduction of additional link (banks) in redistribution of income generated by construction.

Speaking about sector's prospects as they were seen before the outbreak of the crisis in February-March 2029, the following should be noted.

Quarter-on-quarter dynamic of housing construction volumes compared to 2018 after the collapse seen in Q1 and advance growth rates (12–15 percent) posted in subsequent two quarters, in the closing Q4 demonstrated slight uptick (around 2 percent if not taking into account commissioning of the houses built on garden land plots). And in December when Russia boasts of a spike in housing commissioning, a decline was observed even with the account of this new factor. Having said that, sector's management expressed concerns in late 2019 with respect to big complications the sector can face in 2021–2022. For instance, the Minister of construction, housing and utilities of the Russian Federation, Vladimir Yakushev, underlined at the forum "Digital Transformation in the Construction Industry Aimed at Sustainable Development" held in St. Petersburg that this was due to a small number of issued permits for housing construction.[1]

It is worth noting that obtained increment at year-end 2019 missed targets set forth by the National project "Housing and urban environment". Growth in housing construction volumes posted in 2019 made provisions for return to the 2016–2017 indicators (80.2 million and 79.2 million m^2, respectively). Nevertheless, not only targeted index envisaged by the National project (88million m^2) was missed but the previous peak values of 2014–2015 (84.2 million and 85.5 million m^2) as well.

5.9.3. Legal novations in the shared-equity construction system

Last year boasted of the ongoing reform of the shared-equity construction system comparable in its intensity to the changes happened in 2018.[2]

The Law dated June 27, 2019 No. 151-FZ introduced amendments and supplements to more than ten normative and legislative acts including the Land and Town Planning Codes of the Russian Federation, bankruptcy law, etc. However, many of them have been the result of the next widescale adjustment in the base law on shared construction of 2004 (No. 214-FZ).

First of all, we should underline regulation of relationship with defrauded homebuyers wherefore the Law No. 214-FZ received three new article at one go (Articles 21.1–21.3).

As in the case with the public law company "Fund for Protection of Rights of Citizens' Participating in Shared-Equity Construction" established in 2017 in accordance with the special law (No. 218-FZ), the scope of operation of the Law No. 214-FZ on the local level was extended to the relations related to the settlement of developer's liabilities to the participants in shared-equity construction and transfer of its property (including title thereto) and liabilities to the unitary non-profit organization (Fund) set up by RF subject with due regard for the specificities stipulated in that Law, as well as the laws regulating shared construction and bankruptcy. The new organization was granted the status of a developer company.

[1] Ministry of construction projects a decline in housing commissioning in 2021–2022, November 18, 2019 URL: https://realty.interfax.ru/ru/news/articles/112072.

[2] See IEP's Annual report "Russian Economy in 2018. Trends and Perspectives". Moscow. IEP, 2019.

RF subject sets up its Fund in accordance with the regional normative and legal acts aimed at the regulating developers' liabilities declared as bankrupts before the participants in shared construction and transfer to them property (including title thereto) and developers' commitments to complete construction of multi-apartment buildings and (or) other real estate facilities, which construction is done through attraction of homebuyers' funds according to the envisaged order, and (or) for the completion of construction of engineering and technical and social infrastructure for its subsequent compensation-free transfer to the state or municipal property.

The fact that RF subject may set up only one Fund is conditioned by the need to include information on construction facilities located on the region's territory into the Single Register of Problematic Facilities.[1] The latter represent multi-apartment buildings and (or) other real estate facilities where developer violated by more than 6 months the timeline for completion of construction and (or) liabilities to transfer the facility to participant in shared construction under the registered agreement or where developer is declared as bankrupt and with respect to whom bankruptcy proceedings were launched in compliance with the bankruptcy law of 2002. For the implementation of measures intended to restore the citizens' rights whose funds have been raised for the construction of those facilities included on the unified register located on the region's territory, the latter's executive authority approves a corresponding implementation roadmap for such measures.

Status, objectives and functions of RF subject's Fund and the procedure for the set up of its management bodies are determined by the RF Civil Code and by the legislation on non-commercial organizations.

Settlement of developers' liabilities can be carried out by RF subject's Fund out of funds provided by public law company "Fund for protection of rights of citizens participating in shared-equity construction" established in 2017. These funds can be allocated for financing the activities of RF subjects' Fund which can act as a developer and engage in completion of construction of multi-apartment buildings and (or) other real estate facilities and objects of infrastructure with account of non-application of a number of articles on shared-equity construction.

RF subject's Fund has the right to raise funds from individuals and legal entities on co-investment agreements with respect to the facilities under completion only on condition the funds being on escrow accounts opened with an authorized bank in the housing construction segment according to the stated order.

For the implementation of envisaged activity any operations transactions carried out by the Fund of RF subject, legal entities, which are its partners including the latter making deals with other legal entities are carried out by authorized bank in the sphere of housing construction to the stated order envisaged by the law of 2017 on public law company on protection of the rights of citizens participating in shared construction (No. 218-FZ). That said, conditions established in relation to "Fund for Protection of Right of Citizens Participating in Shared-Equity Construction", are applied to RF subject as well.

[1] Formed along with the Single Register of Developer Companies (SRDC) in electronic form in the Unified information system for housing construction (UISHC) by means envisaged by hardware and software complex of the system on the basis of data uploaded by subjects of information.
Information contained in the Single Register of Problematic Facilities as well as in SRDC are in open access except information with restricted access by the law of Russia.

By being its founder, the subject's budget finances every day activities of the Fund. For these purposes the Fund does not use its own money.

The Fund of RF subject when receiving developer's property and liabilities before the participants in construction according to the procedure set forth by the bankruptcy law is not responsible for developer's violations that was declared bankrupt, breach of timelines for transfer of facility to participant in shared construction which must be done not later than 3 years from the day of pronouncement of corresponding decision by the court of arbitration.

When region's normative legal act on the establishment of the Fund of RF subject envisages that financing of its activities and measures on the settlement of developer's liabilities are carried out from the fund of RF subject without the attraction of the federal budget funds and (or) funds provided by public law company "The Fund for Protection of Rights of Citizens Participating in Shared-Equity Construction" , then the Fund of RF subject carries out its activities with the account of the following factors.

The Fund is not subject to mentioned above bans and provisions with respect to conducting operations with authorized bank in the segment of housing construction. The RF subject's Fund is entitled to raise funds from citizens and legal entities through co-investment agreements with respect to facilities in the state of completion only on condition of their deposit on escrow accounts with authorized bank (regardless of requirements to deposit participants' funds on escrow accounts in the authorized bank in the segment of housing construction).[1]

In case the Fund of RF subject allows to commit non-execution or improper execution of its obligations on the implementation of measures intended to settle developer's commitments, the subject of the Russian Federation-founder of the Fund is subsidiary liable for its commitments.

For carrying out operations with funds received from the regional budget the Fund opens an account with the financial body of RF subject. For all other purposes the Fund of RF subject may open an account with credit institutions located on the territory in due course.

The RF subject's Fund takes decision on financing or inexpedience of financing the measures related to above indicated objectives. The RF subject's Fund informs bankruptcy commissioner and the public law company "Fund for Protection of Rights of Citizens Participating in Shared-Equity Construction" on its decision not later than 3 days following the corresponding decision.

The decision of RF subject's Fund on financing must envisage funding of completion of construction of all located on the territory of the region-founder of the Fund multi-apartment buildings and (or) other real estate facilities and infrastructure objects of the developer in respect of which the Court of Arbitration decided to declare him bankrupt and introduce bankruptcy administration. The RF subject's Fund decides on expediency of funding (except cases if the regional executive authority decides otherwise) on the provisions introduced into the 2017 law on public law company for protection of rights of citizens participating in shred-equity construction (No. 218-FZ).

Just to name a few significant amendments introduced to the law on shared construction (No. 214-FZ).

Firstly, regarding the subject of regulation and conceptual framework the term "private premises in multi-apartment buildings" (in the context of attraction of funds from citizens) to replace with a wider one "premises in multi-apartment buildings and (or) other real estate facilities" hereunder are understood non-living premises and car-places.

[1] On the divergence between two categories of banks see below.

From mid-2018, the list of permitted methods of attracting private funds of individuals no longer includes that of the issuance, by the owner or holder by right of lease of a land plot for which a permit was obtained in the established procedure for the construction therein of a multi-unit residential building, of bonds of a special type (housing certificates), the direct ban has been imposed on the sale of securities to citizens, the execution of rights upon which according to the terms of issuance and terms and conditions of trust agreement on the management of mutual investment fund, a citizen has the right to claim a unit in a multi-unit residential building and (or) in another real estate facility which has not been put into operation although there was attraction of citizens fund for construction.

Alongside the term "authorized bank" brought about in 2017,[1] definition of an authorized bank in the segment of housing construction was designed, which is a bank established in accordance with the law of the Russian Federation and ascertained by the 2015 law on the assistance to the development and raising efficiency in the segment of housing management (No. 225-FZ). According to the amendments introduced therein in 2019, this is a joint stock company (JSC) representing the credit institution whose all shares are in ownership of a single institute of development in the housing segment. Sale or other way for alienation of those shares, pledging or other way of disposal of the shares is carried out according to the federal law. In truth, this refers to "ДОМ.РФ" which was created on the basis of the bank *Russian Capital*[2] after the transfer of its 100-percent stake to the charter capital of the Agency for Housing Mortgage Lending (AHML) at the very end of the year 2017, which was later reorganized into JSC "ДОМ.РФ".

Secondly, there were important adjustments related to the relationship between developer and credit institutions.

In the context of determination of targeted credit or loan for construction (creation) of multi-apartment residential building and (or) other real estate facility according to the provisions of the contract concluded by a developer and a creditor (bank or founder (participant) of developer), restrictions related to the targeted use of such funds are not applied in case the developer carries out the construction (creation) of indicated facilities with raised funds from participants in shared-equity construction on condition of their deposit on the escrow accounts according to established procedure.

The bank account contract concluded with authorized bank prior to the commissioning of multi-apartment residential building can be terminated by the developer where the developer takes decision not to raise funds from participants in shared-equity construction for construction (creation) of a facility by virtue of participant agreement in the absence of obligations owed to them. However, termination is impossible if the developer becomes the plaintiff or the defender in a lawsuit which contects are disputes on its obligations emerged after the day of opening a bank account with the authorized bank before such bank or before participants in shared-equity construction as well as where the court enforcement proceedings were not completed regarding mentioned developer's obligations.

In the event the Bank of Russia crosses out authorized bank from the list of banks corresponding to the criteria established by the RF government, the developer terminates the bank account contract unilaterally. Then, developer, technical customer, and principal contractor executing works according to the signed contracts are obliged to open bank accounts

[1] Banks for work with developers which correspond to the criteria established by the RF government dated June 18, 2018 No. 697.

[2] Several years ago this bank was eligible for resolution SC "Agency for Deposits Insurance" (ADI).

in another authorized bank and transfer to those accounts all funds not later than 30 days from the release by the Bank of Russia of information on crossing out such bank from the mentioned list.

Having said that, it continues monitoring the compliance of the purpose and amount of payment indicated in the developer's instruction both to the content of submitted documents which are the basis for drafting instruction and to established by law requirements for the use of developer's funds[1] and procedure for the execution of operations as per its account before obtaining from developer of mentioned notification about opening of the new bank account. Upon receipt from the developer of mentioned notification such bank may not execute operations on the developer's current account except those operations instruction on whose execution were received before one day or on the day of receipt of corresponding instruction on execution the operation for transfer of funds to the new bank account of the developer.

Thirdly, in relation to the disclosure of information, the developer determined that its major part is subject to be posted on the Unified Information System for Housing Construction (UISHC) website prior to submission for the state registration of the first participant agreement in shared-equity construction of multi-apartment residential building and (or) other real estate facility. And information on the introduction of one of the bankruptcy procedures, on opening or closure of developer's account with indication of its number, name of the authorized bank and its identifications (taxpayer identification number (TIN), main state registration number (OGRN), notification on onset of construction, conversion of the construction project posted in accordance with the law on state-planning activity are posted on UISHC's website not later than 3 working days from the date of the onset of the associated event. Developer in accordance with the law of the Russian Federation is held responsible for incomplete and (or) unauthenticity of information subject to disclosure.

Fourthly, the co-investment agreement in shared-equity construction now can be concluded in electronic document signed with an enhanced encrypted and certified digital signature.[2] This being said, it has to contain more precise terms for raising funds from participants in shared construction: (a) execution of obligation on transfer of contributions to the compensation fund or (b) deposit participants' funds on escrow accounts according to the established procedure. Agreement on the cession of rights for forfeit, penalty (fine) is not subject to state registration.

With regard to regulation for ensuring of execution of obligations on the agreement the security deposit determines that when the developer raises funds on agreements for participation in shared construction submitted for state registration after July 1, 2019, in case they were concluded prior to that date and declare developer a bankrupt with opening against him of bankruptcy proceedings, land plot as collateral upon its partition remains with respect to the new land plot where a multi-apartment residential building and (or) other real estate facility is being constructed (created) or were constructed (created) for the construction for which purpose funds from participants in shared construction are raised and terminates in relation to the altered land plot which remains as a result of its partition in the altered borders.

[1] The list of objectives that are eligible for the use of funds from developer's account was supplemented with payment for costs incurred with placing multi-unit residential building and (or) other real estate facility on state cadaster registration, for which construction funds from participants in shared construction projects were raised.

[2] Requirements to electronic form of contract, agreements introduction of amendments, on assignment of claims thereon, including requirements to format and filing forms of such documents are established by the federal body of executive power in the area of state regulation of ownership rights and transactions therewith.

The partition of land plot does not require consent from the participants in shared construction (pledgeholders) and the bank unless otherwise provided for by the agreement. These rules are also applied in relation to pledge of lease rights or sublease on the land plot. Executive government bodies (local self-administration) authorized for the provision of land plot owned by the central or local government are obliged not later than within 7 working days from the date of receipt from the developer of a corresponding application to carry out actions envisaged by the land legislation required for the state cadaster registration and state registration of rights for the created and altered land plots.

Fifthly, regulation of attraction by developer of funds from participants in shared construction in case of their deposit on escrow accounts and their use was supplemented by the following norms.

In case the construction (creation) of a multi-apartment residential building and (or) other real estate facility by a developer company is funded by a targeted loan, extended according to an agreement on syndicated credit (loan), the participants in a shared construction project make their contract price payments to escrow accounts opened with the authorized bank (authorized banks) – participant (participants) in syndicate of creditors determined by such agreement of syndicated credit (loan)

Where construction of real property facility is exercised by a developer at the expense of targeted credit funds then after the Bank of Russia crosses out authorized bank from the list of banks which correspond to criteria established by the government of the Russian Federation, participants in shared construction project deposit their funds towards the payment for participant agreement concluded in relation to such a facility on escrow accounts opened with such authorized bank. Where construction is exercised by a developer without raising funds of targeted credit, then in case of mentioned actions taken by the Bank of Russia, participants in shared construction project deposit funds towards the payment for participant agreement price concluded with respect to such facility on escrow accounts opened with another authorized bank.

Authorized bank (escrow agent) may terminate unilaterally escrow account agreement when funds were not deposited on escrow account within the timeframe of more than 3 months from the date of conclusion of such agreement. The text of the escrow account agreement in addition to bank account of participant in shared construction project (bailer) on which funds are deposited is supplemented with the information on the pledgeholder and requisites of the pledged account where escrow-agent deposit funds if participant agreement in shared construction project specifies the use by participant in borrowed funds for the payment of participant agreement price.

Sixthly, all developer's information is augmented with data on individuals and (or) legal entities who in accordance with RF legislation on protection of competition forming the same group with developer specifying: (a) data identifying a person (for individual – full name, citizenship and place of residence, for legal entity–organizational and legal form, OGRN and TIN), and (b) grounds for an individual to form the same group with developer. Developer' responsibility to disclose to any person a certain set of documents appears solely in case of their unavailability on UISHC's website.

All information of construction's project is augmented with the data on targeted credit (targeted loan) including data allowing to identify the creditor, on the available amount of credit (loan) with lending limit in accordance with its agreement provisions, unused balance on the credit line for the last reporting date and on the number of concluded agreements (total floor

area of facilities of shared-equity construction and agreement's price) with indication of the facility's type (residential, non-residential, parking place), including number of agreements concluded on condition of payment of mandatory contributions to the compensation fund or through using escrow accounts.

Seventhly, multiple novations appeared in the information provision.

Parting from the information posted on the Unified Information System for Housing Construction (UISHC) website, its operator may form analytical information, including with the account of the aggregated information's level (country-wise, RF subjects-wise, on municipalities, on separate directions in the construction segment, on other levels of aggregation). Disclosure of such information on requests from the government bodies, local governments and the Bank of Russia is exercised free of charge. Information disclosure is exercised with confidentiality and requirements of the RF legislation on commercial secret.

The list of information posted on UISHC's website by a controlling body is augmented with data obtained from the adopted by the executive authority of RF subject roadmap for the implementation of measures on restoration of the citizens' rights whose funds have been attracted for multi-apartment residential buildings and (or) other real estate facilities entered on the Register of Problematic Facilities, and with the implementation timeline of corresponding measures

The registration body posts on the UISHC's website information taken from the Single State Register of the Real Estate identified by the RF government on the land plot, on a multi-apartment residential building and (or) other real estate facility constructed with the attraction of duns from the participants in shared-equity construction as well as on the construction site. The posted information on agreements of participation in shared-equity construction separate information on additional agreements, which alter the substance and the price of an agreement, transfer timeline of the construction site by a developer as well as data on agreements, contracts on the cession of right thereto.

In accordance to the bankruptcy law, the developer being a beneficiary may get access to the documents and information on each capital construction facility, having received liabilities thereto before the participants in shared construction. The access procedure for such developer to those documents and information is determined by the operator of the system–Single institute of housing development, determined by law of 2015 (No. 225-FZ), i.e. JSC "ДОМ.РФ".

The use of private accounts of developers and HCC has been regulated.[1] In case the document is posted through a personal user account belonging to the subject of information the date of its receipt by another subject is the date following the date of document's post in the personal user account of the first subject.

The controlling body may request from an authorized bank information in relation to developer required for exercising its duties on the government control (supervision) in the segment of shared-equity construction of multy-apartment residential buildings and (or) other real estate facilities in order determined by the RF government on coordination with the Central Bank of Russia.

[1] The RF government established the procedure for the interaction of the subjects of information while using information resources of UISHC by its Resolution of March 26, 2019, No. 319.

5.9.4. The housing market prospects

The immediate prospects of the housing construction are determined not so much by institutional factors as by the new socio-economic realities of early 2020 shaped by the outbreak of the coronavirus pandemic of its challenges and the absence of agreement between the major crude oil producers. The subsequent plunge of the global crude oil prices has led to a notable depreciation of the ruble.

Retention of the key rate by the central bank at 6 percent has not eliminated an uncertainty for further rates movement on mortgage loans. Even in case of U-turn of the global crude oil prices the shock effect of these events makes feasible the following scenario for the housing market.

In short-term timeline the activity of consumers who have been already getting ready for purchases is boosted and augmented by impulsive actions of those who by analogy with previous crises has been trying to protect accumulated savings by investments in the real estate. In the future as this motivation disappears there comes deep recession on the back of decline of real income of the population and transition to cautious consumer behavior (an attempt to maintain the current quality of life and turn to savings amid favorable concurrence of circumstance). Partial market dollarization has not been excluded if it follows the inflation and devaluation with some lag. Government support of the housing market will be limited due to a probable federal budget deficit and obvious more acute problems to tackle (medicine, social safety net, labor market, etc.). Logically, within these priorities certain effect for the housing market is possible (for instance, mortgage holidays, support of certain groups of citizens).

However, it is obvious that in the current market situation and anyway problematic achievement of targets envisaged by the national project “Housing and urban environment” till 2024 is being postponed. Over 20 recent years there were examples of downturn in the Russian housing construction in 2009–2010 (down by 9 percent) and in 2016–2018 (down by 11 percent) can be surpassed both in depth and duration.

Section 6. Institutional change

6.1. The public sector and privatization[1]

6.1.1. Economic subjects in federal ownership

From 2016, statistical data began to be published in the framework of the System of Public Property Management Efficiency Estimates (hereinafter – System of Estimates). It was approved by Decree of the RF Government 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 accordance with RF Government Decree No 1 dated January 4, 1999 (as amended on December 30, 2002). The System of Estimates contains data on the number of federal state unitary enterprises (FSUEs) and joint-stock companies (JSCs) with RF stakes in their capital, which had been previously published, as a rule, in the government privatization programs for the next period (from 2011 – for three-year period, and prior to 2011 – for one-year period). Such data can also be found in the newly adopted forecast plan (program) of federal property privatization (FPP), as well as in the Main Directions of Federal Property Privatization for 2020–2022 approved by RF Government Directive No 3260-r dated December 31, 2019.

Together with data from the Federal Property Register and the System of Public Property Management Efficiency Estimates, the relevant data are shown below (*Table 1*).

As of January 1, 2019, the Russian Federation was property owner of 700 FSUEs and held stakes (was participant) in 1,130 economic societies.

When these numbers stated in the new privatization program are compared with the data published in the corresponding documents for the previous periods, it can be noted that the number of FSUEs shrank by nearly 44% on the beginning of 2016, and fivefold on the beginning of 2010; and that of JSCs – by 1/3 and by nearly 62%, respectively. Similarly to the dynamics observed over the previous period between the adoption of the two programs, the number of FSUEs was declining at an accelerated rate compared with that of JSCs with RF stakes.

[1] This section was written by *Malginov G. N.*, Candidate of sciences, Head of the Ownership and Corporate Governance Department of the Gaidar Institute, leading researcher at the Center for Institutions Analysis and Financial Markets of the RANEPA IAES; *Radygin A. D*, Doctor of sciences (Economics), Professor, Head of the Center for Institutional Development, Ownership and Corporate Governance of the Gaidar Institute, Director of the RANEPA IAES, Director of the RANEPA Institute of Economics, Mathematics and Information Technologies.

Table 1

Societies and organizations in federal ownership entered in the Federal Property Register and the System of Public Property Management Efficiency Estimates in 2010–2019

Дата	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[1]
as of January 1, 2010	3,066/2,950[b]		3517[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/ 1,130[e]	77	984/ 862[e]	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

[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 stakes in joint-stock capital;
[b] – 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] – according to 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 (from data released by *Rosimushchestvo* it follows 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 and 2018 Report on the implementation of the Forecast Plan (Program) of Federal Property Privatization for 2017–2019, respectively.
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, April 23, 2013; RF Federal Agency for State Property Management (*Rosimushchestvo*)'s Annual Report for 2015; Forecast Plan (Program) of Federal Property Privatization and the Main Directions of Federal Property Privatization for 2017–2019; statistical data from the System of Public Property Management Efficiency Estimates, URL: www.gks.ru, March 20,2016, September 5, 2016, March 20, 2017, September 5, 2017, March 20, 2018, September 5, 2018, March 20, 2019, September 5, 2019; Forecast Plan (Program) of Federal Property Privatization and the Main Directions of Federal Property Privatization for 2020–2022.

In spite of the declining number of commercial organizations that have to do with some form of federal ownership, it would be worthwhile to note that the actual data on their number still differs depending on its source. The number of economic societies as of the beginning of 2016 and 2019 as stated in the privatization programs was higher than that derived from the System of Estimates, while the corresponding ratio for FSUEs was exactly opposite. Another and more vivid proof of the questionable reliability of published data has been provided by the fact that the number of JSCs and LLC with stakes held by the RF (or where the RF was a participant) was the same in *Rosimushchestvo*'s reports on the implementation of the Forecast Plan

[1] Federal state institutions.

(Program) of Federal Property Privatization for last year and the year before last: 1,130 units as of January 1, 2018 and January 1, 2019,[1] which was unlikely, if only because of the privatization program's progress over the period 2018–2019.

Now let us look at the category of economic societies with various degrees of state participation, which is more numerous and at the same time more important from the point of view of their role in the economy[2] (*Table 2*).

Table 2

The movement patterns of 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 2010–2019

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), *Rosimushchestvo* (register and annual reports)										
As of January 1, 2010[a]	2,950/ 2,949	100.0	1,757/ 1,688	59.6	138/ 167	4.7	358/ 377	12.1	697/ 717	23.6
As of January 1, 2011 (RI report)	2,957	100.0	1,840	62.2	136	4.6	336	11.4	645	21.8
As of December 31, 2011 (RI report)	2,822	100.0	1,619	57.4	112	4.0	272	9.6	819	29.0
As of January 1, 2013[b]	2,337/ 2,356	100.0	1,256/ 1,257	53.7/ 53.3	100/ 106	4.3/ 4.5	227/ 228	9.7/ 9.7	754/ 765	32.3/ 32.5
As of January 1, 2014 (RI report)	2,113	100.0	1,000	47.3	95	4.5	224	10.6	794	37.6
As of January 1, 2015 (RI report)	1,928	100.0	861	44.7	90	4.7	203	10.5	774	40.1
As of January 1, 2016 (FPP)	1,704[c]	100.0	765	44.9	93	5.4	172	10.1	674	39.6
As of January 1, 2019 (FPP)	1,130[d]	100.0	368	32.55	30	2.65	95	8.4	637	56.4
Rosstat (System of Public Property Management Efficiency Estimates, JSCs only)										
As of January 1, 2016	1,557	100.0	816[e]		52.4[e]		174	11.2	567[f]	36.4[f]
As of July 1, 2016	1,571	100.0	711[e]		45.3[e]		189	12.0	671[f]	42.7[f]
As of January 1, 2017	1,356	100.0	575[e]		42.4[e]		128	9.4	653[f]	48.2[f]
As of July 1, 2017	1,247	100.0	514[e]		41.2[e]		108	8.7	625[f]	50.1[f]
As of January 1, 2018	1,189	100.0	488[e]		41.0[e]		102	8.6	599[f]	50.4[f]
As of July 1, 2018	1,060	100.0	448[e]		42.3[e]		87	8.2	525[f]	49.5[f]
As of January 1, 2019	1,084	100.0	442[e]		40.8[e]		85	7.8	557[f]	51.4[f]
As of July 1, 2019	1,059	100.0	429[e]		40.5[e]		85	8.0	545[f]	51.5[f]

[a] – the denominator is the number of JSCs as stated in the privatization program for 2010–2013, the numerator is the total number of JSCs and LLC, as entered in the Federal Property Register as of February 17, 2012;
[b] – the denominator is the number of JSCs as stated in the privatization program for 2014–2016, the numerator is the total number of JSCs and LLC stated in *Rosimushchestvo*'s Year-end Report for 2013;
[c] – 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);
[d] – the number of economic societies;
[e] – the total number of JSCs with federal stakes of more than 50% (without counting separately the JSCz with 100-% federal stakes), and their relative share;
[f] – 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.

[1] This is the number that is also stated in the new Privatization Program for 2020–2022, approved late in 2019.
[2] Previously, this group of companies could be described in more detail on the basis of information derived from 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.

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, April 23, 2013; the RF Federal Agency for State Property Management (*Rosimushchestvo*)'s Annual Report for 2015; Forecast Plan (Program) of Federal Property Privatization and the Main Directions of Federal Property Privatization for 2017–2019; statistical data from the System of Public Property Management Efficiency Estimates, URL: www.gks.ru, March 20,2016, September 5, 2016; March 20,2017, September 5, 2017; March 20, 2018, September 5, 2018, March 20, 2019, September 5, 2019; Forecast Plan (Program) of Federal Property Privatization and the Main Directions of Federal Property Privatization for 2020–2022; own calculations.

The relative share of JSCs in full state ownership (100% of charter capital) declined 52% on 2016, and nearly fivefold since 2010. Close to this figure is the decline index observed in the group of JSCs with blocking state stakes (25% to 50% of charter capital): by 45% on the beginning of year 2016, and nearly fourfold since 2010. The deepest plunge of this index was observed for JSCs with controlling state stakes (50% to 100% of charter capital): more than threefold on 2016, and almost fivefold on the beginning of year 2010. And the least shrinkage was demonstrated by the group of JSCs with minority state stakes (25% or less of charter capital): by 5.5% on the beginning of year 2016, and by 8.6% on the beginning of year 2010.

As a result, the structure of economic societies by the size of state stake in their charter capital underwent some significant changes.

While as of January 1, 2010 and January 1, 2016, those of them where the State as a shareholder exercised full corporate control[1] accounted for more than 64% and about half of all companies with RF stakes, respectively, by early 2019 their relative share amounted already to only 35%. Over the period of 9 years (2010–2018), the share of economic societies with blocking state stakes shrank from approximately 12% to 8.4% (at the beginning of 2016 – 10.1%). The relative share of companies with minority state stakes, on the contrary, was constantly increasing: from 23.6% in 2010 to 56.4% in early 2019 (vs approximately 1/3 at the beginning of 2013, and almost 40% at the beginning of 2016). But it should be remembered that the data in the privatization programs for 2011–2013 and 2014–2016 included only JSCs, and those from the subsequent programs covered all the companies with federal stakes. However, the other economic societies (LLCs) play only a minor role in the group of companies with state participation.[2]

Besides, an analysis of Rosstat's data published in the framework of the System of Public Property Management Efficiency Estimates has generally confirmed everything that is said above, despite reflecting a slight moderation. Over 3 years (2016–2018), the number of JSCs with federal stakes amounting to at least half of their capital fell by 46%, and their relative share decreased from 52.4% to less than 41%. The number of JSCs with federal blocking stakes more than halved, and their relative share shrank from 11.2% to about 8%. Accordingly, the share of all the other joint-stock companies with federal stakes increased from 36.% to 51.4%. In H1 2019, these trends became even more prominent.

According to more recent data released by Rosstat as of July 1, 2019, the Russian Federation was a shareholder in 1,059 JSCs, and the owner of property of 712 FSUEs, 48 federal treasury enterprises (FTE), and 14,942 federal state institutions (FSI).

[1] Summary statement based on the total number of JSCs with 100% and majority stakes held by the State.

[2] According to *Rosimushchestvo*'s Year-end Report for 2015, as of the end of that year only 20 LLCs out of the total of 1,704 economic societies had been entered on the Federal Property Register; of these, there were only 11 companies in full state ownership (where the State held a 100% stake) or with a majority state stake (50% to 100%) in their capital.

When these data are compared with the corresponding data obtained a year earlier, it can be noted that the number of FSUEs decreased by 156 units (or 18%), and that of FSIs – by 578 units (or 3.7%). Interestingly, the number of JSCs with state participation remained practically unchanged (declining by just 1 unit), while that of JSCs where the State held the special right to participate in a company's management granted by 'golden share' lost 4 units (5.2%). The number of FTEs decreased by 2 units (4%) and remained stable in H1 2019.

During this shorter period, the movement patterns displayed by the number of units in each of the main categories of organizational legal forms were as follows. The number of unitary enterprises decreased by 10.1%, that of JSCs with state stakes by 2.3%, and that of state institutions by 1.3%. It is worth noting that in H2 2018, there was an increase in the number of JSCs with state stakes.

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 2016–2018 (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[a]	4,891	56,247	3,501	2,364
As of July 1, 2013	66,131[a]	4,589	56,100	3,201	2,241
As of January 1, 2014	64,616[a]	4,408	54,699	3,097	2,412
As of July 1, 2014	63,635[a]	4,236	54,173	2,988	2,238
As of January 1, 2016	65,587[b]	4,284	56,693/56,649[c]	3,888[d]	…
As of July 1, 2016	65,218[b]	3,982	56,893/56,856[c]	3,718[d]	…
As of January 1, 2017	64,457[b]	3,719	56,548/56,507[c]	3,532[d]	…
As of July 1, 2017	62,655[b]	3,294	55,414/55,361[c]	3,353[d]	…
As of January 1, 2018	61,734[b]	3,053	54,851/54,814c	3,239[d]	…
As of July 1, 2018	60,391[b]	2,763	53,933/53,899[c]	3,125[d]	…
As of January 1, 2019	59,608[b]	2,608	53,394/53,360[c]	3,054[d]	…
As of July 1, 2019	58,839[b]	2,366	52,901/52,870[c]	2,972[d]	…

[a]– 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;

[b] – 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.);

[c] – total number of institutions created by the RF 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);

[d] – total number of economic societies, the size of their state stake (or shares in charter capital) being irrelevant; data concerning the number of economic societies with controlling state 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: www.gks.ru, March 20, 2016, September 5, 2016, March 20, 2017, September 5, 2017, March 20, 2018, September 5, 2018, March 20, 2019, September 5, 2019.

According to data collected within the framework of the new System of Estimates, by mid-2019 the total number of economic subjects belonging to the public ownership category amounted to approximately 58,800 units, which is less by approximately 15,500 units (or by 2.6%) than a year earlier, and by approximately 4,800 units less than the corresponding index for mid-2014.[1]

For some categories of economic subjects it can be noted that, relative to mid-2018, the number of unitary enterprises declined by approximately 400 units (or 14.4%), that of economic societies – by approximately 150 units (or 4.9%), and that of state institutions – by approximately 1,000 units (or 1.9%).

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 9.3%, that of economic societies – by 2.7%, and that of state institutions – by nearly 1.0%.

In this connection, it should be borne in mind that a decline in the number of state-owned entities occurred in the main as a result of their reorganization by way of merger, and only in a small minority of cases it resulted from their privatization.

6.1.2. Privatization policy

In 2019, the implementation period of the Forecast Plan (Program) of Federal Property Privatization and the Main Directions of Federal Property Privatization for 2017–2019, approved by Directive of the RF Government No 227-r dated February 8, 2017, was over. This was the third 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. Since the moment of approval of the Forecast Plan (Program) of Federal Property Privatization and the Main Directions of Federal Property Privatization for 2017–2019, a total of 58 normative legal acts (NLA) pertaining to these issues were adopted, of which 14 were issued in 2019 vs 29 in 2018, and 15 in 2017. The frequency of legislation adjustments over the course of last year was comparable with that in 2017. If we compare the FPP for 2017–2019 (overall) with the previous privatization program for 2014–2016 (a total of 90 NLAs), the number of adjustments and alterations shrank nearly 1.5 times, but it was still higher than that noted for the privatization program for 2011–2013 (the introduction of 51 new NLAs).

When the FPP for 2017–2019 is compared (in general) with the previous privatization program for 2014–2016 (in the course of which 90 NLAs were adopted), it becomes obvious that the number of adjustments and alterations was about 1.5 times less, but still higher than that noted for the implementation period of the program for 2011–2013 (51 NLAs).

Initially, the FPP for 2017–2019 envisaged the possibility of privatization of 7 biggest companies by special presidential and governmental decisions, with due regard for the market situation and recommendations of eminent investment consultants, including 4 JSCs where the State ceased to be a shareholder (OJSC *Novorossiysk Commercial Sea Port*, OJSC *United Grain Company* (UGC), *Oka Non-ferrous Metals Processing Plant*, and *Kristall Production*

[1] The last bulletin of the developments in the public sector of the RF economy covered the period January-September 2014. Here, for the purpose of a medium-term analysis, the data for H1 2014, released as of 1 July 2014, were applied.

Association). In 2019, that group was joined by *Adler Trout Breeding Farm* and *Makhachkala Commercial Sea Port*, the latter having been struck of the list of FSUEs earmarked for privatization in an ordinary procedure.

For 3 companies (VTB Bank (PJSC), *Sovkomflot* PJSC, and *Alrosa* PJSC), a reduction of the state stake in their capital was allowed. In the framework of preparation for the alienation of shares in VTB Bank (PJSC) and *Sovkomflot* PJSC, the agents specifically commissioned in 2016 for handling their sale (*Renaissance Broker* LLC and *VTB Capital* respectively) continued to develop their proposals as to which methods should be applied in closing the deals. The RF Government did not make any proper decision in this respect, although from November 2019, measures have been taken to publicly place 25% of ordinary shares in *Sovcomflot* PJSC with a view to their further alienation from federal ownership.

In actual practice, only one deal was closed with regard to the biggest companies placed on the corresponding list within the framework of the FPP. In order to properly maintain the existing gems cutting and polishing complex of the Russian Federation, create appropriate conditions for the development of diamond-cutting enterprises, and attract investments that can be spent on their modernization and upgrading, on the basis of RF Government Directive No 2027-r dated September 11, 2019, the preparatory measures for the sale of the 100% federal stake in *Kristall Production Association* JSC to *Alrosa* PJSC were successfully completed. The total deal price was RUB 1,886 billion.

Four times more money (RUB 7,845.6 million) was generated in the course of implementing RF Government Directives No 1430-r dated September 2, 2010 and No 1172-r dated June 9, 2016, and also in accordance with the terms stipulated in the supplementary agreement of June 23, 2016 attached to the 5-year installment buyout agreement, of October 9, 2010, between *Rosimushchestvo* and SSA *Sistema* PJSC concerning 547,312,918 shares in Sistema Shyam Teleservices Limited (now *Sistema Smart Technologies* Limited),[1] owned by the Russian Federation, to the total value of USD 777 million. The revenue generated for the federal budget (about RUB 7.85 billion) turned out to be lowest compared with the revenues received in the previous years (more than RUB 8.5 billion in 2017, and RUB 10.3 billion in 2018).

According to data from the monthly report on federal budget execution as of January 1, 2020 (internal sources of deficit financing) available on the RF Federal Treasury's official website, the amount of revenue generated by the sale of shares and other forms of participation in capital held in federal ownership was RUB 11,527.5 million, and thus it can be concluded that the two aforesaid deals accounted for almost 85% of this particular budget revenue category.

In its other aspects, the final year of the third privatization program turned out to be much less successful. In 2019, in addition to the property sale deals arranged according to individual schemes, a total of 51 stakes (or shares in charter capital) of economic societies (JSCs) were sold to the value of RUB 2.06 billion rubles. The number of sold stakes (or shares in charter capital) increased only slightly on the period 2017–2018 (46–47 units), but the total value of the deals (RUB 2,064.6 million) plunged on 2018 by almost 28%, and shrank more than 2.5 times on 2017.

As far as privatization of federal state unitary enterprises (FSUEs) is concerned, the annual data for the period 2017–2019 (81 units)[2] differ significantly from those that had been published

[1]The stake in that joint Russia-India venture was received by the Russian Federation under the 2007 Intergovernmental Agreement by way of redemption of debt against previously issued loans.
[2] Including the 6 FSUEs that in 2019 were struck off the Forecast Plan (Program) of Federal Property Privatization for 2017–2019.

earlier.[1] So, the information on the number of FSUEs for which the decisions concerning the terms of their privatization were finalized specifically in 2019 cannot be considered to be fully reliable (*Table 4*).

Table 4

Comparative data on the movement of the number of privatization deals involving federal state unitary enterprises and federal stakes in 2008–2019

Period	Number of privatized enterprises (entities) formerly in federal ownership (data released by *Rosimushchestvo*)		
	privatized FSUEs,[a] units	sold stakes in JSCs, units	sold treasury property entities, units
2008	213	209[b]	…
2009	316+256[c]	52[b]	…
2010	62	134[b]	…
2008–2010	*591+256*[c]	*395*[b]	…[d]
2011	143	317[e]/359[b]	3
2012	47[f]	265[e]	40
2013	26	148[e]	22
2011–2013	*216*	*730*[e]	*65*
2014	33	107[e]	12
2015	35[g]	103[e]	38
2016	60[g]	179[e]	282
2014–2016	*125*[g]	*389*[e]	*332*
2017	69	47	77
2018	4	46	173
2019	8	51	171
2017–2019	*81*	*144*	*421*

[a] – all preparatory work is completed, and the relevant decisions concerning the terms of privatization are issued;
[b] – including those stakes that were put up for sale in the previous year;
[c] – 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*;
[d] – available information concerning sales of other property entities over that period is reduced to that concerning the 4 immovable military 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;
[e] – less sales of shares with the participation of investment consultants;
[f] – estimated value based on data on the total number of FSUEs in respect of which directives 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;
[g] – for several enterprises, the decisions concerning the terms of their privatization were abolished in 2015–2016 and then readopted, so the 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).
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, 2016; *Rosimushchestvo*'s reports on the implementation of the Forecast Plan (Program) of Federal Property Privatization in 2017–2019 for 2017, 2018, 2019. URL: www.rosim.ru,

[1] On the basis of data taken from *Rosimushchestvo*'s Reports on the Implementation of the Forecast Plan (Program) of Federal Property Privatization in 2017–2019, in 2017 and 2018 decisions concerning the terms of their privatization were made with regard to 18 and 21 state-owned enterprises, respectively.

Overall, in the course of implementing the FPP for 2017–2019, more than 450 bidding procedures involving the sale of state stakes (shares in charter capital) and 1,400 biddings for treasury properties took place.

Over 3 years, the sales of state stakes in economic societies other than biggest ones generated more than RUB 10.3 billion, of which RUB 5,396.14 million was received in 2017, RUB 2,857.05 million in 2018, and RUB 2,064.64 million in 2019.

The greatest contribution to this financial result was made by the sales of 77 stakes (out of a total of 153 stakes earmarked for sale) to the total value of about RUB 8.4 billion (82 % of total proceeds), handled by *Auction House of the Russian Federation* (*RAD* OJSC). The total year-end deal value index for 2019 (RUB 1.474 billion) turned out to be an absolute record low of the entire 3-year period (2017 – RUB 4.84 billion; 2018 – RUB 2.053 billion), although the number of sold stakes (32 units) was the highest (2017 – 17 units, 2018 – 28 units). The contribution made by the other agent – VEB Capital Plc, which had been commissioned to handle the sales of 120 economic societies, amounted to much *less*. It sold only 16 stakes to the total value of approximately RUB 780 million, and most of these deals were closed in 2019 (14 units to the total value of RUB 568.8 million). It was expected that the final results of bidding and of the closure of sales of stakes in 52 economic societies, handled in the main by independent sellers, would become available in Q1 2020. Over 3 years (2017–2019), those sellers accounted for almost 65% of all sold stakes (shares in charter capital) (or 93 units) and for more than 91% of total proceeds, which amounted to approximately RUB 9.4 billion.

In 2019, the biggest transaction was the sale of all shares in the hotel *Shakhter* in Moscow, to the value of RUB 198.6 million. The other 6 out of 7 deals of various magnitude, closed that year to the value of not less than RUB 100 million, were the sales of properties situated in the city of Moscow and in Moscow Oblast (including Production Association *Fine Organic Synthesis*, *Specstroyexpluatacia* JSC, a bakery plant, a learning center, and a publishing house). Thus, more than 45% of the total proceeds of standard sales were generated by deals involving stakes in JSCs situated in the region around the capital city, where the fact of property ownership per se creates rich opportunities for deriving income in addition to (or instead of) the core activity of a business. Out of those 8 deals, 4 were handled by *Auction House of the Russian Federation* (*RAD* OJSC), and 4 – by VEB Capital Plc.

The competition level was not high. Overall, there were 132 biddings for the stakes (shares in charter capital) earmarked for privatization, and 194 bidders, i.e., 1.5 bidders per proposed deal. If we disregard the 65 biddings that were canceled due to the absence of any bids, this index will surge to 2.9. In 2019, the highest interest on the part of potential investors was focused on the stakes in the following JSCs that were sold without their price being disclosed: Yaroslavl Fuel Enterprisese (100%, 24 bids); Leasing Company ROSSAKHALIZING (Yakutsk, 10%, 16 bids); *Olimp* (Vladikavkaz, 30.23%, 11 bids).

In 2019, as far as privatization of RF treasury property is concerned, the number of sales of treasury property entities (171 units) remained at the same level as in 2018 – 173 units (in 2017–77 units); there were more than 800 bids by potential investors (vs 1,300 in 2018). Nevertheless, as before, the number of sold treasury property entities was stably above that of sold stakes (or shares) in economic societies, and last year there was a 3.4 times difference between the two indices. The total value of closed deals increased nearly 1.7 times (to RUB 755.4 million).

In contrast to deals of sale of stakes (or shares) in economic societies, in this segment the dominating role belonged to *Rosimushchestvo*. In 2019, it handled the sales of nearly 2/3 of all property entities (111 units) and accounted for more than 53% of the total deal value (RUB

403.35 million). This result was achieved, among other things, due to the efforts of *Rosimushchestvo*'s territorial branches, which in the framework of the ongoing privatization plan handled the sales of 78 treasury properties to the total value of RUB 261.9 million. The delegation to them of the powers pertaining to privatization (or alienation) of federal property entities results in shorter pre-sale preparation procedures and boosts the interest of regional investors, including small businesses and individual entrepreneurs, in bidding for these properties.

The territorial branches of *Rosimushchestvo* were also closely involved in the realization, by small and medium-sized enterprises (hereinafter – MSE), of their preferential right to buy out the properties leased by them, in accordance with Federal Law No 159-FZ dated July 22, 2008 'On the Specific Features of Alienation of Immovable Property in State or Municipal Ownership and Leased by Subjects of Small and Medium-Sized Entrepreneurship, and the Introduction of Alterations into Some Legislative Acts of the Russian Federation', which was subsequently amended in 2018. After analyzing the information submitted by the territorial branches and reviewing the requests submitted by MSEs concerning their desire to buy out the federal property entities currently leased by them, *Rosimushchestvo* prepared special directives regulating the terms of their privatization, and dispatched the corresponding orders to its territorial branches in the localities where said property entities are situated, so that the lessors could properly realize their rights. Over the reporting period, 22 purchase-and-sale agreements with the lessors (MSEs) were concluded to the total deal value of RUB 155.42 million, given that the current privatization program targeted more than 150 leased immovable property entities.

The role of independent sellers in handling the deals involving treasury properties has become somewhat less prominent. The already mentioned *RAD* OJSC sold 39 units to the value of RUB 301.6 million (in 2018 – 39 units to the value of RUB 72.1 million; in 2017 – 9 units to the value of RUB 28.60 million); the Agency for Direct Investments (ADI) sold 18 units to the value of RUB 47.1 million (in 2018 – 20 units to the value of RUB 70.6 million); and VEB Capital Plc. sold 3 units to the value of RUB 3.31 million (in 2018 – 14 units to the value of RUB 30.8 million). It was expected that the final results of the sales of 133 property entities would become available in Q1 2020, including the 12 property entities handled by independent sellers.

Overall, in the course of 3 years (2017–2019), *RAD* OJSC sold 87 units out of the 285 property entities earmarked for sale in accordance with RF Government Directives, to the total value of RUB 402.3 million, the ADI sold 38 out of 73 properties to the value of RUB 117.7 million, and VEB Capital Plc. sold 17 out of 205 properties to the value of RUB 34.1 million. Taken together, they accounted for the sales of approximately 1/3 of all properties and for 37% of the total proceeds (RUB 1.5 billion).

In 2019, the success of realization of state stakes (or shares in charter capital) and treasury property entities, calculated as the ratio between the number of sold assets and the number of biddings, stayed approximately at the same level (37–38%). Because of absence of any bids, more than 54% of the announced biddings for treasury property entities and 61% of biddings for stakes (or shares) in economic societies were cancelled. Traditionally, the main reasons for this state of affairs were the absence of real economic activity and low financial and economic potential indices.

The comprehensive pre-sale preparatory measures implemented by independent sellers prior to property sales are more time-consuming, and so the cases when bidding had to be postponed

were quite frequent. At the same time, it becomes possible to attract a larger number of potential buyers and achieve better results of the privatization procedures.

In 2019, the success rate of sales of stakes (or shares) in economic societies, measured as the ratio of the number of sold stakes (or shares) to the number of biddings, was higher for the independent agents (40%) than for *Rosimushchestvo* (29%). That gap was even wider for treasury property entities (51% vs approximately 1/3). However, in the course of sales of treasury property entities by VEB Capital Plc., the number of canceled biddings was twice as high as the number of closed sale deals, while for the ADI both these indices were practically equal.

In 2017–2019, in the framework of implementation of 27 Executive Orders of the RF President and 17 Directives of the RF Government concerning the creation or expansion of vertically integrated structures (VISs), *Rosimushchestvo* set out to establish 14 VISs. The 3-year privatization program launched in that sector listed a total of 40 FSUEs, shares in 66 JSCs, and 135 treasury property entities. As of the year-end of 2019, the relevant decisions concerning the terms of privatization were taken with regard to 28 FSUEs, 60 JSCs, and 132 treasury property entities; for 5 VISs, the relevant measures have not yet been completed.

On the whole, the results of the third 3-year privatization program (for 2017–2019) turned out to be much more modest than the results of the second program (for 2014–2016).

While in 2017–2019 the sales of stakes (or shares) in 144 economic societies were completed, 421 treasury property entities were sold, and relevant decisions concerning the terms of their privatization were adopted for 81 FSUEs, over the period 2014–2016 the corresponding deals involved 389 stakes (or shares) in economic societies, 332 treasury property entities, and 125 FSUEs. The number of sold stakes (shares in charter capital) fell by nearly 2/3, and that of privatized FSUEs – by more than 1/3. At the same time, the number of sold treasury property entities gained nearly 27%. The total proceeds of sales of stakes (or shares in charter capital) in economic societies other than biggest ones (RUB 10.3 billion) amounted to 58% less than in 2014–2017 (more than RUB 24.8 billion), not counting the effects of inflation. The progress with regard to creation of vertically integrated structures (VISs) was likewise less impressive. As far as the integrated assets are concerned, there was a sharp plunge in the number of treasury property entities (132 units vs 702 units) and JSCs (60 units vs 141 units), while the number of FSUEs privatized in the framework of VIS remained almost unchanged (28 units vs 30 units).

In the **new Privatization Program** approved by Directive of the RF Government No 3260-r dated December 31, 2019, similarly to the previously existing document, there is no direct and explicit statement of the government policy goals in the field of privatization. There is a reference to the achievement of goals envisaged in the RF Government Program (GP) *Federal Property Management*, approved by RF Government Decree No 327 dated April 15, 2014, and the improvement of federal property management mechanisms in accordance with Section XII of the Concept of Budget Spending Efficiency Improvement in 2019–2024, approved by RF Government Directive No 117-r dated January 31,2019. In respect of the assets included in the Privatization Programy it is specified that the relevant enterprises (or organizations) in federal ownership are not natural monopolies or organizations belonging to the defense complex. In principle, this is the continuation of the basic guideline stipulated in Executive Order of the RF President No 596 dated May 7, 2012, *On Long-term Government Economic Policy.* It should be reminded that the Executive Order envisaged that by 2016, the State should completely withdraw from the capital of companies operating in the ‘non-raw’ sector, companies that were not subjects of natural monopolies, or organizations belonging to the

defense complex. However, the new FPP does not mention the fact of belonging to the 'non-raw' sector.

The additional exceptions are as follows: (1) joint-stock companies (JSCs) and enterprises entered on the list of strategic organizations, (2) minority federal stakes in JSCs, as well as shares in JSCs affiliated to the core companies of vertically integrated structures, to be later redistributed among the latter, and (3) organizations registered outside of the territory of the Russian Federation. Generally speaking, all these organizations were mentioned in a similar context in the privatization program for 2017–2019, although the second group was defined more narrowly as minority stakes in JSCs affiliated to the core companies of VISs, with the purpose of their subsequent transfer to the charter capital of those core companies. A comparatively new phenomenon is the mention, among of types of property earmarked for privatization, of shares in JSCs transferred gratis to legal entities or individuals, or transferred into federal ownership as a result of reorganization of economic societies, or by a court ruling, and of heirless property.

The predictions of the possible effects of property privatization on structural changes across the national economy are purely formal, because they simply visualize the quantitative distribution of state-owned economic subjects earmarked for privatization by type of economic activity.

The list of biggest companies to be privatized by special presidential and governmental decisions, with due regard for the market situation and recommendations of eminent investment consultants, includes 4 companies (JSCs) in respect of which the State is planning to withdraw from their capital (*Makhachkala Commercial Sea Port*, *Adler Trout Breeding Farm*, *Novorossiysk Commercial Sea Port,* and Foreign Trade Association *Almazjuvelirexport*), and 4 companies where the state stakes will be reduced: in two (*Sovkomflot* PJSC and *Rosspirtprom* JSC) – to 75 % + 1 share, and in the other two (VTB Bank (PJSC) and Kizlyar Brandy Factory JSC) – to 50 % + 1 share.

The list of assets earmarked for privatization within the framework of individual schemes partly overlaps the forecast plan of federal property privatization for 2017–2019 (in its most recent version) and the other previously adopted programs. In reality, *Almazjuvelirexport* can indeed be considered to be a new asset of national importance. However, the possibility of its full privatization depends on one condition – that of transfer to another empowered organization of the powers to export precious metals and precious stones currently granted to Gokhran of Russia, as well as the powers to export uncut and cut diamonds granted to 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 announced reduction of the stakes held by the State in *Sovkomflot* PJSC and VTB Bank (PJSC)[1] will still make it possible to exercise government control over these two companies, although in the previous program it was stipulated that the government would only be able to retain its influence on their corporate governance procedure by keeping a blocking stake.

The list of assets to be privatized following standard procedures (Part 2 of the Program) consists of 86 FSUEs, 186 JSC, 13 LLCs, and 1,168 treasury property entities; these will be treated in the same way as it has been done in recent years. Compared with the initial versions of the previously adopted privatization programs, the number of commercial organizations earmarked for privatization is lowest – this is true for unitary enterprises (114 units in the FPP

[1] For a bank, it is established that a share in excess of 50 % of capital should be recognized as an ordinary registered share.

for 2011–2013; 514 units – in the FPP for 2014–2016; and 298 units in the FPP for 2017–2019), as well as for economic societies (854 units, including 35 CJSCs and 10 LLCs, in the FPP for 2011–2013; 440 units, including 4 CJSC, in the FPP for 2014–2016; and 487 units, including 10 CJSC, in the FPP for 2017–2019). The number of property entities of other types, on the contrary, is highest compared with the previous forecast plans (73 units in the FPP for 2011–2013, 94 units in the FPP for 2014–2016, and 1,041 units in the FPP for 2017–2019).

As far as privatization possibilities for certain assets are concerned, special conditions have been introduced with regard to the terms of their privatization after the restrictions thereof have been lifted in the established procedure (in the group of unitary enterprises); the reorganization into a JSC of several unitary enterprises and the alienation of state stakes in JSCs in the event when no other government decision thereof is adopted before early 2021; the timelines for completing the privatization procedures in coordination with the federal body of executive authority responsible for proper coordination and regulation of the relevant activities; alienation of shares after the performance of the functions of an asset manager has been terminated (for some JSCs); and implementation of a privatization procedure and the transfer of a property entity to the RF Treasury. With regard to other privatized assets, their transfer to different integrated structures is specified, including the reorganization of a group of unitary enterprises into a JSC with a subsequent transfer of a 100% stake to state corporations (SC) *Roscosmos*, *Rosatom*, *Rostec*, or the transfer to the charter capital of Russian Railways OJSC, United Shipbuilding Corporation (USC), Shipbuilding & Shiprepair Technology Center JSC, and some other property entities held by the RF Treasury.

The new privatization program, similarly to the previous one, mentions the possibility of adopting presidential and government decisions on privatization by way of reducing the size of a state stake in the charter capital of an economic society, when additional shares are issued, and the proceeds of their sale are used for an additional capitalization of that economic society, with due regard for the various aspects of its long-run development and the investment needs associated with its development strategy, as well as capital adequacy ratio (the latter applies to banks).

In the course of presentation of the Forecast Privatization Plan at a meeting of the RF Government, the then RF Minister of Economic Development noted that due to a surplus in the federal budget for 2020–2022, privatization of state-owned companies is viewed not as a source of budget financing, but as a tool of structural transformations in the economy designed to achieve the following three goals: (1) boost competition, (2) attract resources for the development of companies, and (3) improve the quality of corporate governance in those companies. In this connection, he pointed to the following instruments to be applied in the achievement of these goals: rapid privatization of non-strategic assets, reduction of the size of state stakes in the capital of some companies by way of additional issues of shares, and involvement of private shareholders in the managerial bodies of state-controlled economic societies.[1]

The amount of federal budget revenue to be generated by federal property privatization in 2020–2022 (less the value of shares in biggest companies) is forecast to be RUB 3.6 billion per annum (the total projection being RUB 10.8 billion). In the previous privatization programs, the corresponding projection was RUB 5.6 billion per annum over the period 2017–2019 (a total of RUB 16.8 billion), RUB 3 billion per annum over the period 2014–2016 (a total of RUB

[1] URL: https://www.economy.gov.ru/material/news/pravitelstvo_odobrilo_plan_privatizacii_na_2020_2022_gody.html, December 25, 2019.

9 billion), RUB 6 billion for 2011, and RUB 5 billion each for 2012 and for 2013 (a total of RUB 16 billion). There are no quantitative projections as to the amount of planned proceeds of federal property privatization by way of sales of shares in biggest companies, which are highly attractive for investors, on the basis of a special government decision; such projections were absent in all the previous 3-year privatization programs, with the exception of the first one (for 2011–2013).

Thus, as far as budget targets for the revenues to be generated by privatization are concerned (other than biggest deals), we may note their shrinkage by more than 1.5 times compared with previous 3-year privatization program for 2017–2019, although their amount it still somewhat higher than the corresponding projections in the program for 2014–2016. However, they could probably be adjusted at a later point, especially in view of the recent alterations in the structure of the Russian government, where *Rosimushchestvo* is now subordinated to the RF Ministry of Finance.

Meanwhile, the Federal Law on the Federal Budget for 2020–2022 No 380-FZ dated December 2, 2019, similarly to last year's budget law, offers no specific information on the amount of revenues to be generated by privatization neither in the body text, not in the annexes thereto.

At the same time, in the explanatory note attached to the draft law submitted by the government, the revenues from privatization of assets in federal ownership were listed alongside government borrowings as a separate source of federal budget deficit financing. Similarly to the draft budget laws for 2016–2019 and in contrast to the corresponding documents adopted prior to that period, some of the supplementary materials attached to the draft law did provide data pertaining to the forecast plan (program) of federal property privatization, with a substantiated forecast of federal budget revenue to be generated by privatization; this information can also be found in the explanatory note.

The amount of federal budget revenue to be generated by federal property privatization is forecast to be RUB 11.3 billion in 2020, and RUB 3.6 billion per annum over the period в 2021–2022. Its role as a source of federal budget deficit financing will be brought to a minimum: in 2020–2022, the expected privatization-generated revenue is to be less than 1% of total planned government borrowing. Based on the preliminary results of the implementation of the FPP for 2019, the probability that this scenario of privatization-generated revenue may come true can be estimated to be high. Moreover, for the period 2021–2022 it is expected that the budget target for privatization-generated revenue set in the new privatization program (less the value of shares in biggest companies) will be fully achieved.

This year, some alterations have been introduced into the current privatization law (adopted in 2001).

Firstly, we may note the more widespread participation of private sellers in the privatization procedures involving not only federal property entities, but also properties owned by subjects of the Russian Federation and municipalities. The possibilities for their selection at a local level are reduced to the list of 23 legal entities, which are granted the right to organize, on behalf of the State, sales of privatized federal property entities and (or) to perform the functions of a seller; the list was approved by the RF Government in 2010 (as amended in 2017).

Secondly, the mechanism of selling property at an auction, in the framework of a tender, and a sale without announcing a price was adjusted so as to eliminate the possibility to file applications in writing, and to introduce instead the procedure of open bidding. The winner can no longer be notified by a written notification issued to their attorney against a confirmation

signature by the latter. Instead, the notifications should be sent personally to the winner by one or other method on the day when the results of a property sale are established.

The norms concerning the recognition, as the winner in a tender (in the event of a price offer tie), of the earliest bidder and the placement of bids by participants in a public offer of state or municipal property by raising their bid cards after the announcement of an initial price offer or an underbid price were recognized to be null and void.

With regard to the realization, by a lessor, of the right to buy out the federal or municipal property entity being leased under a contract concluded prior to the entry into force of the current privatization law (adopted in 2001), it is now possible only to do this within the timelines established in the contract if the latter also stipulates the buyout price, the timeframe thereof, and the payment procedure.[1]

The sale of state or municipal property by any permitted method (except the transfer of state or municipal property as a contribution to the charter capital of a JSC and the sale of shares in the framework of trust management) in effectuated in an electronic form.

Thirdly, the following criteria have been altered:

(1) the criteria imposing restrictions on closing a deal by a unitary enterprise without the consent of the owner of its property, from the date of entering into force of the forecast plan (program) of federal property privatization and until the date of State registration of the newly created economic society (10-fold amount of minimum charter capital of a FSUE instead of 50,000-fold amount of minimum wage);

(2) the criteria establishing the possibility of holding inter-regional and all-Russia specialized auctions for sale of shares (net assets of a JSC must amount to 500-fold to 3,000-fold established minimum charter capital of a public JSC as of the moment of issuing that decision, instead of the corresponding minimum wage index);

(3) the criteria whereby a similar alteration is introduced (50-fold minimum charter capital of a public JSC instead of 50,000-fold minimum wage) for the value of a property entity, when during the voting on the issues of property alienation, transfer as a collateral or lease, or the commitment of other acts that may result in property alienation, the winner in a tender is subject to restrictions until the ownership right to shares in a JSC (or a stake in the charter capital of a LLC) is transferred to him during the voting in the managerial bodies of those companies.

Some important alterations were introduced into the Provision on the selection of legal entities for organizing, on behalf of the Russian Federation, a sale of a privatized federal property entity and (or) performing the functions of a seller, approved by Directive of the RF Government No 748 dated June 26, 2017.[2]

Under the previous procedure, beside the adoption, by the RF Ministry of Economic Development, of a decision concerning the selection procedure and the establishment of a

[1] Previously, there existed a possibility to buy out a leased property entity within 6 months from the date of entering into force of the 2001 law, if the lease agreement that granted the right of a buyout did not specify the amount of a buyout payment, the timeframe and procedure of payment in the form of a transfer of the leased state or municipal property entity as a contribution to the charter capital of a JSC created jointly with the lessor, the latter being granted a preferential right to buy shares in the said JSC (if the market value of the leased property entity was above the cap of 10,000 minimum wages established by the Federal Law), or if an additional agreement has been concluded whereby the terms of a buyout, its timeframe and payment procedure were established (if the market value of the leased property entity was not in excess of the cap of 10,000 minimum wages established by the Federal Law).

[2] For more details concerning the content of that document and its analysis, see Russian economy in 2017. Trends and Outlooks. Moscow, Gaidar Institute, 2018, p. 396–403.

commission for that purpose, there used to be two phases of selection proper; instead, the current Provision establishes only one phase.

It is also established that in the event of the issuance of an assignment, by the RF Government, that the method of sale of privatized federal property should be changed, if the consent thereto has been obtained from the legal entity commissioned to act as a sale organizer and (or) perform the functions of a seller, a new selection procedure is not required. The RF Ministry of Economic Development, which was previously empowered to make the decision concerning a termination of the selection procedure during any of its phases on the bases of instructions or assignment issued by the RF President of the RF Government, may now do this only before the results of the selection procedure have been established.

The commission set up by the RF Ministry of Economic Development is now chaired by the director of the Ministry's responsible department (previously its chair was to be a deputy minister); the powers of *Rosimushchestvo* have been expanded, its representatives are now included in the commission on a mandatory basis, and a deputy director of the responsible department is appointed to be the commission's deputy chair.

The application, in addition to a cover letter stating an interest, on behalf of the State, in organizing a sale of a privatized federal property entity and (or) performing the functions of a seller, and the information entered in one of the two available model forms[1] must include, among other things, a specific downward coefficient to be applied to one or other federal property entity (or the lot number). The letter stating the offer is verified by the signature of the person empowered to sign the letter on behalf of the legal entity, as well as the other documents attached to the application for participation in the selection procedure.

The downward coefficient is set in the interval from 1 to 0, and is to be applied to the cap compensation for organizing, on behalf of the Russian Federation, of a sale of a privatized federal property entity and (or) performing the functions of a seller, including all the necessary organizational expenses (among other things, the cost of services outsourced to legal entities and the mandatory payments established in accordance with the RF Tax Code). The cap compensation to be paid to a legal entity cannot be higher than: 2%, adjusted downward through the application of the aforesaid coefficient, in the event of organizing a deal by offering shares on the stock market; 2%, adjusted downward (but not below RUB 100,000), in the event of organizing a deal in the form of an auction or a public offer; and in other cases, 1%.

Consequently, the protocol of opening the envelopes with applications for participation in the selection procedure, as well as the selection commission's protocol of the results of the selection procedure, must contain, as part of the relevant information, also the information concerning the downward coefficient, and the list of grounds for rejecting an application must be augmented by the instance of a situation when these are absent.

Not later than 10 workdays from the date of opening the envelopes with applications for participation in the selection procedure, the commission considers the applications from the point of view of their compliance with the established requirements for such applications and generates the estimates for each legal entity by assigning appropriate scores (points).

The scores are determined by assigning points to each offer based on two model forms.

[1] If within the framework of the RF Government assignment a legal entity is required to have had experience of placing shares in the stock market, the information must be submitted only in Form No 1; in a general case, Form 2 is submitted.

While the set of criteria for assessing an offer in ***Form 1*** was left unchanged (three blocks),[1] that included in ***Form 2***, which had previously consisted of two blocks, is now reduced to one block.

It includes the following criteria: (1) number (units) and (2) value volume (thousands of rubles) of the biddings for privatized state and (or) municipal property entities (with a verified protocol of bidding results) that had taken place over 3 calendar years prior to the selection procedure, (3) number (units) of the biddings for other property entities (beside sales of state and municipal property entities in accordance with RF privatization legislation) that had taken place over the last calendar years preceding the selection procedure (confirmed by copies of the relevant documents, specifying the source where the information on the bidding had been published and the protocol on the property sale results), and (4) number (units) of the public law entities interacting with the legal entity commissioned to organize and conduct the bidding for a state and (or) municipal property entity (confirmed by copies of the relevant contracts). It can be noted that these qualitative criteria (which also have a quantitative dimension) are more specific and objective that those previously applied (in the format of two blocks),[2] and their composition is now close to the content of information entered into Form 1, in cases when a legal entity is required to have experience of placing shares on the stock market.

In order to determine the winner in the selection procedure, the selection commission assesses and compares the applications submitted by legal entities, and assignes to them score points.

The aggregate score of each application during the selection procedure is derived by applying a formula where the final score assigned to a legal entity is determined by the sum of two coefficients: (1) based on the offer assessment, and (2) by applying a downward coefficient.

The first coefficient is calculated as the ratio of the number of points assigned to a legal entity relative to 100, and then multiplied by 0.6. The second coefficient is calculated as the difference between 1 and the absolute value of the downward coefficient multiplied by 0.4.

The winner in the selection procedure is recognized to be the legal entity with the highest aggregate score based on the results of the selection procedure. In the event of a tie, the selection commission issues the decision that a second application should be submitted.

The results of considering the applications by the selection procedure from the point of view of their compliance with the established requirements, as well as the resulting score of the legal entities, are properly formalized during the selection commission's meeting and entered into the protocol of the selection procedure results, which must state as follows: (a) the list of legal entities that have submitted applications; (b) the legal entities whose applications have been rejected by the selection commission, with substantiated reasons for each rejection; (c) the list of legal entities that have passed the selection procedure, with their assigned points based on

[1] (I) information of the legal entity's professional experience (II) the list of its staff and other individuals and legal entities participating in organizing the property sale, pre-sale preparation and closure of the deal, (III) experience of cooperation with government bodies.

[2] Block (I) consisted of only 2 criteria: (1) individuals (not more than 3) responsible for organizing and coordinating the deal at the top level (top CEOs), (2) analytical department (the staff responsible for the company's analytical support (their experience should be described in an annex). Block (II) was reduced to one criterion – cooperation with the RF government, administrations of subjects of the Russian Federation (or state bodies acting as their assignees) in organizing privatization deals over the last 5 years (listing all the deals participated by that legal entity as a bidding organizer (seller) for the purpose of state property privatization, and the value volume of closed deals in millions of rubles).

the assessment of their offers adjusted downward through the application of the downward coefficient, and their final scores; (d) the winner in the selection procedure.

The introduction of a combined formula for determining the winner, which accounts not only for the professional potential and qualifications of each applicant, but also for their particular offer in the framework of a given deal, has made it possible to eliminate the second phase of the selection procedure, which previously required that a request concerning the value of the downward coefficient should be mailed to the legal entities that have been selected.

The amount of compensation to be paid to the winner depending on the method of sale is determined as the marginal values adjusted downward through the application of the downward coefficients suggested by the legal entities,[1] with the floor set at RUB 100,000, in the event of a sale at an auction or by a public offer.

6.1.3. The presence of the State in the economy and the issues of management of economic subjects operating in the public sector

Over the past year, some important alterations were also introduced into the list of strategic enterprises and joint-stock companies. Over the course of 2019, it was augmented by 1 FSUE and 2 JSCs. Over the same period, 7 FSUEs were struck off the list of strategic organizations; of these, 5 will be merged with another unitary enterprises; one will be reorganized into a JSC with the subsequent transfer of all but one of its shares to the charter capital of Concern *VKO Almaz–Antey*, by way of offsetting the value of placement on the market of an additional issue of its shares in order to increase its charter capital; and the property complex of another enterprise will be transferred, as a state contribution to the charter capital, to State Corporation *Rosatom*).

Some relatively insignificant adjustments (compared with 2018) to the list of strategic organizations were followed by other important changes that influenced the other economic subjects operating in the public sector.

First on all, we should note the creation of two public law companies.

The emergence of the first of them has had to do with the so-called ‘trash reform’ and the Environment National Project. The company *Russian Environmental Operator*, designed to build a comprehensive system for management of municipal solid waste (MSW), was created by Executive Order of the RF President No 8 dated January 14, 2019 in order to set up a comprehensive system for handling MSW and ensure its proper management, prevent the harmful effects of such waste on human health and environment, involve it into the economic turnover as a raw material and other types of materials, and recycle it in order to create new products and energy, as well as for the purpose of resource saving. The functions and powers of the company’s founder on behalf of the State will be executed by the RF Ministry of Natural Resources and Environment.

Another similar economic subject, the Military Building Company, was created by Executive Order of the RF President No 504 dated October 18, 2019. Its founder is the RF Ministry of Defense. The company’s declared goals are the activities and services that have to do with preparing documentation for territory planning prior to the installment of military and social infrastructure entities, and the engineering research, architectural and building

[1] The cap on the compensation to be received by a legal entity cannot exceed 2% in the event of a deal in the form of placement of shares on the stock market, an auction, public offer; and 1% in all other cases.

construction blueprints, construction, reconstruction, capital repairs and technical upgrading of the said entities. One of the first sites where the Military Building Company may focus its efforts could become the completion of the construction project *Vostochny Cosmodrome* (spaceport) in Amur Oblast.

Both these companies hold their property by right of ownership, and use it in the course of their activity in order to perform their delegated functions and execute their powers; one of the sources of their property has been the contribution made by the Russian Federation. The companies are allowed to conduct commercial activities. Their managerial bodies are the supervisory board, board of directors, and director general.

After the adoption, in 2016, of the Law on Public Law Companies (No 236-FZ), the Russian Environmental Operator and the Military Building Company became the first organizations of this type created by Executive Orders of the President. In 2017, by a special jaw, the non-commercial organization (NCO) 'Foundation for the Protection of the Rights of Citizens – Participants in Shared Construction Projects' was reorganized into a public law company with the same name.

Another important innovation was Executive Order of the President No 480 dated October 3, 2019, which addressed the telecommunications sector.

By that Executive Order, it was allowed to increase the charter capital of the public joint-stock company (PJSC) *Rostelecom* by way of an additional issue of ordinary shares, to be placed by closed subscription for the benefit of VTB Bank (PJSC), on condition that the Russian Federation should control it jointly with State Corporation (Major Financial Development Institution) VEB.RF and VTB Bank by holding more than 50% ordinary shares in Rostelecom, while keeping in direct RF ownership not less than 33.2% of its capital. In this connection, it should be reminded that previously, the Executive Order of the RF President issued in 2012 set the same state corporate control threshold for *Rostelecom* (50%), but at that time only two controlling stakeholders were determined (the State and *Vnesheconombank*), without specifying the size of stake to be held by each of them.

The new format of corporate control by the State is maintained by (1) the prolongation of the shareholder agreement between the Russian Federation and State Corporation VEB.RF, whereby the procedures of corporate governance and shareholder voting for *Rostelecom* PJSC are established, and (2) the signing of a shareholder agreement between the Russian Federation and VTB Bank concerning the shares in *Rostelecom* acquired by the latter, whereby the state control with due regard for the first shareholder agreement is ensured. The new shareholder agreement, in addition to regulating the procedure of exercising the rights secured by shares in *Rostelecom* PJSC, must impose a ban on the disposal by VTB Bank, directly or indirectly, of part of the newly acquired shares over a period of 4 years from the date of entering into the said shareholder agreement, with the right to their subsequent alienation by RF Government decision, while granting the State the preferential right to acquire these shares.

The introduction of these mechanisms should be viewed in the context of approval of the RF Government's proposal that the stake held by *Rostelecom* PJSC and its affiliation – *Mobitel* LLC – in the charter capital of T2 RTK Holding LLC should be increased to 100%.

From the point of view of the presence of the State in the economy and the implementation of its structural policy, the following developments should be noted.

A noteworthy event in the corporate control market was the sale, at the end of last year, of *TransContainer* JSC. *Russian Railways* OJSC, which had held the control stake in that JSC

(50% + 2 shares), sold it for RUB 60.3 billion (the initial offer price being RUB 36.16 billion).[1] In principle, that deal may be placed in the same category with the other deals whereby the State (represented by *Russian Railways* OJSC) fully withdrew from the capital of a transport company (*Freight One*, *Central Suburban Passenger Company*). However, in case of *TransContainer* JSC, VTB Bank has still remained one of its shareholders, although it holds a stake that falls short of a blocking one (24.5%).

As of October 1, 2019, an entry was made into the Single State Register of Legal Entities (EGRUL) concerning *Russian Post* JSC created by way of reorganization of the FSUE with the same name. The substantiation for corporatization of the postal service was the special law adopted in 2018 (No 171-FZ). All the shares in the JSC were placed on the account of the Russian Federation, to be represented by *Rosimushchestvo*, which will be exercising shareholder rights on behalf of the State in the framework of the approved charter. This government department will continue the procedure of formalizing the ownership rights to immovable property, the latter then to be transferred as an additional contribution to the charter capital of *Russian Post* JSC. The first tranche was to consist of 28,900 immovable property entities; overall, as of February 1, 2019, the company was making use of more than 51,000 immovable property entities and 44,000 land plots.[2]

On the basis of *Russian Newspapers* JSC, it is planned to create a vertically integrated structure. It was proposed that it should incorporate 9 print services enterprises, in respect of which the ongoing privatization measures have been suspended. Besides, there have been proposals that a state corporation in the medical sector[3] and a public law company for co-investment in the liquefied gas production sector ('LGP projects')[4] should be created.

By way of implementing the decisions previously adopted by *Rosimushchestvo*, stakes in *Zelenodolsk R&D Bureau* JSC and *A.M. Gorky Zelenodolsk Plant* JSC (the latter in the shipbuilding sctor) were transferred into the Republic of Tatarstan's ownership; besides, as a property contribution, 97.5% of shares in *Innopolis* JSC was transferred to Autonomous Non-commercial Organization *Innopolis University* (Republic of Tatarstan)[5].

When speaking of the legal innovations addressing the management of economic subjects in the public sector, we should make a special note of the changes in the legal base concerning unitary enterprises.

At the very end of the year 2019, the amendments to the 2002 law (No 161-FZ) that had been discussed for nearly two years, were finally adopted.

Some fundamental alterations were introduced into the list of grounds for creating a unitary enterprise. In contrast to the previously existing provisions, it has become uniform, without separating the enterprises managed by right of economic jurisdiction or by right of operative management (treasury enterprises).

Unitary enterprises may be created in the following cases: (1) when this deed is established by federal laws and legal acts of the RF President or the RF Government, (2) to secure the activity of federal bodies of executive authority (FBEAs) performing the functions pertaining to elaboration and implementation of government policy in the sphere of defense and state

[1] URL: https://www.rbc.ru/newspaper/2019/11/28/5ddd0ed29a79473514434ee2.
[2] URL: https://www.rosim.ru, 01.10.2019, 19.07.2019, 15.02.2019.
[3] URL: https://www.rbc.ru/society/28/02/2020/5e590e0b9a79474b2cb33543.
[4] The Arctic's development will be heated up by liquefied natural gas. RBC, 18.10.2019, No 163 (3118), p. 11–12. [In Russian].
[5] A higher educational establishment specializing in the field of information technologies and robotics.

security,[1] (3) to operate in the sectors of natural monopolies, (4) to ensure proper living conditions for the population of the Far North regions and regions of a similar status, (5) to operate in the spheres that have to do with cultural activities, the arts, cinematography, and preservation of the cultural heritage, (6) to operate outside of the territory of the Russian Federation, (7) to engage in activities that involve handling radioactive waste, including its deep geological disposal; activities involving the use of seaport infrastructure exclusively in federal ownership; and granting to unitary enterprises the status of a federal nuclear organization.

Besides, in cases when it is necessary to eliminate the consequences of an extraordinary situation or a threat to normal life of the people, the decision on creating or maintaining a unitary enterprise engaged in activities that fell outside of the scope of activities described above can be adopted by the national government on the basis of a substantiated request submitted by a superior government official of a subject of the Russian Federation, which must be properly considered, and the relevant decision issued, within a period not longer than two months.

A unitary enterprise cannot be created by way of reorganization of an entity of another organizational legal form.

The adoption of any decisions concerning the creation of unitary enterprises is now linked to the requirements to act consistently with the requirements of antimonopoly legislation; for this end, a separate chapter (7.1) was introduced into the 2006 law on protection of competition (No 135-FZ).

The norm stipulated in that chapter (Article 35.1) imposes a direct ban on their creation and operation in competitive markets in cases that fell outside of the scope outlined earlier. Meanwhile, the activity of unitary enterprises in the competitive commodity markets of the Russian Federation is permitted in principle. However, the proceeds received by a unitary enterprise from such an activity must not exceed 10 % of its total proceeds received over the last calendar year, and this restriction does not apply to the activity of enterprises created on the basis of federal laws, legal acts of the RF President or the RF Government that has to do with securing the functions of FBEAs in the sphere of defense and state security, or activities that involve handling radioactive waste, including its deep geological disposal, activities involving the use of seaport infrastructure exclusively in federal ownership, and activities that have to do with granting to unitary enterprises the status of a federal nuclear organization.

The creation of a new unitary enterprise (or an alteration of its permitted types of activity) requires a resolution by an antimonopoly agency; the latter within 30 days issues its resolution concerning that act being consistent or inconsistent with antimonopoly legislation. If the former is the case, the resolution will be valid over the period of one year from the date of its issuance by the antimonopoly agency.

A unitary enterprise that has been created, or its permitted types of activity altered in violation of the established ban, and it is not carrying on the prescribed types of activity, must be liquidated by a ruling issued by an antimonopoly agency, or by a lawsuit filed by the latter in a judicial procedure. In the event of a lawsuit concerning the liquidation of a unitary

[1] In the law, the text of that chapter is lengthy and lists all the corresponding sectors and fields (defense, intelligence service, mobilization and mobilization preparedness in the RF, transport security, international relations of the RF, state security, internal affairs, civil defense, protection of the population and territories from natural and manmade disasters, fire security, water transport security, the functions of the RF National Guard, and the functions of federal bodies of executive authority responsible for government administration in the field of national security of the RF, and the material, technical and financial provision of the activity of the supreme bodies of state authority in the RF).

enterprise, filed by an antimonopoly agency, being accepted for consideration by a court of justice, any transactions with that enterprise during the period until the issuance of a lawful court ruling may be concluded only with the consent of its founder.

Beside the right to issue resolutions, the antimonopoly agency has been granted the powers pertaining to issuance of written warnings, while the bodies of state authority of all levels are forbidden not to enforce proper measures pertaining to reorganization or liquidation of a unitary enterprise operating in a competitive commodity market, or creation of such an enterprise, with the exception of cases envisaged in the law.

The enterprises that had been created prior to the entry into force of the new legal norms, i.e. before the beginning of the year 2020, which operate in competitive markets, are subject to liquidation or reorganization by their founder's decision before January 1, 2025. In the event of failure to adopt and implement such decisions, the enterprises must be liquidated in a judicial procedure on the basis of a lawsuit filed by an antimonopoly agency.

In the event of a transformation of a certain commodity market in the Russian Federation into a competitive market, including its transformation from its former natural monopoly status, an antimonopoly agency issues an order to the founder of the unitary enterprise operating in the said commodity market concerning the necessity of its liquidation or reorganization, specifying the timelines for adopting such a decision, and the timelines for carrying out the measures necessary for its implementation.

By way of reviewing this package of legal innovations, we should note that it is based on the notion (which has been rather widespread over recent decades) that the activity of unitary enterprises is a threat to competition because of the 'toxic nature' of that particular organizational legal form (its close relation to authorities, poor performance). Thus, the law relies on an evidently oversimplified 'dichotomy' between natural monopolies and competitive markets. Meanwhile, the contemporary theory of economics, when studying the latter, singles out not only purely competitive markets, but also some intermediate types (monopolistic competition and oligopoly). In those markets, the activity of state-controlled economic subjects may become one of the factors that sustain competition – of course, only if they are prevented from creating barriers that prevent 'others' from entering 'their' markets. In this connection, there arises one more issue – that of delineating the borders of such markets, and the situation in those markets will depend on the ways that this issue may be resolved.

In spite of the rather radical character of these innovations, one cannot expect any rapid changes in the sphere or competition protection. The situation that has been shaping in the national economy over the course of recent decades vividly demonstrates that by reducing the participation of the State in the economy, or at least its direct participation, we do not automatically boost competition, which is proved by statistics (see below) and the fact of repeated efforts on the part of authorities to deal with these issues, one example being the recent alterations to legislation.

The total number of unitary enterprises in this country, which in the early 2000s exceeded 80,000, shrank more than 50-fold over the last two decades, and their share in GDP declined from 4.1% in 2000 to 1.6% in 2017.[1] There have been, quite frequently, the instances of preferential treatment of economic subjects without any state stakes in their capital; government officials can participate in business activities by proxy, using for personal gain their powers and family connections. Lack of proper competition and misuse of market situation can also be

[1] Privatization 30 years later: the scope and performance of the public sector / A.D. Radygin, R.M. Entov, A.E. Abramov, M.I. Chernova, G.N. Malginov. M., Delo Publishing House, RANEPA, 2019, p. 24.

observed in those sectors where the State has long ceased to be a relevant producer of goods (or work, or services), because the issues of market de-monopolization, competition, transparency of government procurement orders are mostly self-sustaining and self-reproducing.

It is logical to expect that the reorganized unitary enterprises will stay in their new organizational legal forms (economic societies and institutions) in certain commodity (work, services) markets. As for the actual disappearance of unitary enterprises, for example as a result of their liquidation – it can translate into a lower competition level, thus protecting private companies from competition in a situation where sales are guaranteed, in a certain sense. However, a positive effect for small and medium-sized businesses can also be possible, and they can be regarded as those that can benefit most from the ousting of unitary enterprises, due to the introduction of a cap on their proceeds in competitive commodity markets.

In their ultimate version, the innovations turned out to be milder and more realistic than those stipulated in the draft law approved in first reading and based on the text submitted by the government in late 2018. The list of exceptions that permit the functioning of unitary enterprises has been extended, and the definition of the grounds for the creation, by FBEAs, of new unitary enterprises has been made more precise.

While with regard to the federal level the suggested amendments can mitigate the potential risks associated with a more limited spread of unitary enterprises, this is not true for the level of regions and municipalities. Suffice to say that the business activity aimed at sustaining the population's lifestyle at a proper level, which is very relevant for the Far North regions, can also be in demand in other parts of Russia. One example is the low-volume markets, where the budget potential and the incomes or consumers are insufficient to properly stimulate local private contactors to engage in certain activities regularly and profitably, and where it is unlikely that such contractors can be attracted from other territories.

Meanwhile, the new prohibitive and restrictive norms are primarily focused on the local level. According to data in the System of Public Property Management Efficiency Estimates, as of July 1, 2019 there were 760 FSUEs,[1] including 48 treasury enterprises (6.3%), and 1,606 enterprises owned by subjects of the Russian Federation, including 93 treasury enterprises (5.8%). And according to more recent data, released by the Federal Tax Service, on the number of legal entities entered into the Single State Register of Legal Entities (EGRUL), as of January 1, 2020 there existed, nationwide, 13,801 unitary enterprises, including 757 federal unitary enterprises (5.5%), 1,581 unitary enterprises owned by subjects of the Russian Federation (11.5%), and 11,459 municipal unitary enterprises (83%).[2]

The prolongation of the transition period to 5 years offers a chance of avoiding too many measures being implemented rapidly and simultaneously, which is inevitably fraught with the risks of murky activities and losses of assets by creating a motivation, for the CEOs and government officials alike, to act on the spur of a moment when regulating their existing debts, including their liabilities to their personnel and the state budget, because of having limited time to sell property and to underestimate their assets, which for most part have low liquidity.

[1] Among these, the most prominent ones are as follows: by type of economic activity – R&D (140 units), agriculture, forestry, hunting, fishery and fish-breeding (129 units), manufacturing industries (102 units); and by government department – those subordinated to the RF Ministry of Education and Science (152 units), the RF Ministry of Industry and Trade (91 units), the RF Ministry of Defense (58 units), and the RF Ministry of Agriculture (57 units).

[2] URL: https://www.nalog.ru/rn50/related_activities/statistics_and_analytics/forms/8376083/.

As for the reorganization of unitary enterprises into other organizational legal forms, it can create certain preconditions for improving the situation.

A reorganization into a joint-stock company (with a subsequent sale of 100% or less of its shares) may theoretically improve the quality of corporate governance. However, it is unlikely that real advantages (compliance with legislation on joint-stock companies (JSC) and securities, proper promotion and attraction of investments though entry on the stock market), can be actually gained from such a reorganization, especially at a local level. There is also a high risk that the corporate environment may inherit the specific problems of a unitary enterprise and thus deteriorate in response to the increased pressure on the mechanism designed to represent the interests of the State in economic societies (an increased number of state representatives in the managerial bodies of a JSC, while it is desirable that they should have sufficient qualification and be able to properly use the corporate governance mechanisms).

More promising are the hopes that financial flows will be reliably controlled in case of reorganizing a unitary enterprise into a state or municipal institution. In this case, the rather tough procedures stipulated in budget legislation will begin to be systematically enforced. In this connection, there may arise the question as to the necessity of some additional budget funding, as well as the high probability of the owner's subsidiary responsibility to fulfill the existing obligations, which are differentiated by type of institution (similarly to treasury enterprises). The other options for reorganizing unitary enterprises (into LLCs and NCOs) are not very popular.

It may prove useful to liquidate those unitary enterprises that do not have any core activity other than leasing out their miscellaneous properties. The transfer of such property to the treasury opens up opportunities for their gradual privatization as independent property entities on general conditions, or their subsequent use in the small and medium-sized business development programs by transferring them into ownership and (or) long-term use (including at a reduced rent rate), with the possibility of realization, by MSEs, of their preferential right of buyout of leased properties. This, in its turn, may become an incentive for developing new methods of doing business and boosting competition. However, in this connection it is necessary to remember that the property complexes held by unitary enterprises may contain some properties that are subject to privatization restrictions, and so their transfer to the treasury will entail the necessity to finance their upkeep, and this factor will remain relevant in case of their reorganization into a joint-stock company.

In addition to all these innovations that address the fundamental principles of the operation of unitary enterprises, there exists one more innovation that has to do with the regulation of their financial operations.

It should be reminded that in accordance with the amendments introduced in 2017, the federal unitary enterprises of strategic importance for the military-industrial complex and RF state security, as well as the economic societies controlled by them directly or indirectly, are granted the right to open accounts, to receive covered letters of credit, to conclude account bank agreements and deposit bank agreements with credit institutions, and to purchase their securities only if a given credit institution is compliant with a certain set of requirements and is entered in the list (published and reviewed on a monthly basis on the RF Central Bank's official website) specifying the amount of its equity and its mandatory participation in the deposit insurance system.

The well-known problems plaguing the banking system were the reason why the regulatory norms have been introduced to cope with the situations when a credit institution may begin to experience such problems.

It has been established that within the period of implementing the plan (approved by the Bank of Russia's Board of Directors) for the enforcement, by a bank placed onto the aforesaid list, of the measures designed to prevent its bankruptcy, the latter may carry on certain operations (or transactions) with federal unitary enterprises of strategic importance for the military-industrial complex and RF state security, as well as the economic societies controlled by them directly or indirectly, irrespective of their being compliant (or not compliant) with certain requirements, on condition that the Bank of Russia's Board of Directors has adopted a decision concerning the uninterrupted operation of that bank throughout the period of implementing the aforesaid plan.

In such a case, during that period the bank is not to be struck off that list, and if the bank has been struck off it, the bank must once again be entered onto that list by the Bank of Russia not later than within 5 workdays following the date of making the decision concerning the guaranteed uninterrupted operation of that bank throughout the period of implementing the plan for the RF Central Bank's participation in enforcing the measures designed to prevent its bankruptcy.

By the alterations introduced into RF Government Decree No 739 dated December 3, 2004, whereby the powers of federal bodies of executive authority (FBEA) to exercise their ownership rights to property of FSUEs are regulated, it was augmented by provisions stipulating that FBEAs, with regard to the FSUEs under their jurisdiction entered onto the list of such enterprises (approved by the RF Government),[1] are authorized to appoint or dismiss their directors, and to reimburse them by paying year-end bonuses with the consent of the deputy chairpersons of the RF Government responsible for coordinating the activities of the relevant FBEAs.

No significant alterations were made to the mechanism of managing a JSC with state participation. In 2 JSCs, the powers to exercise the shareholder rights on behalf of the State were delegated to the branch FBEAs, including the rights of the RF Ministry of Agriculture in respect of *Rosagrolizing* (the corresponding provisions having been properly approved).

6.1.4. The budgetary effect of government property policy

In 2019, in contrast to the trends observed over the previous year, the movement of federal budget revenues that had to do, in one or other way, with public property was multi-vectored. There was evident growth of revenues generated by the use of public property (renewable sources), while those generated by privatization and sale of property (non-renewable sources) declined significantly.

Tables 5 and *6* below demonstrate data taken from the reports on federal budget execution, in particular the revenues generated by the use of public property and the sale of public property entities belonging only to some specified categories of tangible property.[2]

[1] The RF Ministry of Economic Development was assigned the task to prepare for the government the lists of relevant FSUEs, as well as federal state institutions and autonomous institutions.

[2] Here, we do not consider 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

Table 5

Federal budget revenues generated by the use of public property (renewable sources) in 2000–2019, millions of rubles

Year	Total	Dividends on shares (2000–2019) and revenues generated by other forms of participation in capital (2005–2019)	Payment for lease of land in state ownership	Revenues generated by lease of property in state ownership	Revenues from transfer of part of net profits of FSUEs after taxes and other mandatory payments	Revenues from other sources (in 2000–2007 and 2011 – those generated by Joint Venture *Vietsovpetro*; and in 2018–2019 – those generated by property transferred as pledge or to trust management)
1	2	3	4	5	6	7
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

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, 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; 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 law on federal budget execution for 2015–2018 contains no aggregate data listed under each revenue classification code or sub-code, or listed according to the classifications 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; and January 1, 2019, and the monthly report on federal budget execution as of January 1, 2020.

Cont'd

1	2	3	4	5	6	7
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/ 254,328.3[n]	918,969.1/ 226,574.1[n]	9,412.4[k]	5,843.25[o] +3,026.7[m]	9,471.9	–
2017	275,168.2	251,327.0	9,825.1[k]	5,318.4[o] +2,857.7[m]	5,840.0	–
2018	333,396.13	312,565.8	9,783.0[k]	1,988.6[o] +2,922.6[m]	6,136.0	0.13
2019	465,945.25	441,613.0	12,053.2[k]	1,292.55[o] +3,239.2[m]	7,616.9	130.4

[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 was entered (RUB 9,887.1 million) (without any components being specified);
[b] – the amount of lease payments (a) for the use of agricultural land, and (b) 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 (a) scientific research organizations, (b) educational establishments, (c) healthcare institutions, (d) state museums, state cultural and arts institutions, (e) archival institutions, (f) the RF Ministry of Defense, (g) organizations subordinated to the RF Ministry of Railways, (h) organizations providing research-related services to the academies of sciences with the status of a state entity, and (i) 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] – 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 (a) for the use of land plots in the territories of towns and settlements, (b) 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 (a) scientific research organizations, (b) educational establishments, (c) healthcare institutions, (d) state cultural and arts institutions, (e) state archival institutions, (f) institutions of the federal postal service of the RF Ministry of Communications and Informatization, (g) organizations providing research-related services to the academies of sciences with the status of a state entity, and (h) 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: (a) scientific research institutions, (b) organizations providing research-related services to the Russian Academy of Sciences and 'branch' sectoral academies, (c) educational establishments, (d) healthcare institutions, (e) federal postal service institutions of the Federal Communications Agency, (f) state cultural and arts institutions, (g) state archival institutions, and (h) 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

[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.

types of economic activity and revenues from the use 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: (a) scientific research institutions, (b) organizations providing research-related services to the Russian Academy of Sciences and to the 'branch' (sectoral) academies, (c) educational establishments, (d) healthcare institutions, (e) state cultural and arts institutions, (f) state archival institutions, (g) properties held by right of operative management by the RF Ministry of Defense and its subordinated institutions (2010), (h) properties in federal ownership disposed of by the Executive Office of the RF President (2010), and (i) 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 (a) lease payments received for the lease of land plots in federal ownership, situated in public motor road precincts of federal importance (2012–2019), (b) 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 2014-2019), and (c) payments received in the framework of agreements on the establishment of servitude with regard to land plots in federal ownership (2015–2019);
[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: (a) scientific research institutions, (b) educational establishments, (c) healthcare institutions, (d) state cultural and arts institutions, (e) state archival institutions, (f) other revenues from the lease of property held by right of operative management by federal treasury institutions, (g) federal bodies of state authority, the Bank of Russia, and the managerial bodies of RF government extrabudgetary funds, (h) 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* (RUB 692,395 billion) (less interim dividend payments);
[o] – for the period 2016–2019, 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; and January 1, 2019 (annual data); and the monthly report on federal budget execution as of January 1, 2020, URL: www.roskazna.ru; own calculations.

In 2018, the aggregate revenues generated by renewable sources increased by nearly 40% relative to the previous year. This was achieved in the main due to the receipts of dividends in the federal budget (RUB 441.6 billion), which increased by 41%, thus rising above the previous record high of 2018 (RUB 312.6 billion). The receipts of part of profits paid by unitary enterprises gained more than 24%. However, when taken in in absolute terms (RUB 7.6 billion), this index was just close to its 2014 level.

[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 RUB 315 million in 1999 and RUB 440 million in 2000. Thereafter, the major role in organizing the commercial use of federal immovable property situated abroad was assigned to FSUE *Goszagransobstvennost*.

The amount of revenue generated by lease of land plots increased by approximately the same degree (about RUB 12.05 billion).[1] At the same time, the aggregate revenues generated by lease of federal property (approximately RUB 4.5 billion) continued to decline. This happened as a result of shrinkage, by more than 1/3 (to less than RUB 1.3 billion), of 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). The revenues generated by lease of property which is held by the RF Treasury (except land plots), on the contrary, increased (by nearly 11%), amounting to more than RUB 3.2 billion. For the second year in a row since they had been identified in budget reports as a separate entry (from 2013 onwards), they began to prevail in the aggregate structure of revenues generated by lease of federal property (amounting to more than 70%).

As in the previous year, dividends held a dominant position in the structure of renewable federal budget revenue sources (approximately 95% vs. 94% a year earlier). The relative share of lease payments for land plots amounted to 2.6%; that of payments for property lease – to 1.0%; and that of profits transferred by FSUEs – to 1.6%. Their aggregate relative share declined relative to 2018. [2]

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 such assets (state stakes, and over the period 2003–2007, also land plots[3]) 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 2000–2019, millions of rubles

Year	Total	Sale of shares in federal ownership (2000–2019) and other forms of state participation in capital (2005–2019)[a]	Sale of land plots	Sale of miscellaneous properties
1	2	3	4	5
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]

[1] The amount of lease payments for land plots, just as a year earlier, includes (1) lease payments received for the lease of land plots in federal ownership situated in public motor road precincts of federal importance, (2) 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, and (3) payments for the execution of agreements on the establishment of servitude with regard to land plots in federal ownership.

[2] In the last two years, the classification of federal budget revenues generated by use of property was augmented by one more 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.

[3] Data for the period 2003–2004, including revenues generated by the sale of leasing right.

Cont'd

1	2	3	4	5
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	406,795.2	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	28,251.3	12,787.5	1,660.6[q]	13,803.0+0.2 (ITA)[r]
2019	20,122.75	11,527.5	1,641.05	6,954.2

[a] – treated as an internal source of funding to cover federal budget deficit, amount to RUB 29.6 million for 2008 (as stated in the Report on Federal Budget Execution as of January 1, 2009); this is a federal budget revenue item, but it is absent in the 2008 law on federal budget execution;

[b] – revenues generated by privatization of entities in public ownership and treated as an internal source of funding to cover federal budget deficit;

[c] – revenues generated by the sale of land plots and the right to lease land plots in state ownership (with special entry concerning those land plots in which privatized enterprises are situated), 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 (a) the sale of apartments, (b) the sale of state-owned production and non-production assets, transport vehicles, other equipment and tangible assets, and (3) revenues generated by the sale of intangible assets (ITA), treated as federal budget revenues;

[e] – including RUB 6 million generated by the sale of shares held by subjects of the Russian Federation;

[f] – revenues generated by the sale of land and intangible assets, their amount not specified as a separate entry, treated as federal budget revenues;

[g] – revenues generated by the sale of property in public ownership (including RUB 1.5 million 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 (a) the sale of apartments, (b) the sale of equipment, transport vehicles and other tangible assets, the proceeds being transferred to the federal budget, (c) the sale of the products of ships recycling industry, (d) the sale of property held by state unitary enterprises and state institutions, as well as the sale of military property, (e) 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 (a) the sale of apartments, (b) the sale of property held by FSUEs, (c) the sale of property held by right of operative management by federal institutions, (d) the sale of military property, (e) the sale of the products of recycled armaments, military technologies and ammunition, (f) the sale of other properties in federal ownership, (g) 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 (a) the sale of apartments, (b) the sale of property held by FSUEs, (c) the sale of property held by right of operative management by federal institutions, (d) the sale of military property, (e) the sale of the products of recycled armaments, military equipment and ammunition, (f) 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 (a) the sale of apartments, (b) the sale of property held by FSUEs, (c) the sale of property held by right of operative management by federal institutions, (d) 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, (e) 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, (f) 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 (less land plots held by federal autonomous and budget-funded institutions (data for 2011–2012)), treated as federal budget revenues; prior to 2015, 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 2012-2017, also less revenues generated by the sale of timber produced as a result of measures designed to safeguard, protect, reproduce forests in the framework of government order 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 (a) the sale of apartments, (b) 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 2011–2019), less revenues generated by the activities of institutions situated abroad (2015–2019), (c) 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, (d) the sale of the products of recycled armaments, military equipment and ammunition, (e) 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 2010–2019), (f) 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, (g) revenues generated by the sale of immovable property held by budget-funded and autonomous institutions (2014-2018), (h) 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.
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; and January 1, 2019 (annual data); and the monthly report on federal budget execution as of January 1, 2020, URL: www.roskazna.ru; own calculations.

When taken in absolute terms, the amount of property-generated federal budget revenues from non-renewable sources in 2019 shrank by nearly 29% (to RUB 20.1 billion). Relative to the period after 2010, this would be a record low but for the index for 2015 (RUB 18.6 billion).

The revenues generated by the sale of shares fell by nearly 10% (to RUB 11.5 billion), this index relative to the period after 2010 exceeding only that for 2015 (RUB 6.3 billion). The revenues generated by the sale of land plots stayed approximately at the same level as in the previous year, amounting to RUB 1.64 billion,[1] which roughly corresponds to their level in 2015. The amount of revenues from the sale of miscellaneous properties shrank by half, and their index in absolute terms (RUB 6.95 billion) is a record low of the entire period since 2010 but for the index for 2017(RUB 6.4 billion). The sale of shares accounted for more than 57% (in 2018 – more than 45%), the sale of property – for 34.6% (in 2018 – about 1/2), and the sale of land plots – for more than 8% (in 2018 – less than 6%).

The aggregate federal budget revenue generated by the privatization (or sale) and use of state property in 2019 (*Table 7*) gained more than 34% relative to the previous year.

Table 7

The structure of property-generated federal budget revenues from miscellaneous sources, 2000–2019

Year	Aggregate revenue generated by privatization (or sale) and use of state property		Privatization-generated revenues (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
1	2	3	4	5	6	7
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*

[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 (RUB 37.9 million).
Previously this budget item did not exist in reports on execution of the federal budget, although corresponding data were published on the official website of the Federal Treasury among the indices characterizing the efficiency of government property management (in 2015 – RUB 0.433 million, in 2016 – RUB 2.381 million, in 2017 – RUB 4.962, in 2018 – RUB 0.1835). At the same time, the monthly Report on Federal Budget Execution as of January 1, 2020 did not include a separate budget item specifying the revenues generated by the sale of the real estate of budget-funded and autonomous institutions, although the 2014-2018 monthly Reports on Federal Budget Execution did contain this budget item.

Cont'd

1	2	3	4	5	6	7
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**
2017	297,074.9	100.0	21,906.7	7.4	275,168.2	92.6
2018	361,649.1	100.0	28,251.3	7.8	333,397.8	92.2
2019	486,068.0	100.0	20,122.75	4.1	465,945.25	95.9

* including the proceeds received by the RF Central Bank as a result of the sale of a stake in *Sberbank* (RUB 159.3 billion), which is probably an overestimation of the actual aggregate share of non-renewable sources, because the budget did not receive 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* (RUB 692,395 billion) (less interim dividend payments).

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 (annual reports), and monthly report as of January 1, 2019, URL: www.roskazna.ru; own calculations.

Their index in absolute terms (RUB 486.1 billion) was below only the record high of 2016, when the deal of sale of stakes in *Rosneft*) was closed.[1] In 2019, there were no such deals, and the ratio of non-renewable to renewable sources in the structure of aggregate revenues generated by the privatization (or sale) and use of public property shifted further in favor of the latter.

The relative share of non-renewable sources in the structure of aggregate revenues generated by the privatization (or sale) and use of public property was slightly above 4%. The revenue generated by the use of public property jumped to nearly 96%, thus hitting a record high, in absolute terms, of the entire period since the early 2000s, while the revenues generated by the privatization and sale of property amounted to slightly less than a half of the corresponding index for 2014, at the same time being above the indices for 2008–2010 and 2015.

In this connection it should be noted that in the budget reports, the RF Central Bank's revenues generated by its stake in the capital of *Sberbank of Russia* PJSC are not identified as a separate entry; according to the materials attached to the drafts of federal budget laws prepared by the RF Government, these are treated as 'other non-tax revenues'. Last year, in accordance with the special Law dated November 28, 2018 (No 454-FZ), such revenues were to be transferred to the federal budget before August 1, 2019, and that amount was to be subsequently subtracted from the RF Central Bank's aggregate profits earmarked for the federal budget.[2]

6.1.5. The Government Program Federal Property Management: new amendments (version) and current results

A condensed statement of the government policy in the sphere of property management in its current phase is the Government Program (GP) *Federal Property Management*, approved

[1] The proceeds from that deal were to be paid to the federal budget in the form of dividends from *Rosneftegaz*, the latter being the parent of *Rosneft*.

[2] A similar norm was also adopted a year earlier (Law No 370-FZ dated December 5, 2017).

by RF Government Decree No 327 dated April 15, 2014, to replace the original GP with the same title that had been in effect for approximately 14 months.[1]

By RF Government Decree No 352-20 dated March 29, 2019, important alterations were introduced into the program adopted in 2014: it was approved in its new (fourth) version, after the initial one and the subsequent versions approved as of March 31, 2017[2] and March 31, 2018. The GP has been prolonged until 2020, while in its previous version it was to be completed in 2020. Thus, its second phase (2016–2021) is now increased to 6 years.

Now we may proceed to an analysis of the changes in the volume of budget funding and its proportional distribution (*Table 8*).

Table 8

Budget allocations to the Government Program Federal Property Management in 2013–2021, millions of rubles

Period	GP 2013*		GP 2014 (original version)		GP 2014 (version 2017/2018/2019)	
	total	including additional funding	total	including under Subprogram *Improvement of the Efficiency of Government Property Management and Privatization*	total	including under Subprogram *Improvement of the Efficiency of Government Property Management and Privatization*
2013	5,474.3	5,896.9	23,629.8	5,673.8	23,287.2	5,474.3
2014	5,251.4	9,666.6	22,093.5	5,436.1	22,093.5	5,436.1
2015	5,275.1	9,842.7	27,537.6	5,298.9	27,938.9	5,408.5
2016	5,469.8	11,180.5	25,261.0	5,138.9	24,854.5	4,465.8
2017	5,775.8	8,028.8	26,903.6	5,158.6	22,971.3	4,127.6
2018	6,192.0	7,869.2	29,605.5	5,531.4	22,491.1/ 23,047.6**	4,046.0/ 4,058.0
2019					22,172.6/ 22,621.5**/ 15,811.4***	3,991.6/ 4,069.4**/ 4,092.5***
2020					22,944.5**/ 16,123.5***	4,131.2**/ 4,155.5***
2021					16,449.7***	4217.7***
Total	33,438.4	52,484.8	155,031.1	32,237.7	165,809.1/ 189,759.0**/ 192,577.6***	32,949.8/ 37,170.8**/ 4,1436.0***

* only the amount of funding allocated to the Subprogram Improvement of the Efficiency of Government Property Management and Privatization. The budget allocation data for the Subprogram Government Material Reserve Management are classified;
** as approved in 2018;
*** as approved in 2019.
Source: Government Program *Federal Property Management,* approved by RF Government Directive No 191-r dated February 16, 2013; Government Program *Federal Property Management,* approved by RF Government Decree No 327 dated April 15, 2014 (original version, as approved on March 31, 2017, March 30, 2018, and March 29, 2019).

Overall, by the end of the nine-year period (2013–2021), the volume of financial resources allocated from the federal budget to the implementation of the GP will amount to RUB 192.6 billion, which is just RUB 2.8 billion (or 1.5%) greater than the amount envisaged in the previous version of the GP for an 8-year period (2013–2020). After approval of the federal

[1] Approved by RF Government Directive No 191-r dated February 16, 2013. For more details on GP 2013, see Malginov, G., Radygin. A. Public sector and privatization // Russian Economy in 2012. Trends and Outlooks (Issue 34). Moscow, IEP. 2013, p. 468–475.
[2] For an analysis of the GP as amended in spring 2017, see Malginov, G., Radygin. A. Federal property management: some results and prospects for implementation. Russian Economic Developments. Vol. 24. No 12. P. 51–67.

budget law for 2019–2021, the amount of allocations to the implementation of the GP over the period 2019–2020 was reduced by approximately 30% relative to its original version, although with a planned annual growth of 2%.

Meanwhile, the allocations under the GP to Subprogram 1 *Improvement of the Efficiency of Government Property Management and Privatization* have somewhat increased relative to the previous version: in 2019, RUB 4,092.5 million; in 2020, RUB 4,155.5 million. In 2021, with the planned increase of the allocation target (by 1.5%), the volume of funding will rise to RUB 4,217.7 million. As a result, the relative share of the Subprogram *Improvement of the Efficiency of Government Property Management and Privatization* will amount to approximately 1/4 of the total volume of funding earmarked for the GP (vs less than 20% in its previous versions). Nevertheless, the bulk of budget allocations will go to the Subprogram *Government Material Reserve Management*.

The goals that were previously set in the GP have remained unchanged, and so in its new version the targets and indicators of the GP's progress are, as before, the average rate of decline in the number of organizations with state stakes and federal treasury property entities (as %).

As before, the expected results of the GP are the adoption, by 2020, of a new forecast plan (program) of federal property privatization and the main directions of federal property privatization for 2020–2022, and an increase in the rate of decline in the number of federal treasury property entities from 3% in 2013 to 34.5% in 2021 (instead of 24% in 2019 and 29.5% in 2020).

The total number of quantitative targets set for the Subprogram *Improvement of the Efficiency of Government Property Management and Privatization* has been reduced to 11 (vs 14 in the previous version, and 16 in the original version (adopted in 2014)).

Among the targets aiming at optimization of the composition and structure of federal property, the indicators of the relative shares of economic societies and FSIs, for which a target function was assigned, have been eliminated (with respect to FSUEs, this was done in 2017; and for treasury property entities, in 2018). Consequently, the expected results of the subprogram's implementation no longer include the assigned target function, by 2019, for the organizations with 100% state stakes.

Besides, for lack of resources necessary for automating federal property management, because the necessary additional budget allocations had not been approved, the previously introduced indicator of the relative share (%) of the powers of *Rosimushchestvo* executed through the use of the Federal State Information System *FGIAS ESUGI* (Register of Assets Held by the Russian Federation) has also been eliminated. In this connection, it should be reminded that in the GP's original version adopted in 2014, there were two indicators linked to the use of *FGIAS ESUGI*: the relative share of economic societies with a 100% stake owned by the RF and state organization with a less-than-100% stake owned by the RF (whose accounting systems and tax records were fully integrated in *FGIAS ESUGI*), in the total number of organizations in the relevant category (both these indicators were eliminated in 2017).

The text of the GP was amended as follows.

The list of measures aimed at upgrading the efficiency of federal property sales and strengthening the involvement of federal property entities in commercial turnover, including through the use of privatization instruments, was extended to include the following items (which had been struck off the list in 2017):

– creation of mechanisms for elaborating plans and schedules regarding the sale of shares in big companies with state stakes in a medium-term perspective, prepared with due regard for the

results of a preliminary analysis of their investment potential, markets, demand, investor needs, regulatory environment; and also, whenever necessary, implementation of measures designed to increase the capitalization index and investment attractiveness of the property entities to be alienated; alteration of the business model, strategy and corporate governance quality of companies, and the tariff- and tax-related and social aspects of regulation;

– implementation of a system of motivations for the key participants in a sale (the CEOs of a company earmarked for privatization and the seller);

– elaboration, with due regard for international best practices, of formal procedures of pre-sale preparation and alienation of shares in big companies with state stakes that could be attractive for investors, in accordance with RF Government decisions, in order to attract investments, and promote competition, modernization and technological development of the national economy;

– regular monitoring of the planning, preparation and closure of deals entered in the federal property roadmaps approved by the RF Government;

– better information backing of sales of federal property through regular online publications, and gradual elimination of printed announcements concerning the involvement in economic turnover of federal property entities;

– 'post-privatization' monitoring of the sold entities, and control of the fulfillment of their obligations by the new owners.

In this connection, the following goals related to optimizing the content and structure of the federal property complex were once again set to be achieved:

– creation of a system of motivations for the sellers and CEOs of companies with state stakes earmarked for privatization;

– creation of roadmaps for the pre-sale preparation and sale of big federal property entities that are attractive for investors;

– creation of a system for control and monitoring of the implementation of roadmaps for the pre-sale preparation measures and sale of big federal property entities that are attractive for investors;

– completion of the implementation of roadmaps for increasing the investment attractiveness of federal property entities to be alienated.

Some alterations were also made to the list of measures designed to boost performance in the sphere of federal property management.

On the one hand, along with the additional measures designed to improve the efficiency of federal property sales, the requirement that the companies with federal stakes should gradually go public through entering the organized securities market was once again included in the text of the GP. On the other, it is no longer required that professional directors and independent experts should be elected to the managerial and control bodies of those companies, including biggest ones.

However, as before, the involvement of professional directors and independent experts is mentioned in the context of boosting the competitiveness and openness of the mechanisms of electing the CEOs of state-owned companies, as well as improving the performance of their managerial and controlling bodies.

As far as idle land plots are concerned, it is stated that these should be transferred not only into municipal ownership, but also into the ownership by subjects of the Russian Federation (the latter not being mentioned in the previous version).

Besides, the text has been technically edited in many ways.

The new version of the GP, similarly to its predecessor, contains a number of annexes, the most interesting component of which are the numerical data (indicators). Their publication makes it possible not only to compare different versions, but also to estimate the success achieved in the program's implementation (*Tables 9–13*).

Table 9

The progress of the GP *Federal Property Management* in 2015–2018 and indicators for the period until 2020, in the part of determining target functions (relative share of assets with a determined target function)

Indicator	2015		2016		2017		2018		2019	2020
	plan	fact	plan	fact	plan	fact	plan	fact		
Relative share of economic societies with shares (or stakes) in federal ownership, %*	45	68	50	65.5	100	99.8	100	100	100	100
Relative share of FSIs, %*	–	32	5	49	60	60.6	100	100	100	100

* this indicator is absent from the 2019 version; its values for 2019–2020 are taken from the 2018 version, and are cited for reference.

Source: Government Program *Federal Property Managemen*t, approved by RF Government Decree No 327 dated April 15, 2014 (as approved on March 30, 2018); *Rosimushchestvo*'s reports for 2015–2018, URL: www.rosim.ru.

Table 10

The progress of the GP *Federal Property Management* in 2016–2019 and indicators for the period until 2021, in the part of optimization of its content and structure

Indicator	2016		2017		2018		2019		2020	2021
	plan	fact	plan	fact	plan	fact	plan	fact		
Annual decline in number of JSCs with state stakes relative to previous year, not less than, %	6	20.9	5	14.6	6	8.4	9	11.2	10	11
Annual decline in number of FSUEs relative to previous year, not less than, %	15	9.7	20	22.2	13	18.8	14	10.6	15	16
Reduction in area of treasury-owned land plots not involved in economic turnover, relative to total area of treasury-owned land plots in 2012 (except land plots withdrawn from turnover or those subject to turnover restrictions), %	20	33.9	25	35	30	39.0	43	56.6	45	50
Relative share of treasury property entities involved in economic turnover in total number of treasury property entities as of end of reporting year (less land plots, shares, stakes (or contributions) in charter (share) capital of economic societies and partnerships, other highly valuable movable property entities with initial per unit cost below RUB 500,000/200,000, and current assets (irrespective of their value), entered on records as single entities)*, %					18	20.2	18.5	17.5	19	19.5

* a new indicator that appeared in the 2018 version of the GP.

Source: Government Program *Federal Property Managemen*t, approved by RF Government Decree No 327 dated April 15, 2014 (as approved on March 29, 2019); *Rosimushchestvo*'s reports for 2016–2019, URL: www.rosim.ru.

Table 11

The progress of the GP *Federal Property Management* in 2016–2019 and indicators for the period until 2021, in the part of public asset management instruments (in fact, only JSCs with state stakes)

Indicator	2016		2017		2018		2019		2020	2021
	plan	fact	plan	fact	plan	fact	plan	fact		
Relative share of civil servants in managerial and controlling bodies of JSCs with state stakes, %	30	28.7	50	49.5	50	43.4	50	49.2	50	50
Relative share of JSCs (those entered in the Special List*, and other JSCs with controlling RF stakes) with indicators in their long-term development programs oriented to boosting labor productivity and creation and modernization of high-productivity jobs, %**	–	–	70	71.5	80	80	90	91	95	97

* the lists approved by RF Government Directive No 91-r dated January 23, 2003;
** a new indicator that appeared in the 2017 version of the GP.
Source: Government Program *Federal Property Managemen*t, approved by RF Government Decree No 327 dated April 15, 2014 (as approved on March 29, 2019); *Rosimushchestvo*'s reports for 2016–2019, URL: www.rosim.ru.

Table 12

The progress of the GP Federal Property Management in 2016–2019 and indicators for the period until 2021, in the part of hi-tech development of federal property management methods

Indicator	2016		2017		2018		2019		2020	2021
	plan	fact	plan	fact	plan	fact	plan	fact		
Relative share of federal property entities in Federal Property Register in total number of identified property entities to be entered in Register (over current year), %	80	80.2	80	81.5	80	81	85	88.6	90	95
Relative share of public services rendered in electronic form in total number of services rendered by *Rosimushchestvo*, %	65	93.3	100	100	100	100	100	100	100	100
Relative share of powers executed by *Rosimushchestvo* through the use *FGIAS ESUGI*, %*					45	42.4	60		75	

* a new indicator that appeared in the 2018 version of the GP and then was eliminated in its 2019 version; its values for 2019–2020 are taken from the 2018 version, and are cited for reference.
Source: Government Program *Federal Property Managemen*t, approved by RF Government Decree No 327 dated April 15, 2014 (as approved on March 29, 2019); *Rosimushchestvo*'s reports for 2016–2019, URL: www.rosim.ru.

Table 13

The progress of the GP *Federal Property Management* in 2016–2019 and indicators for the period until 2021, in the part of budgetary effect

Indicator	2016		2017		2018		2019		2020	2021
	plan	fact	plan	fact	plan	fact	plan	fact		
1	2	3	4	5	6	7	8	9	10	11
Relative share of federal budget receipts over reporting year generated by sale of shares and stakes in charter capital of economic societies, as % of planned amount of receipts set in RF Government directive that approved forecast plan (program) of privatization for given year (except receipts generated by sale of shares in biggest JSCs), %*	–	–	100	104	100	43.6	100	38.4	100	100

Cont'd

1	2	3	4	5	6	7	8	9	10	11
Federal budget revenue received as profit derived from stakes in charter capital of economic societies and partnerships, or dividends on shares in federal ownership, as % of planned target for reporting year (with due regard for RF Government decisions and directives concerning % of net profit to be paid as dividends for each JSC, and deviation of actual amount of net profit from planned target),* % per annum	–	–	100	107.1	100	109.9	100	100.1	100	100
Ratio of value of sold property in state ownership to its valuation for purposes of sale, %*	–	–	30	40.5	40	72.4	50	79	70	75

* a new indicator that appeared in the 2017 version of the GP.

Source: Government Program *Federal Property Management*, approved by RF Government Decree No 327 dated April 15, 2014 (as approved on March 29, 2019); *Rosimushchestvo*'s reports for 2016–2019, URL: www.rosim.ru.

These data reliably underline the fact that after the adoption of the third and fourth versions of the GP, according to the year-end results of the period 2018–2019, almost all these indicators were consistent with their targets, were close to their values, or had surged above those target values.

Firstly, the target functions for the economic societies with some of their shares in federal ownership and for federal state institutions have now been fully determined, which should mean that this process nears completion for all organizations with state participation,[1] and so this particular block is to be struck off the list of targets and indicators of the GP's progress, and its definition abolished from the set of target functions for property entities in Subprogram 1. However, this outcome has not yet been formalized in official documents.

In this connection it is worthwhile to point out that the trend, spotted in 2018, of the actual relative share of civil servants in the managerial and controlling bodies of JSCs with state stakes being below the planned target (43.4% vs 50%), now, in 2019, has disappeared as the planned target was actually met (49.2% vs 50%).

Secondly, there is a persisting trend towards an accelerated decline in the number of JSCs with state stakes (annual decline, %) and the rate of shrinkage of treasury-owned land plots not involved in economic turnover relative to the total area of treasury-owned land plots in 2012. In the case of FSUEs, instead of the accelerated rate noted 2017–2018, they began to lag behind (approximately by a quarter). A similar situation could be observed with regard to all the other treasury properties. The rate of shrinkage of treasury-owned land plots not involved in economic turnover relative to the total area of treasury-owned land plots in 2012 corresponds to the planned target for 2019.

The ratio of value of sold property entities in state ownership to their valuation index determined for the purpose of their sale, which is rather difficult to predict, demonstrated an accelerated achievement of the planned level. Thus, according to the year-end results for 2019, the actual indices rose above their planned targets for 2020–2021.

[1] This indicator has not been measured with regard to FSUEs since 2017, when indicators for FSUEs were excluded from the set of indicators (after climbing to 100% in 2015–2016). As regards property entities in treasury ownership, this indicator has not been measured since 2018 (after the Accounts Chamber of the Russian Federation found inconsistences in the performance of the automated information system *Kazna* (IS KAZNA), in the part of quantitative data concerning those entities).

Thirdly, we should note that over the last two years, the federal budget targets for the relative share of revenue generated by the sale of shares, set in accordance with the RF Government Directives thereby the forecast plan (program) of privatization was approved for each reporting year, proved to be unachievable (with the exception of revenues generated by the sales of shares in biggest JSCs) (43.6% and 38.4% in 2018 and 2019, respectively, vs. 100%).

The general reasons for these wide deviations (more than twofold) are the low attractiveness of the assets offered for sale; the increasingly prominent role of independent sellers handling privatization deals (as a rule, with more lengthy pre-sale preparation procedures and frequent postponements of scheduled biddings); suspension of scheduled biddings because of the need to settle the issues associated with the creation of vertically-integrated structures (VIS); the fact that the State retains a stake in a company's capital; the considerations of the option of selling the assets with certain investment conditions; the transfer of assets into regional ownership. By way of comparison, it should be noted that, in 2018–2019, the value of another indicator – that of budget efficiency (transfer of dividends to the federal budget) – was the same or even higher than the corresponding targets.

In the new (2019) version of the GP, the content of the normative legal package to be adopted has been somewhat adjusted.

Its previous (2018) version envisaged the approval, by a government directive, of the privatization program for 2020–2022, and the amendment of the government decree on the improvement of federal property records, as well as of the law on unitary enterprises (concerning regulation of the sale of their property). [1] Now, instead of the latter, it is planned to adopt two new important laws: 'On State and Municipal Property' (normative consolidation of the notion of 'property', as well as a set of related notions (types, characteristics, definition criteria, record-keeping requirements, management specificities, and ownership procedure (termination of title)) and 'On Privatization of State and Municipal Property in the part of Attraction of Strategic Investors' (normative consolidation of the model of state and municipal property alienation by applying this particular method).

* * *

The implementation period of the 3-year Privatization program for 2017–2019 is over. By the majority of indicators, its results turned out to be much more modest than the results of the previous program.

As for the biggest assets included in the program by special government decisions, only one deal took place in that category – that of the sale of the 100% federal stake in *Kristall Production Association* JSC to *Alrosa* PJSC (about RUB 1.9 billion) in 2019. Another example of such deal from the program for 2014–2016, closest to the latter by its timelines and value, is the sale of the of the 100% stake in *Arkhangelsk Trawl Fleet*, to the value of RUB 2.2 billion, to the strategic investor operating in the same sector (by *Virma* LLC) on the basis of a shareholder agreement with Archangelsk Oblast's government whereby the new JSC should guarantee its social liabilities, the preservation of existing jobs, and the development of seaport infrastructure in the region.

[1] For reference: in 2017 previous version, it was intended to introduce amendments to two presidential executive orders (concerning constraints on privatization and the list of strategic organizations) and one federal law (concerning the procedures for determining heirs to property in the course of escheatment process).

The biggest deal with significant budgetary effect of the entire implementation period of the privatization program for 2017–2019 was the installment buyout, under an individual plan, of a stake in a Russia-India joint venture in the telecommunications sector by SSA *Sistema* PJSC. The total budget revenue generated by that deal over 3 years (RUB 26.65 billion) is significantly above the proceeds of the sale, in 2014, of the federal stake (13.76%) in Inter RAO UES (RUB 18.796 billion), but amounts to only slightly more than a half of the proceeds generated by the sale of a stake in *Alrosa* PJSC (10.9%) in 2016 (RUB 52.2 billion).

The movement patterns of sales of stakes in economic societies (shares in their charter capital) in accordance with standard procedures and reorganizations of unitary enterprises into joint-stock companies demonstrated an obvious deep plunge compared with the period 2014–2016. The number of sold stakes in economic societies (shares in their charter capital) fell by nearly 2/3, that of privatized FSUEs – by more than 1/3. The revenue generated by sales of stakes in economic societies other than biggest ones (RUB 10.3 billion) was 58% less than that received in 2014–2017 (more than RUB 24.8 billion). The process of creation, by the government, of vertically integrated structures likewise yielded less impressive results.

At the same time, the number of sold treasury property entities gained nearly 27%. In this segment, the leading role is played by *Rosimushchestvo* (though its territorial bodies). However, we may also speak of a significantly increased role of independent sellers, who made a major input in the sales of stakes in economic societies (shares in their charter capital).

However, the total budget target for revenue generated by the sale of shares proved to be unachievable, and the same was true of the federal budget revenue target (less biggest sale value) set in the privatization program.

The new forecast privatization plan for 2020–2022 is structures similarly to the three previous 3-year programs. Compared with the latter by the number of assets privatized in accordance with standard procedures, it is characterized by the lowest number of commercial organizations (unitary enterprises and economic societies) earmarked for privatization, and the highest corresponding target for other property entities. The projected budget revenue to be generated by privatization (less biggest deals) is a record low (except for the program for 2014–2016). The list of companies to be privatized under individual schemes is comparable with that in the program for 2017–2019, and the plan overlaps with that program by many parameters, although there is no revenue projections.

The alterations introduced into the privatization law follow the trends of recent years, aiming at a higher transparency and better efficiency of the privatization process (the participation of private sellers in the privatization of regional and и municipal property, the abolition of a written application as the main method of conducting a sale, and the introduction instead of an open offer). The 2017 provision has been edited and somewhat simplified with regard to the procedure of selecting legal entities to be commissioned to organize, on behalf of the State, the sales of privatized federal property and (or) to perform the functions of a seller.

As far as the property complex held by the State is concerned, the number of unitary enterprises and joint-stock companies with state stakes in their capital, according to data from a variety of source, was well in line with the multi-year downward trend displayed by the movement pattern of the number of economic subjects in federal ownership. A detailed analysis points to the ongoing shrinkage in the relative share of companies where the State, in its capacity of a shareholder, can exercise full-scale corporate control, as a result of an increase in the relative share of minority stakes.

State-owned companies acted as sellers in the corporate control market (*TransContainer*). This was happening alongside an active process of creation, by the government, of VISs, as well as consolidation of state corporations (*Russian Post*, *Rostelecom*). A relatively new phenomenon was the establishment of public law companies (the Russian Environmental Operator and the Military Building Company).

After a lengthy discussion, some fundamentally important alterations were introduced into the law on unitary enterprises. The list of grounds for their creation has been shortened, made more precise, and linked to the current market competition level and the decisions of an antimonopoly agency. The enterprises created prior to the entry into force of the new legal norms (i.e., before January 2020 and operating in competitive markets must undergo their liquidation or reorganization by their founders' decisions by the start of the year 2025. In the event of a failure to adopt and implement such decisions, the enterprises must be liquidated in a judicial procedure. These newly introduced prohibitive and restrictive norms target in the main the regional and municipal levels, where the bulk of unitary enterprises belong.

In the structure of federal budget revenue generated by privatization (or sale) and use of state-owned property, just as a year earlier, renewable sources played a dominating role. Their relative share hit a record high of the entire period since the early 2000s (about 96%).

There was revenue growth in absolute terms from practically all the sources, one exception being lease payments for property, although revenues generated by the leasing of treasury property entities were still on the rise. The highest growth index was demonstrated by the amount of dividends transferred to the budget. Conversely, the receipts from all non-renewable sources declined. Among these, the greatest contribution was made by the revenues generated by sales of shares (or stakes in charter capital) of economic societies.

The tradition of annual amendment of the Government Program *Federal Property Managemen*t was continued. It was prolonged for one more year (until 2021), and the amount of funding allocated to both its subprograms was increased accordingly; however, the actual amount of these allocations is determined by laws on federal budget.

The major changes in the set of indicators for estimating the course of implementation of the Subprogram *Improvement of the Efficiency of Government Property Management and Privatization* had to do with abolishing the target functions for JSCs with state participation and for state institutions, as had been previously done with respect to unitary enterprises and treasury property entities. The results of implementation of this Subprogram over the period 2018–2019 demonstrate that the established targets were formally met or exceeded by nearly all the indicators.

6.2. The standards and practices of corporate governance: relevant current trends[1]

6.2.1. Phases of the evolvement of 'Russian' corporate governance standards

An analysis of corporate governance practices would be impossible without understanding the corporate governance development in the context of Russian and world practices. With a

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certain degree of arbitrariness, the following main phases of its development can be distinguished.

During Russia's 'wild 90s', despite the adoption of the basic norms of corporate law, the standards of 'good practices' in Russia not only were not complied with – they were not even viewed as something to be oriented to. At that time, the post-privatization property redistribution was taking place in the corporate sector.

In the United Kingdom during the same period, the first version of the Corporate Governance Code (the Cadbury Code of 1992) was prepared and adopted at a time when the recommendations on best corporate governance practices had been recently developed. The Cadbury Code laid the foundation not only for the British codes of best practices, but also set the stage for the development of similar codes in Europe.

In 1999, the OECD Principles of Corporate Governance were adopted, representing the standards and best practices, as well as recommendations for their implementation, that could be adapted to the specifics and national conditions of each country or region. The principles contained specific recommendations for legislative and regulatory initiatives to be adopted by OECD members, as well as by countries outside of the OECD. They have become an international benchmark for policy makers, investors, companies, and other related entities. The principles formed the basis for a broad cooperation program between the OECD and other countries, and were accepted in the framework of recognized international standards in 12 policy areas for a sound financial system. More particularly, they were incorporated into the Corporate Governance Assessments section of the World Bank and the International Monetary Fund's Report on the Observance of Standards and Codes (ROSC).

The second period (approximately 2000–2003) in Russia is marked by an obvious progress at the level of biggest issuers of securities. Now, major Russian companies began to display their interest in corporate governance issues. Against the general background of ongoing equity capital concentration, mergers and takeovers, reorganization of the already established business groups (holding companies), intra-and inter-industry expansion, and an increasingly proactive search for overseas funding sources, Russia's first Corporate Governance Code was adopted in 2002.

Its goal was to bridge the gaps in the then existing Russian laws and regulations on joint-stock companies. In the early 2000s, some large Russian companies (Yukos, LUKoil, Wimm Bill Dann, SSA Sistema, Norilsk Nickel, Magnitogorsk Iron and Steel Works, SUAL) disclosed information on their beneficial owners. The number of independent directors on the boards of Russian companies increased, and the relative share of Russian companies that had begun to pay dividends to their shareholders was on the rise. However, these positive practices (which were formal, for the most part) were typical only of biggest private companies.

In the late 1990s and early 2000s, national corporate governance codes were adopted in Austria, Belgium, Germany, France, Switzerland, and Sweden.[1] Over the same period, similar documents were being elaborated in Australia, Canada, the USA, and Japan.

The third period (2004–2005) started in the aftermath of the Yukos affair, its typical feature being deep freeze put on a wide variety of corporate initiatives. At the same time, that period

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[1] See *Haar B.* Shareholder Wealth vs. Stakeholder Interests? Evidence from Code Compliance Under the German Corporate Governance Code (November 24, 2016). SAFE Working Paper No. 154. URL: https://ssrn.com/abstract=2875275.

saw the completion of the formal corporate governance infrastructure for companies – their corporate governance codes, internal regulations, quotas for independent directors, shareholder committees, corporate secretaries, etc. The demand for innovations was primarily displayed by the second-tier companies that were preparing to enter the financial market.

The general consequences of the 1998 financial crisis produced several global shifts of the early 2000s. The downfall of Enron and WorldCom in the USA and similar scandals involving Independent Insurance in the UK, Elan in Ireland, Kirch in Germany, Royal Ahold in the Netherlands, and HIH Insurance (HIH) and One.Tel in Australia put to a test the effectiveness of corporate governance and financial regulation practices.[1] The upshot of this series of major corporate scandals was a revision, in in 2004, of the OECD Principles of Corporate Governance. The main areas to be revised were as follows:[2] (a) ensuring the basis of an effective corporate governance framework that had not been previously established (Principle I); (b) the rights of shareholders and key ownership functions; (c) conflicts of interest.

The fourth period (approximately 2006–2008) was characterized by more active involvement of the State and state-owned companies in the Russian market for corporate control. That period saw the establishment of state-owned corporations, an increasing size of state-owned blocks of shares, growth in the number of IPOs and cross-border mergers and takeovers, including by way of protecting businesses through attracting major foreign investors.

The 2008 crisis marked **the start of the next period (2008–2014);** the crisis, in a certain sense, gave a new impetus to the development of corporate governance. The weaknesses of corporate governance and financial risks were recognized to be among the powerful factors that triggered the global crisis. The new Russian Corporate Governance Code (hereinafter – CGC),[3] adopted in 2014 on the initiative of the new mega-regulator – the Bank of Russia, was more consistent with the OECD's framework for corporate governance.

The next few years, **approximately from 2015 until the present time**, may be conventionally described as a period of stagnation in the development of positive corporate governance practices which resulted, among other things, from the completion of the process of adjusting the relevant infrastructure of the major public and private companies to the formal requirements established by the regulator, as well as to the international framework standards. At the same time, certain positive practices were now implemented at the level of medium-sized Russian companies. Moreover, according to some estimates, the companies listed on the Russian stock exchange have largely adopted best corporate governance practices and formally comply with practically all the requirements set forth in the Code.

The most significant global development in this field was the approval, in 2015, of the new OECD/G20 Corporate Governance Principles, which retained the main features and content of the 2004 Principles, but were augmented by more detailed recommendations. Although the new Principles are by no means revolutionary, they aim at raising the standards in several fields across the developed and emerging markets, they are better geared to the existing relevant differences in the global corporate governance system, and they recognize the limits to global

[1] See *Hill* J.G. Regulatory Responses to Global Corporate Scandals // Wisconsin International Law Journal. 2005. Vol. 23. Issue 3. P. 369–373. 375–376.

[2] See *Kirkpatrick* G. (OECD). Improving corporate governance standards: the work of the OECD and the Principles, 2005. P. 2–4.

[3] See Letter of the Bank of Russia dated 10.04.2014 No. 06-52 / 2463 'On the Corporate Governance Code' // Bulletin of the Bank of Russia, No 40, 18.04.2014.

convergence of corporate governance practices.[1] Like the earlier principles, they focus on the interests of shareholders and on maximizing companies' stock value.

Meanwhile, there has been much discussion, in the relevant academic literature, on the difference between maximizing the wealth of shareholders and maximizing a company's market value in the context of corporate policy;[2] the issue of an altering balance of relationships between managers and owners in response to globalization (among other things);[3] or financialized corporate governance practices,[4] etc. A 'more applied' discourse has raised the issue of shifting the emphasis in favor of long-term corporate governance goals and the new areas of responsibility of a modern corporation. Over recent years, in the context of reviewing the corporate governance targets, an intense discussion has centered around the interests of all types of stakeholders, social welfare and environmental issues, and also some other problems that have to do with the quality of life, the role of technological advances and digitalization, and so on.[5]

Nevertheless, the principles adopted in 2015 so far have retained their conservative nature and have not been altered in response to some recent, more fashionable trends, as it has happened with a number of other international documents that establish specific codes of conduct for business entities.

A special note, with some clarifications, should be made of the specific features of the regulatory practices that have been developed to date. Today, a review of world practices points to the existence of both mandatory and hybrid regulation of corporate governance. Within the framework of mandatory regulation (for example, in India and the USA), the regulator, by way of a law, establishes uniform mandatory corporate governance rules that apply to all companies. The law is not concerned with the reasons for their non-compliance with the established rules. This regulation model is not costly, and it is very efficient, but it lacks flexibility, does not create proper incentives for companies, imposes a disproportionate burden on small companies, and is not very attractive for foreign investors.

Hybrid regulation relies on a combination of legislation (hard law) and corporate governance code (soft law). At the same time, the code itself can be applied either on a purely voluntary basis (Belarus, Kazakhstan, Mongolia, Tunisia, Ukraine), or rely on the 'comply or explain' approach. The latter is practiced in the majority of large developed and developing countries

[1] See *Wong S.* The 'New' G20/OECD Principles of Corporate Governance: More than Meets the Eye // Hawkamah Journal. Issue 02/2015. P. 22.

[2] See *Hart O., Zingales L*. Companies Should Maximize Shareholder Welfare Not Market Value // Journal of Law, Finance, and Accounting, 2017, 2: 247–274.

[3] See *Schymik J.* Globalization and the evolution of corporate governance // European Economic Review, Volume 102, February 2018, Pages 39–61; *Dignam A., Galanis M.* The Globalization of Corporate Governance. Routledge, 2016.

[4] *Admati Anat R.* A Skeptical View of Financialized Corporate Governance // The Journal of Economic Perspectives, Vol. 31, No. 3 (Summer 2017), pp. 131–150;

[5] See *The Oxford Handbook of Corporate Law and Governance*. Ed. by Jeffrey N. Gordon and Wolf-Georg Ringe. Oxford, 2018; The Handbook of the Economics of Corporate Governance, Volume 1, 1st Edition. Ed. by Benjamin Hermalin, Michael Weisbach. North Holland, 2017; *Pacces A.* Rethinking Corporate Governance. The Law and Economics of Control Powers. Routledge Research in Corporate Law, 2015; *Gelter M*. Comparative Corporate Governance: Old and New. ECGI Law Working Paper N 321/2016, July 2016; *Fenwick M., Vermeulen E.P.M.* The End of the Corporation. ECGI Working Paper N 482/2019, November 2019; *Fenwick M., Vermeulen E.P.M.* Technology and Corporate Governance: Blockchain, Crypto, and Artificial Intelligence. ECGE Law Working Paper N 424/2018, November 2018, etc.

(including Belgium, Germany, Spain, Italy, the Netherlands, Estonia, Poland, Hungary, and Greece).[1]

The 'comply or explain' approach means that corporate governance principles and codes are advisory, and therefore must not necessarily be complies with. However, a company that has chosen not to comply with any one or other rule is required to provide a reasonable explanation for doing so. Both the application of the rule and the provision of a substantiated explanation as to why it has not been applied represent two ways of complying with the rule. In the event of a company's failure to provide a proper explanation, or the explanation provided being insufficient, the company may be punished.

The comply-or-explain approach is considered to be more effective, because it allows companies to more flexibly adapt the corporate governance rules to their individual characteristic features, gives them relative freedom in adopting those governance structures that are most suitable for them and help them improve their management results. Nevertheless, it is more expensive to implement, especially in the less-developed economies.

The CGC, in the contest of Russia's current practice of corporate governance regulation, represents soft law which, when applied together with hard law (legislation), translates into a hybrid regulatory system. Under this regulation system, the law regulates only some components of corporate governance, e.g., the organization of a board of directors, shareholder rights, the existence of an audit committee, and the conduct of a mandatory external audit. The codes regulate some other issues that have to do with the independence of board members, internal corporate control and risk management, and the creation of remuneration and appointment committees.

The CGC was adopted in order to make the corporate governance system in this country more transparent and understandable and to boost the confidence of investors, the companies' customers and employees, and the general public in the proper management and control of joint-stock companies. However, this can only be achieved if the code is properly complied with. Otherwise, even if the document itself is of the highest quality from the point of view of its content, it may still prove to be ineffective when applied as a management performance improvement tool. In this connection, the issue of proper implementation of the code, as well as the use of various mechanisms in the course of its implementation, becomes very important. The compliance with the 2014 CGC is voluntary, but those joint-stock companies that trade their securities in an organized market are required to disclose the information concerning their compliance with the principles established by the CGC, or the reasons for their non-compliance. Thus, the Russian CGC, in its regulation of the activities of listed companies, relies on the so-called comply-or-explain approach.

6.2.2. The board of directors and supervisory board in the corporate governance system

In the modern corporate governance system, is difficult to overestimate the role of the board of directors (and/or supervisory board). It is the most important internal mechanism of corporate governance, designed to secure the interests of a company's shareholders and other stakeholders and to exercise proper control over the activities of its executive bodies.

[1] See *Polezhaeva N.* Compliance with the Corporate Governance Code: are there any improvements? / Russian economy in 2017. Trends and outlooks. The Ye.T. Gaidar Institute for Economic Policy. – Moscow: Gaidar Institute Publishing House, 2018. - P. 452–478.

As is well-known, depending on the supervisory board's formal status of an independent entity, there exist two traditional board of directors models in world practices. Supervisory boards, and thus a two-tier board of directors system, exist in Germany, Poland, France, Italy, the Netherlands, China, and some other countries. In the framework of this model, the supervisory board is a structural component of a two-tier board of directors, alongside the management board. Its functions are clearly defined: it performs only some of the functions delegated to the board of directors, the principal one being that of exercising supervision and control over the management board. The range of its other functions may vary in different countries. The supervisory board consists of independent directors. Nevertheless, it is the one-tier board of directors system with no supervisory board (the USA, the UK, Switzerland, etc.) that is more widespread around the world.[1]

These two systems have their historical origins. Thus, for example, independent entrepreneurial ownership in the UK during its early phase of development was evolving without any participation on the part of the State or any other institution exercising control over the management process. In Germany, mandatory supervisory boards first appeared in the 1870s, when the State delegated its function of overseeing the activities of joint-stock companies to separately established supervisory boards. Both these models have their pros and cons, and comparative law and available experiences provide no evidence that any one of them is clearly superior to the other.

The most significant legal trend is that of providing shareholders with a choice between the one-tier and two-tier systems (France, the Netherlands, Belgium, Luxembourg, Finland, Denmark, and some countries outside Europe). In several countries, including Italy and Portugal, one may choose between a larger number of systems. The European Union also offers shareholders a choice between these systems within the European Company Statute. Germany remains conservative with regard to this issue and refuses to give shareholders any choice (largely due to the existence of strong trade unions), although proposals for reform in this field have already been heard for a long time.

Another trend is the diversity (in terms of age or gender) of the supervisory board.

In the modern world, the discussion about a possible expansion of the supervisory board's powers has become quite popular. The main alterations introduced into Germany's 2015 Corporate Governance Code emphasized the increasingly prominent role of the supervisory board by endowing it with the right to appoint or dismiss the members of the management board, and to determine their remuneration. In China, by contrast, the supervisory board may only exercise control over the management board. Another issue that has been actively discussed is the age and gender diversity of the supervisory board.

It is noteworthy that Russia adopted a one-tier board of directors system, but a supervisory board is synonymous with a board of directors, because it performs all the functions of the latter. That is why this model is controversial (conflict-triggering), and in this it differs from world practices: in Russia, the board of directors (supervisory board) is the single body that simultaneously carries out general management of a corporation, performs the functions of control and oversight, and also, in some cases, the function of its everyday management. In this format, an inclusion on the board of directors of a certain number of independent directors does not eliminate the controversy of functions.

[1] See *Sukhanov, E.A*. Comparative corporate law. Statute, 2014. 620 p. (in Russian); *Rubenko, G.L.* Legal status of management bodies of joint-stock companies. Statute, 2007. 190 p. (in Russian); OECD Corporate governance factbook 2019 // URL: http://www.oecd.org/daf/ca/Corporate-Governance-Factbook.pdf.

In Russia, the board of directors (supervisory board) is the central link of a public joint-stock company's corporate governance system. The performance level of this body and the quality of its decision-making determines a company's further successful development, its attractiveness to investors, as well as its trustworthiness in the eyes of its contractors, shareholders, and related parties. The board of directors is entrusted with some important administrative functions, such as approval of a business strategy, achievement of long-term sustainability, organization of a risk management system, appointment, monitoring and evaluation of the performance of a company's executive bodies, creation of a motivation system capable of attracting and keeping highly qualified specialists, and creation of incentives for achieving long-term goals. In this connection, the issues of efficient performance of the board of directors, its committees and members become especially importance, including their ability to achieve the results that correspond to their organization's needs, and to identify on a timely basis those areas where competences of the board of directors can be further improved, as well as the issues that have to do with planned rotation of its members.[1]

RF corporate legislation, as far as the board of directors is concerned, regulates the issues of its sphere of competence and election procedure, and the conduct of its meetings.[2] The CGC deals with issues that have to do with the performance level and professionalism of the board of directors, and independence of its members. The consistency of companies' practices with the provisions of the CGC is controlled by the Bank of Russia. The first review of corporate governance in Russian public companies drawing on their 2015 annual statements was issued by the Bank of Russia in April 2017.[3] The fourth, and so far the latest review based on the year-end results of 2018, was published in November 2019.[4]

For its fourth review, the Bank of Russia studied the reports on their compliance with the principles and recommendations of the CGC submitted by joint-stock companies included in the first and second level quotation lists of the Moscow Exchange (QL1 and QL2, respectively). Compared to the previous year, the total number of joint-stock companies included in QL1 and QL2 shrank from 75 to 65. And the review relied only on data for those 63 joint-stock companies that submitted their reports in accordance with the established form.

It should be noted that the Bank of Russia, as well as the other institutions that release their analyses of the compliance of Russian companies with the CGC, relied in the main on the information available from the official documents submitted by companies (their quarterly and annual reports, reports on their compliance with the principles of CGC, the lists of their affiliated entities, their statements of relevant facts, etc.), without verifying that information. The joint-stock companies on their own determined the degree of their compliance with one or another principle of the CGC, and the institutions that conducted the analyses noted the highly formal nature and incompleteness of information in the reports provided by companies, especially their explanations for non-compliance with the corporate governance rules.

Based on the analysis of companies' reports for 2018 on their compliance with the principles and recommendations of the CGC, one may note the continuing positive trends with regard to

[1] See the Bank of Russia's Information Letter No IN-06-28/41 dated April 26, 2019 'On recommendations concerning the organization and conduct of a board of directors (supervisory board) performance assessment in joint-stock companies'// Bank of Russia Bulletin, No 29, April 30, 2019.
[2] See, e.g., Chapter VIII of Federal Law No 208-FZ dated December 26, 1995 'On joint-stock companies' // The Russian Newspaper, No 248, December 29, 1995.
[3] URL: https://www.cbr.ru/Collection/Collection/File/24046/Review_17042017.pdf.
[4] URL: https://www.cbr.ru/Collection/Collection/File/25363/Review_29112019.pdf.

the level of implementation of the CGC rules by companies included in the quotation lists, and the quality of explanations for their non-compliance (or partial compliance) with them provided by those companies.

Compared with 2017, the number of CGC principles that have been fully complied with by these companies is on the rise. Thus, according to their self-assessment, the average level of implementation of the principles of the CGC increased by 5%, to 76% of the total number of principles stipulated in the CGC. The average quality of their explanations of the reasons for non-compliance (or partial compliance) with the principles and recommendations of the CGC jumped by 7%, to 60%.

In 2018, a positive movement was also observed in respect to their compliance with the principles stipulated in each chapter of the CGC (*see Table 14*).

Table 14

The relative share of joint-stock companies that declared their full compliance with the principles stipulated in each chapter of the CGC

Chapter of CGC	Number of principles	All PJSCs, %			
		2015	2016	2017	2018
I. Shareholder Rights	13	5	6	7	21
II. Board of Directors	36	0	0	0	0
III. Corporate Secretary	2	45	77	85	86
IV. Remuneration System	10	6	5	11	13
V. System of Internal Control and Management of Risks	6	42	55	60	65
VI. Information Disclosure	7	15	17	25	33
VII. Significant Corporate Actions	5	7	9	7	10

Source: data from the Bank of Russia's 2018 Year-end review of corporate governance practices in Russian public companies.

Chapter II is the most voluminous (36 principles); it outlines the principles of organizing the work of a board of directors, its role in ensuring the efficient performance of a company, and the consistency of its activities with the long-term interests of both the company and its shareholders. The recommendations stipulated in this chapter aim at improving the transparency and efficiency of a company's corporate governance and securing its investment attractiveness. The provisions set forth in Chapter II 'Board of Directors' are those that so far have been the least complied with. Just as it happened in 2015–2017, no joint-stock company declared its full compliance with the principles of this particular chapter of the Russian CGC. However, the average level of implementation of this chapter's provisions was 72%, which is 6% higher than in 2017.

As before, the least degree of compliance was reported with regard to principle 2.5.1 (the election of an independent director to chair the board of directors, or the appointment of a senior independent director selected from among the independent directors); principle 2.7.4 (the approval of a decision by a qualified majority, or by a majority of votes cast by all elected members of the board of directors); principle 2.8.2 (the formation of a remuneration committee from among independent directors); and principle 2.9.2 (the performance assessment of the board of directors). More particularly, the number of companies that implemented principles 2.7.4 and 2.8.2 decreased by 3. In 2018, 22 companies (35%) reported their compliance with principle 2.7.4; and 25 companies (40%), with principle 2.8.2.

At the same time, compared with 2017, there has been a slight positive dynamics in the implementation of principles 2.5.1 and 2.9.2 of the CGC. Thus, 25 companies (40%) fully implemented principle 2.5.1, while in 2017 there were 20 such companies (28%). Their

compliance with principle 2.9.2 was reported by 26 companies (41%), which is by 2 companies more than in 2017 (24 companies, 33%). A moderately positive dynamics was observed with regard to improved quality of the explanation of the reasons for their non-compliance (or partial compliance) with the CGC principles.

As seen by the year-end results of 2018, the relative share of companies with high-quality explanations increased by 8% relative to the previous year. The explanations provided by 16 societies (25%) exceeded the expert assessment level of 75% (high-quality explanations), which is by 4 companies more than in 2017. The number of companies in need of a significant improvement of their explanations fell nearly twofold. Their relative share shrank from 46% to 27%.

For example, when explaining their reason for deviating from principle 2.5.1 (the election of an independent director to chair the board of directors, or the appointment of a senior independent director selected from among the independent directors), companies often expounded the practice of the board of directors where its members, when choosing their chairperson, look at the candidate's moral authority, impeccable business reputation, investors' trust, etc. State-owned companies base their arguments on the specific structure of their equity capital. Some companies note that they are not against the post of senior independent director being instituted, but the board of directors does not initiate the consideration of that issue.

The most common explanation for companies' non-compliance with principle 2.4.3 (the formation of a board of directors where the number of independent directors should be not less than 1/3 of the number of its elected members) has been their inability to influence the process of nominating candidates and electing the board of directors' members by a general shareholder meeting in such a way that the board composition could be consistent with the recommendations stipulated in the CGC.

Among the most common reasons for non-compliance with principle 2.8.5 (the formation of committees under the board of directors composed of at least three members, with an independent director appointed to be the committee chairman), companies refer to the heavy workload shouldered by the independent board members, their insufficient number, and the need to appoint to be the committee chairman an individual with extensive experience in the matters to be handled by the committee. In many companies, in addition to the key committees (audit committee, nomination committee, remuneration committee), also some other committees are created (for example, committees on risks, strategy, etc.), but most often such committees and not headed by an independent director (*see Table 15*).

Table 15

The practice of creating board of directors' committees (75 companies reviewed by the Bank of Russia in 2017)

Committee	QL1		QL2	
	Separate committee created	Issue handled by another committee	Separate committee created	Issue handled by another committee
1	2	3	4	5
Audit	44	0	28	0
Nominations and remuneration	44	0	22	0
Remuneration	0	0	2	0
Strategy	32	1	17	0
Investment	5	4	2	2
Risks	3	4	0	1
Budget	4	0	2	0

Cont'd

1	2	3	4	5
Corporate Governance	4	6	0	0
Ethics	1	0	0	0
Health, safety and environment	2	1	1	0
Technical (safety/technical policy, etc.)	5	0	9	0
Other	4	–	9	–

Source: data from the Bank of Russia's Third (2017) review of corporate governance practices in Russian public companies.

As the reasons for their deviation from principles 2.9.1 and 2.9.2 (regular performance assessments of the board of directors, its committees, and individual members), some companies cite the high professional level and extensive experience of the board members and the fact that the board composition remains unchanged. However, that explanation is not satisfactory, just as the absence in a company of a well-developed self-assessment system or a procedure for outsourcing such an assessment is not a satisfactory explanation, because it does not explain the reasons for non-compliance, but simply states the fact of non-compliance with the principle.

The CGC does not recommend special payments for the participation in each board or committee meeting, or any form of short-term motivation, or additional material incentives for members of boards of directors (paragraph 4.2.1). In most companies, the board members receive some basic remuneration, but it is often calculated with due regard for the number of meetings attended by each member. It is common practice to pay an allowance for chairing the board of directors and committees. About a third of companies use short-term tools to motivate the board members (payment of bonuses depending on the amount of a company's proceeds, capitalization index growth, position in the industry) that are not recommended by the CGC, because such incentives may stimulate the achievement of short-term goals to the detriment of the company's long-term sustainable development. Besides, companies seldom provide information on their compliance with principle 4.2.2 (long-term ownership of shares in their company in order to bring the financial interests of board members closer to the long-term interests of shareholders).

In general, over the four years that have passed since the start of corporate governance quality monitoring by the Bank of Russia, the companies included in the quotation lists managed to achieve quite good results in introducing the principles set forth in the CGC and improving the quality of their explanations of the reasons for their non-compliance (or partial compliance) with those principles. While previously the companies reduced their explanation to describing the actual circumstances of their non-compliance with the CGC, in 2018 they began to pay attention to a meaningful description of their measures undertaken in order to bring down the risks associated with their deviation from the recommendations of the CGC, and to include the information on the timelines for making their corporate governance practices consistent with the CGC.

Special attention should be paid to the issues that have to do with companies' compliance with the corporate governance principles pertaining to the board of directors of those *13 public joint-stock companies with stakes held by the Russian Federation,* whose shares are traded on the organized securities market, which are considered to be the 'flagships of the market' and treated as specific indicators of the level of investment attractiveness of the Russian market as a whole and of the structural quality of corporate governance in Russian companies. These are Alrosa PJSC, Aeroflot PJSC, Bashneft PJSC, VTB Bank (PJSC), Gazprom PJSC, United Aircraft Corporation PJSC, Rosneft PJSC, PAO Rosseti (PJSC), Rostelecom PJSC, RusHydro

PJSC, Sberbank PJSC, Transneft PJSC, and FGC UES PJSC. Their compliance with the CGC is monitored and studied not only by the Bank of Russia, but also by the Federal Agency for State Property Management (Rosimushchestvo), the Open Government, the Government Expert Council of the Russian Federation, the Working Group on Establishing the International Financial Center, as well as a number of research institutes (e.g., the Higher School of Economics).

To analyze the compliance of state-owned companies with the principles of the CGC concerning the board of directors, the annual reports for 2018 of six companies[1] included in the HSE corporate governance rankings[2] were reviewed: two companies with top rankings (Sberbank (4.07 out of 5), ALROSA (3.76)); two with middling rankings (RusHydro (2.96), Rosneft (2.85)); and two with the lowest rankings (Gazprom (1.85), Transneft (1.6)) (*see Table 16*).

Table 16

Compliance with the 36 principles of the CGC concerning the board of directors

	Compliant	Partially compliant	Non-compliant
Sberbank	30	6	0
Alrosa	32	3	1
RusHydro	32	1	3
Rosneft	31	5	0
Gazprom	23	10	3
Transneft	25	9	2

Source: the companies' annual reports for 2018.

Thus, the state-owned companies with top and middling rankings based on corporate governance quality differ little by the number of the CGC's principles concerning the board of directors that they actually comply with. Rosneft demonstrates an even better index than that of Sberbank. However, the companies with the lowest rankings comply with a notably smaller number of those principles. Their reasons for non-compliance are for the most part uninformative. An exception is Transneft, which substantively explains its deviations from the principles.

The principles least of all complied with are those regarding the board of directors' responsibility to set up committees for preliminary consideration of the most important issues pertaining to the company's activities (paragraph 2.8), as well as the principles under section 2.4 in the part whereby it is stipulated that the number of independent directors on a board of directors should be not less than 1/3 of the number of its elected members, and in the part

[1] See Sberbank of Russia's 2018 Annual Report. URL: https://www.sberbank.com/common/img/uploaded/redirected/com/gosa2019/docs/sberbank-annual_report_2018_rus.pdf; 2018 Annual Report of ALROSA PJSC. URL: http://www.alrosa.ru/wp-content/uploads/2019/06/%D0%93%D0%9E_2018_%D1%84%D0%BE%D1%80%D0%BC%D0%B0%D0%BB_%D1%84%D0%B8%D0%BD%D0%B0%D0%BB.pdf; 2018 Annual Report of RusHydro PJSC. URL: http://www.rushydro.ru/upload/iblock/7d9/GO-za-2018-god.pdf; 2018 Annual Report of Rosneft PJSC. URL: https://www.rosneft.ru/upload/site1/document_file/a_report_2018.pdf; 2018 Annual Report of Gazprom PJSC. URL: https://www.gazprom.ru/f/posts/01/851439/gazprom-annual-report-2018-ru.pdf; 2018 Annual Report of Transneft PJSC. URL: https://www.transneft.ru/investors/219/.

[2] See *Evaluation of corporate governance in public companies with Russian state participation and publicly traded shares*. HSE, 2017. URL: https://buscom.hse.ru/data/2017/04/18/1169055539/%D0%9F%D0%BE%D1%81%D0%BB%D0%B5%D0%B4%D0%BD%D1%8F%D1%8F%20%D0%B2%D0%B5%D1%80%D1%81%D0%B8%D1%8F%20%D0%BE%D1%82%D1%87%D0%B5%D1%82%D0%B0__%D1%80%D1%83%D1%81.pdf.

whereby independent directors are obliged to play a key role in preventing internal conflicts in the company and in undertaking significant corporate actions.

Our analysis has highlighted the following *problem points*:

1. A meeting of the board of directors cannot be convened by shareholders (Sberbank, Rosneft, Gazprom). Shareholders should be able to influence the activities of the board; however, in order to avoid undue influence on the board of directors, the CGC recommends that the right to demand that a board meeting be held should be granted only to shareholders holding at least 2% of the company's voting shares, and only for the consideration of issues defined in the charter.

2. There is a low proportion of in-person meetings of the board of directors and its committees (RusHydro, Rosneft, Gazprom, Transneft). Moreover, due to the concentration of ownership, absentee ballots take place quite often (sometimes several times a week). A face-to-face meeting of the board is preferable for discussing the most important issues, because it involves the joint presence of board members.

3. The board of directors' agenda sometimes includes a section titled 'miscellaneous', which is fraught with the risk of some significant issue being considered without proper notice to all the board members. The dates of the decisions to hold absentee voting and the dates of such voting almost always coincide (Sberbank). The very limited time assigned for preparing for such voting may prevent the adoption of a well-considered decision by the board of directors.

4. The recommendations of the CGC concerning the need to ensure a qualified majority in the board of directors or the majority of its elected members on important issues (less than half of the issues belonging to the category of the most important ones under the CGC) are not implemented in full (Alrosa, Rosneft, Gazprom). This also gives rise to the risk of poor decision-making on significant issues.

5. A number of problems have to do with the limited powers of the board of directors, for example:

- the powers of the board of directors do not include their right to appoint, or to dismiss prior to their term of office expiry date, the president or chair of the company's board (Sberbank); and the board of directors has no power to form the management bodies of relevant companies controlled by the core company (Rosneft);
- independent directors and the human relations and remuneration committees do not participate in compiling the list of candidates for the board of directors of Rosimushchestvo for the next corporate year, which creates a situation where the management has to submit such a list in the context of a potential conflict of interest (no information on such participation is available from RusHydro or Rosneft);
- no powers to review the budget of the internal audit subdivision and determine the remuneration to its head are envisaged for the board of directors (Gazprom, Transneft). The CGC recommends that the internal audit unit should be made independent, which can be achieved by distinguishing between its functional and administrative accountability. It is recommended that the internal audit unit should be administratively subordinate to the sole executive body. The functional subordination of the internal audit unit to the board of directors means, inter alia, that the board approves (the audit committee preliminarily reviews) the internal audit's activity plan and budget. The absence of such a separation of accountability in a number of state-owned companies may impede the maximum independence of internal audit from the management of the organization;

– the board of directors does not pay enough attention to the company's development strategy, while full-fledged strategic sessions with the participation of management and board members should be held on an annual basis (Alrosa).

6. The reports on the board of directors' decisions do not disclose the voting results and roll-call of board members in the event of absence of unanimity (Sberbank, Rosneft, Gazprom, Transneft).

7. Lack of a proper remuneration system for board members.

The CGC recommends that the amount of remuneration for members of the board of directors should be set so as not to be too high, on the one hand, while on the other, to be adequate to the time, qualifications and responsibilities of the directors, and also take into account the level of remuneration of the other employees of the company. Despite this, in RusHydro, Rosseti, and FGC UES, the remuneration tends to zero, including in relation to the average remuneration of board members. The amount of remuneration that does not comply with the recommendations of the CGC prevents proper involvement of the directors and their concentration primarily on their professional work on the board. In the Russian state-owned companies considered here, the level of remuneration paid to members of the board of directors is significantly lower than in the international companies of a similar status. The exceptions are Rosneft, Gazprom, Transneft, Bashneft and Sberbank, which are not inferior in this respect to European companies, but significantly lag behind their US and Canadian counterparts. In electric power companies, this situation was caused, among other things, by the use of outdated recommendations of the RF Ministry of Economic Development for determining the amount of remuneration of independent directors and professional attorneys in state-owned joint-stock companies, adopted in 2009.[1]

The CGC also recommends not to use the various available forms of short-term motivation for members of the board of directors, including those pegged to capitalization or profit. However, Aeroflot, Bashneft, and Gazprom have introduced certain components of premium annual remuneration depending on capitalization or profit. At the same time, these remuneration programs are not replicas of the programs for the participation of board members in capital that are typical of American companies, where part of the remuneration is distributed by means of conditional shares (issued free of charge, with their number calculated at a conditional fixed price), and is paid only after the term of office of a board member has expired.

It seems that in state-owned companies, which for the most part pursue economic goals and operate in a competitive environment, the level of remuneration of board members should reflect the current market conditions, to the extent necessary for attracting and retaining highly qualified members in the board directors.

There also exist some other negative corporate practices of biggest state-owned companies that have to do with the operation of their boards of directors.

8. One problematic issue is how to organize the board of directors' work. Most frequently, their schedule is centered around their need to consider the proposals of the company's management and to discuss the issues suggested by the board members; whereas the scheme that involves the elaboration, by the board of directors, of its own standpoint as to the scope of its competence and responsibility (with due regard for the management's proposals), including

[1] See Letter of the Ministry of Economic Development of Russia No D08-3156 dated September 28, 2009 'On recommendations on determining the size of remuneration to be paid to independent directors and professional attorneys in joint-stock companies with state participation' // Consultant Plus.

the development of joint proposals and various decision-making scenarios, is not commonly seen (e.g., Alrosa), and such a scheme is usually applied only to some specific issues.

9. The CGC recommends that an independent director should be elected to chair the board of directors, or that a senior independent director should be appointed from among the elected independent directors. Generally, state-owned companies prefer the second option (paragraph 2.5.1).

It seems that what the decisive factor here is not the independent status of the board's chair, but their personal attitude. The interest on the part of the chair inevitably gives rise to a meaningful discussion participated by all representatives of shareholders and independent directors. A proactive chair allows the independent directorate to communicate their viewpoints, which are then given maximum consideration during the process of generating or issuing decisions concerning each item on the meeting's agenda. The personalities of the key participants in corporate governance, and not only the personality of the chair of the board of directors, present an eternal problem, because this is something that cannot be fully controlled by regulatory norms.

10. Some questions also arise in connection with the issues of liability insurance of the members of the board of directors, because the insurance, among other things, provides a compensation for losses, otherwise it would have been difficult to recover from an individual. Big state-owned companies actively insure the liability of members of their board of directors, board members, and other officials, by way of compensating for the losses incurred by other entities, for which claims can be presented to the insured individual for their wrong actions committed in the course of their management activities (insurance amounts vary from RUB 3 billion to USD 250 million). However, this may result in unjustifiably risky behaviors of the board members in the course of their decision-making.

Thus, in spite of the good overall picture, it is still recommended that state-owned companies should provide proper solution to the issues relating to their boards of directors.

6.2.3. Prescriptive decision making on the part of the State

The issues involving prescriptive decision making on the part of the State are not covered by the Russian CGC because they represent a specific feature of state-owned companies. However, even the OECD Guidelines on Corporate Governance of State-Owned Enterprises[1] say nothing about any distinctive ways for the State to exercise its shareholder rights, and only point out that the State should exercise its ownership rights in accordance with the legal structure of each company, and that one of its main responsibilities is to organize a clearly structured and transparent process of nominating the candidates to the board of directors of an enterprise where the State holds a 100% stake or a controlling stake, and to actively participate in the formation of boards of directors of all state-owned enterprises (Principle IIE2).

In the OECD countries, the State has long been playing a continually diminishing role in the direct management of state-owned companies while steadily tightening its control over their economic activities. Thus, in Denmark, Norway, the Netherlands and the UK, there are no government representatives in state-owned companies. In Sweden, Germany and Finland, there

[1] OECD Guidelines on Corporate Governance of State-Owned Enterprises, 2015 // URL: https://read.oecd-ilibrary.org/governance/oecd-guidelines-on-corporate-governance-of-state-owned-enterprises-2015_9789264244160-en.

are no more than 2 government representatives on a company's board of directors.[1] The OECD members strive to implement efficient management, by the State, of the property of joint-stock companies by strengthening its control over their reporting procedures and financial indicators, as well as by regulating corporate relationships so as to promote transparency, accountability, and social responsibility.

In Russia, the State exercises its shareholder rights through the Federal Agency for State Property Management (Rosimushchestvo) (in certain cases, the RF Ministry of Defense and the Executive Office of the President of the Russian Federation), which acts on behalf of the Russian Federation, by appointing government representatives to the management bodies of joint-stock companies (boards of directors, general shareholder meetings), who participate in voting in the course of the decision-making process. On some issues (approval of the agenda of a general shareholder meeting, recommendations concerning the amount of dividends on shares, consent to a major transaction, etc.), representatives vote in accordance with the directives in the form of written instructions issued to each representative (or representatives) of shareholders about the specific actions that should be undertaken.[2]

This mechanism for managing the stakes held by the State is fraught with a number of problems. The directives are always drawn up on behalf of Rosimushchestvo, regardless of the branch ministry or government department that each joint-stock company is actually subordinate to. Because Rosimushchestvo by no means always knows in detail the state of affairs in each company, it usually does not issue directives to state representatives, thereby blocking the decision-making process or preventing state representatives from taking part in voting, and so the State cannot take full advantage of its opportunities to participate in a company's management.

The negative consequences of such distribution of powers could be mitigated by following Rosimushchestvo's practice of drawing up its directives on the basis of resolutions issued by the body of authority or administrative body responsible for each joint-stock company. However, this approach has not become a widespread practice – its application seems to be the exception rather than the rule.

Another problem is that the state representatives in the management bodies of joint-stock companies prefer not to participate in voting on those issues that can be voted without a prescriptive directive.

Although the existing approach to representing the interests of the State in the management bodies of joint-stock companies with RF stakes has its limitations, it is still too early, in order to promote the independence of company management in its decision-making, to abolish the procedure of issuing directives concerning specific issues on the agenda of board of directors' meetings. The board members can be liable for their actions under civil or criminal law. Meanwhile, the criteria for instituting guilt, integrity and reasonableness are still in their formative phase, and the board members, who sometimes make important decisions in the

[1] See *Bottaev A.Yu.* Foreign experience of corporate governance in state-owned companies // University Herald. No. 10. 2015. P. 165.

[2] See Decree of the RF Government No. 738 dated December 3, 2004 'On management of federal shares in joint-stock companies and the use of the Russian Federation's special right to participate in the management of joint stock companies ('golden share')' // Collection of RF legislation, December 13, 2004, No 50, p. 5073.

absence of sufficient information, will be forced to operate in an unregulated space, should the directives be abolished.[1]

The form of a directive, the timeline and procedure for its issuance need to be improved. One option could be a 'soft' directive - either a directive on a 'mandatory issue', that the State does not insist on being complied with, or a directive that outlines the desirable standpoint to be taken by a member of the board of directors, without going into specific details. Also, as a transitional measure, directives may be issued only for those biggest companies that under existing legislation are recognized to be 'strategic'.

6.2.4. Dividend policy

In 2017–2019, the dividend policy of companies was shaped under the influence of several economic, geopolitical and institutional factors.[2]

In October 2019, the Guidelines for the Fiscal, Tax, and Customs and Tariff Policy for 2020 and the 2021–2022 Planning Period were adopted, whereby a significant input into the non-oil and gas revenues of dividends of state-owned companies was envisaged. A gradual transition to the payment of dividends in the amount of 50% by state-owned companies is expected, in accordance with International Financial Reporting Standards (IFRS). The dividends to be received by the State should amount, in 2020, to RUB 760.6 billion; in 2021, to RUB 930.9 billion; and in 2022, to RUB 1076.8 billion, in other words, over the period in 2020–2022 they should increase by more than 40%.

As early as 2016, Government Directive No. 705-r dated April 18, 2016 was issued, whereby it was ordered that state-owned companies should pay dividends amounting to 50% of their net profit. That order was not implemented, but it largely determined the growth of dividend payments.

Thus, in 2018, the level of dividend payments by Gazprom PJSC doubled relative to 2017, increasing to RUB 393.2 billion. This is the historic high of the amount of dividends ever paid by the company: 27% of its profits in accordance with IFRS. The shareholders of Sberbank received 1.3 times more, the level of their dividends amounting to 43.45% of Sberbank's net profit for the previous year under IFRS. Rosneft's year-end indicators of 2018, including interim dividends, amounted to only RUB 274.6 billion; however, that indicator grew 2.5 times relative to 2017, amounting to exactly 50% of net profit under IFRS.[3]

On December 24, 2019, Gazprom PJSC approved its new dividend policy of a gradual transition, over a 3-year period, to a level of dividends amounting to 50% of its adjusted net profit under IFRS (in 2020, this index will be 30%; in 2021, 40%; in 2022, 50%). Previously, its dividends were paid under Russian Accounting Standards (RAS).[4] According to some estimates, under the previous scheme the State withdrew part of the income by raising taxes, thus bypassing the other shareholders.[5] Thus, in particular, in Q4 2018, a federal law was passed whereby the rate of mineral extraction tax (MET) for Gazprom was raised. According to RF

[1] See *Osipenko, O.V.* Corporate control: expert problems of efficient management of subsidiaries. M.: Statute, 2014. Book. 2: Corporate control implementation.

[2] For further details, see *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;(1):66-92. (In Russian). Parts 1–2. // Voprosy Ekonomiki, 2020, No. 1, p. 66–92; 2020, No. 2, p. 59–85.

[3] *Gaydaev, V.* The RF Ministry of Finance chases away dividends. - Kommersant No. 98, July 6, 2019. URL: https://www.kommersant.ru/doc/3993002.

[4] URL: https://www.gazprom.ru/press/news/2019/december/article496461/

[5] Razumnyi, E. Gazprom's board approved a new dividend policy. – Vedomosti, December 12, 2019.

Deputy Minister of Finance Ilya Trunin, this was done so as to compensate the RF budget for the loss of RUB 72 billion that Gazprom had not paid as dividends to the State as its main shareholder in 2017; RUB 72 billion equals almost 40% of Gazprom's total dividend payments for 2017. The negative aspect of the situation where MET is paid at a higher rate is that the controlling shareholder (the State) received it in lieu of dividends, thus effectively putting its priorities above those of the other shareholders, who receive reduced dividends.[1]

The new dividend policy is more transparent. However, no market response followed, because these principles had already been known.

Over the next few years, the level of dividend payments amounting to 50% of their net profit will be achieved, according to their plans, by Sberbank PJSC (by 2020)[2], Rosneftegaz PJSC[3], and Gazprom Neft PJSC (from 2020).[4]

According to the RF Ministry of Finance, by increasing dividends to 50%, it will not only become possible to boost government revenues and improve the quality of investment projects implemented by state-owned companies, as well as their capitalization, but also to create equal, competitive conditions across the economy. An artificial reduction of return on invested capital creates an unreasonable advantage for state-owned companies over private ones. Thus, for example, in Central and Eastern Europe, state-owned companies give their shareholders, on average, 70% of their profits.

The growth of companies' dividend payments was stimulated by the following factors:

1) improvement of the financial results of all exporters due to the ruble weakening and rising oil prices;
2) a revision of the dividend policy, followed by an increase in the payout ratio (MTS, Sberbank, Tatneft, Alrosa, RusHydro);
3) the majority of oil and gas companies doubled their dividends relative to the previous year. Thus, for example, LUKoil altered its dividend policy by determining that it would pay its shareholders at least 100% of the adjusted cash flow, which will be adjusted for interest payments and repurchase costs. In addition, dividends will have priority in terms of capital gains distribution. Until then, dividends amounted to 25% of net income under IFRS. In 2018, taking into account interim dividends, LUKoil paid 30% of its net profit. According to some forecasts, the expected dividend payments for 2019 will be the highest in the history of the company.[5]

When speaking about the **problems** associated with the dividend policies of Russian companies, it should be noted, first of all, that most companies still *do not pay dividends*. The reasons for their doing so include but are not limited to:

– attraction of investment from the market without using an open subscription offering; the reasons for this are the risks of raiding, and the low investment activity of the population;

[1] *Peskov, A.* Taxes against dividends. How the State passed over Gazprom shareholders. – URL: https://quote.rbc.ru/news/article/5b3f68f79a7947508aed57b7, 6.07.18.
[2] National Rating Agency. Analytical review 'Dividend payments of russian companies for 2013–2018'.– URL: http://www.ra-national.ru/ru/node/63468.
[3] Interview of RF Minister of Finance Anton Siluanov with Reuters – URL: https://www.minfin.ru/ru/press-center/?id_4=34789-intervyu_ministra_finansov_rossii_antona_siluanova_agentstvu_reuters.
[4] Gazprom Neft from 2020 to increase its dividends to not less than 50% under IFRS.– URL: https://finance.rambler.ru/markets/43662747-gazprom-neft-s-2020-goda-vyhodit-na-dividendy-ne-menee-50-ot-pribyli-po-msfo, 14.02.20.
[5] *Razymny E.* LUKoil disclosed the principles of its new dividend policy. - Vedomosti, 10.16.19.

– 'entrenched management', without significant shareholdings, but using various means to secure a high level of influence on company policy and turnover income, thus reducing or nullifying dividends;

– creation of a group of companies with cross-ownership of shares, transfer pricing, and an offshore profit center, with no need to pay dividends as a result.

All this translates into the orientation of businesses toward non-transparent business dealings, the lack of motivation for long-term investments, and mistrust of the authorities.

The next problem of the dividend policy of Russian companies is *their non-compliance with the minimum rate of return set by them for the payment of dividends*. A fixed rate of return floor has a positive effect on the shareholders' investment decisions; however, it is not uncommon for this rate to become just a formality which is subsequently not implemented, or a company may set a wide rate band for its dividends. Thus, for example, until December 2019, Gazprom PJSC followed this practice, by fixing its dividend rate in the range of 17–35% of RAS net profit.[1]

Quite often, we can observe a conflict of interests between majority and minority shareholders, when cash flows are directed so as to serve the interests of the former, i.e. to solve the problems faced by majority shareholders.

For shareholders and future investors, the problem is the frequency of dividend payments. As is well known, quarterly payments are the most common world practice, which allows shareholders to reinvest their dividends, and also testifies to the company's financial sustainability. In Russia, only a small number of biggest companies pay dividends every six months or in a quarterly basis (Tatneft PJSC, LUKOIL PJSC, Novatek PJSC, Rosneft PJSC, Gazprom Neft PJSC, NLMK PJSC, Severstal PJSC).

6.2.5. New technologies and corporate governance

Digitalization and Corporate Governance

The concept of a digital economy based on the transition of man, in his economic activity, to processing electronic bits (digital interaction) was formulated at the end of the 20th century. Its advantages are the virtuality of business linkages, lower need for raw materials and transport infrastructure, rapid global movements, etc.[2] It is believed that the transition to a digital economy will result from the fourth industrial revolution, or Industry 4.0.

In accordance with the official definition adopted in the Russian Federation, the digital economy refers to economic activities where the key production factor is digital data.[3] It is also defined as an economy where economic activity is conducted using electronic or digital technologies, with an emphasis on goods, services and networks operated by electronic business

[1] URL: https://www.gazprom.ru/press/news/2010/october/article104767.

[2] See *Negroponte N.* Being Digital. New York: Alfred A. Knopf. 1995. 243 p.

[3] See Directive of the Government of the Russian Federation No 1632-r dated July 28, 2017 'On approving the Program 'Digital Economy of the Russian Federation'' // Collection of RF legislation, August 7, 2017. No 32. Art. 5138 (no longer effective due to the adoption of a new identically-titled national program, see Directive of the RF Government No. 195-r dated February 12, 2019 // Collection of RF legislation, February 25, 2019, No 8, Art. 803). Certificate of the National Program 'Digital Economy of the Russian Federation'. URL: https://digital.gov.ru/uploaded/files/natsionalnaya-programma-tsifrovaya-ekonomika-rossijskoj-federatsii_NcN2nOO.pdf.

and electronic commerce methods;[1] or, as economics multiplied by new technologies, primarily those capable of collecting, storing and transmitting huge data sets.[2]

To date, Russia has adopted a number of documents aiming at digitalization of the national economy,[3] including a law whereby, from October 1, 2019, digital rights have been made a new object of civil rights.[4] This innovation was necessary to prepare the Civil Code of the Russian Federation for the adoption of laws on digital financial assets (cryptocurrency and tokens) and crowdfunding (attracting investments through electronic platforms).[5]

In July 2017, the Program 'Digital Economy of the Russian Federation'[6] for the period until 2025 was launched, which further develops the main provisions of the 2017–2030 Strategy for the Development of an Information Society in the Russian Federation',[7] its ultimate goal being to boost Russia's competitiveness, quality of life, economic growth, and national sovereignty.

While speaking of digitalization of law, it should be noted that its 'machinizing' is impeded by the periodic deviation of legal norms from the laws of formal logic, and by the free will of man.[8] Thus, for example, the conversion into machine code of ambiguous terms will require either a huge number of reservations and exceptions, or a significant simplification of the terminology and, accordingly, legislation as a whole. In the latter case, simplification of legislation may translate into its tightening; without human intervention, that 'machinized law' can become a replica of totalitarian society's law. In most cases, artificial intelligence, when applied in law, should be treated as an auxiliary tool to identify contradictions, duplication, and lack of logic. However, a human must make the final decision on the application of a legal norm.

Corporate practice and law have not been standing aside from the digitalization process. As noted above, the issues related to corporate governance appeared alongside the first joint-stock companies. However, we may say that modern corporate governance was born with the adoption, in the UK in 1992, of the first Corporate Governance Code, or the Cadbury Code,

[1] See *Vaipan V.A.* Fundamentals principles of legal regulation in a digital economy // Law and Economics. 2017. No 11. P. 5–18. (In Russian).
[2] See *Aliev V.M.* Political and legal aspects of the transition to a digital economy in Russia // Russian Investigator. 2018. No 9. P. 48–52. (In Russian).
[3] See, for example, Executive Order of the President No 203 dated September 5, 2017 'On the 2017–2030 Strategy for the Development of an Information Society in the Russian Federation for 2017–2030' // Collection of RF legislation, May 15, 2017, No 20, Art. 2901; Decree of the Government of the Russian Federation of September 7, 2018 No. 1065 'On the Government Commission on Digital Development and the Use of Information Technology to Improve the Quality of Life and the Conditions for Doing Business' // Collection of RF legislation, September 17, 2018, No 38, Art. 5846; Decree of the Government of the Russian Federation No. 234 dated March 2, 2019 'On the management system for the implementation of the national program 'Digital Economy of the Russian Federation''// Collection of RF legislation, March 18, 2019, No 11, Art. 1119.
[4] Federal Law No. 34-FZ dated March 18, 2019 'On Introducing Alterations into Parts One, Two, and Article 1124 of Part Three of the Civil Code of the Russian Federation' // Collection of RF legislation, March 25, 2019, No 12, Art. 1224.
[5] Draft Federal Law No. 419059-7 'On Digital Financial Assets' // URL: https://sozd.duma.gov.ru/bill/419059-7.
[6] Directive of the Government of the Russian Federation No 1632-r dated July 28, 2017 'On approving the Program 'Digital Economy of the Russian Federation'' // Collection of RF legislation, August 7, 2017. No 32. Art. 5138 (no longer effective due to the adoption of a new identically-titled national program, see Directive of the RF Government No. 195-r dated February 12, 2019 // Collection of RF legislation, February 25, 2019, No 8, Art. 803).
[7] Executive Order of the President No 203 dated September 5, 2017 'On the 2017–2030 Strategy for the Development of an Information Society in the Russian Federation' // Collection of RF legislation, May 15, 2017, No 20, Art. 2901.
[8] See *Ivanov, A.A.* On the depth of law mechanization // Law. 2018. No 5. P. 35–41. (In Russian).

when the Cadbury Committee on the Financial Aspects of Corporate Governance developed recommendations on best corporate governance practices. The Cadbury Code laid the foundation for other national codes and the international corporate governance principles. Together with the Sarbanes-Oxley Act of 2002 (OECD) and the Corporate Governance Principles of the OECD, the Cadbury Code gave rise, in the late 1990s and early 2000s, to a comprehensive system of principles and standards of corporate governance conventionally called *Management 1.0*.

The global financial and economic crisis of 2008 gave a new impetus to the revision and further development of corporate governance standards. As a result, experts began to actively exploit the concept of *Management 2.0* which, along with the involvement of employees in the corporate decision-making process, is characterized by the exclusively technological aspects of management that must be viewed in the context of informatization of economic activity. At the same time, inclusiveness increases in response to the growing digitalization of society in the form of the increasingly widespread big data processing technologies, dematerialization of productive assets, and the widespread use of digital activity formats, in other words, the emergence of a new digital economy.

Management 2.0 focuses on the accumulation of intangible assets, development of network formats for conducting economic activities, creation of corporate data sets not only for the purpose of reporting, but also with a view towards future development; all this will contribute to better long-term planning and the inclusion of shareholders and other related parties in the corporate decision-making process. Further digitalization of the economy, with an increasingly prominent role of artificial intelligence in management processes, may pave the path towards *Management 3.0*.

It should be noted that the active development of information technologies not only improves corporate governance, but also modifies its inherent potential for a conflict of interests, and produces qualitative changes in the information disclosure requirements, as well as in the information itself (on the activities of joint-stock companies). It is not yet clear whether corporate governance will become more rational as a result of these changes, or whether it will be necessary to deal with new conflicts and contradictions.[1]

Nevertheless, digitalization is becoming an integral part of corporate practices, and three degrees of its penetration into the activities of corporations and legislation can be distinguished.

First, *the ability to automate certain actions*. Thus, for example, an application for the purchase of issued securities can be submitted by an individual with a preemptive right to purchase additional shares and equity securities either by sending a signed written document to the registrar of the issuer, or by sending an electronic document signed by qualified electronic signature.[2] To make such an opportunity possible, no significant changes to corporate law will be required.

Second, *the execution of a specific action only in electronic form*. For example, the document flow between a registry holder and a nominee holder with a personal account.[3]

[1] See *Milovidov V.D.* Corporate governance 2.0: evolution of the system of corporate relations in an information society // National Strategy Issues. 2017. No. 4 (43). S. 171–189. (In Russian).
[2] Paragraph 3.1 of Article 41 of Federal Law No 208-FZ dated December 26, 1995 'On joint-stock companies' // The Russian Newspaper, No 248, December 29, 1995.
[3] For more details, see Article 8.9 of Federal Law No 39-FZ dated April 22, 1996 'On the securities market' // The Russian Newspaper, No 79, April 25, 1996.

Third, *the system's transformation resulting from the introduction of information technology*. Here, we mean primarily a decentralized automated organization (hereinafter - DAO), which may be either part of a classical corporation or a fully virtual organization. Legal regulation of the activity of such an entity will require a significant transformation of legislation.

Thus, considering the impact of new technologies on corporate governance, we may speak of corporate governance digitalization *and* corporate governance in digital organizations.[1]

The elements of new technologies in corporate governance

Blockchain Electronic registries. Electronic document management. Electronic voting

In studies on the issues of digitalization in corporate practices, one of the central places is given to blockchain technology.[2] It is believed that this technology has many advantages and can reduce corporate risks due to its transparency and high reliability.

Blockchain is a decentralized database network and includes two components: asymmetric cryptography and Distributed Ledger Technology (DLT). The key benefits of blockchain technology are as follows: (1) creation of indelible electronic records; (2) value transfer as a result of updating these records; (3) the updates are automated. Blockchain can reduce the role of third parties, i.e., guarantors, intermediaries, etc.[3]

Blockchain technology is still suffering from some significant technical, operational, and scalability issues. The majority of up-to-date blockchain applications lack complete decentralization. Although blockchain systems are considered to be safe, this technology has not yet become widespread enough to be found reliable. Besides, there is also the problem of high costs associated with a switchover to constantly developing new technologies. And finally, a high degree of uncertainty has to do with the existing normative legal base for regulating blockchain and smart contracts. The blockchain system is in conflict with national regulatory requirements, and so the latter need to be upgraded across all jurisdictions. In addition, the current blockchain technology is too slow to cope with the current volume of operations.[4]

Blockchain technology can be applied in a variety of fields, although it should be noted that its implementation in Russia is progressing at a slow pace because of lack of relevant legislation. So, today this technology is developing only where there are no legislative constraints.

The imperfection of the mechanism for keeping records of corporate rights in joint-stock companies is the trigger of the majority of corporate disputes related to establishing the ownership structure of share capital.

A shareholder list is kept and updated by the registrar in accordance with the Bank of Russia's requirements for shareholder record-keeping, whereby it is established that the list should be kept in the form of an electronic database. At the same time, the methods for storing the shareholder account data should ensure a correct and recoverable temporal sequence of

[1] See *Chekhovskaya S.A.* New contours of corporate law // Entrepreneurial Law. 2018. No. 3. P. 31–41. (In Russian).

[2] Blockchain projects are subdivided into financial (cryptocurrencies – e.g., bitcoin) and non-financial ones (data storage, distribution and transmission), which are the subject of our discussion here.

[3] See *Smirnov F.A.* Transformation of the global financial system: blockchain, smart contracts and over-the-counter derivatives // Auditor. 2017. No. 6. P. 49–54. (In Russian).

[4] See Technology and Corporate Governance. ECGI Roundtable, hosted by Allen & Overy. London. 26 November 2018. URL: https://ecgi.global/sites/default/files/technology_and_corporate_governance_1.pdf.

events and all the entries on the list made by the registrar, as well as the ability to identify the individuals or software that made every entry or alteration thereto.[1] The registrar is obliged to carry out daily shareholder data backups. In this way, the regulator represented by the Bank of Russia seeks to reduce the risks of data loss and unlawful alterations to the shareholder list.

The use of a distributed database of records, which includes a blockchain, a database, and distributed ledgers, could minimize these risks. However, in order to achieve the desired result, it is first necessary to solve a number of issues, including the issue of reliable access to the Internet (it is not required for modern registries), i.e. the issue of digital inequality.

Another problem has to do with the authentication of the owner of shares (the issue of depersonalization), when the shares are recorded on a digital wallet that links the digital transaction to an IP address, and not to a certain individual – the subject of law.

The uniqueness of a distributed ledger results from the impossibility of interference by a third party. This raises questions as to what could be done in the event of a loss of the password to a digital wallet, and how to enforce court decisions.[2]

Electronic registries are not the only area where blockchains can be applied. Corporations with a complex organizational structure have a particularly complicated system of internal acts, the clarity of which ensures the organizational design and maintenance of a proper legal feedback. However, in actual practice, corporate acts often have flaws, contain contradictions, are not consistent with legislation, etc.

The measures outlined in the Program 'Digital Economy of the Russian Federation' in the part concerning corporations (an inventory of reporting forms and its optimization; elimination of excessive regulation; implementation of the principles of automatic data exchange between legal entities and government bodies, etc.) are designed to encourage companies to actively digitalize their legal bases. Although many companies already use electronic document management systems, the capabilities of the latter are limited.[3] A closed blockchain could contain all the information necessary for corporate governance (the charter, advisory legal norms, etc.). However, this system has a potential flaw – it may be impossible to delete or modify the data stored in the previous blocks, as only new data can be entered.[4]

Today, the most elaborate and well-substantiated products offered in the Russian market of corporate procedure services are the voting systems using blockchain technology (e-proxy voting). The possibility for applying this technology can be explained by fewer legislative constraints compared with other fields (the law does not prohibit the use of blockchains for voting, and does not create insurmountable obstacles to its application), a large number of participants with equal rights, the simple confidentiality requirements, the finite set of possible alternatives in the voting process, and its autonomy.[5]

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[1] See Article 8 of Federal Law No 39-FZ dated April 22, 1996 'On the securities market' // Collection of RF legislation, No 17, April 22, 1996, p. 1918; Bank of Russia Regulation No. 572-P, dated 27 December 2016, 'On the requirements for keeping the register of securities holders' (registered with the RF Ministry of Justice on February 15, 2017, No 45649) // Bank of Russia Bulletin No 25, March 1, 2017.

[2] See *Laptev, V.A.* Blockchain technology in the corporate compliance system // Law and Digital Economy. 2018. No. 2. P. 31–33. (In Russian).

[3] Workflow provides automation of local, corporate and business processes; ECM is corporate content management, CRM is customer relationship management. The modifications of these programs are also applied.

[4] See *Koroleva A.N.* Digitalization of local and corporate rulemaking by legal entities // Civil Law, 2018, No. 5. P. 16–18. (In Russian).

[5] See *Novoselova L., Medvedeva T.* Blockchain for shareholder voting // Economy and Law. 2017. No 10. P. 10–21.

Blockchain can make the electronic voting by shareholders more transparent and reliable. The voting, in its turn, can help solve the problem of shareholder inclusion, reduce transaction costs, and give up the practice of costly in-person general shareholder meetings[1] (non-public companies have already been granted such an opportunity (Article 66.3 of the Civil Code of the Russian Federation)). Blockchains can also be used in other types of collective decision-making, for example, meetings of the board of directors or its committees, or board meetings.

However, the use of blockchain technology in corporate practice is also fraught with some problems. Blockchains can aggravate the problem of shareholder depersonalization, create the illusion of their involvement in the corporate affairs, while in reality it is intermediaries, with their own vested interest, who would be acting for them in the course of electronic voting.

Artificial Intelligence

At the current level of technology development, artificial intelligence can play only a limited role in corporate governance. It is quite capable of handling simple issues, but not the complex ones that are frequently dealt with in corporate governance practices. To be able to solve complex problems, artificial intelligence progress so as to come close to human intellect, and this means that because the conflicts typically occurring in human relationships are not going to disappear, there will be little sense in introducing artificial intelligence in that field.

The presence of artificial intelligence cannot rule out all conflicts. Thus, in the classic corporate governance model, there can arise the agency problem, when managers put their interests above the interests of shareholders. With the introduction of artificial intelligence, the danger of someone acting in his own interests to the detriment of shareholders *comes from the program developers*. There is also the possibility that artificial intelligence may act contrary to the corporation's interests if it is capable of functioning independently both of its creator and customer. Thus, artificial intelligence, while providing solutions to some problems, can give rise to others.

Today, the artificial intelligence issues have become the focus serious attention in foreign countries,[2] where one can already observe some examples of it being applied in corporate governance. Thus, for example, Deep Knowledge Ventures introduced the computer algorithm Vital (Validating Investment Tool for Advancing Life Sciences) as an unofficial director participating in the board decision-making. Vital processed huge amounts of data and quickly provided optimal solutions in matters relating to investments in certain projects, and the directors relied heavily on these solutions.

Depending on whether such a robot is used as a consultant, as in the described example, or is assigned an official director status, the question as to the scope of its liability for the losses incurred as a results of its decision and the scope of responsibility should also be properly settled.

In Russia, electronic services for shareholders are rarely used in corporate governance systems (such services were introduced, for example, by VTB Registrar, the National Settlement Depository, Independent Registrar Company JSC, and R.O.S.T. Registrar).

[1] See Articles 47-63 of Federal Law No 208-FZ dated December 26, 1995 'On joint-stock companies' // The Russian Newspaper, No 248, December 29, 1995.
[2] See, for example, Horizon 2020, the European Union's research and innovation program.

A new algorithm based approach to the selection of candidates to the board of directors is also being developed.[1] Compared with the traditional procedures, algorithms can overcome the negative consequences of cognitive distortions and thus improve the management performance level.

At present, the process of electing a board of directors often results in a situation where the directors turn out to be well-known personalities (as a rule, they are male and have extensive connections with the company's past and current management, as well as some financial experience), but this by no means always is the best option from the point of view of the interests of shareholders. The algorithm based approach to the board selection will make it possible to expand the list of candidates and identify those of them who possess the necessary skills for a successful director, but who would not be considered as such in the usual approach. The directors who are not 'old buddies' of the management are more likely to exercise proper control over it, and also to be able to express their different and potentially more useful opinions about corporate policies.

However, the application of an algorithm is not without its drawbacks, and if a director is chosen solely on the basis of an algorithm, some of the candidates' characteristics that are valuable for the management, such as their industry knowledge, can be overlooked, thus resulting in less than perfect decisions. In this connection, it is suggested that the tools based on algorithms should be used only as auxiliaries, not replacing, but only complementing human judgment in the course of decision-making.

Platforms and Virtual Corporations

Corporations in their traditional most common form are characterized by centralized power and a clear hierarchy. The State provides them with an appropriate political and legal environment that allows such corporations to operate efficiently. Corporate law and corporate governance are designed to support businesses that are organized in this way. However, the problem faced by centralized organizations is their slow, cumbersome and costly decision-making process in a rapidly changing consumer-oriented economy.

New technologies are undermining the 'old world'. By triggering changes in the practices and thinking of modern society, they give rise to more flat decentralized organizations (Facebook, Twitter, Uber, Airbnb, Spotify, etc.), which attract customers by their speed and ease of use.

All the most successful companies of the digital age strive to create an open corporate culture without intermediaries, based on technology, data and algorithms. A technology-driven business culture helps companies maintain their high profile in the digital network market, by developing and redesigning products and services that continuously deliver customer satisfaction. Advanced companies understand that in order to achieve this goal, they need to introduce new technologies in every aspect of their organization and management.

Modern companies use new technologies to create for all their stakeholders a more decentralized and inclusive corporate culture without intermediaries. This culture provides the companies with competitive advantages in attracting talent, capital, suitable partners, and maintaining relevance in the hyper-competitive global markets. As a result, there is a widening

[1] See *Erel I., Stern L.H., Tan C., Weisbach M.S.* Selecting Directors Using Machine Learning (May 12, 2019). Fisher College of Business Working Paper No. 2018-03-005; European Corporate Governance Institute (ECGI) – Finance Working Paper No. 605/2019. URL: https://ssrn.com/abstract=3144080.

gap between traditional regulatory models and the more modern forms of business organization.[1]

A. Platforms

The digitalization of the economy has spawned new business models that rely on a combination of digital platforms, telecommunication technologies, and the commercial operations based on such technologies.

The emergence of platform companies, which are both virtual and real places, has become one of the significant developments in the economy over the past two decades. The term 'platform' is usually associated with a technology company, i.e. a company that uses a social platform (Facebook, Instagram), an 'exchange' platform (Amazon, Airbnb, Uber), a content platform (YouTube, Medium, Netflix), a 'software' platform (GE's Predix), or a blockchain platform (Ethereum, EOS). Each platform, by using digital networking technologies, creates value when it facilitates the exchange between two different but interdependent groups (for example, groups of friends (Facebook, Instagram), content providers and consumers (YouTube, Medium, Netflix), service providers and users (Amazon, Airbnb, Uber), in the end generating profit for themselves, i.e. for their owners - shareholders in the platform.

Interconnected technologies like the Internet, which rely on code-based algorithms, personal computers and smartphones, have boosted the popularity of platforms, facilitating the rapid and widespread exchange of products and information through decentralized networks without traditional intermediaries. Thus, it has become possible to create global ecosystems that encourage their registered users and content consumers to add value to the platform by constantly creating their own content, which in its turn attracts new content creators and consumers (network effects).

It should be noted that the use of the platform model goes beyond the technology sector. Thus, many traditional retailers are moving their product distribution channels from 'physical' stores to online platforms. Meanwhile, new technologies are a key element in any platform business. Any company seeking to function as a platform must act as if it were a technology company.

The common feature of all platform companies is the organization of their internal operations in such a way that cooperation between many related parties (managers, employees, investors, consumers, developers, etc.) generates continuous innovation in the platform's activities and the products and services being produced.

Today, not only businesses, but also governments, investors, charitable organizations, etc. are experimenting with platform thinking. Among its main advantages, they often point out cost

[1] See *Fenwick M., Kaal W.A., Vermeulen E.P.M.* Why 'Blockchain' Will Disrupt Corporate Organizations (August 7, 2018). Lex Research Topics in Corporate Law & Economics Working Paper No. 2018-3; U of St. Thomas (Minnesota) Legal Studies Research Paper No. 18–17; European Corporate Governance Institute (ECGI) – Law Working Paper No. 419/2018. URL: https://ssrn.com/abstract=3227933; *Fenwick M., McCahery J.A., Vermeulen E.P.M.* The End of 'Corporate' Governance: Hello 'Platform' Governance (August 16, 2018). Lex Research Topics in Corporate Law & Economics Working Paper No. 2018-5; European Corporate Governance Institute (ECGI) – Law Working Paper No. 430/2018. URL: https://ssrn.com/abstract=3232663; *Fenwick M., Vermeulen E.P.M.* Technology and Corporate Governance: Blockchain, Crypto, and Artificial Intelligence (October 9, 2018). Lex Research Topics in Corporate Law & Economics Working Paper No. 2018-7; European Corporate Governance Institute (ECGI) – Law Working Paper No. 424/2018. URL: https://ssrn.com/abstract=3263222.

saving resulting from the elimination of intermediaries, as well as higher transparency. Besides, platforms also contribute to individual self-realization and creativity by providing people with a new and safe environment.[1]

B. Virtual corporations

Modern corporations are centralized and hierarchical, and corporate governance aims at maintaining such a structure. However, with the advent of new technologies, it has become possible to use automation solutions for managerial functions, the development of which has been underway since the 1970s. One of these solutions is the Decentralized Autonomous Organization (DAO), fully formalized by a smart contract.[2, 3] So, for example, a digital organization that unites participants (i.e. shareholders) who have joined it through the acquisition of tokens[4] (i.e. shares) can be considered to be a joint-stock corporation, which also needs its own management rules. It is possible, to a certain extent, for it to apply the existing principles and rules of corporate governance, especially those based on the comply-or-explain approach, which can also be suitable for digital organizations, in particular an analogue of a board of directors. This issue, as well as a number of other issues - the legal status of a DAO (is it, or not, just an autonomous code operated independently of legal systems);[5] the high degree of uncertainty[6] associated with a decentralized system; or the jurisdiction of digital organizations, etc., are yet to be resolved.

Hitachi was one of the first companies to attempt the 'industrial' implementation of DAOs by proposing, in 2016, the concept of autonomous decentralization.[7] Essentially, it means the creation of systems with a high degree of reliability and extensibility, where the subsystems exchange real-time information by using controlled equipment, so that each subsystem can work autonomously. This concept has been practically implemented on the basis of the control systems used in the transport sector and steel industries. It was intended to implement that idea on a systemic level and to achieve company-wide optimization of value creation, including other companies, through joint analysis and use of information up to the management level. The ultimate goal is to use the concept as a basis for creating platforms that share value by combining different systems.[8]

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[1] See *Fenwick M., Kaal W.A., Vermeulen E.P.M.* Why 'Blockchain' Will Disrupt Corporate Organizations (August 7, 2018). Lex Research Topics in Corporate Law & Economics Working Paper No. 2018-3; U of St. Thomas (Minnesota) Legal Studies Research Paper No. 18–17; European Corporate Governance Institute (ECGI) – Law Working Paper No. 419/2018. URL: https://ssrn.com/abstract=3227933.

[2] See *Chekhovskaya S.A.* A new outline of corporate law // Entrepreneurial Law. 2018. No. 3. P. 31–41. (In Russian).

[3] A smart contract is an algorithm whereby a set of conditions is laid down, the fulfillment of which serves as the basis for making a transaction. Blockchain provides an opportunity to verify that the transaction participants have fulfilled the obligations set forth in a smart contract.

[4] With this approach, tokens are considered to be an investment asset, and not a means of payment.

[5] It should be noted that in the USA, the DAO is treated as a virtual organization whose activities fall under the requirements of federal securities laws.

[6] The risk of uncertainty of investing in DAOs associated with the possibility of the system being changed at any time by any participant conducting operations in it.

[7] See Hitachi Integrated Report 2016 // URL: https://www.hitachi.com/IR-e/library/integrated/2016/ar2016e.pdf.

[8] Symbiotic Autonomous Decentralized Platforms for Faster Fusion of Control and Information // Hitachi Review Vol. 65 (2016), No. 5. P. 9.

Also in 2016, the first DAO was created, which was an alternative investment platform. It had no physical address because it was a computer code - an organization of a corporate type without a traditional centralized management system, which used blockchain technology and smart contracts. It was assumed that a computer code was better suitable for running the organization than people, because the latter do not always follow the rules.

There were no directors, managers, or employees in the DAO. The management system was based on the software, computer code and smart contracts that used the Ethereum public decentralized blockchain platform. This automated system provided DAO participants with real-time direct control over the funds deposited and the ways these funds were being distributed. Anyone could become a member of the DAO by buying its tokens. The DAO attracted more than $ 150 million from about 10,000 investors. DAO tokens were fully transferable and could be traded like shares in a traditional listed corporation. A number of smart contracts granted the token holders a voting right. Thus, a blockchain-based smart contract imitated a company's charter. Because the code of the DAO was open-source, the token holders could vote for any changes made to the code, which ensured transparency and security.

Among the advantages of the DAO over a traditional corporation, one can name its cheapness and the simplicity of its creation, which can translate into increased competition. The distributed and anonymous nature of a decentralized autonomous organization prevents the emergence of natural and political monopolies.

Although the flaws in the DAO code made it possible for hackers to withdraw a third of its funds, this does not mean the end of such organizations. In 2017, the creator of the DAO announced the launch of a new decentralized autonomous organization in the field of non-profit and charitable activities, which should pave the way for further development of corporate organizations on the blockchain platform.[1]

Thus, new technologies are actively penetrating corporate practices. Digitalization influences not only some minor elements of corporate activities (electronic registers, voting, etc.), but also begins to radically change the structure of corporations (platform and virtual organizations).

In spite of the imperfection of the existing blockchain and artificial intelligence technologies, they are gradually being introduced into corporate management due to their potential advantages. Platforms are becoming widespread, virtual corporations are evolving. Digitalization is progressing at an increasingly faster pace, and legislators have to catch up with this process, pre-calculate its possible directions and the associated risks in order to timely elaborate an appropriate regulation. It seems that in the digital world, where speed and flexibility come to the fore, laws alone will not be enough, and the comply-or-explain principle will become the mainstay of regulation. It should be noted that the Russian Corporate Governance Code is already based on this approach. We can also note that legislators must not actively intervene in the ongoing digitalization processes until they gain a more comprehensive understanding of those processes, as well as their own role in the new world.

[1] See *Fenwick M., Kaal W.A., Vermeulen E.P.M.* Why 'Blockchain' Will Disrupt Corporate Organizations (August 7, 2018). Lex Research Topics in Corporate Law & Economics Working Paper No. 2018-3; U of St. Thomas (Minnesota) Legal Studies Research Paper No. 18–17; European Corporate Governance Institute (ECGI) – Law Working Paper No. 419/2018. URL: https://ssrn.com/abstract=3227933.

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In 2017–2019, the most problematic issue in the field of legal regulation of corporate governance in Russian companies remained the function of the board of directors. The least observed principles were those of electing an independent director to chair the board of directors or appointing a senior independent director selected from among the independent directors; those of adopting a decision by a qualified majority or a majority of all elected members in the board of directors, or setting up a remuneration committee composed of independent directors; and the principles of performance assessments of the board of directors, its committees, and each of its members.

An analysis of the activities of state-owned companies also revealed that among the least observed principles, there was the principle whereby the board of directors was obliged to create committees for a preliminary consideration of the most important issues pertaining to the company's activities (paragraph 2.8); and principle 2.4, in the part whereby it is recommended that independent directors should constitute at least 1/3 of the elected members of the board of directors, and the part whereby independent directors are obliged to play a key role in preventing internal conflicts in the company and in executing significant corporate actions.

Our analysis highlighted the following problem areas in the activities of state-owned companies:

– a meeting of the board of directors cannot be convened by shareholders;

– the proportion of in-person meetings of the board of directors and its committees is low, although absentee ballots take place quite often (sometimes several times a week);

– the item titled 'miscellaneous' is sometimes put on the board of directors' agenda which, because its content is not specified, is fraught with the risk of some significant issue being considered without proper notice to all the board members. The dates for decision-making on absentee voting and for voting on such an agenda almost always coincide. The very limited time assigned for preparing for such voting may prevent the adoption of a well-considered decision by the board of directors;

– the recommendations of the CGC concerning the need to ensure a qualified majority in the board of directors or the majority of its elected members on important issues (less than half of the issues belonging to the category of the most important ones under the CGC) are not implemented in full. This also gives rise to the risk of poor decision-making on significant issues;

– a number of problems have to do with the limited powers of the board of directors, for example, the powers of the board of directors do not include their right to appoint, or to dismiss prior to their term of office expiry date, the president or chair of the company's board, or their right to form the management bodies of relevant companies controlled by the core company, or the right to review the budget of the internal audit subdivision and determine the remuneration to its head, etc.;

– the reports on the board of directors' decisions do not disclose the voting results and roll-call of board members in the event of absence of unanimity;

– there is no transparent remuneration system for the board of directors' members;

– most often, the schedule of the board of directors is arranged so that they predominantly consider the proposals put forth by the company's management, and discuss the issues suggested by the board members; while the option of forming their own standpoint on issues that have to do with their competence and responsibility (with due regard for the proposals by

the management), including the elaboration of joint proposals and various decision-making scenarios, is not commonly observed, and it only happens in some cases;

– some questions arise with regard to insuring the liability of the members of the board of directors because on the one hand, the insurance, among other things, provides a compensation for losses that otherwise would have been difficult to recover from an individual, while on the other, it may translate into an unjustifiably risky stance of the management in the course of their decision-making.

The problems that have to do with the implementation of government directives are as follows: the non-transparency of the system for appointing state representatives in the management bodies of a joint stock company, the system of distribution of powers with regard to the issuance of directives, and the tendency of the government representatives in the management bodies of companies not to participate in voting on those issues that can be voted without a mandatory directive.

As far as the dividend policy of Russian companies over the period 2017–2019 is concerned, there was an increase in the amount of dividends paid both by state-owned companies and by some private companies. The reasons behind that trend were the government policy towards state-owned companies, the lack of interest on the part of the companies in investing their funds, etc. Among the problems associated with the dividend policy, there are the continuing non-payment of dividends by most companies, their non-compliance with the minimum rate of return set by them for the payment of dividends, a conflict of interests between majority and minority shareholders, when cash flows are directed so as to serve the interests of the former; as well as the frequency of dividend payments, which often makes their reinvestment impossible.

New technologies are actively penetrating corporate practices, and legislators have to catch up with this process and to pre-calculate its possible directions and the associated risks in order to elaborate an appropriate regulation in a timely manner. It seems that in the digital world, where speed and flexibility come to the fore, laws alone will not be enough, and the comply-or-explain principle will become the mainstay of regulation. We may also note that that legislators must not actively intervene in the ongoing digitalization processes until they gain a more comprehensive understanding of those processes, as well as their own role in the new world.

As has already been noted, Russia has currently adopted and is implementing hybrid regulation based on the comply-or-explain approach, and this choice seems to be quite correct because it is consistent with the interests of companies.

However, in order to apply this method, the regulator should be properly prepared. The RF Central Bank is developing the necessary normative documents, but does not hamper companies by unduly interfering with their activities, which seems to be a reasonable decision during this phase of the Code's implementation. Special attention should be paid to the quality of explanations provided by companies, because at present, the Bank of Russia is obliged to identify the reasons for the low quality of these explanations, and not the reasons for companies' non-compliance with the provisions of the Code. In the near future, it will become necessary to proceed from reviewing their formal reports to assessing their actual corporate governance practices, and this is a very complex process, the implementation of which will require a lot of resources.

On the whole, the formal regulatory model that so far has been established in Russia (in the form of hard law, represented by the RF Civil Code and the Federal Law 'On joint-stock

companies'; and also soft law, represented by the CGC) is no worse and no better than any other national model, including the OECD members and the EU. As in other developed and developing countries of the world, it follows its own historical traditions, covers all significant areas of corporate governance, and has its pros and cons, which largely can be regarded as a matter of taste.

The principal question in the context of our discourse on corporate governance quality improvement is concerned with the steps that should be taken next. The easiest way would be to follow *the path of formal, or inertial, improvement*, which will entail, in particular:

– some minor cosmetic amendments to the legislation on joint-stock companies (for example, the corporate law development project, launched in 2018 by the RF Ministry of Economic Development);

– simulation activities aimed at implementing the provisions of the Corporate Governance Code (monitoring of private and state-owned companies, increased administrative pressure on companies to improve their indicators, etc.);

– academic discussions (for example, on the controversial nature of the Russian model of board of directors/supervisory board, or on the panacea in the form of independent directors).

However, here we come across an objective qualitative limit to development. As the authors have repeatedly noted, Russia has developed a strictly majoritarian model of shareholding ownership and corporate governance, where the classical corporate governance system of checks and balances that gives consideration to the interests of all parties does not actually work. For obvious reasons, this is even more typical of companies with significant state stakes, where the strategic and fiscal interests of the State can radically diverge from those of private minority shareholders.

The external factors of corporate governance are also of great importance. Any serious qualitative changes at the micro level can be possible only in adequate financial, economic and institutional conditions (the situation in the Russian stock market, the general institutional environment, the incentives for foreign and internal investment, etc.). The anti-Russian economic sanctions and their possible long-term character have become an additional negative incentive for Russian companies to achieve some real progress in their compliance with the civilized principles and best practices of corporate governance.

6.3. Adaptation of Russian industrial companies to the challenges of digital transformation [1]

One of the key global trends of recent decades that have been profoundly and thoroughly influencing all national economies is that of digital transformation. In that field, there are no clear-cut and well-established definitions. Usually, digital transformation is understood as the economic and social effects of the process of using of data and digital technologies as connectors for interactions across the economy that transform the existing types and models of business activity or create new ones.[2] At the micro level, digital transformation is viewed as one of the processes characterizing the struggle between companies aimed at enhancing their

[1] This section was written by *Kuzyk M.G.*, Candidate of Sciences (Economic), Deputy Director, Center for Structural Policy Research, NRU HSE; *Simachev Yu. V.*, Candidate of Technical Sciences, Director for Economic Policy of NRU HSE, leading researcher at the Center for Institutions Analysis and Financial Markets of the RANEPA IAES; *Fedyunina A.A.*, leading researcher at the Center for Structural Policy Research, NRU HSE.

[2] OECD (2019). Going Digital: Shaping Policies, Improving Lives. OECD Publishing, Paris. URL: https://doi.org/10.1787/9789264312012-en.

competitiveness in the context of rapidly advancing digital technologies. Alongside with the concept of digital transformation, there also exist some other terms of a similar meaning. These are, to name a few, the Second Machine Age,[1] Industry 4.0,[2] and the fourth industrial revolution.[3] In contrast to Industry 3.0, which is focused on the automation of single machines and processes, Industry 4.0 focuses on the end-to-end digitization of all physical assets and their integration into digital ecosystems with value chain partners.[4]

The concept of digital transformation particularly gained in popularity thanks to the efforts of the German government to promote the ideas set forth in Industry 4.0, which is one of the components of the High-Tech Strategy 2025. Industry 4.0 aims at solving the fundamental issues of production digitalization like standardization, the management of complex production systems, information security, staff training, and changes in the normative and regulatory framework (especially with regard to protection of intellectual property rights and data exchange).

Investments in ICTs were an important factor in the post-crisis development of several major economies: in the USA, their input in GDP growth is estimated at 35%, and in Germany – at about 42%. It is noted that digital technologies are used in almost every sector of the global economy, and quite frequently they go beyond the boundaries of start-up sectors[5] The widespread use of digital technologies prompts transformations in the consumer and competitive behavior patterns.[6]

In many developed and major catch-up countries, the State has become an active participant in the ongoing digital transformation, promoting the deployment of 5G networks, development and implementation of advanced manufacturing technologies, the Internet of things (IoT), and artificial intelligence. The introduction of digital technologies is associated with substantial costs, but in view of the fast pace of technological development it is not easy to decide which particular technology is worth putting a stake on. This fact translates into a surge of competition between governments for best solutions and new ideas in the field of digital transformation. While most countries have indeed displayed their generally high interest in digital transformation, they still vary strongly by the degree of intensity of their implemented changes, the leaders being the USA and China.[7]

The most important way that digital transformation differs from the traditional innovation are as follows: [8]

- high speed of technological changes;
- importance of investments in intangible assets (special value of data, scalability);
- prominent role of services and non-technological innovations.

[1] Brynjolfsson, E., McAfee, A. (2014). The second machine age: Work, progress, and prosperity in a time of brilliant technologies. WW Norton & Company, NY, US.
[2] PwC (2016). Industry 4.0: Building the digital enterprise. URL: https://www.pwc.com/gx/en/industries/industries-4.0/landing-page/industry-4.0-building-your-digital-enterprise-april-2016.pdf.
[3] Schwab, K. (2016). The fourth industrial revolution. World Economic Forum.
[4] PwC (2016). Industry 4.0: Building the digital enterprise. URL: https://www.pwc.com/gx/en/industries/industries-4.0/landing-page/industry-4.0-building-your-digital-enterprise-april-2016.pdf
[5] OECD (2014). Measuring the Digital Economy: A New Perspective. OECD Publishing, Paris. URL: https://doi.org/10.1787/9789264221796-en.
[6] World Bank (2016). World Development Report 2016: Digital Dividends. URL: https://openknowledge.worldbank.org/bitstream/handle/10986/23347/9781464806711.pdf.
[7] UNCTAD (2019). Value Creation and Capture: Implications for Developing Countries. Digital Economy Report.
[8] OECD (2017). The impacts of digital transformation on innovation across sectors. Workshop Summary.

Another important difference is that in many cases, the survival of companies depends on their ability to alter their business models; in this connection, it is more difficult for big companies to undergo drastic changes, while for small startup businesses it is more problematic to attract the necessary resources.

Within the framework of digital transformation, disruptive technologies are distinguished, which are innovations that significantly alter the way that consumers, industries, or businesses operate in the markets. The leading examples of the most disruptive technologies are the Internet of things, big data analytics, digital counterparts, quantum computing, blockchain technology, artificial intelligence, robotics, additive manufacturing, and unmanned vehicles. Among the current trends in the changing organization of markets, we may point to the formation of large digital platforms that alter the traditional relations between market participants, the emergence of the sharing economy, and rapid growth of the gig economy. [1] We can also note the fundamental advantages and critical problems that are typical of digital transformation in combination with general uncertainty, as well as the existence of a gap between dynamic technological development, the accompanying changes in the organization of markets and the political framework, and the response of governments to the new challenges.

Among the most important areas of digital transformation inside the economies, the following ones have been noted: [2]

- scale without mass – the possibility of dynamic growth for companies without increasing their staff;
- transformation of space – the diminishing role of borders and new opportunities for the development of territories;
- expansion of horizons – the development of network peripherals, creation of their own networks and communities in social networks;
- platforms and ecosystems – the low transaction costs make it possible to create multilateral platforms, some of which can evolve into digital ecosystems.

When discussing *the effects of digital transformation*, the following areas can be distinguished:

- formation of new markets;
- impact on employment,
- impact on exports,
- impact on labor productivity.

The ongoing R&D projects in the field of ICT coupled with an intensive generation of big data sets are triggering transformations across all types of economic activity.[3] The following prerequisites for *the formation of new markets* can be noted:[4]

- ICT convergence, access to high-quality specialized services, an asset ownership model is replaced by a leasing model;

[1] The gig economy, otherwise known as the freelance economy, refers to the currently observed tendency to expand self-employment and part-time employment, where employers and workers switch to a model of short-term relationships focused on performing some specific tasks (see, e.g., Jamie, Musilek, 2007).
[2] OECD (2019). Vectors of digital transformation. OECD Digital Economy Papers, №. 273.
[3] *Van Welsum, D., Overmeer, W., van Ark B.* (2013). Unlocking the ICT growth potential in Europe: Enabling people and businesses. In: Report for the European Commission GD Communications Networks, Content & technology.
[4] OECD (2016). Support the development of new markets enabled by ICTs.

- improving properties of devices and applications with a wide range of functions, with resulting changes in the relationships of firms and their customers, employers and employees;
- the Internet of things creates new opportunities for analytics and data mining, which translates into new business opportunities;
- the integration of ICT with other technologies, including robotics, nanotechnology and molecular biology, can dramatically expand the range of specialized applications for research, economics and society;
- increasing customization and consumer involvement in the innovation process.

The most important but poorly predicted phenomenon is *the impact of digital transformation on employment*. On the one hand, the digitalization of traditional industries gives rise to job cuts. On the other hand, digital transformation creates new opportunities for skilled labor and provides progressive changes to existing jobs.[1] The channels for creating new jobs include production of new types of goods and services, increased consumption of non-digital products due to cost reduction, and increased investment in digital technologies in every sector. Alongside this progress, there also exist some significant barriers to the creation of new jobs: firstly, the skills required in the context of digital transformation differ significantly from traditional skills; secondly, the job qualification requirements are changing, both by sector and by item, and routine tasks are replaced by problem-oriented ones. And finally, the reaction of governments to the ongoing digital changes may be delayed and/or restrictive, thus also significantly limiting the possibilities for developing new sectors and business activities.

As far as *the impact of digital technology on companies' exports* is concerned, it has been noted that digital technology is a significant factor in getting access to international markets,[2] and the resulting effects for small companies can be significant. Meanwhile, the influence of digital technologies on export expansion is by no means always so apparent: positive effects can be observed when the available resources are complementary (high-quality human capital and a favorable environment are necessary), while digital technologies produce a noticeable effect when combined with process and organizational innovations.[3]

And finally, we should mention *the relationship between digitalization and labor productivity*. In general, digital technologies help drive productivity gains, while data and their analysis are becoming a key to innovation.[4] However, there is uncertainty as to their impact on business indicators – the information technology productivity paradox.[5] The diffusion of promising digital technologies so far had occurred on a limited scale, and there is a significant

[1] OECD (2019). Going Digital: Shaping Policies, Improving Lives. OECD Publishing, Paris. URL: https://doi.org/10.1787/9789264312012-en.

[2] *Olejnik, E., Swoboda, B.* (2012). SMEs' Internationalisation Patterns: Descriptives, Dynamics and Determinants. International Marketing Review 29 (5): 466–495; Sinkovics, N., Sinkovics, R. R., Bryan Jean, R. (2013). The Internet as an Alternative Path to Internationalization? International Marketing Review Edited by Olli Kuivalainen 30 (2): 130–155.

[3] *Cassetta, Ernesto; Monarca, Umberto; Dileo, Ivano; Berardino, Claudio Di; Pini, Marco* (2019). The relationship between digital technologies and internationalization. Evidence from Italian SMEs, Industry and Innovation, DOI: 10.1080/13662716.2019.1696182.

[4] OECD (2016). Stimulating digital innovation for growth and inclusiveness. OECD Digital Economy Papers, No. 256.

[5] *Tippins, M. J., Sohi, R. S.* (2003). IT Competency and Firm Performance: Is Organizational Learning a Missing L ink? Strategic Management Journal 24 (8): 745–761; Biagi, F. (2013). ICT and Productivity: a Review of the Literature. Digital Economy Working Paper. Seville.

gap in the scope of digital innovation between large and small businesses. The following factors can be pointed out as the most significant barriers to increasing labor productivity based on digital technologies:

– inertia of established businesses, traditional business models;
– shortage of human capital with the necessary competencies;
– lack of trust.

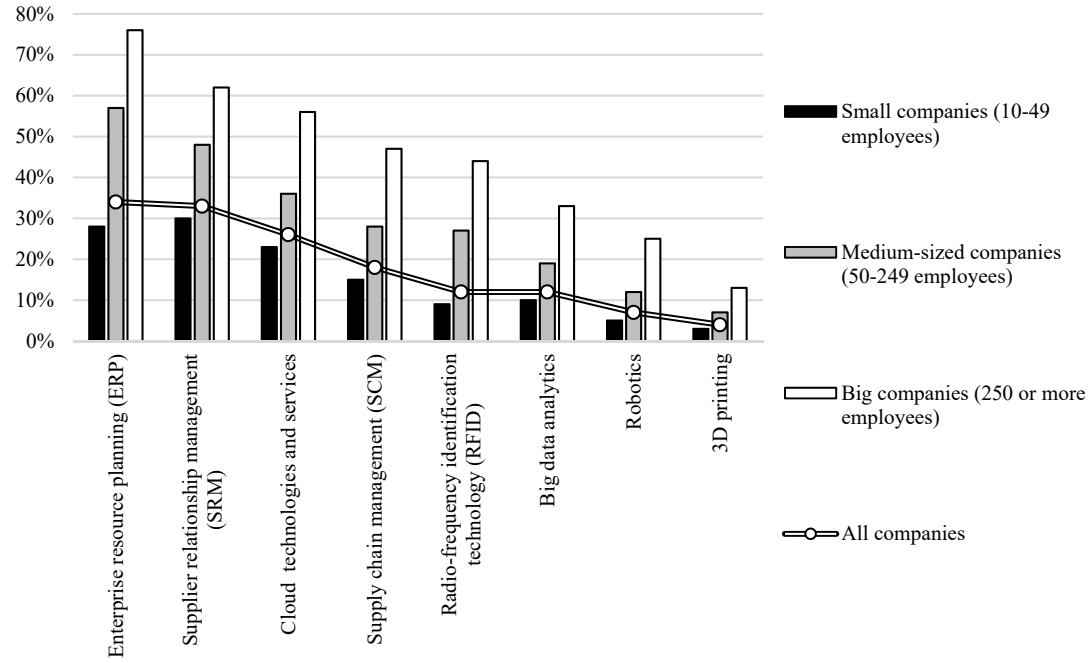
Researches have noted a number of constraints that have to do with productivity growth in the economy achieved through digital transformation. On the one hand, digitalization increases companies' responsiveness to new technologies[1], but the process of digital transformation is a trigger in itself, and in this connection the level of penetration of new digital technologies into the economy becomes an important factor. In order to achieve noticeable macro effects, it is necessary to rise above a certain digital technology penetration threshold; [2] thus, for example, in the USA, a considerable surge in production caused by the introduction of digital technologies is predicted to occur in 2028–2033 (at a digitalization level of more than 50%).

Researchers also note[3] that the qualitative effects (digital technology spillover effects) translate into total factor productivity growth more slowly than do the investments in conventional R&D. The lag between the implementation of digital technologies and an increase in productivity can be 7–8 years, while the learning effects may be relevant for achieving positive effects at the micro level.

When considering *the actual prevalence of digital technologies in companies operating in the EU countries* (*Fig. 1*), we can note that this index varies significantly by type of digital technology. Thus, digital business plans and strategies and digital interaction with clients are the most widespread technologies (more than 1/3 of companies, and in the big business segment – more than 2/3 of companies). At the same time, complex technologies (big data analytics, robotics, 3D printing) are less common, they are used only by 5–10% of companies.

Beside the highly heterogeneous use of various digital technologies, we may also note a significant digital technology gap between big and small companies – the difference is threefold for the majority of technologies. Digital technologies are somewhat better conducive to the rapid growth of independent small companies (scale without mass, as noted earlier) and a reduction in transaction costs for exports (helping small businesses in going global); however, at the same time, there are also the constraining effects of resources available to small businesses and fewer opportunities to attract better human capital.

[1] *Andrews, D., Criscuolo, C.* (2013). Knowledge-Based Capital, Innovation and Resource Allocation. OECD Economics Department Working Papers, No.1046, OECD, Paris.
[2] *Saniee, Iraj; Kamat, Sanjay; Prakash, Subra; Weldon, Marcus* (2017). Will productivity growth return in the new digital era? Bell Labs Technical Journal, Vol. 22, January 2017.
[3] *Edquist, Harald, Henrekson, Magnus* (2016). Do R&D and ICT Affect Total Factor Productivity Growth Differently? No 1108, Working Paper Series, Research Institute of Industrial Economics.



*Other than the financial sector, companies with more than 10 employees.

Fig. 1. The relative share of EU companies* using different types of digital technology

Source: Eurostat, 2018 (or nearest year).

It is noteworthy that even among the EU countries, there are significant multiple differences in the prevalence of digital technologies (*Fig. 2*). In the EU, leaders in digital transformation are Finland, Germany, and the Netherlands.

A comparison of data on the prevalence of digital technologies in EU and Russian industrial companies suggests, at a first glance, that Russia is not so far behind in this field, after all. Moreover, in terms of cloud digital technologies, Russia's position is next to the top-ranking countries. However, if we consider the data on the depth of digital technology use, its immersion in business processes, the picture will become somewhat more pessimistic. The most illustrative in this respect is the use of robotics by companies compared with the number of their employees. According to 2017 data, on average in Europe, there were 99 robots per 10,000 jobs, and in countries like Singapore and South Korea that index was more than 600 robots; however, Russia's index was next to India's – 4 and 3 robots per 10,000 jobs, respectively. [1] It should be noted that robotization is the most important factor in ensuring competitiveness in hi-tech industries like the automotive industry, optics, and electronics.

By way of assessing the main motivations for and limitations to digital transformation at the micro level, we present *a brief analysis of empirical data* – the results of a specific survey of the heads of 1,716 Russian manufacturing companies (2018 Competitiveness in Russian Industry Database).

[1] *Atkinson, R. D.* (2018). Which Nations Really Lead in Industrial Robot Adoption? Information Technology & Innovation Foundation.

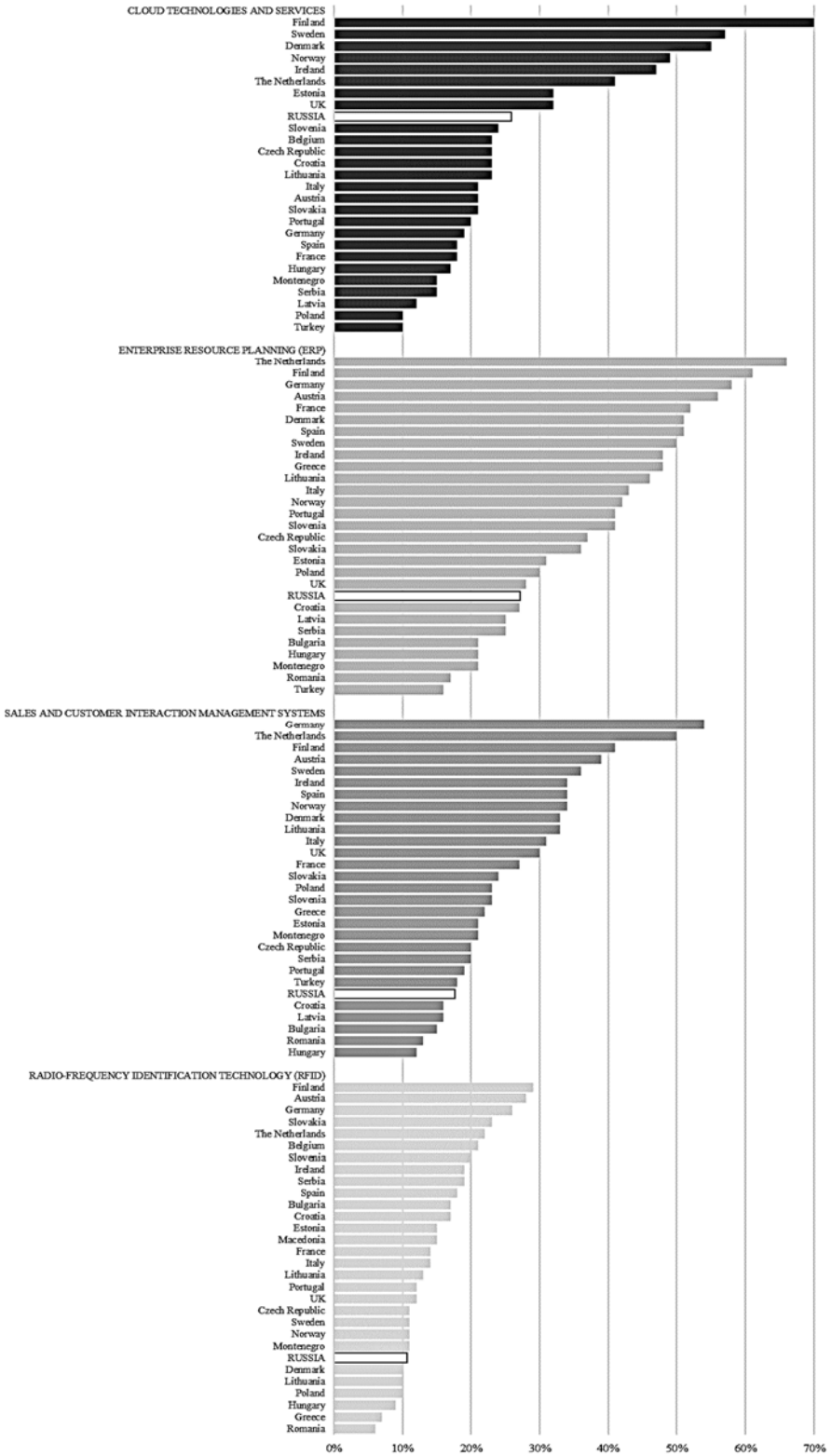


Fig. 2. The relative share of manufacturing companies using different types of digital technology: cross-country comparisons

Sources: Eurostat, Rosstat, 2017 (or nearest year).

The first feature that can be noted in relation to Russian industry (*Table 17*) is that, similarly to European countries, the use of big data analytics, artificial intelligence, and additive technologies is typical for small groups of companies (under 5% of the sample). It is noteworthy that available expert assessments of the prevalence of certain digital technologies among Russian enterprises display significant variations. Thus, for example, unlike in our results, robotics was noted to be one of the most common technologies for manufacturing enterprises, and cloud technologies and the Internet of things were found to be less common.[1] We believe that this is a natural upshot of the still underdeveloped assessment methodology (determination of estimated technologies), as well as differences in the empirical samples.

The second feature is the presence (similarly to European countries) of the digital divide between big and small companies. To a greater extent, this disparity is manifest in the use of planning and customer interaction management systems, and in big data analytics. In addition, it can be noted that this gap is less significant with regard to the use of the Internet of things and mobile services technologies.

Table 17

The relative share of Russian manufacturing companies* using different types of digital technology, %

	All companies	Company size			Per capita GRP		
		small (10–100 employees)	medium-sized (101–245 employees)	big (more than 250 employees)	low	medium	high
Digital technology of any type	71	69	78	91	61	76	76
Automated systems CRM, EPR, CAD, etc.	28	26	32	53	23	34	23
Cloud technologies and services	30	28	35	44	20	33	37
Internet of things and Industrial Internet	35	34	29	40	32	35	37
Technologies for using mobile terminals and services	21	19	24	29	13	23	25
Robotics	12	11	19	25	7	11	20
Big data analysis, predictive analytics	12	10	15	33	3	15	18
Artificial intelligence, machine learning	10	9	8	15	2	12	15
Virtual and/or augmented reality technologies	9	9	5	13	2	11	15
Additive technologies including 3D printing	7	6	5	13	4	6	9

* Hereinafter, because of the sampling bias relative to the general population, unless otherwise specified, weighted data are applied.

Source: Competitiveness in Russian Industry (database), 2018.

The third feature is the strong differentiation in the use of digital technologies across Russian regions, depending on their economic situations. The regions with a low per capita GRP obviously lag behind in implementing complex digital technologies like artificial intelligence, big data analytics, virtual and augmented reality. The by-region variance in the use of digital technologies can probably be explained by differences in human capital quality, as well as by the specificities of consumer demand, which is shaped by the undeveloped middle class.

Based on our evaluation of the parameters of binary logistic regression models (*Table 18*), it can be argued that *the drivers of digital transformation in Russian industry are big companies, startups, and exporters*. All other conditions being equal, digitalization is more visible in hi-tech industries (in particular, production of electronics and optics), and so far it has been less common in light industry and woodworking. Overall, the digital transformation processes are

[1] NRU HSE (2020). Digital activity of manufacturing enterprises in 2019.

more intensely developing in the regions with higher per capita GRP indices, which may serve as an additional factor that further increases interregional differentiation.

Table 18

The use of digital technology depending on the characteristics of manufacturing companies

Independent variables		Dependent variables: type of digital technology used									
		digital technology of any type	CRM, EPR, CAD systems, etc.	cloud technologies and services	Internet of things	technologies for using mobile terminals and services	robotics	big data analytics	artificial intelligence, machine learning	virtual and / or augmented reality technologies	additive technologies, including 3d printing
Company age (Ln)		–***	–**	–**		–***	–**	–***	–***	–***	
Number of employees (Ln)		+***	+***	+***		+***	+***	+***	+***	+***	
Industry	food industry		–*				–***	–*	–***	–**	–**
	light industry		–*	–***	+*			–**			
	woodworking	–*	–***				–***		–**		
	pulp and paper industry		–*			+***					
	chemical industry			+**							
	manufacture of rubber and plastic products										
	manufacture of other non-metallic mineral products		–**			–*			–**		–*
	metallurgy			–*	–**	–*					
	manufacture of electronics and optics	+**		+**		+ ***			+*	+***	+***
	electrical industry						+**				
	manufacture of machinery and equipment										
	automotive industry					+*					
	manufacture of other vehicles	100%		+ *		+*			+***	+*	
	furniture manufacture									+*	+***
	repair and installation of machinery and equipment		–***	+**			–**		–***		
Ownership structure	state participation						+***				
	presence of foreign shareholders		–*	+*	+***						–*
Involvement in exports		+***	+***					–**	–**	–*	+*

* Significance at 10%.
** Significance at 5%.
*** Significance at 1%.
Source: own calculations based on data from the Competitiveness of Russian Industries database, 2018.

Based on an assessment of the specific composition of the digital technologies being used, we may note that sophisticated technologies are used by no means only in hi-tech industries. Thus, for example, additive technologies and virtual reality technologies are applied in the

manufacture of furniture, potentially reflecting the increasingly prominent role of product customization.

For a number of digital technologies, we did not see any predominance of large companies, because the use of the Internet of things and additive technologies is no less widespread among small businesses. This may be a upshot of the greater orientation of small firms to the their customers' needs.

Our overall assessment of the use of digital technologies revealed no existence of any specific features of companies with state or foreign participation. However, when considering separately the use of each digital technology, we revealed the following differences:

- for companies with foreign participation, cloud services and the Internet of things are important: in this regard, they can to a certain extent serve as an example of the use of these technologies by Russian companies;
- state-owned companies, all other things being equal, use robotics more often than other companies, probably due to the complexity of their technologies, their significant costs, and their involvement in activities that have to do with state defense and security issues.

And finally, for the group of exporting companies, which we previously pointed out as one of the drivers of digital transformation, it is typical to rely on sales and customer interaction management systems because thus they can easily integrate and effectively function in global value chains.

Special note should be made of *the group of companies that use very heterogeneous digital technologies*; inside that group, we can distinguish 4 main clusters (*Table 19*). What are their main distinctive features?

Table 19

The group of manufacturing companies using digital technology: the results of K-means clustering*

	Centroids			
	Cluster 1	**Cluster 2**	**Cluster 3**	**Cluster 4**
Company age, years	15	10	24	16
Number of employees	103	110	233	311
Industry's technological level	low	medium-low	medium-high or high	medium-low
State involvement	none	none	none	none
Presence of foreign shareholders	none	none	none	yes
Region's per capita GRP	low or medium	very high	low or medium	high
Number of companies in cluster	*638*	*299*	*260*	*79*

* Unweighted data.

Source: own calculations based on data from the Competitiveness of Russian Industries database, 2018.

The first digital cluster (the biggest one) consists of relatively small firms, which are attached to low-tech industries and can be found in the main in regions with a low or moderate level of per capita GRP. Thus, digital transformation has been truly cross-cutting – there exist prominent groups of 'digital' companies not only in the more advanced regions, but also in those that have been lagging behind, and not only in the hi-tech sectors, but also in the mid- and low-tech ones.

The second largest digital cluster consists of the youngest companies in the sample, which operate mostly in the low- and medium-tech industries. This cluster is represented mainly in the regions with the highest per capita GRP. Thus, startups as a driver of digital change are more typical of the advanced regions.

The third digital cluster is distinguished by its functioning in hi-tech industries. The companies that belong to this cluster are bigger in size, and the cluster displays a bias towards 'older' companies. To a certain extent, this can be regarded as a Soviet legacy, when science

was most highly developed in the hi-tech sectors, and the enterprises were more responsive to new technologies.

And finally, the last digital cluster is represented by companies with foreign participation, and the biggest ones at that. Here, digitalization is determined by the presence of foreign owners.

An important question that arises in this connection is: for what purposes digital technology are used by companies? The most common motivation is to ensure the interaction with suppliers and consumers, and organization of production (this applies to more than half of all companies using digital technologies – *Fig. 3*). Thus, digital technologies to a greater degree determine the chains of cooperation between companies, and for small businesses, it is their relationships with suppliers and customers that are the drivers of digitalization. For big companies, quite naturally, it is the issues that have to do with production organization and management, safety and R&D that are more significant. By the way, all the other conditions being equal, the latter is also more typical of companies with foreign participation, which due to their global nature are familiar with the most latest digitalization practices.

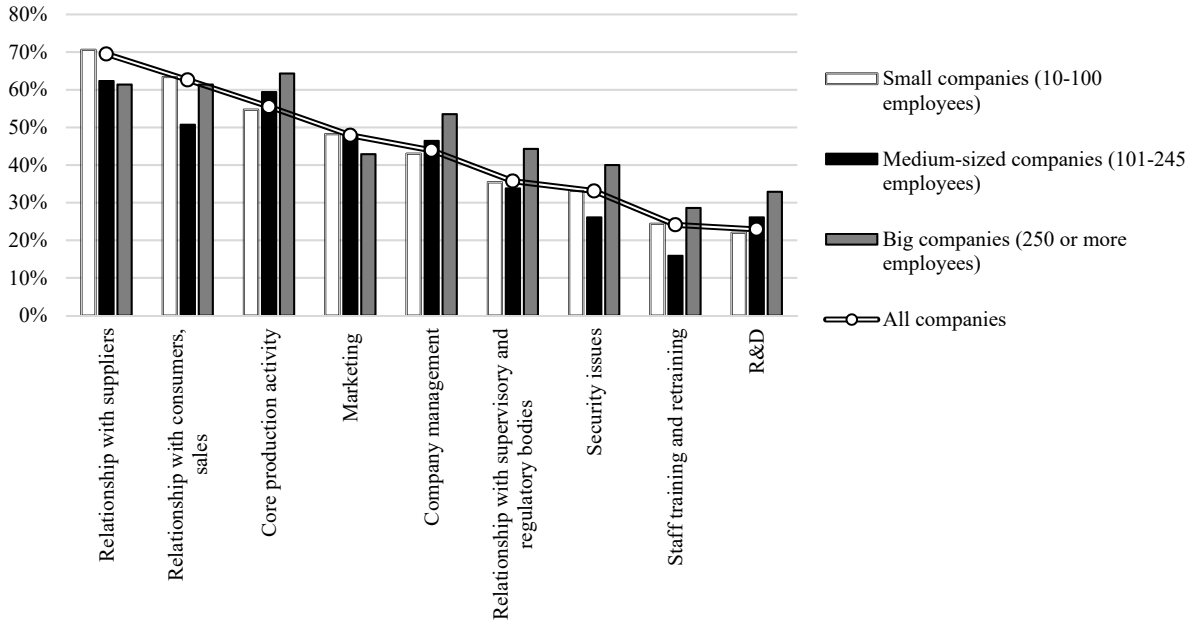


Fig. 3. The main fields where manufacturing companies apply digital technologies: frequency of mention by the heads of companies where digital technologies are used

Source: Competitiveness in Russian Industry database, 2018.

Analysts have noted a curious phenomenon: the older the company, the higher the significance of digital technologies in its interaction with supervisory and regulatory bodies. We assume that a long history of interaction with the State has created incentives for reducing transaction costs and making that interaction easier and more predictable. This motivation is also significant for exporter companies, whose interaction with the State is more diverse (for example, VAT refunds, tax declarations, payment of duties, certification, etc.).

An analysis of the *key barriers to digital transformation* (*Table 20*) revealed that the high cost of introducing digital technologies is by far the most relevant negative factor, because it

was mentioned by more than 35% of all companies that rely on digital technologies, while every other obstacle was noted by no more than 10% of companies. We believe that this is the consequence of the persistently poor predictability of the commercial effects of digital technologies, and the majority of companies are still undergoing the phase of testing the effects of their individual solutions. At the same time, for medium-sized companies, the more significant problem is that of a lack of human capital for both the CEO and rank-and-file positions. It should be noted that the problem of the shortage of necessary specialists is more relevant for the regions with a low level of per capita GRP. It is likely that in such regions, the brain drain processes prevail over those of training new personnel.

Table 20

The main obstacles to the use of digital technologies by manufacturing companies: frequency of mention, %

	All companies using digital technology	Company size			Per capita GRP		
		small (10–100 employees)	Medium-sized (101–245 employees)	big (more than 250 employees)	low	medium	high
High cost	36	36	32	34	37	35	35
Market shortage of specialists and workers with required competencies	8	7	15	10	12	7	6
Lack on market of technologies and solutions that we need	6	6	9	9	6	7	5
Weak use of digital technologies by contractors	6	6	6	7	5	7	6
Market shortage of managerial personnel with necessary competencies	6	5	12	6	6	5	7
Business security threats	5	5	6	4	3	8	4
Lack of government support for digital technology implementation	5	5	3	6	7	4	3
Increasing dependence on providers of technologies and/or services	4	4	4	4	3	5	5
Lack of required standards	4	4	7	4	2	5	5
No obstacles	47	47	44	50	48	45	48

Source: Competitiveness of Russian Industries database, 2018.

Now, let us consider *the diffusion of technology-enabled business practices*, which is the most important factor of dynamic digital transformation.

Overall, it is the 'demand for innovation' channels that prevail in the diffusion of digital technologies. In Russian industry, the most significant channel for innovation is the change in the needs of retail consumers (the population), and thus is true for more than half of the companies using digital technologies. Changes in consumer demand are closer linked to the use of specific types of digital technologies, such as mobile services, additive services, and the Internet of things. We believe that this is an upshot of the rising demand for customization and mobility.

An important role in the diffusion of digital technologies is also played by some other channels, e.g., when companies follow the example set by other, more advanced Russian and foreign companies, or when new technologies are adopted by their consumers (20–30% of all companies using digital technologies). The example of other companies is very important for digital transformation, because it can be a channel for disseminating many complex digital technologies, while Russian and foreign companies can serve as examples in various

technological areas: Russian ones – in robotics, artificial intelligence, and foreign ones - in big data analytics, virtual and augmented reality.

Against this background, the 'innovation proposal' channel appears to be weaker; in particular, the proposals of scientific organizations and universities do not work so well. However, research organizations have been making a significant input in cloud services, big data analytics, virtual and augmented reality technologies. We believe that this channel for Russian companies is complementary to that of the example set by other companies in similar technological fields.

A separate note should be made of the strong impact on the spread of digital technology of toughening regulatory requirements and the introduction of stricter standards. This fact points to the existing opportunities for the State to create some further incentives for the digital transformation of the economy.

Digital technologies are a significant factor in the development of new products by companies. However, we have found that only the most widespread digital technologies can produce such an effect: automated planning and customer interaction, cloud services, mobile services, and the Internet of things. There is also a positive impact of robotics and additive technologies. However, as far as more complex technologies are concerned, such as big data analytics, artificial intelligence, virtual and augmented reality, their application has nothing at all to do with the release of new products. This may be due, on the one hand, to the lengthy period of time needed for the development of practical solutions for sophisticated digital technologies, and on the other, to the fact that these technologies produce a significant effect only in combination with changes in business organization. The latter is associated with significant costs and risks for big companies, but they, unlike smaller ones, possess the necessary resources for investing in breakthrough technologies.

And finally, there is the *issue of the impact of digital technology on corporate growth*. We found some evidence of such an impact only with regard to the IoT technologies. It should be noted that investments in digital technologies are more typical for companies with a longer planning horizon, and that big data analytics, virtual and augmented reality, and artificial intelligence are the technologies with the highest 'sensitivity' to this parameter. To a certain extent, by investing in these technologies, companies invest in their future competitiveness, while there can be significant lags between investments and their effects.

In conclusion, we are going to discuss *each of the challenges for Russian policies that arise as a result of digital transformation.*

Firstly, digital transformation significantly lowers the minimum performance efficiency threshold for businesses, thereby opening the way for creating new companies. However, a positive effect can be achieved only if there is motivation for entrepreneurial activity.

Secondly, digital changes translate into better performance, primarily in a developed competitive environment, where demonstration effects can be possible. Thus, it becomes necessary to improve the business climate and develop the business environment.

Thirdly, digital technologies create some additional conditions for business mobility and new interactions. At the same time, companies are becoming more sensitive to the quality of government regulation, and in this connection it becomes necessary to ensure the competitiveness of national jurisdiction.

Fourthly, digitalization is changing the terms of world trade, as it gives rise to large digital platforms. In such a situation, it is important to ensure fair and equal access to such platforms,

and thus it becomes necessary to develop technical regulation and participate in the elaboration of international standards.

Fifthly, the digital transformation is associated with a conflict between government regulation and the private regulation adopted by some major companies occupying advanced positions in the digital economy. New business models often pose a challenge to the standard regulation.

In these conditions, in order to effectively respond to the challenges of digital transformation, the government policy should take into account the following aspects:

- the necessity of a proactive response of the regulatory system to technological changes in a situation of high uncertainty;
- the classical approach to regulation, which is geared to a certain industry or product, is ineffective due to the end-to-end impact of digital technology;
- the previously adopted regulatory approaches are not applicable to some of the new objects of regulation (regulation of platform monopolies, the taxation of certain operations in the context of digital transformation, the delineation of responsibility for decision-making by artificial intelligence), or applicable only on a limited scale;
- a number of digital technologies (first of all, artificial intelligence) have given rise to a strong contradiction between the ethical standards (cultural traditions) and the advantages created by rapid technological progress;
- the likelihood of the emergence of 'technological bubbles' is on the rise, while there exists a significant bias in expert judgments either towards conservatism (protection of traditional markets) or towards excessive techno-optimism (attraction of investors to new fields);
- on the whole, it is very difficult to strike a balance between improving national jurisdiction and maintaining the global rules of game.

6.4. Science and innovations[1]

The main topic related to science in the previous year was the National Project (NP) "Science" and federal projects implemented under its framework. Considering the speed of budget funds allocation, NP "Science" was one of the most dynamic one among projects of similar status. The National Project "Digital Economy" was on the other side of the spectrum, for which allocation of funds to performers has just started. An interlinking via identical monitoring indicators of NP "Science" and the Strategy for Scientific and Technological Development of the Russian Federation (SSTD) took place making the latter a "living" document.

At yearend, a more clear distribution of topics/issues that the Russian Academy of Sciences (RAS) and the Ministry of Science and Higher Education are focused on, was put in place. The main thing for RAS was the organization of their own activities, that is, clarification of competences, procedure for election of new academy members, organization of expertise of state assignments for all recipient scientific and educational institutions. In addition, RAS was developing a program dedicated to basic scientific research. The Ministry, in turn, was focused on the implementation of federal projects in the pattern of NP "Science", where the major topic could be the establishment of the Research and Educational Centers (hereinafter - REC). Such

[1] This section was written by *Dezhina I.G.*, Doctor of Sciences (Economics), Leading researcher, Gaidar Institute, Head of Analytical Department, The Skolkovo Institute of Science and Technology

a focusing is associated with the complexity of the initiative, the need to combine scientific and technological policies of the federal and regional scales.

No “breakthroughs” took place in the field of innovation technologies as evidenced by the dynamics of the Russia’s position in various rankings, results of the companies’ survey as well as indicators of the high–tech companies outflow from the country. At the same time, the Government introduced more measures striving to improve the situation, having initiated new target (development of artificial intelligence) and infrastructural projects (technological valleys).

6.4.1. Strategic guidelines

Main strategic guidelines for the sphere of science and technologies in 2019 and their prospects were announced in the Presidential Address to the Federal Assembly[1]. Three priority groups, i.e. thematic, structural and human resources capacity, relate to development of science and technologies. The thematic priorities included genome technologies with new centers set up last year for their development, and the artificial intelligence followed up by the creation of the Development Strategy of the artificial intelligence. The new infrastructure was marked by mega-science installations and modern research vessels with activities in this direction carried out under the framework of NP “Science”, though relatively slow. At present, only the basic parameters of future megascience installations are being determined. There are plans to link them with priority projects focused on mandatory use of these installations[2]. The structural priorities also included research and educational centers designed to link regional priorities, science, education and business. The work in this direction was carried out in 2019 most actively.

The development of human resources in a broad sense, from school sections, technical professional schools, to highly qualified personnel, was also among the priorities, because the country needs specialists who are able to "create and use breakthrough technical solutions." Thus, the 2019 Address of the President determined the main trends of practical actions, implemented at different speeds during the year. The approval of the list of indicators for the implementation of the Strategy for scientific and technological development of the Russian Federation[3], was an important aspect and actually linked NP “Science” and the Strategy. These are the financial indicators of the amount of domestic costs on research and development from all sources (as a percentage of GDP) and separately, the amount and the share of extra-budgetary funds, the country's place in the rankings according to the number of articles in international databases, and by the share in the global pool of applications for patents. The proportion of researchers under the age of 39 is subject to monitoring, which raises the topic of attracting young people to science and reducing the outflow of employees to a new level.

The development of a science draft law has not been resolved during the year, however, it was under discussion more than five consecutive years. In summer, a new version of the science draft law and scientific and technical activity, developed by the Ministry of Science and Higher

[1] Presidential Address to the Federal Assembly. 20.02.2019. URL: http://kremlin.ru/events/president/news/59863.
[2] The implementation of the Russian megascience installations project disclosed. 05.09.2019. URL: https://lenta.ru/news/2019/09/05/megascieince/.
[3] List of indicators related to implementation of Strategy of science/technological development of the Russian Federation with their dynamics to be subject to monitoring. Approved by Decree of the Russian Federation of 15.08.2019 № 1824-p. URL: http://static.government.ru/media/files/L3np1utu1mzwMA58HluaADkvVxfkalUU.pdf.

Education, was submitted for public consideration. The RAS took a time-out for a detailed consideration of the draft law, however, it failed to be submitted to the State Duma at the year end. The RAS authorities considered the project rough, containing too many generalities and provisions.

The key issues of the draft law relate to the government bylaws[1]. According to Alexey Khokhlov, the RAS Vice-President, the law on science should mostly offer favorable conditions for academic efforts in Russia, being in turn one of the goals of NP "Science". Therefore, the researchers' achievements should be assessed by their results, while the results mean the accomplishment of research, governing postgraduates and students, fund raising, writing articles, etc. Among remarkable suggestions by the RAS Vice-President are the requirement to put into law the right of the Russian scientists for "barrier-free cooperation" with their foreign colleagues on public topics researching. This is a reflection of the geopolitical challenges appeared in the recent years and impacted on the international scientific cooperation.

6.4.2. Plans to finance R & D from the budget

The year 2019 was marked by insufficiently active use of budget R & D funds, which resulted in the carry-over of unspent funds for 2020 in the budget plans for the next three years. Statistically, this gave the most significant increase for 2020 compared to 2019 (almost by 24 percent), and in the next two years the growth rate will be about 3-4 percent per year (see *Table 21*).

Table 21

Dynamics of civilian R&D budget appropriations

Indicator	2020	2021	2022
Federal budget expenses on civilian R&D, total RUB billion	505.61	518.87	540.65
Increase to previous year, percent	+23.9	+2.6	+4.2
Increase compared to draft law for 2018–2020, each year, percent	+14.4	+14.6	–

Source: Schedule 8 to the Explanatory Note attached to the Federal Draft Law "On the Federal Budget for 2020 and the 2021 and 2022 Planning Period", own calculations.

The main "umbrella" program benefiting from funds allocation for civilian R&D, as well as for other science needs, represents the state program "Scientific and technological development of the Russian Federation", approved in March 2019[2], with a budget for the current year in the amount of RUB 688.3 billion and plans for further appropriations growth: RUB 740.7 billion in 2020, RUB 795.9 billion in 2021 and RUB 870.7 billion in 2022. It is expected that the consolidation of the entire federal budget aimed at civilian research and development will begin in 2020 within the framework of this program, including the budget allocated so far through a number of state programs.

There are plans to increase budget appropriations for the implementation of NP "Science" under the National program "Scientific and Technological Development of the Russian Federation" (*See Table 22*).

[1] *N.Volchkova*. Science draft law was "zeroed" again. 26.07.2019 URL: https://www.poisknews.ru/skript/do-osnovanya-a-zachem-proekt-zakona-o-nauke-v-ocherednoj-raz-obnulen/.

[2] RF Government Resolution of 29.03.2019. № 377 «On approval of the National program of the Russian federation "Scientific/technological development of the Russian Federation". URL: http://fcpir.ru/upload/iblock/4d0/PP-GP.pdf.

Table 22

Parameters of Federal projects NP "Science" (RUB billion)

National project "Science"	2020	2021	2022
Total	**47.4**	**69.8**	**96.1**
Amendment compared to the Law № 459-FZ, percent	+10.2	+11.2	+8.6*
Including on federal projects:			
Federal project "Development of R&D production cooperation"	12.6	7.9	10.6
Federal project "Development of advanced infrastructure for R&D in the Russian Federation"	23.4	37.1	59.4
Federal project "Development of R&D human resources capacity"	11.3	24.7	26.1

* amendment to the project passport for 2022.
Source: Schedule 8 to the Explanatory Note attached to the Federal Draft Law "On the Federal Budget for 2020 and the 2021 and 2022 Planning Period", own calculations.

The support to basic research financed though the fundamental research program as well as two research foundations, i.e. the Russian Research Foundation (RRF) and the Russian Foundation for Basic Research (RFBR) will annually increase (See *Table 23*). Moreover, the foundations budgets will practically be equal by 2022 due to significant recapitalization of the Russian Research Foundation, as it failed to attract extra-budgetary funds almost on parity basis, as previously expected . The RRF and RFBR will cumulatively allocate about one third of the budget appropriations aimed at basic research, being a positive trend in general terms.

Table 23

Budget appropriations for basic research

Type of expenditure	2020	2021	2022
Basic research (Capital Repairs Fund subsection), RUB billion	190.7	216.3	250.7
Share in total expenditures for civilian R&D, percent	*37.7*	*41.7*	*46.4*
Russian Foundation for Basic Research	22.9	23.9	24.7
Russian Research Foundation	9.3	21.8	22.4

Source: Schedule 11 and Schedule 11 to the Explanatory Note attached to the Federal Draft Law "On the Federal Budget for 2020 and the 2021 and 2022 Planning Period", own calculations.

In the meantime, it is evident that the Foundations could allocate larger resources. Thus, R&D appropriations for NRC "Kurchatov Institute" planned at RUB 24.9 billion by 2022, will exceed the whole RFBR budget. To put that in context, the Lomonosov MSU will receive 5–6 times less for R&D than "Kurchatov Institute".

A significant rise in appropriations in 2020 and the following reduction in budget funding by 4–7 percent per year is expected in the field of applied scientific research related to the main item of civilian expenditure (applied scientific research in national economy). Thus, hope remains that the extra-budgetary funding for applied research will be intensified.

On the whole, these expectations can be implemented in the coming five years. Thus, the history of R&D financing in the USA would remember that it took 30 years to make extra-budgetary appropriations equal to budget R&D funding in terms of volume[1].

6.4.3. Reorganization of research foundations

Despite the fact that budget plans for two state scientific foundations, RFBR and RRF, retain the logic of previous years, the Ministry of Science and Higher Education began developing plans last year to reorganize foundations by transforming their programs and redistributing

[1] U.S. Research and Development Funding and Performance: Fact Sheet. Congressional Research service. Updated January 24, 2020. P.2. URL: https://fas.org/sgp/crs/misc/R44307.pdf.

functions. This work was carried out jointly with foundations management, however, without expert discussion and the RAS involvement. This approach to resolving issues resembles the actions of six years ago related to the RAS reform.

The Ministry did not strive for openness and collegial decision-making, and it should be noted that the Ministry of Science and Higher Education was on the last place in the ranking of Russian departments in terms of transparency, prepared by the Accounts Chamber[1]. This has resulted in the Ministry delaying the creation of advisory bodies. A public Council was created only in October with its activity starting in November, and failed to consider the subject of foundations reorganization.

Moreover, in comparison with the previous Councils (it was a Scientific Council under the Ministry of Education and Science, and a Scientific Coordination Council under the Federal Agency for Scientific Organizations), there are very few RAS representatives in the new structure. As there are no public debates, the scientific community raised some concerns that the reform of the foundations could lead to negative consequences, including the liquidation of RFBR.

However, the most intriguing question is why the reorganization of scientific foundations should be held? It would seem that the functionality between them is clearly divided, duplication is minimal and concerns only the so-called "large" projects. Moreover, the duplication is more likely an alternative rather than repeating the same thing in the absence of private research foundations in the Russia's environment. The presence of several foundations, even with overlapping agendas, is an important condition for stability of the scientific system in any developed country. Nevertheless, the official reason for the invented changes was the elimination of duplication.

The reform of foundations system is needed "to increase efficiency and expand grant support for domestic science", as well as ... to "avoid duplication[2]."

The announced plans to transform the system of foundations can result in a reduction in the scope of grant support for domestic science, as the RFBR competition, the most massive and effective according to scientific results, aimed at support of pilot scientific projects (more than 8 thousand research teams participating in 63 regions of Russia) will be cancelled.

This competition is in fact a compensation for lacking funds aimed to conduct particular scientific activity at research institutions and universities, partially substituting a low-performing system of science organization with salaries and other objects of expenditure remaining low. The Ministry of Science and Higher Education specified a new functionality of the foundations: the RFBR will undertake the implementation of international and regional projects as well as develop scientific postgraduate studies; RRF will deal with the implementation of the Presidential Program of research projects and large interdisciplinary projects[3].

The planned differentiation of large scientific projects that will be funded by the RRF and international projects under umbrella of RFBR raises questions.

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[1] The State transparency in Russia. Expert report. RF Accounting Chamber. 2019. C.45. URL: https://www.infoculture.ru/wp-content/uploads/2019/06/Otkrytost-doklad.pdf.

[2] Quoted from statement of A.Fursenko, the Assistant to the President of the Russian Federation, published by TASS. Source: Academic community discuss prospects of reorganization of scientific foundations. 05.09.2019. URL: https://nauka.tass.ru/nauka/6847737.

[3] N. Volchkova. Has the fate of RFBR been sealed? // Poisk, 20.11.2019. URL: https://www.poisknews.ru/news/sudba-fondov-predreshena/.

As a matter of fact, large projects should be international, therefore the separation of the "state-of-the-art science" supported by RRF, from the "international agenda" looks false and groundless. The planned separation of postgraduate school (RFBR) from the youth support programs (RRF) is no less strange.

The RAS and the scientific community represented by the Society of Scientific employees (SSE) made appeals to the government of the Russian Federation. In its letter, the Russian Academy of Sciences (RAS) insisted on a comprehensive discussion of the planned reorganization of scientific foundations and emphasized the importance to continue the RFBR competitions to support initiative projects[1], while the SSE also justified the importance of this competition and its high demand and insisted to maintain it.

Therewith, the SSE appeal noted the inconsistency of the argument related to duplication of the RFBR and RRF functions, as well as the need for many scientific foundations in the country[2].

Actually, the letter of the Ministry of Science and Higher Education of the Russian Federation, signed by Grigory Trubnikov, the First Deputy Minister[3], was considered a reply to all applicants, containing arguments that the reorganization will be implemented and will be based on a step-by-step basis, agreed with the management of the two foundations, while panel discussions will take place in the course of transformation process. In other words, the decision was made without coordinating with main stakeholders and can not be challenged.

6.4.4. Plans and restrictions to attract young people to science

The "rejuvenation" of science due to an increase in the share of young researchers aged below 39 and became one of the main target indicators for the implementation of NP" Science "and the Strategy for Scientific and Technological Development. It should be noted that the share of young researchers in Russian science is already quite high and amounts to nearly 44 percent, however, the further involvement of young people is considered by the government as the platform for the sustainable development of science and the country's leadership in various rankings.

Meanwhile, there has been a tendency for three years in a row to reduce the proportion of young researchers under the age of 29, i.e. that cohort, which just characterizes the "influx of young people into science." Over the past year, it fell by 1 percent, against just 2 percent over the period since 2010[4]. There are many reasons for this phenomenon, i.e. from more challenging conditions for international cooperation to the growth of bureaucratization of science and pressure of bibliometrics. At the same time, scientific mobility as one of the instruments of international cooperation, attractive in particular for young people, will obviously significantly reduce in 2020 due to the unfolding pandemic.

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[1] Academy appeals to the government // Scientific Russia. 11.09.2019. URL: https://scientificrussia.ru/articles/akademiya-obrashchaetsya-v-pravitelstvo.

[2] An appeal of Russian scientists in defense of RFBR. Interregional Society of Researchers. 21.11.2019. URL: http://onr-russia.ru/content/nauka-za-RFFI-press-release; https://trv-science.ru/2019/12/03/uchenye-protiv-reorganizacii-nauchnyx-fondov-v-rossii/comment-page-1/.

[3] Letter published on RAS website, news of 12.11.2019. URL: http://www.ras.ru/tradeunion.aspx.

[4] Calculations according to data: T. Ratay, I. Tarasenko. Academic staff: reduction trend is maintained //Science. Technologies. Innovations. Express-information. NRU HSE, 25.09.2019. p. 2. URL: https://issek.hse.ru/data/2019/09/25/1540060251/NTI_N_145_25092019.pdf.

Online forms of cooperation will succeed. The reduction of physical mobility can have an even more dramatic impact, that is, to decrease research productivity, however, it too early to assess such impact.

In 2019, the principal officially debated reason for the low influx of young people into science was the lack of systematic support measures for young researchers. It should be noted that the government implements quite a few measures to support young researchers, including special grants competitions, and the number of such incentives is growing. At the same time, the requirements for competitions differ, the definition of the concept "the young researcher" also differs depending on the incentive, while there is no data about the amount of money allocated to support young people and the effects of this measure.

The Accounts Chamber conducted an analysis of government support measures for young Russian researchers in 2016–2018 and noted this particular fact[1]. This remark is fair and applies not only to youth programs, but also to most major government incentives: if cost indicators can still be calculated, then there are simply no estimates of effects, with rare exceptions. For example, according to the new version of the mega-grants program with the competition ended in November 2019, the number of young researchers should be half the number of the scientific teams without considering the subject and the tasks that have to be solved under megagrant.

Moreover, the program requires to annually increase the number of young researches at least by 2 percent[2]. However, this decision is not based on a platform that work will be more effective with this number of young people rather than when the boss determines the age parameters of the team.

That is why, it would be important to identify the incentives that have already proved their effectiveness, firstly among youth programs. Thus, for instance, what are the outcomes of the requirements determined by some grants competitions to mandatory include a particular number of young researchers among the performing team and to pay them at least the percentage of the total salary fund established by the rules, regardless of whether these young people really work well or only listed as grant recipients. However, another danger is evident: instead of analyzing success and failures, there is the centralization of incentives, the "fight against duplication", and other approaches aimed at creating unique definitions and requirements formats[3]. If the movement begins in this direction, it will suppress diversity, and the latter is critical for the adequate scientific activity.

The postgraduate education is partially related to the youth theme. Positive changes were observed in this area: the number of dissertation councils was reduced because a significant number of members of these councils did not meet the minimum requirements for publication activities over the past 5 years. In other words, they did not publish any scientific papers or number of their publications was either not sufficient or published not in the refereed journals. The dissertation council may continue working only if at least 90 percent of its members meet the requirements of the Higher Attestation Commission (HAC) in terms of publications[4]. Thus, the remaining councils should not deal with poor quality theses. Actually, demands to

[1] State support of young researchers is not systemic. 05.03.2019. URL: http://www.ach.gov.ru/press_center/news/36112?sphrase_id=11358263.

[2] Results of the mega-grants competition summed up. 21.11.2019. URL: http://www.p220.ru/home/news / item/1693-itogikonkurs2019.

[3] Ministry of Education and Science worked out measures aimed to improve the system of support of young researchers/TASS. 05.03.2019. URL: https://nauka.tass.ru/nauka/6188550.

[4] Ministry of Education and Science commented on the activity of over 320 dissertation councils/TASS. 19.08.2019. URL: https://nauka.tass.ru/nauka/6775889.

postgraduates became tougher along with demands to members of the dissertation councils. This entailed a reduction in the proportion of candidates who defended their thesis on time. In the 2000s, the proportion of postgraduates who graduated from a university and defended their dissertation was around 31.5 percent, slightly varying depending on the subject, and currently, it has reduced more than half and constituted 12.7 percent. There was a similar reduction in respect of postgraduate education in research institutes, i.e. from 22.9 to 10.3 percent[1]. On the one hand, the observed trends should indicate an increase in the quality of education by reducing the number of ineffective dissertation councils and postgraduates.

On the other hand, the personnel "database" for attracting young people to science is declining, since the number of young candidates of science is decreasing annually.

Thus, the task to attract young people to science remains non-trivial under declining influx, including those who have a Ph.D., and therefore more likely than a specialist without a degree, decide to commit to scientific activity.

6.4.5. Research and educational centers as a new priority

The topic of research and educational centers, being established under one of the federal projects of NP "Science", was a centerpiece in mass media covering the development of science. The past year can be considered preparatory, since the platform and criteria for funding RECs were developed, the size of state subsidies determined, and approaches to the establishment of RECs developed (by and without competition, with and without budget financing).

There are plans to launch 15 RECs within three years (2019–2020), and the first 5 RECs were approved in 2019 without a competition. They were established in those regions where the Governors capacity and their interest to RECs were the highest.

Typically, the work on transformation of these centers has started in these regions long before all official criteria and rules of their selection were determined. RECs stacking" is a long process as the REC new model does not signify a university project compared to previous organization, rather, it is a large regional project involving a high number of stakeholders. They include universities of the region and beyond, research institutions, enterprises of a different size, regional administration. The fact that there is a basic university accommodating the REC without corporatizing, provides an analogy with the previous REC models..

The final working plans, membership and some other parameters of the first five RECs have not yet been approved by the government at the year end, however, the thematic focus of each of these centers and their specificity is generally understood.

The most developed concepts are the REC "Kuzbass" (Kemerovo region) and the West Siberian REC (uniting three regions: the Tyumen region, the Khanty-Mansi Autonomous Okrug and the Yamal -Nenets Autonomous Okrug).

In the Kemerovo region, it was easier to a certain extent to single out specialization and, therefore, to go through tasks and expected results in detail. This resulted in the project success. The incentive and the effort spent by the West Siberian REC on challenging coordination of interests of the three regions, made this REC special, while its activity was transparent and

[1] *S. Martynova, A. Nefedova, I. Tarasenko*. Development of highly qualified academic personnel: indicators of postgraduate education/Science. Technologies. Innovations. Express-information. 15.05.2019. URL: https://issek.hse.ru/data/2019/05/15/1507176995/NTI_N_128_15052019.pdf.

extensively highlighted in the media and social networks. Another three RECs are being establishes in Belgorod, Nizhny Novgorod regions and Perm Krai.

The initial concepts of the first five RECs show that every region clearly highlights its "smart specialization", namely, the spheres, where scientific institutions and enterprises can work together, and their development is important for socio-economic prosperity of the region. Active position of the Governor provided for the success. It is more difficult to formulate specific tasks and target indicators. The tasks do not always evidently follow goals, while target indicators were very general as they were extracted from statistical reporting and from a number of target indicators of NP "Science". Thus, with rare exception, indicators are not focused on identification of the development effects specific for this region. In this context, the project of the Perm REC stands positively apart presenting a list of possible socio-economic effects resulted from REC activity, such as the inflow of investments, new employment opportunities, living standards in the region.

The next five RECs will be chosen by competition to be apparently held in spring 2020, however, already in 2019 the following regions became known for their chances to win. Among them the Urals REC uniting Sverdlovsk, Chelyabinsk and Kurgan regions, RECs in Samara, Novosibirsk and Tomsk regions, REC "Eniseyskaya Sibir: Industry 4.0" in Krasnoyarsk Krai.

The elaboration of measures and criteria of the state support to RECs was going on throughout the year, but their final format has not been yet approved. The first one was the RF Resolution of the Government of April 30, 2019, № 537 "On measures of state support of the world-class scientific-educational centers based on integration of higher educational institutions and their cooperation with organizations acting in the real sector of the economy[1]." It states the context of the program of the REC activity, the reporting indicators to be submitted as well as financial support provided in a format of subsidy and spent on fixed expenditures. Funds will be transmitted to the REC parent organization rather than to the regional budget. In terms of performance indicators, the REC program should indicate target indicators and indices, including those taken from NP "Science" (number of patents, number of articles, percentage of researchers under the age of 39 years, programs of additional professional education, etc.) Thus, initially the REC performance indicators are comported with the indicators related to the implementation of NP "Science". This approach facilitates calculating results for officials, but makes it difficult to assess the real effects of the REC.

The financial models of the REC budget support have been constantly transformed. Initially, it was assumed that RECs approved on a non-competition basis, will receive government funding in 2020 after their real development success become visible[2], however, at the year end, the government decided to allocate them RUB 60 million each provided that these RECs will finally formulate and elaborate the programs of their development[3].

Another financial model related to REC development, the so-called "regional vector", appeared, when the REC has been firstly proactively established at the regional level at its own expense, and then, if it develops successfully, claims federal support[4]. The Ural region first

[1] URL: https://www.garant.ru/products/ipo/prime/doc/72140532/.
[2] Conditions defined. World-class scientific-educational centers will not have any legal entity // Poisk, №20, 17.05.2019. p.2. URL: https://www.poisknews.ru/skript/usloviya-ochercheny/.
[3] Kotyukov: REC will receive grants support RUB 60 million each in the Russia's regions //Russia's future. National projects. 18.11.2019. URL: https://futurerussia.gov.ru/nacionalnye-proekty/noc-v-regionah-rf-polucat-grantovuu-podderzku-v-60-mln-rublej-kotukov.
[4] Ministry of Science and Education recommended the regions to finalize REC programs by June 27// Russia's future. National projects. 24.06.2019. URL: https://futurerussia.gov.ru/nacionalnye-proekty/585137.

chose this path, but then decided to participate in the 2020 competition. It was replaced by the Samara region, but it quickly became clear that such a REC model would not "survive" without benefiting from special conditions provided by the government.

Thus, it is difficult for regional budgets to get involved in supporting universities due to the fact that predominantly they are federally governed[1]. Therewith, funds can be obtained from industrial partners, for example, the state corporations "Rostekh" and "Roscosmos" could become such partners for REC Samara. However, apparently this is not enough. Therefore, Alexander Fetisov, Deputy Chairman of the Government of the Samara Region, suggested introducing benefits and preferences for REC participants, such as tax incentives, customs duties for foreign manufacturers, preferential investment, short-term lending, etc[2].

In addition to financial aspects, an issue was identified in the course of establishing RECs related to challenges in building the communication among the scientific community and business. It is a long-standing problem, but this time, representatives of regional administrations encountered it[3]. It is the disagreement of interest, and sometimes, inertia, self-centeredness of a number of stakeholders that became a stumbling block for those RECs that were not among the five elected but actively endeavored to develop their concepts.

Finally, the determination of methods to assess the effectiveness of RECs has been and remains an issue, and last but not the least, there is still no answer to the question, whether RECs should cover the maximum possible number of various stakeholders or to make them more "compact" [4]. It should be noted that building links between the scientific and business community is an issue for all countries, and it is studied not only by researchers, but also by such organizations the OECD.

In particular, the OECD, having studied the experience of 35 OECD member countries, identified 21 tools to accelerate the transfer of knowledge from science to industry[5]. The following key trends were identified: (1) organizing intermediary organizations, including regional technology transfer centers; (2) joint knowledge production through inter-sectoral mobility inclusively, as well as engaging civil society institutions; and (3) digital transformation comprising establishment of an online community of experts, using such forms of collecting ideas and suggestions as crowdsourcing, as well as posting data on open platforms[6].

So far, the study of the interactions between science and industry is carried out at the most general level in the context of the REC, although some RECs plan to develop digital approaches. For example, the Belgorod REC is going to create research and production platforms for the interaction between actors of the innovation system.

Thus, the deployment of an incentive having no clear rules and clearly articulated expectations gives dynamism to the whole process. In the future, it will be of interest to know

[1] *Y. Vostretsova*. Intelligence for export. Urals regions will set up world-class RECs // Rossijskaya Gazeta 03.07.2019. URL: https://rg.ru/2019/07/03/reg-urfo/tri-regiona-urala-sozdadut-nauchno-obrazovatelnyj-centr-mirovogo-urovnia.html.

[2] Alexander Fetisov spoke at the Federation Council suggesting RECs improvement //Information portal VolgaNews.ru 06.11.2019. URL: https://volga.news/article/520515.html.

[3] *M. Starikova*. Officials failed to find criteria for scientific – educational centers //Kommersant .24.06.2019. URL: https://www.kommersant.ru/doc/4011530.

[4] *E. Mischenko*. "Looking at the schedule without falling in love: "what is the progress against the first RECs // Indicator, 25.06.2019. URL: https://indicator.ru/engineering-science/pervye-nots-bez-vlyublennosti.htm.

[5] OECD (2019), University-Industry Collaboration: New Evidence and Policy Options, OECD Publishing, Paris. P.20. URL: https://doi.org/10.1787/e9c1e648-en.

[6] Ibid, p. 21–22.

which centers will more efficiently deploy their work, those created without a competition or others, established in accordance with all the rules on a competitive basis. The REC project is special because their establishment started almost a year before the basic rules, parameters and conditions of budget financing and the required REC elements were finally determined.

However, a direct connection was established from the very beginning between the Governor's activity and the quality of the REC program. First of all, the REC represents a Governor's initiative showing his capacity to work out an attractive project in the region. This, among other things, explains why the scientifically poor REC "Kuzbass" was included in the top five Centers selected in 2019 without competition. Thus, if success of the previous REC models was determined by the importance of the Rector position and the research team of the university at the stage of their development, now it is the position of the regional authorities that is critical.

In addition to REC, the NP "Science" suggests to establish centers of two other types, i.e. World – class research centers including mathematics and genome research, and STI (CC STI) Centers of competencies. Centers have their own specifics from the point of knowledge production (basic or applied research or developments) and, therefore, the extent of interaction with industry.

World-class research centers were selected according to competition in 2019, and as a follow up it was announced that 4 centers of mathematics and 3 genome research centers will receive funds. All centers are being established as consortium of research institutions, mostly in partnership with the universities. Both competitions were organized almost unnoticed and without consideration, as the scheme of a consortium research center has been already tested and it is rather simple compared to REC, while scientific community did not express any objections or surprise against the winners. In contrast with REC, support of the world-class research centers will be funded from the budget only. In 2019, funds allocated to centers of mathematics amounted to RUB 80 million per center and will double in 2020. Genome centers will receive more funds, about RUB 200 million each on the average, while it total it is expected to allocate RUB 3.7 billion to all centers for a period of 6 years (2019–2024)[1]. Due to the spreading pandemic, the main focus in 2020 will probably be on establishment of new centers according to "Grand Challenge" problematics in the field of virology and epidemiology. The fight against new coronavirus is a new challenge. At the same time, this will mean the end of exclusive work on these topics[2].

On the other hand, the CC STI have been set up already in 2018, and in 2019, their activity has just started. The main challenge is to propose projects attractive for industry. Every center should attract significant extra-budgetary funds and, therefore, cooperation with enterprises is one of their principal functions.

[1] Billions bill. The size of state support for world-class centers has been determined.//Poisk, №44-45, 08.11.2019, p.6.

[2] It turned out that only State scientific center of virology and biotechnology «Vektor" in technopolis Koltsovo, Novosibirsk region possesses required pipeline to develop testing and vaccines. That is why, the laboratory of the Antibubonic Center in Moscow is being rapidly reequipped. *Source*: Antibubonic Center will be reequipped to do laboratory testing //TASS, 15.03.2020. https://tass.ru/moskva/7984949. Moreover, university laboratories, i.e. MSU and Kazan Federal University, started parallel development of vaccines. *Source*: "It may appear by summer in the developed countries". Who develops vaccine against coronavirus and when it can be expected // ZNAK, 18.03.2020 г. URL: https://www.znak.com/2020-03-18/kto_razrabatyvaet_vakcinu_ot_koronavirusa_i_kogda_ee_zhdat

6.4.6. Publishing activity and plans to transform Project 5-top 100

Publishing activity is one of the key parameters to assess implementation of the NP "Science" Strategy of scientific and technological development, performance of universities pretending for leadership and participating in the Project 5-top 100. Last year, public and government attention to bibliometric assessment remained very high. However, there were no changes proving any quantum shifts in scientific performance. Russia moved up from the 11th to 12th place over the past 15 years per number of publications indexed in the Scopus database, although, there were "gap years", when the country was on the 15th or 16th place (2007–2014)[1]. According to the number of scientific publications, Russia belongs to the same group as such countries, such as Australia, Brazil, Iran and South Korea. Physics and Astronomy, engineering sciences, material engineering, chemistry and mathematics, were the subjects with the highest number of publications by the Russian scientists, traditional for the Soviet and Russian science, and they have not changed over the last 5 years. It proves conservatism and, consequently, lack of such programs and projects, which would change the balance of disciplines.

In terms of quality of scientific performance, partially determined by citation rate, Russia demonstrates results below world average in most disciplines. However, the citation rate of Russian publications slightly increased compared to 2012 and cited more frequently. A more detailed inter disciplined analysis confirms the remaining "niche" featuring development of the Russian science, highlighting only hyper-focused areas with citation rate above world average. Unfortunately, Russia is a different record holder, as it is leading along with Ukraine at self-citation. If the world average self-citation median level constitutes 12 percent, it is worth 36 percent in Russia[2]. China and Japan, for comparison, are in line with the world average median level of self-citation, while scientists from the USA and Great Britain self-cite far less often. Thus, meanwhile, accelerating the publication race brings modest positive and tangible negative results.

In general, the issue of tolerance to various ethical violations associated with the publications and preparation of theses is escalating in Russian science, and it can have a long-term negative effect on the quality of scientific performance. According to NRU HSE monitoring data, only 54.3 percent of the university teachers support retraction of the academic degree for plagiarism[3]. In other words, half of the Russian academic teaching staff considers plagiarism to be the norm not deserving punishment.

All the more remarkable was the initiative for retraction of scientific articles, launched at the end of the year. The RAS Commission for Combating Falsification of Scientific Research announced that over 850 articles from 263 Russian journals were retracted[4], and more than 2.500 articles in total found in 541 Russian scientific publications subjected to retraction.

[1] *E. Erokhina*. Russian science in Scopus and WoS: quantity or quality // Indicator, 08.02.2019. URL: https://indicator.ru/engineering-science/rossijskaya-nauka-v-scopus-i-wos-kolichestvo-ili-kachestvo.htm.
[2] *Van Noorden R., Chawla D.S*. Hundreds of extreme self-citing scientists revealed in new database // Nature 572, 578-579 (2019), August 19, 2019. URL: https://www.nature.com/articles/d41586-019-02479-7.
[3] *V. Rudakov, Y. Roschina, L. Bitokova*. Changes of strategies, motivation and economic behavior of students and teachers of Russian universities. Information newsletter. Moscow: National Research University "Higher School of Economics", 2019. (Economics of education monitoring; № 1 (133). p. 22.
[4] *S. Belyaeva*. Chain retraction //Poisk, № 1-2, 17.01.2020. p. 3.

Moreover, according to Dissernet, the scale of the disaster in terms of articles containing false results, plagiarism or self-plagiarism is even higher, i.e. estimating at 150 thousand articles[1].

Scientometrical success was the most significant among the universities of the 5-top 100 Project compared to the average Russian one (according to Scopus) [2]. Scientists from these universities more often publish articles in the journals of the first quartile, i.e. having the highest impact factor. It is noteworthy that higher productivity can be achieved inclusively due to international cooperation, for which these universities have more funds than former academic research institutes and other universities.

The share of international coauthored publications accounts for 35 percent at the universities included in the Project 5-top 100 against 25 percent an average of the Russian science. However, the recent evaluation of the universities under Project 5-top 100 showed that the scale of their international cooperation is stable, while Chinese universities demonstrate constant growth[3]. Universities participating in the Project could not surpass yet two leading Russia's universities, that is, the MSU and the St. Petersburg university, by indicators of scientific performance.

The Project 5-top 100 universities, and there are 21 of them currently, consistently break into three equal leading groups, actively developing and demonstrating modest success. Group membership has not changed since 2018. Perhaps, this "stability" is partially associated with tremendous difference in the universities funding: the strong become even stronger receiving annually around RUB 900 million each from the government in addition to their basic funding of state assignment and subsidies for other purposes; the "average" get twice less, around RUB 450 million per year, while the laggards will hardly significantly improve their positions, receiving RUB 120–130 million per year. The universities will receive approximately the same amounts n year[4].

Formulating new goals and parameters of the Project 5-top 100 became an important change of the year mostly marked by expansion and diversification of participants and lowering the standards of the universities performance. The universities will strive to take top positions in the industrial or discipline rating rather than compete globally. Only "leading" universities under Project 5-top 100 (it is expected that there will be 10 of them)[5] will be focused on continuing growth in global ratings, however, the goals will be modest, i.e. to be in top 1000 at least for two years in row rather than in top 100 in any of the institutional ratings. There are plans to increase the number of the Project 5-top 100 participants up to 30 in 2020, having reviewed the composition of universities though announcement of a new competition. In this respect, the regional focus will be strengthened, as it is expected that universities representing at least 10 regions will participate in the project. Sectoral and regional universities will be focused on transformation in regional centers of excellence (the task is slightly similar to the REC idea). Thus, the new format of the Project 5-top 100 will be more closely associated with

[1] *Chawla D.S*. Russian journals retract more than 800 papers after 'bombshell' investigation // Science, January 8, 2020. URL: https://www.sciencemag.org/news/2020/01/russian-journals-retract-more-800-papers-after-bombshell-investigation.

[2] *E. Erokhina*. Russian science in Scopus and WoS: quantity or quality // Indicator, 08.02.2019. URL: https://indicator.ru/engineering-science/rossijskaya-nauka-v-scopus-i-wos-kolichestvo-ili-kachestvo.htm.

[3] Data presented by M. Fatkhullin,, Director for cooperation with public authorities Elsevier S&T в Москве. Source: Session "Scientometrics" 2.0: digital resetting". The Gaidar Forum, 15.01.2020.

[4] *T. Vozovikova*. Reaching the unreached // Poisk, №44-45, 08.11.2019. p. 14.

[5] Number of the Project 5-top 100 participants will grow to 30 as from 2020. TASS, 19.11.2019. URL: https://nauka.tass.ru/nauka/7150681.

NP “Science”, the regional vector in scientific and technological policy will increase, however, the performance requirements will be lowered while maintaining the level of budget funding. Greater attention to regions is important for equalizing conditions and increasing competition within the country, however, simultaneous lowering of standards within the international scale indicates focusing on self-involvement and internal issues, despite manifesting the importance of leading global positions in a number of parameters enshrined in NP “Science".

6.4.7. RAS as an expert institution

The RAS activity was noteworthy in three aspects: the expertise of scientific projects carried out on state assignment, formulation of a new basic research program and RAS elections, organized in a new way, in terms of greater transparency and information about candidates for positions of RAS academicians and corresponding members.

Expertise of scientific reports

Apparently, promoting the idea to assign RAS a status of the main national expert institution, RAS leaders meant an expertise of major government decisions, strategies, participation in foresights and other important types of activities that should be carried out by outstanding national scientists, rather than routine assessment of tens of thousands of reports on state assignments and other projects that were held at the budget expense. This task, that RAS eventually began to carry out, is both laborious and uninteresting.

Therewith, the information on the scale of this expertise differed from source to source. Thus, according to Alexey Khokhlov, RAS Vice-President, the annual expert load on the Academy amounts to 50–70 thousand reports[1] on state assignments, while according to Alexander Sergeev, it is up to 30 thousand[2]. By the end of the year, when results of the first expertise of 2018 reports were discussed, it fell to 17 thousand expertise (this information also provided by RAS President)[3]. If we take the last figure for the actual amount of work, it turns out that the estimated data on the amount of expert work were exaggerated by about 3 times. It is evident, though, that the main burden of conducting the expertise fell on the RAS professors rather than on academicians and corresponding members. 500 professors of the Russian Academy of Sciences conducted 6 thousand expertise[4], and 2,000 academicians and corresponding members carried out the remaining 11 thousand. Thus, professors had an average of 12 expertise each and RAS members did the half. Professors are considered the “reserve” of the Russian Academy of Sciences, the source of its rejuvenation, and, apparently, this explains their higher expert load.

The expertise of the universities reports for 2018 has not been completed by April 2019 [5], causing negative reaction of the organizations falling within RAS assessment, as it delayed allocation of 2019 budget funds. Rectors of the universities, especially, the leading ones,

[1] *N. Demina*. Scientists have to be liberalized //Troitsky variant-science, № 288, 24.09.2019. p. 4–5. URL: https://trv-science.ru/2019/09/24/uchenyx-nado-raskrepostit/.

[2] *A. Emelyanov* RUS still has hopes//Rossijskaya gazeta, № 166, 30.07.2019. URL: https://rg.ru/2019/07/30/akademik-strategicheskoe-prognozirovanie-mozhet-stat-vazhnejshej-funkciej-ran.html.

[3] RAS President criticized unwillingness of academicians to deal with expertise //TASS, 29.11.2019. URL: https://nauka.tass.ru/nauka/7227353.

[4] Source data: *E. Mischenko*. “ Nobody has brains except RAS”: sad paradoxes of the RAS Professors meeting // Indicator, 29.11.2019. URL: https://indicator.ru/humanitarian-science/mozgov-ni-u-kogo-krome-ran-net.htm.

[5] About 2.7 thousand research works expect expertise in order to get funding // TASS, 27.03.2019. URL: https://nauka.tass.ru/nauka/6264322.

publicly complained not only about RAS slow performance, but also about RAS being the institution conducting this expertise.

The most serious accusation was that the Academy was "biased" about expertise, showing favoritism in favor of projects carried out at former academic institutes, and accordingly underestimating universities. This attitude is partly explainable, because RAS representatives made direct or indirect statements about the weakness of university science compared to academic one. However, the accusation of bias towards the academic expertise turned out to be unfounded: according to the results of assessments, both for research institutes and universities, the proportion of rejected reports, according to the RAS Vice-president Alexey Khokhlov, amounted to about 7 percent[1]. This is a very modest figure, especially taking into account that the level of science in ordinary Russian universities is indeed quite weak. Thus, the expertise was carried out either formally or rather humanely.

Disproportionate funds expenditure by the former Ministry of Science and Higher Education on scientific and methodological support was a rather surprising result of the expertise, which was carried out by subordinate (not former academic) organizations. Actually, it was about solutions of tasks to provide services to the Ministry and not about implementation of scientific projects. About 25 percent of all funds allocated by the Ministry to scientific organizations and universities have been spent on appropriate services[2]. Thus, it occurred that it was not the Academy but the Ministry that ineffectively spends budget funds.

Despite all challenges related to conduct of the expertise, the RAS leaders aim to continue and improve the procedures, as, according to RAS President, it will be possible to "submit a proposal to draft a law on RAS as of a State Academy", if the expertise is conducted well[3]. In this regard, there are plans to, first of all, more actively involve foreign scientists, members of RAS[4], in expertise process and to establish own information system, centralizing and facilitating the expertise of reports. It seems that RAS leaders do not wish to use the existing infrastructure, for example, Center of information technologies and systems of government bodies[5]. However, the project to set up such a system is under consideration, as the Academy does not have funds for its development[6].

Program of long-term basic scientific research in the Russian Federation

In October, the RAS submitted draft program of basic scientific research (PBSR) covering all basic research in Russia funded by the federal budget. This is an "umbrella" program including projects and activities implemented also within NP "Science" as well as programs of government research foundations.

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[1] Interview with Alexey Khokhlov. Poisk, 07.06.2019. URL: https://www.poisknews.ru/skript/strasti-po-ekspertize/.

[2] On projects expertise under State assignment by subordinate organization of the Ministry of science and education of Russia. 08.04.2019. URL: http://www.ras.ru/news/shownews.aspx?id=c3fdfe2c-2e06-4369-9f6b-80afb64a3097.

[3] Meeting of RAS Presidium 21.05.2019. Scientific Russia. URL: https://scientificrussia.ru/articles/zasedanie-prezidiuma-ran-21-05-2019-pryamaya-translyatsiya.

[4] *E. Mischenko*. "Now you have these functions, let us implement them" // Indicator, 26.06.2019. URL: https://indicator.ru/humanitarian-science/ran-funktsii-vlast.htm.

[5] Center of information technologies and systems of government bodies.

[6] *A. Emelyanov*. RAS still has hopes PAH // Rossijskaya gazeta, № 166, 30.07.2019. URL: https://rg.ru/2019/07/30/akademik-strategicheskoe-prognozirovanie-mozhet-stat-vazhnejshej-funkciej-ran.html.

The most significant part of the program comprises the description of thematic trends of research, described according to the RAS traditional pattern of distribution by scientific disciplines. Taking into consideration the presented trends of research, it is not possible to link them with priority areas of development at the state level and assess their contribution to socio-economic development. The topics listed in the PBSR project most likely appeared as a result of summing up the areas in which research is being conducted at former academic institutes.

However, financial parameters of the program and the assessment indicators of its effectiveness are the most remarkable.

The main wish of the draft program is a twofold increase in the cost of basic research from the federal budget. However, this is not feasible, since it will result in a significant imbalance in the structure of budget financing of R&D. Budgetary allocations for basic research account for about 40 percent of civilian R&D.

If we make comparison with countries that have developed basic science, then there is about the same proportion of the costs aimed at basic research financed from budgetary funds. For example, in the United States 42.7 percent of the total federal budget expenditures go to R&D[1], to support basic research, and currently a debate has been initiated claiming that this is too much[2].

Meeting the request to double expenditures would mean directing all the R&D appropriations exclusively to support basic research. This is not only unrealistic, but also extremely dangerous, since the "applied" component of R&D in Russia has been so far poorly developed and resulted in a low level of R&D commercialization, and therefore a small contribution of science to the economic development of the country.

At the same time, it is proposed to increase funding of the RAS as a budget institution by 3 times in comparison with the current level (up to RUB 13 billion by 2026). According to draft federal budget, the appropriations for the Academy will amount to RUB 4.4 in 2020, which is quite sufficient, given the fact that the RAS does not have subordinate institutions and spends the allocated funds to ensure its own work, as well as to pay fees to international organizations on behalf of the Russian Federation. The draft program does not explain the purposes for such a substantial increase in funding. Finally, it is proposed to evaluate the effectiveness of the program by 6 indicators with some of them corresponding to those used in NP "Science":

1) number of researchers under the age of 39;
2) cost of basic research in GDP;
3) Russia's place in the share of articles in priority areas;
4) number of scientific specialized areas where Russia is among top ten;
5) number of major international programs implemented in the Russian Federation;
6) number of PhD and doctoral theses.

Among the listed indicators, the index of effectiveness can be attributed only to the indicator of leadership in a number of scientific areas. This is really relevant, since a "niche" science has been essentially formed in Russia, and quality research in highly- specialized areas are not available in every discipline. The remaining listed indicators are either resource (researchers,

[1] Federal R&D. In: The State of U.S. Science and Engineering 2020. Science and Engineering Indicators. NSB, January 2020. Figure 20. URL: https://ncses.nsf.gov/pubs/nsb20201/u-s-r-d-performance-and-funding#federal-r-d.
[2] Sarewitz D. Necessary but not Sufficient? // Issues in Science and Technology. Winter 2020. Vol. 36. No. 2. P. 17–18.

funding, dissertations), or process indicators (number of international programs, percentage of articles).

The program will probably be updated, however, the presented project is notable for the ongoing tradition and style of preparing academic documents, comprising indispensable long descriptions of thematic areas and poorly reasoned requests for increased budget funding.

RAS elections

RAS elections held in November, were called "unprecedentedly transparent". Actually, they were more transparent, as the information about scientific performance of candidates to the position of RAS academicians and corresponding members including bibliometric data) was publicly available. The President of the Russian Federation said that this time there were no candidates having no outstanding merits in science[1]. Meanwhile, the ample public discussion took place precisely in connection with the inadequate or non-existing scientific merits of a number of candidates. Data on such personalities were presented in a report prepared jointly by the Dissernet and the RAS Commission on Combatting the Falsification of Scientific Research. According to the report, the works of 56 candidates for position of RAS academician and corresponding member showed signs of plagiarism and pseudoscientific allegations[2]. The report caused a mixed reaction at the RAS, the RAS departments considered it, and as a result, 22 candidates from this list were nevertheless recommended for election.

The age of academicians and corresponding members was unexpectedly debated in connection with the RAS elections. The impetus to the discussion was sent by the President of Russia, who noted that at the last elections the newly elected members were younger[3]. In fact, the average age of academicians and corresponding members was quite respectable, 75 and 68 years respectively. The age of candidates was lower, 67 and 59 years respectively[4]. Thus, "rejuvenation" does take place in RUS but at a low pace. Probably, it would be possible to move in this direction faster, if the reserve is involved, i.e. RUS professors (they should be not older 50 when this title was awarded), and start moving away from the practice to elect to the Academy primarily those who occupy high administrative positions in research organizations and universities. However, the age issue is not that important as such, but it matters in connection with the functions that the Academy should perform. For members of the Honorary Club, age is not important, however, it matters for experts of strategic and innovative solutions.

6.4.8. Conflicting signals: appeals for internationalization vs growth of autarchy

It is impossible to achieve leadership positions under the autarchy of science, and, therefore, the goals of NP "Science" and the Strategy of scientific and technological development (SSTD) alone imply internationalization and international cooperation. The calls for the internationalization of science signify a kind of meme, since the programs to promote Russian universities and to strengthen and develop their research activities has already started. However,

[1] Meeting with Alexander Sergeev, the RAS President. 12.11.2019. URL: http://kremlin.ru/events/president/news/62016.
[2] URL: http://kpfran.ru/2019/09/23/doklad-komissii-kandidaty-v-chleny-korrespondenty-i-akademiki-ran/.
[3] Meeting Alexander Sergeev, President of the Russian Academy of Science. 12.11.2019. URL: http://kremlin.ru/events/president/news/62016.
[4] Ibid.

despite an almost 15-year history, there is still no clearly articulated vision of the government on the specific goals, which require internationalization in the field of Russian science.

Wording related to internationalization, its importance for promotion in a variety of ratings are definitely present in various government documents, but its essence, while the rating position cannot be an essence, has been poorly disclosed. However, it is not forbidden for each institution and university to independently decide how to develop internationalization. Agencies are also differently involved in this process. For example, there are about 12 percent of foreign scientists among the RRF, however, it is not known how many of them are actually involved in the expertise[1]. On the other hand, RFBR makes no provisions for the international expertise of Russian scientific projects.

However, an external context setting the scope of red lines exists and dominates more and more. Current laws of the Russian Federation "On Foreign Agents" (No. 121-FZ dated July 20, 2012) and on unwanted foreign organizations (No. 129-FZ dated May 23, 2015) served as an example of typical external impact, resulted in the winding-up of a number of representative offices of foreign funds and the termination of international scientific cooperation programs.

The attitude towards non-commercial organization (NCO) receiving funds from abroad and rendering their assistance to science has not changed in 2019. This support was called "destructive", and sphere of education (including universities receiving most of these funds[2]) was highlighted in this context. Moreover, the NCO reporting became even tougher: they have to report not only on available sources of funding from abroad, but also whether the organizations that provided donations, have foreign sources of funding. Among international programs, that surprisingly fell out of favor, was the prestigious British Chevening program, because opinion leaders having "liberal values"[3] are virtually trained using education of postgraduates. Similar rhetoric was also typical with regard to Fulbright's most prestigious American science programs[4].

However, the most sensational event in this series were "recommendations" of the Ministry of Science and Higher Education of the Russian Federation on interaction with international organizations and reception of foreign citizens in organizations subordinate to the Ministry. Formally, they were put into effect in February 2019, however, public attention burst only in August, and the scandal developed intensively and even resulted in official letters sent by various societies, including international (scientific societies of Great Britain and Germany)[5]. Such a widespread response to the ministerial "recommendations" was associated with their style, written in the spirit of the Soviet instructions, dating back to the times, when any communication with foreigners was suspicious and condemned. In particular, the Ministry

[1] Russian Research Foundation. Information on the Foundation activity in 2018. p. 18. URL: http://rscf.ru/fondfiles/other/rsf_in2018.pdf.

[2] Putin was Only told about "undermining" foreign funding of Russian universities. 11.03.2019. URL: https://www.rosbalt.ru/russia/2019/03/11/1768675.html.

[3] *E. Sizov*. British Foreign Office uses pseudoscientific program Chevening to train enemies of Russia. 23.11.2019. URL: https://slovodel.com/540633-britanskii-mid-ispolzuet-psevdonauchnuyu-programmu-chevening-dlya-podgotovki-vragov-rossii.

[4] *M. Tsepelev*. The USA use educational programs to transfer Russia into a new colony 28.10.2019. URL: https://riafan.ru/1223106-ssha-ispolzuyut-obrazovatelnye-programmy-dlya-prevrasheniya-rossii-v-novuyu-koloniyu.

[5] *N. Vedeneeva*. Foreign scientists wrote a letter to Mr. Kotyukov, Minister of Science and Higher Education// Siberian science news 21.10.2019. URL: http://www.sib-science.info/ru/news/inostrannye-uchenye-napisali-pismo-glave-minobrnauki-20102019.

instructed to hold meetings between Russian and foreign scientists only after obtaining special permission from the leadership and then prepare a report to be sent to the Ministry of Science and Higher Education.

If meetings take place at institutes or universities, they should be held in specially designed and specially equipped rooms, foreigners should not use technical means allowing to process information, including mobile phones[1], and at least two Russian scientists should be present at the meeting. According to the official interpretation of the ministry representatives, the drafted document is only a recommendation and aimed solely at accounting rather than control.

However, these "recommendations" contributed to aggravation of international scientific cooperation and negatively impacted on the Russia's image. It is noteworthy that a number of universities accepted "recommendations" as a guide for action. And that made sense, as despite the criticism and all sorts of appeals and letters, the "recommendations" have not been officially abrogated as at the yearend. The counter reaction was launched in the USA, the key scientific partner of Russian scientists, along with Germany, France and Great Britain[2]. The US Department of Energy followed by the National Science Foundation and National Institutes of Health started to track and restrict cooperation of their researchers with colleagues from China, Russia, Iran and Peoples Democratic Republic of Korea. Getting funds for research purposes from these countries became a sensitive subject for the USA. Therewith, the Department of Energy pursues the toughest policy prohibiting laboratory employees to participate in the Russian programs and travel to profile events on invitations from Russia[3]. Some universities may also suffer from interaction with Russia: for example, the US Department of Education demanded that the Massachusetts Institute of Technology (MIT) provide information about all contacts with Russia and the funding received, in particular from the Skolkovo Foundation. Indeed, MIT received substantial funds (about $ 350 million)[4] for assistance in establishing Skoltech – the Skolkovo Institute of Science and Technology. Despite the fact that these are "just checks," they help American universities to exercise greater caution when interacting with Russia.

It is not surprising that internationalization in science, even in formal terms, is poorly developed with this combination of external factors. Thus, the indicators of university reporting based on monitoring results prove that, for example, in 15 of the 21 universities participating in the 5-top 100 project, the share of foreign professors did not exceed 5 percent, and in the remaining 6 universities there were more than 6. 5 percent. This is just a little, and the indicators of internationalization will drop significantly after recalculating the proportions including the "researchers" (they are statistically accounted separately from the scientific and pedagogical employees).

[1] Ministry of Science and Higher Education decided to track meetings of Russian researchers with foreigners. 14.08.2019. URL: https://www.rbc.ru/society/14/08/2019/5d53e60d9a79471f5c462313.

[2] Share of joint works of Russian and American researchers is the highest and constitutes 8.7 percent in the total amount of articles by the Russian authors, 8.1 percent with German colleagues, 5.1 percent with French and 4.7 percent with British colleagues. *Source*: Russian science by numbers /*V.V. Vlasova, L.M. Gokhberg, E.L. Dyachenko et al.* National Research University "Higher School of Economics". – M.: NRU HSE, 2018. p. 13. URL: https://issek.hse.ru/mirror/pubs/share/215179745.

[3] *E. Molokanov*. Laboratories under lock and key // Kommersant, 18.03.2019. URL: https://www.kommersant.ru/doc/3910236.

[4] *G. Taltaev*. US authorities demanded reports on contacts with Russia and China from universities //RBC, 20.11.2019. URL: https://www.rbc.ru/politics/20/11/2019/5dd575af9a7947234bf2dd98.

It has to be taken into consideration that it is rather difficult to interpret the presented data, as one indicator comprises those who arrived for 3–4 months as well as others performing a long term, at least one-year contracts. These foreigners are totally different, they differ by depth of immersion in Russian science and, apparently, by different effects from their work. It is also important to note that the invitation of foreign specialists to work in research institutes and universities is still exclusive and is not part of the routine hiring policy. For example, the mega-grant program, assuming work of foreign researchers in Russia for 4 months a year (3 months from 2019), indicates that even having special and generous funding, we are talking only about short-term visits of foreign researchers to Russia, and the hiring contractual multiyear process adopted by the developed countries is not discussed as a possible mass procedure.

The evaluation of projects results involving foreign partners becomes relevant. An independent study held in the end of 2019, aimed to assess results of research benefiting from mega-grants issued between 2010–2017, based on exemplary laboratories of a physical and biological profile, showed that only about 20 percent managed to publish more articles than efficient Russian laboratories. At the same time, in about a quarter of laboratories, productivity was lower than that of the average effective Russian scientific group in the field of natural sciences[1]. After mega-grant expiry, only about one third of laboratories continued cooperation with the guest leader, while active teams received new funding aimed at mutual cooperation after mega-grant expiry[2]. There was a critical observation made in respect of mega-grants that were largely won by teams that were quite successful in obtaining financing, but this did not provide an equally high level of results. It is true that there are arguments being debated abroad that it is wrong to estimate academic results by volumes of attracted funding, since such an indicator is toxic, and researchers spend more time writing applications and projects[3], which distracts from actual researching.

There is also an internal problem of internationalization: if the academic teaching staff lacks knowledge of foreign languages, has no publications in foreign journals and not presenting at the international conferences, this is a sign of autarchy rather than the impact of external constraints. The NRU HSE monitoring of the economics of education conducted in 2019, showed that only around 10 percent of the universities teaching staff has a good command of a foreign language (according to self-assessment) and nearly 15 percent are well enough. This is a very small part of the scientific and educational community[4]. However, despite the significant increase in the number of those who began to publish scientific articles, only 13.5 percent have publications abroad, and very few, 4.5, speak at international conferences[5]. By all means, financial factors restrict participation in international conferences, but they cannot solely justify such a low representation of Russian scientists at international scientific events.

The pandemic will inevitably reduce the intensity of international relations due to the transition to online modes. In turn, this can become a catalyst for changing the formats of

[1] *G. Tsirlina, M. Feygelman., E. Malinkina*. In the wake of mega grants-1 //Troitsky variant-Science, 2019, № 294, 24.12.2019. p. 2. URL: https://trv-science.ru/2019/12/24/po-sledam-megagrantov-1/.
[2] *G. Tsirlina, M. Feygelman., E. Malinkina*. In the wake of mega grants-2 //Troitsky variant-Science, 2020, № 295, 14.01.2020 г. С. 4. URL: https://trv-science.ru/2020/01/14/po-sledam-megagrantov-2/.
[3] A call for funders to ban institutions that use grant capture targets. 20 July 2019. URL: http://deevybee.blogspot.com/2019/07/a-call-for-funders-to-ban-institutions.html.
[4] *V. Rudakov, Y. Roschina, L. Bitokova*. Change of strategies, motivations and economic behavior of students and teaches of the Russian universities. Information bulletin. – Moscow: National Research University "Higher School of Economics", 2019. (Monitoring of the economics of education; № 1 (133)). p. 11.
[5] Ibid, p. 16.

international conferences, with a tendency to move from multi-thousand symposia and forums to more local thematic conferences.

The events dating back to the beginning of 2020 also show that countries began to isolate from each other and work on their own instead of joining scientific efforts striving to find solutions to fight against coronavirus.

This turned out to be especially typical for the USA and EU countries. The consequences of this policy can have long-term effects in terms of declining trust and challenges to get cooperative ties back on track.

The net effect is that the balance of incentives (financial and administrative) and barriers is not yet in favor of expanding international cooperation.

6.4.9. Innovation activity

The technological innovation pattern has not changed significantly compared to the previous year, however, according to a number of parameters it has more likely deteriorated. Thus, Russia retained its 46th place (out of 129 countries) in the Global Innovation Index, but the balance of "resources-results" has shifted in favor of resources. According to the indicator of resources invested in the development of innovations, the country moved up from 43rd to 41st place, and in terms of innovation activity results fell from 56th to 59th place. Thus, with an increase in the volume of resources invested in the development of innovations, the output in the form of concrete results decreases.

The institutes remain the weakest points of Russian innovation system, i.e. legislative platform, political stability, performance regulator, rule of law and infrastructure including compliance with ecological standards[1].

Public funds kept replacing private ones. If public venture capital investments grew by 60 percent compared to the previous year, private ones almost halved (with their initially substantially smaller size)[2]. Among the state investors, the most active were the Russian Direct Investment Fund (RDI) and the Russian Venture Company (RVC). The fall of foreign investment in venture projects was the most dramatic decreasing by 7 times over one year (from RUB 12.6 billion in 2018 to RUB 1.8 billion in 2019).

Not surprisingly, enterprises, especially major ones, kept aiming at budgetary innovation, i.e. development of technological innovations at the expense of state funds. A survey conducted by NRU HSE among the leaders of 545 enterprises in high-tech industries showed that targeted subsidies in the framework of state and federal targeted programs were the most popular among companies of all sizes. The second most important measures related to non-financial support, such as information and state advisory support.

Herewith, large and medium-sized companies expressed their interest towards non-financial support more often than small businesses, although most of these tools have been developed with the aim to support the sector of small innovative entrepreneurship. Finally, the third priority measure is again the state funding distributed only through state development

[1] *V.V. Vlasova, V.A. Rud*. Global Innovation index-2019 // Science. Technologies. Innovations. Express-information. NRU HSE, 24.07.2019. URL: https://issek.hse.ru/data/2019/07/24/1481487665/NTI_N_137_24072019.pdf.

[2] Who invested in startups in 2019 and how much // Inc. 18.12.2019. URL:https://incrussia.ru/understand/vc-2019/.

institutions[1]. It is noteworthy that among large companies there was the largest share of those that used instruments of state support: 72 percent versus 45 percent (medium-sized companies) and 42 percent (small businesses). Another research "Startup barometer 2019" partially explains this result. Reportedly, 39 percent of startups are disappointed about the instruments of state support, including through development institutions, as according to their arguments, they do not get any tangible benefit[2].

Moreover, the number of instruments suggested by state development institutions is growing. Thus, last year, RBC announced new initiatives aimed at enterprises participating in the implementation of the National technological initiative. For these purposes, various "support packages" are suggested depending on the type and the focus of enterprises. Among them there is a program focused on support, to be provided to high export capacity companies. Its participants will benefit from grants and subsidized interest rate on loans as well as non-financial assistance. Another program focuses on major enterprises creating spin off, and they will be stimulated by a subsidized interest rate on loans and a number of non-financial measures. At the same time, the RBC management underlined that the main accent will be in favor of supporting those enterprises that are not only export-oriented but also capable to win considerable proportions at global markets[3].

As has been demonstrated globally, focusing on export-oriented high-tech business aimed at economic development has been justified. However, companies of this particular category mostly depend on imports in Russia: for example, dependence on imported parts and elements is typical for 82 percent of enterprises, machinery and equipment for 70 percent, foreign technological solutions for 68 percent[4]. Respectively, debates on the benefit and harm of import dependence and import phase-out are not abating. Dependence on imports helps to improve quality and competitiveness of enterprises. Imports phase-out results in losing competitiveness because, as a rule, it is a challenge to make a substituted product of the same or better quality. An oft-repeated counter-argument is that dependence on imports threatens the national security, raises vulnerability, especially for defensive applications. However, the issue is more in the discussion zone, since it is extremely difficult to change the situation substantially.

Moreover, along with the introduction of new programs for enterprises participating in the National Technological Initiative (NTI), the Government of the Russian Federation issued the Decree restricting to transfer technologies developed with public funds to foreign legal entities and Russian legal entities with the share of foreign participation in the authorized capital amounting to over 50 percent[5]. In case of violation of this requirement, all public funds must be returned to the budget, and, in addition, violators pay a fine.

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[1] *V.V. Vlasova, T.E. Kuznetsova, V.A. Rud*. Demand for instruments of state innovation policy from high – tech industry enterprises //Science. Technologies. Innovations. Express-information. NRU HSE 04.07.2019
. URL: https://issek.hse.ru/data/2019/07/04/1477949063/NTI_N_134_04072019.pdf.

[2] *P. Smertina*. Nobody will help startup. //Vedomosti,05.2019. p. 15.

[3] RBC will provide business with up to RUB 500 million to support developing NTI projects //TASS, 28.05.2019. URL: https://nauka.tass.ru/nauka/6478839.

[4] *A. Fedyunina, Y. Averianova*. To buy and then sell // Expert, № 39, 2019. p. 19. URL: https://expert.ru/expert/2019/39/kupit-chtobyi-prodat/.

[5] Decree by the Government of the Russian Federation of August 31, 2019. № 1125 "On amendments to paragraph 5 of the Rules on provision of federal budget subsidies to implement projects aimed at fulfilment of plans of actions ("road maps") of the National Technological Initiative". URL: http://publication.pravo.gov.ru/Document/View/0001201909030002.

On the one hand, this restriction is explainable, it was imposed in order to prevent leakage of new technologies, as such situations already happened in the course of the NTI projects implementation. On the other hand, the concept of technology transfer to foreign countries is very vague and, due to the interpretation ambiguity, it can represent a certain ban on close cooperation with international partners. This becomes an incentive to transform companies under jurisdiction of other countries.

A massive outflow of IT companies from the country started already in 2019 beyond those companies under the National Technological Initiative. Thus, the Conundrum[1] was casted as British company, the Parallels merged with the Canadian corporation Corel, and the Luxoft moved under control of the American IT corporation DXC Technology. However, the Russian IT market players noted that acquisitions were anyway better than a massive immigration of programmers.

The Huawei also had plans to take over a number of Russian enterprises and launched a more active cooperation with Russia in the previous year in R&D, especially when the USA have introduced anti-Russian sanctions. Meanwhile, the pandemic can contribute to creation of new Russian high-tech services dealing with development of online-services including for distance work, holding meetings and conferences. Deterioration in the quality of communication, including video, with a high number of users was a large technical issue[2].

The government implemented selective measures under state policy aimed at Russia's technological development. Two major projects have a special place among them: the introduction of the National strategy of the artificial intelligence development until 2030 and launching of technological valleys after adoption of the respective Governmental Decree having been prepared in 2019 with varying intensity.

There were initial plans to develop technologies of artificial intelligence (AI) as one of the priority trends of the National Project "Digital economy", however, in 2019 the AI has actually turned into a separately addressed topic. In this case, Russia is not an exception, as strategies of the artificial intelligence development have been adopted in various countries since 2013–2014. Currently, this topic is fashionable and hype, but at the same time it is one of the strong competencies of domestic scientists and technologists. Generally, there is a limited number of areas, where Russian exports exceed imports, and the most dynamic one is the IT industry. Exports have exceeded domestic sales in this area over several years in a row[3]. The artificial intelligence, information security, mobile applications, VR/AR, workflow solutions have been recognized as the most successful trends.

In the context of the science development, the AI Development Strategy indicates priority areas described specifically and precisely (for example, autonomous self-education, autonomous decomposition of complex tasks, algorithmic simulation of biological decision-making systems, etc.). At the same time, support measures are listed in the most general form and basically repeat those already existing in the country (stimulation of attracting investments, implementation of interdisciplinary projects, conducting patent research, etc.).

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[1] The company introduces programming solutions preventing break down of sophisticated equipment at large international enterprises.

[2] *A. Cochran*. Making a Plan When Planning Is Impossible // The Scholarly Kitchen, 11.03.2020. https://scholarlykitchen.sspnet.org/2020/03/11/making-a-plan-when-planning-is-impossible/?fbclid=IwAR3ITeD5dP996CwXIAw1P2xICmeAiZh2rGNKg7wWgxts-oM3ACSZFgBQrYA

[3] *A. Grammatchikov*. Soft under pressure/Expert, № 41, 07.10.2019. p. 9. URL: https://expert.ru/expert/2019/41/soft-pod-davleniem/.

The only innovation is the "priority long-term support for scientific research in the field of artificial intelligence" [1], raising the subject of AI in the rank of financial rather than simply strategic priority. There are good reasons for this, as Russia's scientific success in this field is modest compared to the country's share in scientific articles on this subject worth about 1 percent. The world AI leaders in researching of artificial intelligence are China and the United States. A similar situation is still observed in the technological field: in Russia there are only 17 enterprises operating in the field of AI, while in the USA there are more than 2 thousand with more than 1 thousand in China[2].

There are plans to use indicators to evaluate the AI scientific achievements not only related to number of publications as well as their citation, the number of registered results of intellectual activity and developed technological practical solutions. Thus, the Strategy for the development of AI in terms of basic and applied research is a more elaborated and innovative document than the Strategy for the scientific and technological development of Russia. It is not excluded that this is the result of the active business involvement in its development.

Finally, a new infrastructural project, that is, the creation of technological valleys, started last year. The Decree by the Government of the Russian Federation on establishment of the MSU innovation- technological center "Vorobievy Gory"[3] was signed in March kicking start to initiate technological valleys projects. Basically, these valleys are analogues of the "Skolkovo" innovation center models. They also represent various tax and customs privileges, introduce rules and standards regulating certain activities, i.e. city-planning, medical, educational. The MUS valley has a rather comprehensive business profile and will be focused mainly on basic scientific research and design engineering. However, more targeted valleys can be launched, and their first precedent was the "Composite valley" in Tula region, oriented to create technologies for composite materials and pilot productions[4]. In December 2019, the Prime-Minister has approved the foundation of another valley, that is, the Scientific-technological center "Mendeleev valley" with the main focus on agritechnology and chemical technologies[5].

On the other hand, "Skolkovo" innovation center became extra-territorial in 2019, meaning that the requirement to register the company (legal entity) on the center premises will be lifted. Thus, any Russian companies involved in research and commercialization of their results will receive an access towards services and facilities. Another amendment is renouncing thematic constraints. Previously, companies had to specialize in one of the six highlighted trends, while now research should meet the priorities of the Strategy of scientific/technological development of the Russian[6], which has a very broad language. This means that "Skolkovo" becomes the

[1] National strategy of the artificial intelligence development till 2030. Approved by the Executive Order of the President of the Russian Federation of October 10, 2019. № 490. URL: https://www.garant.ru/products/ipo/prime/doc/72738946/.

[2] *N. Ulyanov*. How to stop living as someone else//Expert, № 24, 10.06.2019. URL: https://expert.ru/expert/2019/24/kak-perestat-zhit-chuzhim-umom/.

[3] Decree of the Government of the Russian Federation on establishment of scientific-technological center "Innovation scientific-technological center MSU "Vorobyevy gory" of 28.03.2019. № 332. URL: http://static.government.ru/media/files/6HVZbMfi2ZpV4C42K4Wl9MYeQBLDUPJD.pdf.

[4] *A. Mekhanik*. Long will projects // Stimuli. Journal on innovations. 26.08.2019. URL: https://stimul.online/articles/interview/proekty-dlinnoy-voli/.

[5] Decision taken on establishment of innovation-technological center "Mendeleev valley". 26.12.2019. URL: http://government.ru/docs/38685/.

[6] *E. Erokhina*. Towards the interior of Russia and vastitude of opportunities: how "Skolkovo" will now operate // Indicator, 26.07.2019. URL: https://indicator.ru/engineering-science/skolkovo-novyi-zakon.htm.

increasingly self-developing commercial center added by new territorially specialized models, borrowing a number of facilities offered by "Skolkovo". Essentially, this trend of development should make the infrastructure of technological companies more comfortable due to its diversification.

* * *

The previous year showed relatively high government activity with regard to implementation of the May RF Presidential Executive Orders (2018) particularly concerning the development of science, and the activity of the Ministry of Science and Higher Education expressly focused on the implementation of NP "Science". Inside NP "Science", the greatest attention was paid to the development of Scientific and educational centers as a complex project for combining policies and federal and regional measures. The REC topic is interesting from two points of view. The first is that the REC means another reincarnation of scientific-educational, academic-research and other centers of that kind that have been launched over the past 20 years. The new project is much larger in terms of the diversity of participants and is more focused on the contribution of scientific research to the economic development of Russia.

The second view is that the bid for the first time was made for regional administrations as mediators of interaction between the scientific-educational and real sectors of the economy. If implemented successfully, this project can become a catalyst for the deployment of various regional scientific-technological policies, being currently rather weak. The first five RECs set up in 2019 were special because their selection was made in the "manual mode", without competition. Such an approach can be justified in case those, who take decision on selection, clearly understand what they want to get in the end.

The outbreak of the coronavirus pandemic may affect the choice of topics for those centers that will be founded in 2020. In addition, the transition from monopolistic activities on specific topics in virology and epidemiology to the deployment of a parallel search for solutions to combat the "global challenge" has already started. To organize effective work, it is needed to partially resuscitate the Soviet science management skills, which would allow to mobilize substantial resources for solving the urgent scientific problem in a short time.

However, this solution is applicable only for emergency.

In the normal course of events, effective science develops in favorable environment rather than under mobilization model of support. So far, the issues related to the development of the environment evidently stall, and last year, there has actually been a rollback to the prohibitive style of regulation. The reorganization of scientific funds exhibited the backstage style of management. There was no wide discussion of the planned transformations and, most importantly, no justified arguments, why such a reorganization was needed in principle.

The situation in the field of technological innovations is more clear, i.e. there is a focused success, major unresolved problems associated with the development of new environment that would favor creation of new technologies. Despite highly specialized measures, it can be said that government policy becomes more systemic, attempting to tackle various aspects of developing this environment. As an example, there are infrastructural projects added by mechanisms already in place. At the same time, the dynamics of changes in technological environment shows instability with more efforts aimed at coordination of political measures rather than only at development of new signature projects.

6.5. Customs administration: novation of 2019[1]

In the World Bank's latest "Doing Business – 2020" rating, the Russian Federation is rated again the 99th as regards the "Trading across borders" line, while in the overall rating Russia moves steadily upwards from year to year, having attained the 28th place.[2]

However, 2019 saw important IT-related changes in customs clearance procedures of Russia's customs administration.

To begin with, a switchover to customs declaration at customs terminals – e-declaration centers (EDC) – took place in 2019. Out of planned 16 EDCs, 12 EDCs, which registered over 67% of all customs declarations submitted to Russia's customs authorities, were established. The EDC's goods declaration technology suggests the division between the documentary audit and actual examination of goods. A customs declaration is submitted to EDC and, in case of need of an audit by EDC, additional documents and information are requested, while a customs authority in the region where the goods are actually stored (a seaport, airport or temporary storage warehouse) carries out an inspection or examination of goods. The automatic registration of customs declarations of foreign trade operators and automatic release of goods without customs officials' involvement in customs formalities are actively gaining momentum. On December 17, 2019, at the joint meeting of the RF Federal Customs Service's Public Council and Expert-Advisory Council on Customs Policy Implementation Vladimir Bulavin, Head of the RF Federal Customs Service declared that according to the preliminary results of 2019 2.4 million customs declarations were registered automatically and 560,000 consignments of goods released without customs officials' involvement done on the basis of computer processing of the data indicated in declarations. The abovementioned activities were envisaged by the Comprehensive Program for the Development of the RF Federal Customs Service in the Period till 2020[3] adopted by the Resolution of May 25, 2017 of the Collegium of the RF Federal Customs Service.

Another important event of 2019 was a switchover of foreign trade operators to the customs duty payment technology based on the use of single individual accounts. The work of the RF Federal Customs Service on introduction of the single resource of individual accounts of payers of customs duties and other payments to be charged by customs authorities, customs representatives, as well as other persons carrying out payment of funds to the RF Federal Treasury with application of the "Individual Accounts – Single Individual Account (SIA)" comprehensive software system started as far back as 2013 when by the order of the RF Federal Customs Service the Concept of Centralization of Accounting of Customs Duty and Other Payments and Maintenance of a Foreign Trade Operator's Single Individual Account was approved.[4] In 2019, the customs duty payment system with utilization of a single individual account started to be applied broadly. Prior to the introduction of the centralized system of single individual accounts, cash funds which were deposited by foreign trade operators and their customs representatives for payment of customs duties were related with the specific customs authority which was carrying out administration of customs payments depending on

[1] This section was written by *Balandina G.V.,* Senior Researcher of the Macroeconomic Studies Department, Gaidar Institute, RANEPA.
[2] URL: https://www.doingbusiness.org/
[3] URL: http://customs.ru/activity/programmy-razvitiya/razvitie-2020
[4] Order No.1407 of July 30, 2013 of the RF Federal Customs Service (as amended on February 12, 2016) "On Approval of the Concept of Centralization of Accounting of Customs Duties and Other Payments and Maintenance of the Single Individual Account of the Foreign Trade Operator."

the place of customs declaration of goods. If customs clearance was carried out by a foreign trade operator at different customs authorities (for example, a portion of goods was brought into the country by sea, while the other, by motor transport), it was required to deposit funds timely to pay customs duties to different customs authorities and keep a record of each opened account. The funds deposited into such an account maintained with one customs authority could not be used for paying customs duties to the other customs authority. With a single individual account introduced, it is feasible to direct funds for payment of customs duties to a single centralized account regardless of the customs authority carrying out customs clearance. Though advance customs duty payments which are virtually an additional financial burden on foreign trade operators prevail and, as a consequence, there is much room for customs administration upgrading, yet, it is to be recognized that the RF Federal Customs Service has succeeded in creating the maximum comfortable customs duty payment service in the existing conditions.

In 2019, foreign trade operators' capabilities largely increased in networking with customs authorities with utilization of the "Foreign Trade Operator's Personal Account" information resource. The personal account makes it feasible to carry out e-declaration of goods, build up an e-archive of documents and data required for customs clearance, carry out advance notification, have the information on availability of permit goods transfer documents issued by other federal executive authorities, receive the information on the flow of funds in the single individual account and overdue customs payments, submit to customs authorities reports on goods if the requirement to provide such reports is established by the customs legislation and receive preliminary decisions on the classification of goods in accordance with FEACN. Certified hard copies of e-customs declarations printed out from the foreign trade operator's personal account are accepted by tax authorities for confirmation of eligibility of a 0% VAT rate or a VAT rebate to be applied in exporting and importing of goods, respectively.

By Executive Order No.204 of May 7, 2018 of the President of the Russian Federation "On National Goals and Strategic Development Objectives of the Russian Federation in the Period till 2024", a task was set to achieve export volumes (in value terms) of non-primary and non-energy goods in the amount of USD 250 billion per year, including USD 50 billion worth of machinery exports and USD 45 billion worth of agricultural exports, as well as USD 100 billion worth of services exports, including by means of reduction of administrative procedures and barriers in the international trade, particularly, the cancellation of excessive requirements in licensing of exports and foreign exchange control and organization of networking between international trade entities with supervising authorities on the basis of the "one contact" principle.

The Russian Export Center's (REC) plans of development and implementation of the "one contact" mechanism[1] as regards networking between foreign trade operators and exporters cause some concern with the RF Federal Customs Service and foreign trade operators. In the presented plans, the REC sees its place as an information and technical intermediary between exporters and supervising authorities with the capacity of examining (verifying) documents and data to be submitted by foreign trade operators. The business sees here high risks related with possible financial costs, commercial data leaks, system failures and delays in submission of documents (information) that may result in penalties being imposed by customs and tax authorities.

[1] URL: https://www.exportcenter.ru/press_center/news/sistema-rets-odno-okno-pozvolit-eksporteram-operativno-otchityvatsya-po-valyutnym-operatsiyam/

At the same time, in spite of the declared plans[1] in 2019 there was actually no progress made in formation of the "one-stop shop", which mechanism suggests just a single provision of the electronic format data to all supervising authorities for carrying out control over the cross-border flow of export, import and transit goods.

In a shorter form, the mechanism of the "one-stop shop" with the use of the "Seaport" Web portal was implemented at entry points of the free port of Vladivostok[2], as well as the seaports of the Kaliningrad Region and the Leningrad Region. A complex of software products facilitates the information exchange between foreign trade operators, seaport services, customs and other supervising authorities. The Web portal unites representatives of the RF Federal Customs Service, Rospotrebnadzor, Rosselkhoznadzor, the Border Guard Service of the Federal Security Service of the Russian Federation, importers of goods, ships' agents and maritime port authorities which network by means of electronically signed e-documents. It is expected that prior to a port call, the supervising authorities can already start checking the information on the vessel and transported goods, so, as it is known from the experience of other countries using the "one-stop shop" mechanism, the time of keeping goods at a seaport can be largely reduced without the reliability of state supervision being impaired.

The concurrent development of two mechanisms – "one contact" and "one-stop shop" – based on different approaches, but aimed at solving one and the same objective, that is, to cut foreign trade operators' time and financial costs related with administrative formalities in cross-border transfer of goods requires from the RF Government to make a choice between the two models of state control organization based on information networking of supervising authorities, foreign trade operators, transportation carriers and other persons engaged in supply chains. With taking into account the notable progress made by supervising authorities and funds invested in development of e-technologies of networking between them, as well as the authorities and interested persons, preference is likely to be made to development of the "one-stop shop" mechanism with substantial promotion of the role of the RF Federal Customs Service as the coordinator of such networking and integrator of all data submitted to various state authorities in transferring of goods and transport vehicles across the customs border.

In 2019, the customs administration legal base was further updated due to the fact that from January 1, 2018 the Customs Code of the Eurasian Economic Union and the Federal Law of August 3, 2018 "On Customs Regulation and Amendment of Individual Statutory Acts of the Russian Federation" came into effect. In 2019 alone, several dozens of laws and regulations of the Eurasian Economic Commission, the RF Government, the RF Ministry of Finance and the RF Federal Customs Service putting into effect the reference rules of these fundamental legal instruments regulating customs procedures were approved.

Overall, the adopted regulations bring the customs administration more in harmony with the supervising model based on the utilization of the systems of accounting of foreign trade operators, introduction of general guarantees of payment of customs duties and carrying out of the post audit (customs check after the release of goods); upgrade the transparency of the

[1] Resolution No.68 of May 29, 2014 of the Supreme Eurasian Economic Council "On the Main Guidelines for Development of the "One-Stop Shop" Mechanism in the System of Regulation of Foreign Economic Activities"; Resolution No.19 of May 8, 2015 of the Supreme Eurasian Economic Council "On the Plan of Actions to Implement the Main Guidelines for Development of the "One-Stop Shop" Mechanism in the System of Regulation of Foreign Economic Activities"; Resolution No.52 of May 28, 2019 of the Supreme Eurasian Economic Council "On the Detailed Plan for 2019 on Implementation of the Plan of Actions to Carry out the Main Guidelines for Development of the "One-Stop Shop" Mechanism in the System of Regulation of Foreign Economic Activities."

[2] In accordance with Article 22 (4) of Federal Law No.212-FZ of July 13, 2015 "On the Free Port of Vladivostok."

requirements as regards the classification of goods in accordance with FEACN, identification of the country of origin and estimation of the customs value which are the main criteria in determining the amount of customs duties in importing and exporting of goods; exclude excessive demands as regards multiple provision of one and the same information at different stages of customs clearance of the same goods.

For example, in Order No.104[1] of January 28, 2019 of the RF Federal Customs Service the form of the certificate of inspection of the system of accounting of goods by customs-related officials (customs representatives and owners of temporary storage warehouses and customs warehouses), authorized economic operators and persons owning and using goods undergoing customs clearance procedures envisaging inventory accounting, which suggests utilization of the data of the system of accounting of importers and other persons for customs clearance purposes, was approved.

Resolution No. 1005[2] of August 2, 2019 of the Government of the Russian Federation sets the rules of application of the general guarantee for the payment of customs duties; in compliance with these rules the sum of provided financial guarantees for the payment of customs duties on all obligations to customs authorities can be 5% lower than the prospective amount of the debt on customs payments in carrying out of transit operations. This advantage can be taken only by companies whose charter capital is minimum RUB 100 million and if they meet other applicable requirements. Though, as compared with the terms of provision of global guarantees in other countries, these rules yield an insignificant advantage (for example, the EU legislation in respect of persons meeting the applicable requirements provides for the reduction of the size of the global guarantee by 30%, 50% or even 100% as compared with the sum of the customs debt and not only in case of a transit operation[3] alone), the first step was made towards utilization of the analysis of risks of evasion of customs duty payments in determining the size of the global guarantee.

Regulations were approved on setting the procedure for application of the fall-back method of assessing the customs value of goods[4] (method 6), which is most commonly used in adjusting the customs value; the procedure for renewal of tariff preferences[5]; the procedure for applying FEACN classification codes in respect of some goods on which disputes may arise as regards classification thereof in declaring.[6]

[1] Order No.104 of January 28, 2019 of the RF Federal Customs Service "On Approval of the Form of the Certificate of Inspection of the Existence of the System of Accounting of Goods and Maintenance of the Record Keeping of Goods, Procedure for Completing It and Introduction of Changes (Additions) in Such a Certificate."
[2] Resolution No. 1005 of August 2, 2019 of the RF Government "On the Procedure for Applying General Guarantee for Fulfillment of Obligations as Regards Payment of Customs Duties and Taxes Provided that All Customs Clearance Operations are Carried Out in the Territory of the Russian Federation and Identification of Cases and Conditions, in Which the Total Amount of Customs Duties, Taxes and Payment Obligations Secured by Such a General Guarantee Exceeds the Size of the General Guarantee and the Limits of Such an Overrun."
[3] Article 84 of the EU Commission's Regulation 2015/2446. URL: http://data.europa.eu/eli/reg_del/2015/2015/oj
[4] Resolution No.138 of August 6 of 2019 of the Collegium of the Eurasian Economic Commission "On Application of the Fall-Back Method (Method 6) in Estimating the Customs Value of Goods."
[5] Resolution No.64 of February 22, 2019 of the Council of the Eurasian Economic Commission "On Establishment of Cases and Conditions of Renewal of Tariff Preferences."
[6] Order No.28 of January 14, 2019 of the RF Federal Customs Service "On Classification of Individual Goods in Compliance with the Eurasian Economic Union's Foreign Economic Activity Commodity Nomenclature."

Order No. 541[1] of April 1, 2019 of the RF Federal Customs Service defines the rules of utilization of the "Seaport" Web portal's software for the receipt and processing of the electronic information and documents at the arrival and departure of sea vessels at harbor border crossing points. Plans call for preliminary (prior to a sea vessel's arrival) analysis of the information both on the vehicle and transported goods, as well as customs authorities' decision options to be taken on the basis of the findings of such an analysis, including the possibility of a preliminary permit to be granted for unloading the vessel or placing the transported goods under the transit customs clearance. It is arranged that the preliminary supplied information is used for transit customs clearance and temporary import (export) of vehicles. At the same time, it is not expected to use the preliminary e-information for carrying out other customs clearance operations (temporary storage and customs declaration). Also, no provision is made for by the abovementioned order in respect of the utilization of the "Seaport" Web portal for the exchange of e-information with other supervising authorities at harbor border crossing points.

Order No.150n[2] of September 20, 2019 of the RF Ministry of Finance sets the rules of carrying out customs clearance operations related either with registration of the goods declaration submitted in an electronic format or denial of such registration by means of the Single Automated Information System of Customs Authorities through formation of an e-document without customs officials' involvement. Order No.901[3] of June 3, 2019 of the Federal Customs Service sets the procedure for utilization of the personal account and organization of the exchange of e-documents and (or) data between customs authorities and customs applicants, freight carriers, persons engaging in customs clearance operations, approved economic operators, rights holders and other persons and defines the main guidelines for application of the "Personal Account" automated sub-system and the rules of granting interested persons an access to the sub-system's functional capabilities.

The role of the Public Council of the RF Federal Customs Service[4] as an authority carrying out public control and consulting networking between customs authorities and businesses over various aspects of customs administration has largely increased. The Public Council's meetings deal both with foreign trade operators' most topical issues in their day-to-day operations and customs authorities' strategic planning issues. In particular, in 2019 the introduction of new technologies of goods declaring via e-declaration centers (EDC) was discussed at the meetings of the Public Council. At the first stage of a switchover to new forms of networking between

[1] Order No.541 of April 1, 2019 of the Federal Customs Service "On Approval of the Technology of Customs Clearance Operations in Respect of Vessels Used for Merchant Shipping Purposes, as Well as Goods and Transport Vehicles, which Move Across the Customs Border of the Eurasian Economic Union with Utilization of the Single Automated Information System of Customs Authorities and Recognition as Inapplicable Order No.892 of September 12, 2001 of the State Customs Committee of Russia "On Approval of the Guidelines for Customs Clearance and Customs Inspection of Vessels Used for Merchant Shipping Purposes, as Well as Goods Transferred by Those Vessels Across the Customs Border of the Russian Federation."

[2] Order No.150n of September 20, 2019 of the RF Ministry of Finance "On Approval of the Procedure for Carrying Out Customs Clearance Operations Related Either with Registration of Goods Declaration or Denial Thereof by Means of Customs Authorities' Information System."

[3] Order No.901 of June 3, 2019 of the RF Federal Customs Service "On Approval of the Procedure for Utilization of the Personal Account and Organization of the Exchange of E-Documents and (or) Data Between Customs Authorities and Customs Applicants, Freight Carriers, Persons Engaging in Customs Clearance, Authorized Economic Operators, Rights Holders and Other Persons, as Well as the Procedure for Receiving Access by Customs Applicants, Freight Carriers, Persons Carrying Out Customs Clearance, Authorized Economic Operators, Rights Holders and Other Persons to Personal Account."

[4] URL: http://www.osfts.ru/

customs authorities and foreign trade operators there were some failures that caused delays in registration of customs declarations and release of goods. Members of the Public Council were asked to take an active part in the debates and development of the draft of the "Strategy of Development of the RF Customs Service till 2030."

Another consulting venue between the business and state authorities to upgrade customs procedures is the Customs Administration Expert Panel working within the framework of the Business Climate Transformation activities.[1] The plan of actions which is regularly updated at least twice a year is aimed at solving the following objectives:

– create conditions for speeding up a switchover to electronic exchange of documents between foreign trade operators and state supervising authorities;

– upgrade efficiency of utilization by state supervising authorities of the risk management system;

– cut the length of all customs clearance procedures related with import of goods and transport vehicles in the Russian Federation and export thereof out of the Russian Federation;

– reduce the share of the shadow volume of imported goods on the Russian market;

– promote attractiveness of seaports of the Russian Federation.

The Expert Panel's agenda includes the following issues: exclusion of duplication of the information provided in an electronic format or on hard copies, except for cases of identification of risks in respect of individual supplies in compliance with state supervising authorities' risk management system; switchover to electronic exchange of documents in carrying out border, customs and other types of control at all border entry points, as well as locations of customs clearance operations; legal regulation and introduction of random control operations in carrying out state federal veterinary checks both at the stage of arrival and the stage of release of goods in accordance with the declared customs procedure based on the risk-oriented approach in respect of goods which are subject to examination.

At the same time, despite substantial progress made in customs administration as regards introduction of information technologies in customs clearance procedures some disputable issues and unsolved problems remain.

Advance payment of customs duties and taxes is a non-tariff trade barrier and noninterest bearing financing by importers and exporters of the budget.[2] The updated customs legislation provides for a deferral of customs payments. In addition, the right to pay customs duties is actually granted to persons who are allowed to submit a customs declaration after the release of goods. At present, this category of persons includes only approved economic operators (AEO) (as of October 1, 2019 there were only 166 organizations attributed to AEO[3]), as well as those persons who engage in transferring across the border perishable goods, goods required for liquidation of the consequences of natural disasters and accidents and similar goods. The Eurasian Economic Commission is entrusted with the authorities to identify both categories of goods which can be released prior to the submission of the declaration and the criteria which persons responsible for the transfer of such goods have to comply with. Before these authorities

[1] Instruction No.20-r of January 17, 2019 of the RF Government (as amended on August 10, 2019). URL: http://economy.gov.ru/wps/wcm/connect/e608035d-3483-489b-b560-5cd4e2e85a34/20-р+от+17.01.2019+ТДК.pdf?MOD=AJPERES&CACHEID=e608035d-3483-489b-b560-5cd4e2e85a34

[2] In the classification of non-tariff measures by the United Nations Conference on Trade and Development (UNCTAD), a down payment request is attributed to financial non-tariff trade-restricting measures. See International classification of non-tariff measures. Geneva, United Nations, 2019. URL: https://unctad.org/en/PublicationsLibrary/ditctab2019d5_en.pdf, c.36

[3] URL: http://customs.ru/folder/720

start to be carried out in the territory of the Russian Federation, the RF Government has the right to determine such categories and criteria. However, a full-scale modification of customs administration technologies, such as postponement of customs payments till the release of goods, is not specified so far in the plans of the RF Ministry of Finance and the Federal Customs Service.

On December 28, 2018, the Concept of Establishment and Functioning in the Russian Federation of the System of Marking of Goods by Means of Identification and Movement Traceability Marks was approved by the Resolution of the RF Government.

In the Concept, "traceability of goods movement" means a complex of actions facilitating the registration of the movement of goods through a commodity distribution network from the date of identification marks or a check (identification) symbol being applied, as well as automated provision of legally important data on operations with a commodity unit and processing thereof by the state information system. The Concept envisages that the organization of marking of goods and tracing the movement thereof is based on the principle of expediency of marking in respect of the specific group of goods and the need to ensure the minimization of costs of participants engaged in merchandize turnover in case of marking.

By Resolution No.792-r of April 28, 2018 of the RF Government, a list of 11 commodity groups subject to mandatory identification marking starting from 2019 was approved. It includes the following: tobacco products (despite the existence of excise stamps), perfume and eau de toilette (despite special regulation of the turnover of the specified products in compliance with the legislation on the turnover of alcoholic beverages and alcohol-containing products), tiers and tire casings, genuine leather garment, jersey blouses, coats and jackets, bed-linen, footwear, cameras and dairy products. In addition, individual regulations set requirements in respect of marking of furs, precious metals, jewels and articles made thereof [1] and pharmaceuticals.[2]

The RF Chamber of Commerce and Industry has carried out a survey of industry business associations. Market participants' opinions have divided. For example, though the marking of pharmaceuticals is supported, it is stated that there are problems related with frequent modification of requirements and unavailability of the infrastructure.

Representatives of perfumery products refer to the fact that the market is already overregulated and the product turnover is controlled by Rosbotrebnadzor, Rosalkogolregulirovanie, Rosakkreditatsia and the RF Federal Customs Service. In addition, retail trade in such products is mainly carried out by small businesses and individual entrepreneurs which are quite sensitive to any additional costs.

Dairy product producers point justly to the fact that Rosselkhozdadzor already carries out the monitoring of traceability of products with the use of the Mercury monitoring system. They indicate that the cost of the barcode (50 kopeks) in the prime cost of each dairy product packing compared to the prime cost of a fur product and even a packet of cigarettes is by far higher.

Though Soyuzlegprom supports the idea of marking goods produced by the light industry as a measure of prevention of illegal imports and illegal goods turnover, it states that the industry, regulators and supervisors are unprepared for introduction of mandatory marking within the specified time-limits. Opinions of representatives of the shoe-making industry divided. However, they pointed out that problems were caused by the fact that requirements to marking were often modified and the system did not work smoothly.

[1] Resolution No.321 of March 24, 2018 of the Government of the Russian Federation "On Testing the Marking of Individual Types of Precious Metals, Jewels and Articled Made Thereof."
[2] Federal Law No.61-FZ of April 12, 2010 "On the Turnover of Pharmaceuticals."

Federal Law No.386-FZ of December 2, 2019 ratifies the Agreement on the Mechanism of Tracing of Goods Brought into the Customs Territory of the Eurasian Economic Union. In the abovementioned Agreement, "traceability" is already defined as organization of accounting of goods subject to traceability and operations related with turnover of such goods with national systems of product traceability used.

Resolution No.807 of June 25, 2019 of the RF Government "On Testing Traceability of Goods Produced in the Territory of the Russian Federation in Compliance with the Customs Procedure for Domestic Consumption Output" sets the main lines of ensuring traceability of goods on the basis of collection of the information on goods and utilization of the goods accounting data of participants engaged in goods turnover. For the sake of testing, three groups of commodities were selected: household appliances, baby carriages and some types of special equipment. The test findings will be available in 2020, but from international practice it is known that the analysis of information with utilization of modern information technologies can be much more effective than marking each unit of product.

A new situation emerged in the wake of the economic recession requires from the customs system a significant reduction of administrative interference into the process of entry and exit of goods amid retaining the level of the customs control reliability. The new conditions require, on the one hand, reduction of excessive costs incurred by businessmen involved in the foreign economic activity and, on the other hand, optimization of the customs clearance procedure excluding at maximum personal contract between the business representatives and controlling bodies reveal underegulated issues and shortfalls of the system.

Such measures are:

- measures aimed at speeding up goods clearance: transfer of the control measures (review of documents and information) to the stage after the goods clearance in the form of desk audits, reduction of cases of examination and inspection of goods where it is not due to stop goods banned or restricted to entry; put in place in customs, regional customs agencies and FCS of Russia 'hot lines' by way of phone and electronic communication where businessmen could lodge a complaint against the actions of customs checkpoint officers who delay goods clearance;
- completely avoid in customs operations the need to submit written applications by the foreign economic activity participants which require visiting customs bodies in order to obtain the required permissions in the form of a resolution by the corresponding official (for example, application to the name of the head of the customs body regarding a preliminary goods examination which are under customs control, on a temporary entry of reusable packaging, on extension of the timeline for customs transit, on submission of the license original on entry-exit of goods, etc.);
- remove from the customs bodies the functions to additionally change and charge VAT where on the results of customs control after the goods clearance the customs body decides to raise the amount of customs payments (needs introduction of amendments in the Tax Code of the Russian Federation and the Federal law "On Customs Regulation in the Russian Federation and on the Introduction of Amendments in Certain Legislative Acts of the Russian Federation."
- revision of administrative elements of violation and sanctions for their violation by replacing administrative penalties with administrative warning imposed in a simplified manner where a company admits a violation in case of small administrative violations;

– suspension of customs inspections, administrative proceedings on administrative violations for the period of imposition of restrictions for movements of individuals.

6.6. Russia in international economic institutions [1]

In 2019, the effects of geopolitical contradictions and increasing protectionism continued to influence the global economy, the Russian economy, the economies of our partner countries, and the current agendas of international institutions. The escalation of tensions undermines confidence across the business community and negatively affects investment activity. Investment growth in the G20 countries (China excluding) in 2019 dwindled to 1% (vs 5% in 2018). The growth rate of global trade fell to a record low since 2009 and amounted to 1%.[2] According to the estimates released by the IMF, the negative impact of trade conflicts between the US and China is going to push down global GDP, to 0.8% in in 2020.[3] Even in case of a favorable outcome of the tariff confrontation and the closure of the trade deal between China and the USA, the economies of China's trading partners (the EU, Japan, South Korea) can expect to experience some negative consequences as a result of changes in the trade flows.[4] The risks of a further slowdown in economic growth remain high, making obvious the need for collective action to restore confidence, strengthen inclusive growth, boost employment, and improve the well-being of citizens. The growing need for multilateral cooperation is also determined by the fact that digital transformation multiplies the cross-border effects of national policies, thus increasing the potential benefits of international cooperation, while at the same time also increasing the risks associated with failures in the operation of multilateral institutions. Under these conditions, Russia's priority is to build a positive agenda in global and regional economic organizations, as well as cooperation on risks monitoring, development of measures aimed at their prevention overcoming negative unanticipated consequences for the global economy.

6.6.1. G20 and BRICS

As before, one of Russia's key tasks in G20 and BRICS was to advance the elaboration of collective decisions aimed at promoting the reform of the WTO and the Doha Round of trade negotiations, overcoming the crisis in the Dispute Settlement Body (DSB), giving an impetus to new initiatives (on electronic commerce, simplification of the 'investment for development' procedures, and regulation in the services sector). According to the year-end results, it can be stated that there had been both successes and problems. On the one hand, the leaders of G20

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[2] OECD Economic Outlook. Vol. 2019. Iss. 2. URL: https://www.oecd-ilibrary.org/sites/9b89401b-en/1/2/1/index.html?itemId=/content/publication/9b89401b-en&_csp_=dfa9d861509505eac6168a6630ad633f&item IGO=oecd&itemContentType=book

[3] World Economic Outlook. October 2019. URL: https://www.imf.org/en/Publications/WEO/Issues/ 2019/10/21/World-Economic-Outlook-October-2019-Global-Manufacturing-Downturn-Rising-Trade-Barriers-48513

[4] Managed Trade: What Could be Possible Spillover Effects of a Potential Trade Agreement Between the U.S. and China? URL: https://www.imf.org/en/Publications/WP/Issues/2019/11/15/Managed-Trade-What-Could-be-Possible-Spillover-Effects-of-a-Potential-Trade-Agreement-48771?cid=em-COM-123-39738

and BRICS reaffirmed their desire to create a free, fair, non-discriminatory, transparent, predictable and stable trade and investment environment and to maintain open markets, as well as their willingness to support a reform of the WTO, including the adoption of measures designed to ensure proper functioning of the dispute settlement system.[1]

On the other hand, on November 22, 2019, at the meeting of the DSB of the WTO, the USA once again rejected the proposal of 117 WTO members, including Russia, BRICS, and the majority of G20 members, and so blocked the process of appointments and reappointments in the Appellate Body (WTOAB). The member states continue to introduce protectionist measures, which have already affected 8.8% of imports of G20 members[2]. The contradictions between developed and developing countries concerning the package of issues addressed by the Doha Development Round have been deepening.

In 2019, Russia continued to consistently promote a reform in the international financial and monetary system. Here, we can also observe both problems and achievements. In spite of the confirmation, by the leaders and ministers of finance of G20 members, of their obligation to complete the review of the IMF quota formula before the 2019 Annual Meetings, the 15th General Review of quotas did not result in any quota increase or adjustment of quotas in favor of the emerging markets and developing countries. At the 40th meeting of the International Monetary and Financial Committee in October 2019, the discussion of this issue was once again postponed until the next (16th) General Review of quotas, with the Review to be extended from 2020 to no later than December 2023. Meanwhile, the New Development Bank continued to strengthen, increasing its project portfolio[3] and opening new regional centers, including in 2020 in Russia. It was decided to expand the membership of the NDB. The preparations for the operational activities of its contingent reserve (the pool of foreign exchange) are nearing completion; these will involve the provision of funds to the member states, including cashing out without a stabilization program agreed upon with the IMF. These decisions are significant. The new institutions function as additional development and insurance mechanisms for the five countries. It is also important that they exert pressure in favor of more active reforming of the existing system.

Russia pays special attention to cooperation in the field of 'making use of the full potential of the digital economy as a tool designed to ensure the well-being of people and global development based on the principles of sustainability and inclusiveness.'[4] To achieve this end, it is necessary that the State, despite the 'race for technological superiority'[5], should develop some common approaches that ensure collective regulation and increase the level of trust. The process is evolving with difficulties, but there is still some progress in a number of areas. In

[1] G20 Osaka Leaders' Declaration. Paragraph 6. URL: https://www.ranepa.ru/images/News_ciir/Project/G20_new_downloadings/OSAKA_DECLARATION_rus.pdf; 11th BRICS Summit Brasilia Declaration. Paragraphs 26–28. URL: https://www.ranepa.ru/images/News_ciir/Project/BRICS_new_downloadings/2019/11th_BRICS_Summit_rus.pdf

[2] Reports on G20 Trade and Investment Measures. Mid-May to Mid-October 2019. URL: https://www.wto.org/english/news_e/news19_e/g20_joint_summary_nov19_e.pdf

[3] The Bank has approved the provision of financing for 49 projects in the field of infrastructure in the total amount of about USD 14 billion.

[4] Report by Svetlana Lukash at the International Scientific Conference 'Globalization 4.0, Changing World Order and the Future of Global Economic Governance.' URL: https://www.ranepa.ru/images/News_ciir/news/conf_2019/3-4_October/Svetlana_Lukash_rus.pdf

[5] The Global Race for Technological Superiority. URL: https://www.ispionline.it/sites/default/files/pubblicazioni/ispi_cybsec_2019_web2.pdf#page=7

2019, in the framework of implementing the Action Plan on Base Erosion and Profit Shifting (BEPS), G20 approved the OECD proposals for the development, by 2020, of a coordinated approach to taxation rules in the digital economy. It is necessary to formulate the principles and methods for determining, distributing and administering the 'power to tax' in a situation where the 'market jurisdiction' (the country in which clients of a business entity are situated) may be spread across several countries, and not reduced to the country where the business entity is permanently established. In the Osaka Declaration, the leaders of G20 reaffirmed the need to continue the dialogue on security issues in the digital economy and to bridge the digital divide, and supported the G20 AI Principles based on the OECD Recommendation on Artificial Intelligence.[1] The BRICS members adopted the Work Plan for the BRICS Partnership on the New Industrial Revolution, embarked on the implementation of the BRICS Roadmap of Practical Cooperation on Ensuring Security in the Use of ICTs, and confirmed the importance of creating a legal framework for BRICS cooperation in this area. Russia's proposal concerning an appropriate BRICS intergovernmental agreement on cooperation in the use of ICT has not yet found full support,[2] but this work will continue as part of Russia's upcoming BRICS chairmanship in 2020. Development of digital technologies and solutions for raising efficiency, sustainability and potential of health care systems to rapidly react to urgent situations will take an important place in the BRICS and G-20 schedule.

6.6.2. International financial institutions

Within the IMF, Russia, having a creditor status, continued to participate in various mechanisms and operations stipulated in the relevant articles of the IMF agreement, including the participation in the New Arrangements to Borrow (extended until November 16, 2022), with the volume of potential obligations of the Russian Federation under the agreement not exceeding SDR 4,440.91 million, and in the bilateral borrowing agreement until December 31, 2019 (with the possibility of extending it until December 31, 2020), the volume of potential obligations under the agreement not exceeding USD 10 billion.[3] Based on the results of the IMF Article IV consultation, a report and recommendations on Russia's economic policy were prepared. As part of Russia's fiscal policy, it is planned to stimulate growth in accordance with the budgetary rule and to continue investing the NWF resources in high quality foreign assets, even after its liquid part will have reached 7% of GDP. As part of Russia's monetary policy, it is recommended that liberalization should be continued, and that confidence in the regime based on inflation targets should be improved. As far as financial markets are concerned, consolidation of the banking sector should be continued, alongside a decreasing presence of the State on those markets; supervision and regulation should be strengthened; and a set of measures designed to reduce the risks created by the rapid growth of household debt should be implemented. It was also recommended to pursue the structural reform, making it easier for companies to enter and exit the market, to reform public procurements, to reduce the barriers

[1] G20 Osaka Leaders' Declaration. Paragraphs 10–12. URL: https://www.ranepa.ru/images/News_ciir/Project/G20_new_downloadings/OSAKA_DECLARATION_rus.pdf

[2] Brazil put forth an initiative of bilateral agreements between BRICS members. 11th BRICS Summit Brasilia Declaration. Paragraph 19. URL: https://www.ranepa.ru/images/News_ciir/Project/BRICS_new_downloadings / 2019/11th_BRICS_Summit_rus.pdf

[3] On loan agreements between the Bank of Russia and the IMF. URL: https://www.cbr.ru/StaticHtml/File/36568/NAB20170615.pdf

to trade and FDI, to increase transparency in the fiscal sphere, as well as accountability and management quality of state-owned enterprises[1].

Another major priority in the framework of cooperation with the World Bank Group (WBG) in 2019 was information exchange, research, expert and analytical support, and development of recommendations in the field of financial regulation.[2] Besides, some of the multilateral official assistance to development in Russia is provided through the WBG's institutions[3].

Nevertheless, some unresolved problems can still be noted in Russia's interaction with the traditional international financial institutions. This, among other things, no progress has been achieved in a number of important areas, e.g. increasing Russia's quotas and voting power in the IMF, reviewing the quota formula, expanding the reserve currency range, and changing the composition of the SDR currency basket. As for the WBG, the year 2019 saw a continuing freeze on the approval process for new IBRD projects in Russia (at present, the 6 projects approved by the World Bank before 2014 are being implemented)[4]. As a result of the anti-Russia sanctions, restrictions are still imposed on Russia's interaction with the other WBG institutions. No decisive progress has been possible in reforming the World Bank; the main directions of reform, according to Russia and her partner countries, should be the expansion of its financial capabilities, restructuring of its share capital in favor of the emerging markets and developing countries, and more democratic governance principles.

In face of the uncertain prospects for resolving these problems and against the backdrop of the existing restrictions and waning interaction with the Bretton Woods institutions, Russia is getting increasingly involved in the activities of new financial institutions, especially the New Development Bank (NDB) established by the BRICS states. In 2019, the bank approved financing in the total amount of USD 300 million, earmarked for the development of renewable energy in Russia in accordance with the Energy Strategy until 2030. Also in 2019, the NDB Project Preparation Fund was launched: on December 2, 2019, the Bank pledged to provide USD 400,000 for the consulting services pertaining to the preparation of a cableway project in Krasnodar for the stage when potential external investors will be ready to consider financing it. The cooperation between Russia and the NDB is also actively developing in other areas, beside project financing. In November 2019, the Moscow Exchange registered the Bank's bond issue program to the total value of up to RUB 100 billion. Following the registration of a similar program in China, this was an important step towards increasing the use of national currencies by the NBR. This policy is beneficial for Russia, because it helps reduce the risks faced by national borrowers, as well as deepen the financial market.[5] And lastly, an agreement on the opening of the Eurasian Regional Center of the NBR in Moscow in 2020 was signed.[6] In

[1] Russian Federation: 2019 Article IV Consultation-Press Release; Staff Report. URL: https://www.imf.org/en/Publications/CR/Issues/2019/08/01/Russian-Federation-2019-Article-IV-Consultation-Press-Release-Staff-Report-48549

[2] World Bank Group. URL: https://www.cbr.ru/today/ms/smo/wb/

[3] Russia and the World Bank: International Development Assistance. URL: https://www.worldbank.org/en/country/russia/brief/international-development#3

[4] Projects in the Russian Federation. URL: https://projects.worldbank.org/en/projects-operations/projects-list?lang=en&searchTerm=&countrycode_exact=RU

[5] NDB Registers RUB 100 Billion Bond Program in Russia. URL: https://www.ndb.int/press_release/ndb-registers-rub-100-billion-bond-programme-russia/

[6] Host Country Agreement for NDB's Eurasian Regional Centre in Moscow, Russia Signed in Brasilia. URL: https://www.ndb.int/press_release/host-country-agreement-ndbs-eurasian-regional-center-moscow-russia-signed-brasilia/

addition to expanding the opportunities for project financing in Russia, the center will be able to provide the Bank's support for infrastructure projects in the other countries across the region, which conduce to trade growth and economic integration. Given the upcoming Russian BRICS chairmanship in 2020, the NDB will remain Russia's key partner among the multilateral banks. However, it is necessary at the same time not to overlook the existing potential for interaction with the other financial institutions where the Russian Federation holds a significant position. Thus, in particular, Russia plays a very significant role in the financing of the Asian Infrastructure Investment Bank (AIIB), being its third largest shareholder. Meanwhile, as of the beginning of December 2019, Russia offered only one motor road development project to be financed in the framework of the AIIB, in the amount of USD 500 million, which has not yet been approved.[1] It is also necessary to ensure effective influence on the selection of projects financed by multilateral banks in order that they at most correspond Russia's interests and tasks in light of current risks of the social and economic development.

6.6.3. Energy cooperation with the EU

In 2019, Russia continued to diversify its hydrocarbon supply routes. Thus, in October, Gazprom completed its preparations for the operation of the linear part of the Power of Siberia gas pipeline to China. Meanwhile, the European direction of Russia's energy exports (the traditional one) was also developing. According to Eurostat, in 2018 Russia's share in European natural gas imports amounted to 40.5%.[2] It is expected that at the end of 2019, the volume of pipeline supplies of Russian natural gas will remain at the same level as in 2018 (about 200 billion m^3), while LNG supplies will increase. Also since 2016, Russian natural gas exports have been growing in value terms (EUR 20.5 billion in 2016, EUR 23.6 billion in 2017, EUR 29.7 billion in 2018, and EUR 13.3 billion in H1 2019).[3]

Russian natural gas is supplied to the EU through a well-developed energy infrastructure network, consisting of the gas pipelines and gas compressor stations that ensure smooth transportation of the raw material from the natural gas fields in Western Siberia all the way to the European consumers. Since 2011, the offshore part of the Nord Stream gas pipeline has been in operation. For 2020, the launch of Nord Stream 2 is planned. Its construction in 2019 was complicated by a number of problems that had to do with the political pressure exerted by the USA on her European partners and the sanctions imposed on the companies participating in the project.

There is also another problem – that of complying with the rules of the Third Energy Package (TEP) of the EU applied to the existing and future projects for the export of natural gas from Russia. According to the TEP requirements, 50% of a pipeline's capacity should be reserved for the use by other energy companies. In particular, these rules apply to the OPAL gas pipeline, which runs across the territory of Germany. For Russia, and in particular for Gazprom, the practical implementation of the TEC has created some difficulties in operating the existing export infrastructure, and is potentially fraught with a lower profitability of the future projects.

[1] Russian Federation: Russian Federation Transport Sector Loan. URL: https://www.aiib.org/en/projects/proposed/2019/russian-federation-transport-sector-loan.html

[2] EU imports of energy products – recent developments. Eurostat, 2019. URL: https://ec.europa.eu/eurostat/statistics-explained/pdfscache/46126.pdf

[3] The detailed tables for imports and exports of energy products. Eurostat, 2019. URL: https://ec.europa.eu/eurostat/statistics-explained/images/2/2d/Energy_-_product_details_-_2019.xlsx

The related parties, Germany including, have not yet succeeded in exempting the Nord Stream 2 project from EU legislation.[1]

Overall, in spite of the continuing politicization of the energy relations between Russia and the EU, it is still planned to complete the work on Nord Stream 2 and both branches of TurkStream. In 2019, shipments of Russian liquefied natural gas (LNG) from Yamal LNG plant increased significantly–rated value of output to the tune of 16.5 tons of LNG was surpassed over 11 months of the first year of operations.[2] Coronavirus pandemic-related crisis outbreak on the energy market in 2020 which engulfed PRC, East Asia, and then Europe as well as aggravation of competition with Saudi Arabia following the breakdown of the agreements on the production volumes concluded between Russia and OPEC put in place before our country new challenges aimed at retaining its share on the European energy market. Nevertheless, in the medium and long term, the ongoing globalization of energy markets and a shift in demand towards the large emerging economies in Asia, coupled with the development of renewable energy sources, will translate into an increasing diversification of the supply sources and routes, thus reducing the degree of tension in bilateral energy relations.

6.6.4. The EAEU

The year 2019 brought success for Russia and her partners, as it saw a deepening integration in the most important areas inside the EAEU and its strengthening international status.

In 2019, the Supreme Eurasian Economic Council (SEEC) approved the draft Disposition 'On harmonizing the EAEU Member States' legislation in the sphere of gas transportation and supply between the Member States'.[3] Also, the presidents of the EAEU member states signed an agreement on a common electricity market.[4] Over the next few years, efforts to promote integration in the energy sector will be carried on, with a view towards launching the EAEU common energy markets from January 1, 2025.[5]

Another area of integration was financial regulation. In 2019, the SEEC approved the Concept for creating a common financial market in the EAEU.[6] Besides, the Eurasian Economic Commission (EEC) prepared its first report on the development of cryptocurrencies and blockchain technologies in the EAEU.[7] So far, no common vision of and approach to the regulation of cryptocurrencies and blockchain technologies has been developed in the framework of the Eurasian Economic Union. The Republic of Belarus has taken the first steps towards creating an institutional environment and legal framework for the activities in that field. In the Russian Federation, no single standpoint on the issue of cryptocurrency circulation has

[1] Berlin has failed: Nord Stream 2 could not be saved from the EU Directive on November 8, 2019. URL: https://www.gazeta.ru/business/2019/11/08/12801278.shtml

[2] Yamal LNG ahead of schedule produced annual planned volume of LNG, Novatek, November 29, 2019. URL: http://www.novatek.ru/common/tool/stat.php?doc=/common/upload/doc/YLNG_production_Rus.pdf

[3] SEEC outcomes: Free Trade Agreement signed with Singapore, Concept for creating a common financial market approved, documents on gas transportation and supply adopted. Eurasian Economic Commission. URL: http://www.eurasiancommission.org/ru/nae/news/Pages/01-10-2019-9.aspx

[4] EAEU common energy resource markets will be launched from January 1, 2025. Eurasian Economic Commission. URL: http://www.eurasiancommission.org/ru/nae/news/Pages/26-09-2019-4.aspx

[5] Ibid.

[6] SEEC outcomes: Free Trade Agreement signed with Singapore, Concept for creating a common financial market approved, documents on gas transportation and supply adopted. Eurasian Economic Commission. URL: http://www.eurasiancommission.org/ru/nae/news/Pages/01-10-2019-9.aspx

[7] The EEC published a report on cryptocurrency and blockchain issues in the Eurasian Economic Union. Eurasian Economic Commission. URL: http://www.eurasiancommission.org/ru/nae/news/Pages/22-07-2019-1.aspx

yet been elaborated by the regulatory authorities. The first tentative attempt at legal recognition and the elaboration of regulatory acts was made in September 2017, when a new platform for investors - the Voskhod investment system launched by the NP RTS Association and the Far East Development Fund was the first to receive a formal permission in Russia to trade in cryptocurrencies. The other members (the republics of Armenia, Kazakhstan, and Kyrgyzstan) are still mainly reviewing the regulating practices and experience of their EAEU partners. Therefore, it is necessary to harmonize the approaches to regulating the circulation of cryptocurrencies in the Eurasian space.

The issues of digitalization of the economy are becoming increasingly important in the framework of developing integration. The EEC, as well as the representatives of the member states, noted that the problem posed by a lack of statistics had become an obstacle to the development of competent solutions. For this reason, they supported the proposal that a working group charged with the task of measuring the digital economy under the Advisory Committee should be set up.[1]

In 2019, the EAEU paid particular attention to the development of its agenda until 2030 and to the achievement of its Sustainable Development Goals (SDGs). A study was conducted, which demonstrated that the EAEU member states' progress towards the UN SDGs is more effective in those areas of the economy that are addressed by the supranational regulatory measures[2].

In the short term, integration needs to be further strengthened. It is planned to expand the powers of the EEC, as well as extend the integration to new areas (science, education, scientific and technical cooperation, etc.). There is also a discussion underway that focuses on the formation of a common Eurasian social space, by means of implementing the healthcare and social security initiatives.

In 2019, the Agreement on trade and economic cooperation between the EAEU and the PRC entered into force; besides, the Free Trade Agreement with Singapore, the Memorandum of Cooperation with the Government of Indonesia, and the Interim Agreement enabling formation of a free trade area between the EAEU and Iran were signed. Later on, it is planned to create a free trade zone between the EAEU and Indonesia. FTA negotiations are also underway with Egypt, Israel and India.[3]

The cooperation with international organizations has been deepening. A Memorandum of Understanding in the field of economic cooperation was signed between the EEC and the African Union Commission. Besides, the Declaration on Partnership was signed with the Pacific Alliance, as well as the Memoranda of Understanding with the ESCAP and the World Intellectual Property Organization.

6.6.5. The Arctic Council

The Arctic Council, formally established in 1996 by signing the Ottawa Declaration, is currently the leading intergovernmental forum coordinating the policies of the Arctic States in

[1] A working group on measuring the digital economy will appear in ECE. Eurasian Economic Commission. URL: http://www.eurasiancommission.org/ru/nae/news/Pages/21-10-2019-2.aspx

[2] The Eurasian Economic Commission submitted to the UN a report on the Eurasian Economic Union's experience and best practices in the field of sustainable development. Eurasian Economic Commission. URL: http://www.eurasiancommission.org/ru/nae/news/Pages/13-07-2018-2.aspx

[3] The EAEU aims to deepen integration. Eurasian Economic Commission. URL: http://www.eurasiancommission.org/ru/nae/news/Pages/09-12-2019-3.aspx

the region. The Council has been gaining in importance due to the gradual opening of the Arctic to industrial development and promotion of transport infrastructure following the shrinkage of the Arctic ice cap caused by the global climate change.

In 2019, the Chairmanship of the Arctic Council was transferred from Finland (2017–2019) to Iceland (2019–2021). At the Arctic Council foreign ministers' meeting in May, no new decisions were made in any field of cooperation, partly because of the current US presidential administration's stand on climate issues, which form the core of the Arctic agenda. Nevertheless, the work of Task Forces established by the Arctic Council has not been interrupted. In particular, the Arctic Contaminants Action Program (ACAP) is implementing a project to combat soot emissions in partnership with Russian energy companies.[1] Also, with the participation of the Russian side, the Council's Sustainable Development Working Group is implementing a project to comprehensively improve the living conditions of the indigenous peoples of the North.[2]

The main priority for Russia in the framework of participation in the Council's activities over the next few years is to prepare for taking over its Chairmanship in 2021. While Iceland is chairing the Council, it is necessary to work out an agenda that will take into account the potential changes in the standpoints of the key international players regarding climate issues in order to achieve concrete agreements capable of contributing to the ongoing global efforts to control the climate change as well as provide an answer to new challenges such as price volatility on energy markets and dangers of diseases spread on the global scale.

6.6.6. Internet governance and cyber security

One of the main issues on the international digital agenda is ensuring the security of individuals and the State in the information space. Russia's Internet governance initiatives designed to support global cybersecurity were announced at the 10th Russian Internet Governance Forum held in April 2019 in Moscow in the framework of the UN-sponsored Global Internet Governance Forum. The forum's resolution includes proposals aimed at developing a common approach for all countries in the hi-tech field, in particular artificial intelligence (AI) technologies. The forum participants suggested that certificates of 'compliance with ethical principles' for each product using AI technology should be introduced at the national and international levels under the auspices of the UN.[3]

In 2019, in response to Russia's proposals, the UN initiated the process of 'developing the norms, rules and principles of responsible behavior of states' in the field of information and telecommunications.[4] However, the Russian proposals put forth in the framework of the Open-ended United Nations Working Group (OEWG) on International ICT Security were negatively received by the USA. At present, the process of negotiating 'a common resolution for all' on International ICT Security[5] has been effectively suspended. The elaboration of coordinated global cybersecurity principles remains Russia's priority in international organizations. In

[1] URL: https://arctic-council.org/index.php/ru/our-work/news-and-events-ru/525-norway-is-taking-over-the-chairmanship-of-arctic-contaminant-action-programme-acap

[2] URL: https://www.sdwg.org/arctic-indigenous-youth-food-knowledge-and-arctic-change-eallu-ii/

[3] Resolution of the 10th Russian Internet Governance Forum. URL: https://rigf.ru/press/?p=report

[4] A/RES/73/27 Achievements in the field of informatization and telecommunications in the context of international secutiry. URL: https://undocs.org/ru/A/RES/73/27

[5] Statement by the representative of the Russian Federation, A. I. Belousov, during voting on the draft Resolution of the 74th Session of the UN General Assembly 'Advancing responsible State behavior in cyberspace in the context of international security'. URL: https://russiaun.ru/ru/news/1com_0611

2020, Russia as the chair of BRICS will continue to develop a common position for the five rapidly developing economies on cybersecurity issues, to further promote it on the UN platform, and to counteract the trends towards the regionalization of decisions on information security issues. All institutions expect to work on the solution of issues related to the security of information systems in the wake of large scale crisis situations and prevention of fake news as well as the issue of ensuring balance between free transfer of information and fight with the spread of fake news.

6.7. The strategic development prospects of the North Caucasus federal okrug[1]

Last year (2019) was the tenth year of the implementation of the Strategy of Socioeconomic Development of the North Caucasus Federal Okrug until 2025, adopted in 2010. The Strategy aims at achieving significant economic growth across the North Caucasus regions, as well as modernizing their social structure and stabilizing their socio-political situation. In order to achieve economic growth in the North Caucasus, the Strategy focuses on the creation of a tourism cluster, accelerated development of the region's transport system, and the emergence of new centers of economic development. The Strategy's targets that should serve as the indicators of its successful implementation (under the optimal scenario) are the gross regional product growth of 7.7% per annum in the regions of the North-Caucasian Federal Okrug, and industrial production growth of 10.1% per annum over the period from 2010 through 2025. The Strategy also aims at creating not less than 400,000 new jobs, reducing the official unemployment rate to 5% (from 16.5% in 2010), and decreasing the share of households with incomes below the subsistence level to 9.2% (from the regions average of 15.5% 2010).

By way of implementing the Strategy, a number of special legal entities with state participation were created, first of all North Caucasus Development Corporation (NCDC) OJSC and Northern Caucasus Resorts OJSC. The goal of NCDC OJSC (from 2010 to 2017, its sole founder was VEB; in 2017, 100% of its shares were transferred to the ownership of the Russian Federation), as stated in the corporation's official presentation, is to develop investment projects in the North Caucasus by attracting investors and co-investing in the economic projects launched in the regions. Northern Caucasus Resorts OJSC manages the special economic zones created inside the North Caucasus Tourism Cluster. So far, 6 special economic zones have been created in the tourism cluster's territory in the areas where resort construction projects are currently underway: Arkhyz in the Karachay-Cherkess Republic; Elbrus in the Kabardino-Balkarian Republic; Matlas and the Caspian coastal cluster in the Republic of Dagestan; Armkhi in the Republic of Ingushetia; Veduchi in the Chechen Republic, Mamison in the Republic of North Ossetia – Alania (the latter was established for a second time as a special economic zone and incorporated into the tourism cluster in September 2019).

Over the ten years that have passed since the adoption of the Strategy, the progress of its implementation has been repeatedly the target of caustic criticism. In 2019, the problems that arose in the course of the Strategy's implementation were addressed by a number of expert-analytical and control inquiries carried out by the Accounts Chamber of the Russian

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Federation.[1] One of the obvious problems reflected in official statistics was the *extremely low implementation of the targets set the Strategy*. Thus, according to data released by the Federal State Statistics Service, the average unemployment rate in the regions across the North Caucasus Federal Okrug in 2011–2018 stood at 12.12% vs the target of 5% set in the Strategy, and after 2014, its decline has been only by 0.2 percentage points. Over the period 2010–2018, the average relative share of households with incomes below the subsistence level in the regions of the North Caucasus Federal Okrug amounted to 16.8%, i.e. almost twice as high as the target set in the Strategy. Overall, as the Accounts Chamber stated in 2019, out of the 50 targets laid down in the Government Program 'North Caucasus Federal Okrug Development' that was devised on the basis of the Strategy, only 20 target were actually met or exceeded. In some regions, a particularly critical level of underachievement in the framework of the Strategy was observed: thus, none of the targets of the socioeconomic development subprograms for the Republic of Dagestan for the period 2016–2025 of the Government Program 'Socioeconomic development of the Republic of Dagestan and the Republic of Ingushetia over the period 2016–2025' were met, and under the similar subprograms for the Kabardino-Balkarian Republic and the Chechen Republic, only 25% of the targets were met. According to the Accounts Chamber, the goal of implementing 150 new investment projects in the North Caucasus Federal Okrug, which had been laid down in the strategic documents of NCDC OJSC back in 2011, was not achieved, either.[2]

Another reason for criticism of the decade-long implementation of the Strategy, which also remained relevant in 2019, was *the vagueness of strategic guidelines and performance indicators* for the state-owned organizations set up for the purpose of carrying out the Strategy. Thus, in the texts of strategic documents of NCDC OJSC, where the corporation's objectives were specified for each particular year, the targets established by the Government Program 'North Caucasus Federal Okrug Development' could not be found. According to the materials released by the Accounts Chamber, the investment cost-effectiveness indicators stipulated in the budget-funded investment agreements signed by Northern Caucasus Resorts OJSC are not consistent with the goals of the Government Program 'North Caucasus Federal Okrug Development' and the specific tasks of constructing the resort infrastructure entities that Northern Caucasus Resorts OJSC was expected to perform in the framework of that program. These formal inconsistencies make it difficult to objectively assess the implementation of the Strategy of Socioeconomic Development of the North Caucasus Federal Okrug, and so the

[1] In 2019, the Accounts Chamber implemented two development assessment initiatives addressed to the North Caucasus regions: the expert-analytical initiative 'Assessment of the progress, in 2018, of the government programs of the Russian Federation being implemented in the North Caucasus Federal Okrug for the purpose of providing comprehensive solutions to the issues of creating adequate conditions for socioeconomic development of the North Caucasus', and the control initiative 'Audit of the targeted and efficient use, in 2018 and the last reporting period of 2019, of the federal budget funding allocated to the charter capital of the joint stock company 'North Caucasus Resorts', and the achievement of the goals set in the subprogram 'Development of a tourism cluster in the North Caucasus Federal Okrug' of the government program of the Russian Federation 'Development of the North Caucasus Federal Okrug' for the period until 2025'. The results of the control estimation completed in 2018 'Audit of the substantiation for and effectiveness of the allocation, in 2016–2018, of budget funding to the charter capital of the North Caucasus Development Corporation earmarked for the creation of a medical cluster in the territory of the Caucasian Mineral Waters region and the implementation of investment projects in the North Caucasus Federal Okrug' were no less relevant in 2019, because they have revealed a number of systemic problems in the Strategy's implementation.

[2] It should be noted that some of the Accounts Chamber's conclusions were disputed by CRNC JSC. URL: https://tass.ru/ekonomika/5908483.

performance of all the key actors in the economic development of the North Caucasus Federal Okrug cannot be properly evaluated within the framework of a uniform and sufficiently simple system of parameters.

This particular problem is closely linked to another one, that of *fiscal transparency and spending efficiency in the framework of the Strategy*. That problem is manifest, in particular, in the high relative share, in the costs of the state-owned companies involved in the Strategy's implementation, of purchases made on non-competitive basis, and the sizable chunks of money spent by those companies on their own needs. The share of purchases made in 2018–2019 on non-competitive basis by Northern Caucasus Resorts OJSC, according to the Accounts Chamber, amounted to 39.8% of the total value volume of its procurement contracts, and 59.7% of these purchases were made to satisfy the company's own needs. Meanwhile, the total amount of budget funds saved by the company as a result of its purchases in 2018–2019 was only RUB 23.7 million, or 0.7% of the total amount of initial purchase prices.

Another serious problem that arose in the course of the Strategy's implementation was *the inefficient interaction with investors*, i.e., the absence of an adequate mechanism for selecting and supporting investors consistent with the achievement of the Strategy's goals. These problems vividly illustrate the current state of affairs in the special economic zones that were specifically created to attract investors willing to participate in the implementation of the tourism cluster projects. Actually, among all these SEZs, only three are currently operating: Arkhyz, Armkhi, and Veduchi. As of 2019, a total of 34 resident companies were registered there (30 of them, in the Arkhyz SEZ); they had created 619 jobs, and built and put in operation 81 engineering infrastructure facilities. Over the period from the launch of these SEZs until January 1, 2019 (at the moment of preparing this material, no data for 2019 was yet available), the total proceeds of sales of goods, works, services, less VAT and excises, received by the residents of the SEZs amounted to less than RUB 1 billion (RUB 851.7 million). The volume of investment attracted by the residents of the SEZs was also insignificant, amounting to RUB 2,079.5 million over the entire period of their existence (8.3% of the initially declared volume, according to the Accounts Chamber). These data convincingly demonstrate that the SEZs are still far below the level of development that could enable them to exert a significant influence on the economy of the North Caucasus as a whole, and to become major employers on a regional scale. The input of the SEZs into the creation of new jobs envisaged in the Strategy is likewise meagre. As far as the motivation of the residents of the SEZs is concerned to make an effort for the sake of implementing the Strategy, there are also some obvious problems. Out of the total volume of investment attracted by those residents over the entire period of existence of these SEZs, 75.2% is accounted for by just 4 out of the 34 residents actually registered in their territories. At the same time, as the Accounts Chamber noted in 2019, 29 residents had been neglecting their obligations regarding their investment in SEZ facilities; over the entire period of existence of the SEZs, violations (failures to fulfill contractual obligations) were committed to the total value of RUB 21,447.1 million. The total area of land plots inside the SEZs is 46,799 ha, while the share of land plots suitable for leasing to residents is negligible and amounts to 344.8 ha, or 0.7% of the total area.

Another issue that hinders the tourism business development in the North Caucasus Federal Okrug, which is one of the Strategy's cornerstones, is that neither Northern Caucasus Resorts OJSC nor representatives of the government bodies supervising the implementation of the Strategy for the socio-economic development of the North Caucasus Federal Okrug, did not offer (at least publicly), in 2019 or earlier, any systemic response to the new challenges that

have recently been faced by the tourism business in the North Caucasus. Such challenges include, in particular, the development of ski resorts in a number of post-Soviet states (Georgia, Kazakhstan), which fit into the same price segment as the existing resorts situated in the subjects of the North Caucasian Federal Okrug. In this situation, the competitive advantages of the latter have not been sufficiently clarified to the potential consumers. The question as to the real existence of any such advantages has remained open. It is not clear how the expected tourist inflow was determined, and if any algorithm was applied in its calculation.

The official recognition, in 2019, of the existence of problems in the implementation of the core measures planned within the framework of the Strategy of Socioeconomic Development of the North Caucasus Federal Okrug was followed by a radical reorganization of the federal economic programs' management system in the Okrug. In January 2020, the RF Ministry of North Caucasus Affairs was liquidated. Its functions were transferred to the RF Ministry of Economic Development. Besides, a discussion was launched concerning the possibility of updating the existing strategic documents on the development of the North Caucasus Federal Okrug.

In this connection, the conceptual options that must be considered prior to planning the future strategic development of the North Caucasus once more come to the fore. The current strategy, with its core idea of the North Caucasus being a poor region that lacks its own resources for development, relies on the model where investors should be attracted to the region from the outside with active government support. Such a model, which outwardly looks like a logical approach to the modernization of backward territories, has already been used in a number of countries, but the results of its actual implementation were often quite different from what had been expected. The main reasons for this model's unsatisfactory performance are as follows:

- the development guidelines turn out to be too optimistic, the existing problems are downplayed, the promising indicators are not based on an analysis of authentic information;
- the bureaucratic structures designed to promote development begin to operate on a self-sufficient basis and no longer focus on the goals and objectives initially set for them;
- the motivation of investors in face of the sizable state support becomes distorted, and the project's effectiveness ceases to be their primary incentive;
- the outside investors begin to compete for resources with the locals, who often use those resources outside of the formal legal framework, thus giving rise to conflicts and alienation of the people from the modernization projects.

The ten-year experience of implementing the Strategy has confirmed the existence of the same problems as were faced by the other countries that attempted to implement this model. In this situation, if the Strategy is to be adjusted, we are faced with the following choice: either to try to improve the existing model by strengthening control and making some moderate changes, or to switch over to some fundamentally different approaches, by rebuilding the entire system of support for the modernization of the region. An alternative modernization strategy could be based on the following principles:

- the reliance primarily on the internal resources available for the development of the region;
- avoidance of gigantomania;
- a focus on the changing institutional environment;
- the support, in terms of expansion, modernization, and creation of new jobs primarily within the framework of ongoing projects, that have already proved their effectiveness and ability to function in the specific conditions of the North Caucasus;
- the support of business projects in the local communities.

These approaches were already proposed by some experts during the elaboration of the current Strategy, but at that time, a different approach was chosen. Now, it is more difficult to make a sharp turn, because we have to make a choice not from scratch, but in the context of the already well-established (albeit ineffective) development institutions, normative backing, and support mechanisms. Nevertheless, there do exist some precedents in world practices of a complete policy reversal in the context of modernization promotion in backward regions. Thus, the Southern Development Fund (Cassa per le opera straordinare di pubblico interesse nell'Italia meridionale') was liquidated in Italy; it was the institution responsible for the modernization of the South of Italy and pursuing a policy that was very similar to that outlined in the Strategy of Socioeconomic Development of the North Caucasus Federal Okrug. The modernization support concept was altered entirely, and the new approaches that relied on the region's internal resources proved to be much more successful than the originally applied ones. Such experiences can be borrowed in order to develop a new strategy for the North Caucasus Federal Okrug.

The option of a policy reversal has particularly gained in importance in view of the current economic and social turbulences caused by the coronavirus pandemic and the economic crisis. On the one hand, in such circumstances, the search for some mechanisms that could promote modernization without significant budget expenditures becomes critically important. On the other hand, the highly uncertain prospects of the inevitable changes in the structure of society's needs and market demand in response to the coronavirus pandemic can mean that the future economic development will depend on the ability of economic subjects to flexibly adapt to a changing market situation, and this is typically done with greater ease by small and medium-sized businesses.

6.8. The implementation of executive order No.204 of May 7, 2018 of the President of the Russian Federation and national projects in 2019[1]

From the day of issuing of Executive Order No.204 of May 7, 2018 of the President of the Russian Federation "On National Goals and Strategic Objectives of the Development of the Russian Federation in the Period till 2024" (hereinafter, the Executive Order No.204) and till the end of 2018, the main efforts in implementation thereof were aimed at developing national projects (NP) and establishing the project management system and the initial organizational

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base. It can be stated that the main portion of work on implementation of national projects started from the beginning of 2019.

Within the framework of the initial period of 2019, efforts were made to clear some issues and liquidate the information asymmetry in implementing national projects at various organizational levels. Within the framework of the "National Projects – "Implementation" Stage" Forum, which was held on April 4-6, 2019 in the Moscow Region and attended not only by representatives of the government and federal agencies, but also numerous representatives from regions, such an attempt was made. Based on the results of the Forum, the Prime Minister signed a number of instructions[1] aimed at resolving some problems – identified during the work of the Forum – related to the start of implementation of national projects.

6.8.1. The system of management of achievement of national goals and implementation of national projects

Despite the efforts to establish networking between various levels of the system of management of achievement of national goals and implementation of national projects, the system has a rather complicated pattern. As regards the year 2019, following components of this system can be singled out: Executive Order No.204 setting national goals and 13 national projects, which are key instruments in achieving national goals. The aggregate of national projects does not ensure full coverage of national goals.

It is noteworthy that charters of national projects approved late in 2018[2] were officially published only a month and a half later, that is, on February 11, 2019.[3]

The overall list of instruments ensuring achievement of national goals was presented in the "Government's Main Guidelines" (GMG)[4] actually after the completion of the development of the charters of national projects (by October 1, 2018). In addition, it was specified that the achievement of national goals would be facilitated by means of not only national projects, but also state programs of the Russian Federation and its subjects, as well as federal (regional) projects and other activities included in them. In respect of achievement of each national goal, a plan was formed to determine the trajectory of embarking on the target level, identify factors which influence the achievement of the goal and A special plan for achieving each national goal was formed to determine the trajectory of approaching target levels, identify factors which influence achievement of the goal and include the list of state programs of the Russian Federation (including federal projects which were part thereof) to whose implementation the management of relevant factors was attributed.

An important component of the management system is Single Plan No.4043 p-P13 of May 7, 2019 of "Achieving National Goals of the Development of the Russian Federation in the Period till 2024" approved by the Government of the Russian Federation, which mainly represents the Government's declaration of intentions and includes the list of instruments – different from that specified in the GMG – to achieve them (national projects, state programs and in individual cases – federal laws).

[1] URL: http://government.ru/news/36532/.
[2] Approved at the meeting of the Presidium of the RF President's Council for Strategic Development and National Projects on December 24, 2018 URL: http://government.ru/news/35168/.
[3] National projects: key objectives and expected results. URL: http://government.ru/projects/selection/741/35675/.
[4] The Main Guidelines of the Government of the Russian Federation in the Period till 2024 approved by the Government of the Russian Federation on September 29, 2018.

At the same time, the Single Plan does not include concrete activities aimed at developing measures to synchronize and balance national and federal projects, state programs of the Russian Federation, state programs of subjects of the Russian Federation and municipal programs. It is to be noted that the Single Plan includes neither the list of the required and necessary procedures for achieving the goals, nor concrete measures with specified deadlines set both for the implementation thereof and achievement of the expected results.

In addition, it is also necessary to mention the work of other components of the system of management of national project implementation, achievement of national goals and solution of related issues:

- The activities of the Central Office of the Government of the Russian Federation and the role of the working group of the President's Council for Strategic Development and National Projects;
- The activities of the State Council and its working groups;
- 15 indicators for assessment of the performance of governors[1];
- Conclusion of the Federation – Region agreements on implementation of regional projects in subjects of the Russian Federation[2] and relevant notification of each region of key performance indicators (KPI);
- Building of the e-budget system[3] and the obligation to use it concurrently with a hard copy mode;
- Content affiliation of federal projects with specific state programs: introduction of a project approach into the program budget;
- Monitoring have been established to manage project activities: monitoring of the Government, monitoring of the Presidential Administration, monitoring of law-enforcement agencies and public monitoring;
- Procedure for introducing changes into national projects[4] (all changes are approved by the Presidium of the Presidential Council for Strategic Development and National Projects), which is a component of project management.

Despite some inconsistency between these components, it is impossible to recognize their role in formation of the system of state management of project activities in Russia. The work of relevant instruments constantly influences the quality of the project management system and constitutes in numerous aspects its backbone.

Overall, in 2019 the implementation of national projects was carried out with some difficulties, which were inevitable for such large-scale projects. At the same time, it is possible

[1] Executive Order No.193 of April 25, 2019 of the President of the Russian Federation "On Assessment of the Efficiency of Performance of High-Ranking Officials (Senior Executives of State Executive Authorities) of the Subjects of the Russian Federation and Activities of Executive Authorities of Subjects of the Russian Federation."

[2] The guidelines for the procedure for and the standard form of entering into an agreement between the manager of the federal project and the manager of regional project on implementation of a regional project in the territory of the subject of the Russian Federation were approved at the meeting of the Presidium of the Presidential Council for Strategic Development and National Projects on December 17, 2018. URL: http://static.government.ru/media/files/qAjnutcLUahb8ro3o6UWm1CwgDf4BDFA.pdf.

[3] URL: https://www.minfin.ru/ru/perfomance/ebudget/; URL: http://budget.gov.ru/epbs/faces/page_home?_adf.ctrl-state=u1ba99zl4_4&regionId=45.

[4] Resolution No.1288 of October 31, 2018 of the Government of the Russian Federation (as amended on October 30, 2019) "On Organization of Project Activities in the Government of the Russian Federation (together with the "Regulation on Organization of Project Activities in the Government of the Russian Federation").

to single out a few aspects which played an important role in the period under review. Presented below is the assessment of implementation of each national project in 2019.

6.8.2. The main outputs of implementation of national projects in 2019

The "Demography" National Project

A key goal of the *"Demography" national project* consists in increasing health expectancy of the population (including by means of promotion of a healthy lifestyle, creation of conditions for regular physical training and sports and establishment of the system of long-term care for the elderly and disabled persons) and the total fertility rate (through financial support to families with children, vocational skills training of women on maternity leaves for taking care of a child below the age of 3, provision of affordable child-care services and creation of conditions for persons with children so that they could combine work with their family duties). The first results of implementation of the "Demography" national project in 2019 can be summed up on the basis of the analysis of the project's target indicators.

The achievement of health expectancy equal to 67 years until 2024 is a major goal of the "Demography" national project and the "Elderly Generation" federal project. In 2019, this index was officially calculated for the first time in Russia; it makes it feasible to estimate the number of years at a certain age of a person during which he/she can stay healthy, that is, without any serious health problems. According to the data of the Rosstat, in 2019 health expectancy for the population of Russia was equal to 60.3 years; the index's regional differentiation amounts to 18 years. The highest level is observed in the Republic of Ingushetia (67 years), while the lowest one, in the Chukot Autonomous Okrug (49 years). The dynamics of target values as regards the level of health expectancy by the year till 2024 is not available in the charter of the "Demography" national project. Proceeding from the level of the index in 2019, the achievement of the target value of health expectancy of 67 years by 2024 is quite problematic.

The total fertility rate (TFR) is the main indicator of the *"Demography"* national project and the "*Financial Support of Families at the Birth of a Child*" federal project. According to the data of the Rosstat, in 2019 this indicator was equal to 1.51 per a woman of the reproductive age. It is 4 percent below the level seen in 2018 (1.58) and 6 percent below the target value in 2019 (1.63). The reduction of the total fertility rate is related to a decrease in birth intensity across all regular successions. According to the Rosstat's data, in 2019 the indices of birth of the first baby and the second baby decreased by 2 percent and 8.5 percent, respectively, and the index of birth of the third child and any subsequent ones, by 3percent. Proceeding from the trends of the total rate (it has been decreasing since 2015), the achievement of the target indicator of TFR by 2024 seems infeasible. However, the implementation of the "*Financial Support of Families at the Birth of a Child*" federal project and the *"Promotion of Women's Employment – Creation of Pre-School Education Conditions for Children Under the Age of 3"* federal project may slow down the drop in the total fertility rate owing to the creation in Russia of favorable baby birth conditions. In addition, financial support of families with children and promotion of employment opportunities for women with children of pre-school age will facilitate achievement of the national goal to reduce by 50 percent the level of the poverty rate.

The mortality rate of the population which is above the working age (55+/60+) is another target index of the "*Demography*" national project. At present, the detailed data on the mortality

of the population in 2019 are not available yet (they are expected in August 2020). However, it is to be noted that the target level of the mortality rate in 2019 (37.6 persons per 1000 persons at the age of 55+/60+) was achieved in 2018. To attain this goal, important measurers have been taken: the "Elderly Generation" federal project was launched to create the system of long-term care (in 2019 it started only in pilot regions) to cover people who are above the working age with periodic screenings, including medical checkups and other.

Growth in the share of people leading a healthy lifestyle is another important objective of the "Demography" national project. In 2019, according to the data of the sample survey carried out by the Rosstat the share of people leading a healthy lifestyle amounted to 12 percent. The regional dispersion of this index varies in the range from 0.4 percent (the Chukot Autonomous Okrug) to 48.8 percent (the Republic of Ingushetia). The charter of the "Demography" national project does not include any target indicators as regards the level of this index until 2024.

According to the data of the Ministry for Sport, in 2019 the share of people who regularly take physical training and go in for sports was equal to 43.8 percent with a target indicator of 40.3 percent, that is, an increase of 3.7 percent compared with the target indicator. However, there are some questions to the methods of calculation of the "Share of People who Take Physical Training on a Regular Basis and Go in For Sports" index. The RF Ministry for Sport uses the data on the number of people who goes in for sport supplied by interdepartmental entities engaging in provision of athletic training services (both dual accounting (a person can visit several sports clubs, get registered with all of them and never visit) and misreporting (a person goes in for sports outdoors) may take place). It is evidenced by the findings of the Rosstat's sample survey, which data on those who regularly go in for sports in 2019 are much lower than those of the Ministry of Sport and amount to 27 percent (32 percent below the target indicator of the "Demography" national project). So, it seems it would be correct to calculate the "Share of Those Who regularly Go in For Sports" index on the basis of surveys of the population, rather than on the departmental statistical data.

In 2019, cash administration of the national project was equal to 95.6 percent[1]. At the same time, some lag can be observed with the "*Promotion of Women's Employment – Creation of Pre-School Education Conditions for Children Under the Age of 3"* federal project where application of funds amounted to 74.2 percent. In particular, there were problems related to the implementation of the "material support to families with children by means of application of the reduced mortgage rate" program (a reduced mortgage rate of 6 percent) which did not practically work during the year in some regions (the Magadan Region, the Murmansk Region, Karachayevo-Cherkessia, Republic of Kalmykia, Kamchatka, the Republic of Tyva and the Ingush Republic).

Overall, in 2019 the performance results of the "Demography" national project are not so unambiguous; they are both positive and negative. The positive trend of reduction of the rate of mortality of the population at the age of over 55/60, which was observed before 2018 as well, was accompanied by negative dynamics of the total fertility rate. As regards some new indices calculated by the Rosstat only in 2019, target values were unavailable, so, it is infeasible to assess as of the end of 2019 to what extent they could be achieved (health expectancy, the share of people leading a healthy lifestyle). At the same time, it is to be noted that as of the end of 2019 the demographic situation was characterized by the ongoing natural and general decline in the population, aging, falling fertility rate and high mortality indices. One should not expect

[1] The Treasury of the Russian Federation. URL: https://roskazna.ru/.

the effect of activities carried out under the national project to be substantial in 2019 because most of them were aimed to produce a long-term effect which would become evident only within a few years.

The "Healthcare" national project

The "*Healthcare*" national project[1] was characterized by the domination of the ongoing federal projects and activities carried out within its framework. Most of the newly approved federal projects inherited partially or completely the priority projects or departmental projects of 2016–2018. These specifics permitted to form legal and institutional frameworks for numerous lines, while in some cases, switch over to the actual implementation of individual measures even before the official start of the national project.

A vivid example of such ongoing work is the "Development of the Primary Medical Care System" federal project. Except for buying mobile medical complexes, which monitoring is limited by the number of medical complexes bought in 2019, all other activities are expected to be completed within the framework of the national project's activities of previous years. In particular, in 2019 in a number of subjects of the Russian Federation rural health posts (RHP) were established, modular constructions for RHP were bought and the building and construction works were carried out completely or partially in 2018 within the framework of the RF President's Instruction on Rural Medicine Development.[2] As a result, the target indicator as regards the number of RHPs put into operation was surpassed somewhat (53 RHPs as compared with the target indicator of 40 RHPs).

Individual ongoing activities are typical of other federal projects, too. So, active work on the development of the child healthcare infrastructure began in 2018 within the framework of the "Development of Healthcare."[3] Measures aimed at increasing average wages of health workers and abolishment of internship training will promote staffing in the mid-term and long-term prospect. The introduction of accreditation and upgrading of the continuous professional training of medical professionals and support of the network of national medical research centers and the single digital contour in health care are regular processes which began before the official start of the national project.

As of the beginning 2019 and H1 2019, the new tasks set before the national healthcare system included primarily organizational and methodological activities.

Most target indicators of the national project before its launch in 2016–2018 demonstrated positive dynamics. As a consequence, in 2019 the national project's objective in its most lines of activities consisted in maintaining or speeding up the achieved rates of upgrading. However, in 2019 the dynamics in respect of the number of target indicators of the national project was not so unambiguous. The rate of mortality from diseases of the blood circulation system decreased by 1.0 percent (from 579.6 cases to 573.7 cases per 100,000 persons) as compared with 2018, while that from neoplasms and diseases of the digestive system increased by 0.7 percent and 3.3 percent, respectively. Also, it is important to mention a decrease of 5.2 percent in the rate of mortality from external causes. A decline of the overall index of mortality which

[1] The information on the national project. URL: http://government.ru/rugovclassifier/831/events/; The charter of the "Education" national project. URL: http://government.ru/info/35561/.

[2] See, for example: In the Tambov Region, it was planned to build five new RHPs in 2019. URL: https://ria.ru/20190228/1551460247.html.

[3] Resolution No.210 of March 1, 2018 of the Government of the Russian Federation "On Modification of the "Development of Healthcare" State Program of the Russian Federation."

fell by 1.6 percent based on the results of January-November 2019 as compared with the same period of the previous year can be regarded as a summarizing indicator of all those causes, but it is not the target indicator of the national project. It is to be noted that in a number of regions, the rate of mortality from cardio-vascular diseases is declining amid the decrease in the total rate of mortality, but in more than 30 subjects of the Russian Federation growth in the mortality rate from blood circulatory system related diseases is observed.

A goal of the Healthcare" national project consists in raising by the year 2024 the life expectancy at birth to 78 years (to 80 years by the year 2030), but at the same time the indicator of life expectancy (LE) is not included in the target indicators (consequently, target values until 2024 are not available, either). According to the preliminary data of the Rosstat, in 2019 LE of the population reached the level of 73.4 years, an increase of 0.5 years on the index of 2018. At the same time, the gender gap (10 years) remained at the level seen in 2018.

According to the Rosstat's preliminary data, one of the maim indicators of the Healthcare" national project – the rate of mortality from diseases of the blood circulation system – was equal to 573.7 cases per 100,000 persons in 2019, a decrease of 1 percent as compared with 2018. However, it is 9 percent above the planned target indicator of the national project (525 cases per 100,000 persons). In 2019, the death rate from neoplasms (another main LE indicator) was 0.7 percent higher than in 2018 (201.5 cases per 100,000 persons in 2019). According to the plan of the "Healthcare" national project, in 2019 this indicator should be equal to 199.5 cases per 100,000 persons, but turned out to be 1 percent higher (201.5 cases). The infant mortality rate is the only index of the rate of mortality which demonstrates positive dynamics and the achievement of the target index (except for the data on the rate of mortality of the working age population which are available in summer 2020). In 2019, the infant mortality rate was 9 percent below the target indicator (5.4 cases per 1000 live-born) and was equal to 4.9 cases per 1000 live-born.

In 2019, a number of positive decisions which are expected to facilitate the reduction of the rate of mortality were taken. In particular, they included the amendment of preventive medical examination rules (the Order of March 13, 2019 of the Ministry of Health of the Russian Federation) and promotion of availability of palliative assistance (Federal Law No.FZ-18 of March 6, 2019). The amendment of preventive medical examination rules may influence early diagnostics of numerous diseases. There is a number of death causes which could be prevented at the stage of timely and quality diagnostics. Death causes, which could be prevented provided that timely and quality medical services are available, make a "contribution" to the premature mortality rate. The reduction of rate of mortality from this group of death causes is related to the completeness and adequateness of medical assistance measures. If mortality from these causes is completely excluded, the life expectancy may increase by 1.4 years.

In 2019, the cash administration of this national project was equal to 98.0 percent.[1] As of the beginning of October 2019, according to the statements of the Health Ministry of the Russian Federation[2] all results out of 7 planned ones for the year 2019 were achieved. It seems that further implementation of the project should be aimed at timely and, perhaps, advanced implementation of the planned activities which could facilitate the achievement of target indicators as regards the reduction of the rate of mortality from different causes.

[1] The Treasury of the Russian Federation. URL: https://roskazna.ru/.
[2] The report by Natalia Khorova, Deputy Health Minister on implementation of the "Healthcare" national project. URL: http://government.ru/news/38098/.

The "Education" national project

A major goal of the "Education" national project[1] consists in Russia's entering the top 10 countries as regards the quality of general education. This objective was mainly justified by Russia's relatively low indices in the PISA international comparative survey of 15-year old school students. At the same time, as per the human capital index calculated by the World Bank in 2018 Russia is ranked the 9th as regards the quality of the general education with all achievements of Russian school students taken into account in international surveys of the quality of school education. Accordingly, if the achieved results are retained in subsequent years, there will be no problems with implementation of the RF President's Executive Order in respect of this goal. In this situation, the main risk is the reduced motivation of the participants in the "Education" national project and their adoption of a formal approach to implementation thereof.

The other indicator of upgrading the quality of education is also related to the international competitiveness of the Russian education, that is, Russian universities' entering the Top-500 global ratings of universities. Globally competitive universities should be present in each federal okrug and minimum in 10 subjects of the Russian Federation. This approach is largely related to the efforts to limit somewhat the domination (and, consequently, the receipt of substantial budget funding) in the "Young Professionals" federal project (the "Global Competitiveness of the Higher Education" project) of higher education establishments from Moscow and St. Petersburg. Following the results of 2019, Russia took the 12th place (as compared with the planned 17th place which was believed to be retained from the previous year) as regards this indicator.[2]

Due to the fact that during 2019 national projects were constantly updated, the indicators of officially approved charters of national projects in terms of funding thereof differed from the original version of their charters. In this respect, the "Education" national project is a vivid example.

As measures to be taken within the framework of the "Education" national project were updated, expenditures on implementation thereof changed, too. As compared with the initially declared amount of RUB 747.6 billion in September 2018, in accordance with the project charter the funds were increased to RUB 784.5 billion or 4.9 percent. It is to be noted that an increase in the declared funding took place virtually on the back of growth in federal budget expenditures (growth of over RUB 35 billion). On the contrary, the share of the consolidated budget expenditures of the subjects of the Russian Federation decreased, but not substantially: from 5.9 percent to 5.8 percent.

The highest growth in expenditures took place in the "Modern School" federal project, an increase of RUB 17.2 billion, which sum accounts for nearly a half of growth in all costs (46.2 percent). It is noteworthy that as per the charter of the national project regions co-finance only the implementation of measures aimed at the development of modern school: for these purposes it is planned to spend 90.3 percent of all funds of consolidated budgets of the subjects of the Russian Federation. At the same time, out of over RUB 253 billion federal funds to be spent on this national project, over RUB 240 billion will be directed through inter-budget

[1] The information on the national project. URL: http://government.ru/rugovclassifier/833/events/; The charter of the "Education" national project. URL: http://government.ru/info/35566/.

[2] Based on the published ratings ARWU (URL: http://www.shanghairanking.com/ARWU2019.html), QS (URL: https://www.topuniversities.com/university-rankings/world-university-rankings/2020), THE (URL: https://www.timeshighereducation.com/world-university-rankings/2020/world-ranking).

transfers to regional budgets. In their turn, regional budgets will hand over RUB 41.3 billion to municipal budgets for implementation of the "Modern School" federal project.

The second beneficiary of growth in budget funding of the "Education" national project was the "Social Activity" federal project. Additional funding of the above project amounted to RUB 18.9 billion, a 3.3-fold increase. Such increased funding is the evidence of higher attention to problems of the youth and issues related to promotion of volunteer services and guidance. It can be assumed that the allocation of such a huge sum of additional funds on the youth policy is meant to compensate the reduction of federal budget expenditures on these goals in the past few years.

However, owing to the specification and elaboration of the legal framework of the national project, the implementation of activities within the frameworks of individual federal projects lagged behind, while the cash administration was equal overall to 91 percent in 2019 (though as of the beginning of November 2019 this indicator was equal to less than 60 percent). So, in particular, activities related to advanced training of teachers under the "WordSkills Russia" program[1] as well as those related to the appraisal of learners of secondary vocational training programs with utilization of the demo exam mechanism were carried out with a delay. At the same time, among the "leader"-federal projects in 2019, it is possible to single out the "Young Professionals" federal project, within which framework activities aimed at state support of vocational training institutions to modernize their material and technical base and promote global competitiveness of Russian universities and their entering the Top-100 global ratings were carried out in full.

The further implementation of the national project should be carried out with a view to promote comprehensive accomplishment both of individual projects and the proposed set of federal projects and harmonize implementation thereof with general goals. In addition, it is crucially important to enhance the networking with other national projects, for example, the "Demography" project which deals among other things with the issue of development of the nursery level of per-school educational establishments, private nurseries and kindergartens in a number of Russian regions and federal okrugs or the issue of retraining of workers of a preretirement age (within the frameworks of the "Education" national project and the New Opportunities for Everyone" federal project, advanced training of pre-school teachers and continuous professional training of the population should be provided, respectively).

If these issues (risks) are neglected, negative consequences may arise, in particular:

- Growth in the deficit of regional budgets;
- Shortage of teachers;
- Shortage or surplus of material and technical base of educational establishments;
- Shortage of the current funding of the education system;
- Loss by the population and academic community of trust in activities of the "Education" national project;
- Deterioration of the standard of education instead of its expected upgrading.

The "Housing and Urban Environment" national project

One of the key instruments in achieving the national goal – "The Improvement of Housing Conditions for Minimum Million Families a Year" – is the "Housing and Urban Environment"

[1] WorldSkills Russia. URL: https://worldskills.ru.

national project.[1] This project envisages individuals' moving to new and more comfortable housing and upgrading of the level of comfort and quality of the environment for each person. So, it is important to ensure higher affordability of housing for people and reduce building-related risks. In addition, a key line on which efforts should be concentrated should be the work on upgrading the quality of the urban environment (by 30 percent by the end of 2024 as compared with 2018) because in the 21st century growth of cities and large metropolitan areas is an important driver of the economic development. All these efforts help form a sustainable basis for economic growth and further development of the economy and upgrade substantially the standard of living of each individual.

In 2019, the implementation of the national project was aimed both at solving regulatory issues and fulfillment of a number of measures to achieve quantitative target values of the national project.

In Q1 and Q2 2019, the RF Ministry of Building's efforts were largely concentrated on solution of regulatory, organizational and financial aspects of implementation of the national project and formation of its institutional and financial base. These activities concern all federal projects included; at the same time a portion of them is related not only to intradepartmental activities or relations with regions, but also to the level of interdepartmental cooperation/integration or legislative activities and is already included in the Government's resolutions and draft laws approved by the State Duma.[2]

Apart from that, the main attention was paid mainly to financial, regulatory and administrative issues, while less attention was attached to the technological development of the building industry.

After the peak reached in 2014–2016, the commissioning of the new housing in 2017–2018 was steadily declining owing to negative economic trends, which situation logically caused concerns over the feasibility to achieve the goal of commissioning higher volumes of new housing in 2019.

At the same time, joint efforts on implementation of the national project yielded stable growth in the volume of housing development in 2019 as compared with the previous year (without a decrease in individual months). However, following the results of 2019 the overall volume of housing development in Russia amounted to 80.3 million m^2 against the planned 88 million m^2 in 2019.[3]

In the past two years, the interest rate (both the nominal and real interest rates) on mortgage loans for individuals kept decreasing despite the slowdown of the rate of inflation. In December 2019, the average level of the nominal interest rate on mortgage loans hit the historic minimum of 9.0 percent in the entire period of observations; the average nominal interest rate was equal

[1] The information on the national project. URL: http://government.ru/rugovclassifier/846/events/]; The charter of the "Housing and Urban Environment" national project. URL: http://government.ru/info/35560/.

[2] One of such major laws was the Federal Law "On Amendment of the Federal Law on Participation in Equity Construction of Apartment Houses and Other Real-Estate Projects and On Amendment of Some Statutory Acts of the Russian Federation" and Individual Statutory Acts of the Russian Federation." The Federal Law was approved by the State Duma and the Council of Federation on June 19, 2019 and June 26, 2019, respectively, and signed by the RF President on June 28, 2019. It seems that the advantage of this law consists in the establishment of the system-based order and the reduction of risks related to individuals' buying and building of housing, while its disadvantage is the lack of perceived implications related to the implementation of this draft law for the building industry (the impact on housing commissioning, prices and developers' financial stability) and so for macroeconomic and social consequences for the development as a whole.

[3] URL: http://kremlin.ru/events/president/news/62762.

to 9.9 percent in 2019.[1] However, despite the positive trend, as of year-end 2019 the average target level of the interest rate on mortgage loans (8.9 percent) failed to be achieved.

On one side, according to the data of the RF Government the reduction of average interest rates on mortgage loans from 12–13 percent on average in 2012 to 9.6 percent by the end of 2018[303] led to growth from 30 percent to 40–45 percent in the share of families which could afford new housing. However, in 2019 there was some drop in the growth rates of extension of mortgage loans. It can be explained partially by weakening of this indicator's sensitivity to the decline of the mortgage interest rate, but some effect was produced as well by the statements made by officials on plans to reduce further the mortgage interest rate, which situation prompted households to revise and postpone decisions as regards the timeframe for taking mortgage loans. In addition, further reduction of the mortgage interest rate had a weak effect on housing affordability without growth in households' incomes.

Housing affordability for households vary considerably from region to region. The affordability of housing as a whole remains at a low level (particularly, in southern regions and individual regions of the central part of Russia). It takes on average 5.5 years to buy a "standard" apartment on the secondary housing market.

In 2019, the findings of the assessment of the quality of the urban environment in compliance with the new methods[2] approved in 2019 (based on the data of 2018) were published for the first time. On average, the share of cities with a favorable urban environment was equal to the mere 23 percent, while in other cities the level of quality of the urban environment was recognized as unsatisfactory.

Also, it is to be noted that some progress – though controversial – was made in resettlement of people from the dilapidated and emergency housing. On one side, in January-November 2019 the number of persons who moved from the inadequate housing amounted to 22,200 persons as compared with 8,200 persons planned to be resettled under the national project, that is, the target indicator was surpassed by 200 percent. Judging by the results of 2019, the plan of implementation of the program of resettlement from the emergency housing was surpassed by 500 percent (about 800,000 m^2 of housing against the planned 140,000 m^2)[3]. On the other side, this level of the indicator was achieved mainly owing to a few key regions, but in a number of other regions the program of resettlement of people from the emergency housing did not even begin as of the end of 2019 (the total of ten subjects of the Russian Federation: the Republic of Altai, Dagestan, Ingushetia, Tyva, Kabardino-Balkaria, the Transbaikal Territory, the Stavropol Territory, the Tambov Region, the Tver Region and the Jewish Autonomous Region).[4] It is noteworthy that the replacement of the dilapidated housing takes place – though at a slow rate – mainly in large cities, while in other regions the housing stock is getting obsolete.

The main conditions for achievement of the national goal "Improvement of Housing Conditions for at Least 5 Million People Annually" and target indices of the national project are the following: first, the reduction of the real interest rate on mortgage loans and, second, creation of resources for the substantial reduction of costs related to building of new housing with a high quality of the existing housing and urban environment maintained. All these things

[1] The indicators of the home loan (mortgage) market. URL: https://cbr.ru/statistics/pdko/Mortgage/.
[2] Instruction No.510-r of March 23, 2019 of the Government of the Russian Federation.
[3] URL: http://kremlin.ru/events/president/news/62762.
[4] The meeting of the Presidium of the Presidential Council on the Strategic Development and National Projects. URL: http://government.ru/news/38543/.

need to be done during the switchover to project methods of housing development funding used all over the world.

The "Ecology" national project

Throughout 2019, the higher attention was paid to the "Ecology" national project.[1] It includes 11 federal projects, however, the highest public response and officials' close attention were focused on federal projects which were meant to deal with waste management issues: the "Clean Country" federal project and the "Comprehensive System of Municipal Solid Waste Treatment" federal project. In this sector, the most serious developments took place early in 2019.

In particular, the regulatory and legal framework was established for the implementation of the national project with the following documents approved:

- A federal law on summary calculations and the mechanism of establishing emission quotas in large industrial centers;[2]
- The procedure for development, approval and adjustment of the federal scheme of municipal solid waste treatment;[3]
- The procedure for development, setting and revision of the quality standards of chemical and physical indices of the condition of the environment for individual components of the natural environment;[4]
- The procedure for issuing comprehensive ecological permits;[5]
- The decision on the conversion of the facilities used for the elimination of chemical weapons into interregional technical industrial complexes dealing with processing, utilization and decontamination of extremely and highly dangerous wastes.[6]

The positive factors are the following:

- The start of the waste management reform in most regions of the Russian Federation;
- The establishment of the "Russian Ecology Operator" public company and appointment of FGUP "RosRAO" as the federal operator to manage waste of hazard class I and II;
- The inclusion of the "Quality of the Environment" index in the list of indices for evaluation of the efficiency of performance of high-ranking officials of subjects of the Russian Federation;[7]
- Liquidation of 17 sites of the accumulated environmental damage and 16 unauthorized dump sites;
- Cleaning of 22,000 km of the coastal strip of water bodies;
- Establishment of 5 national parks;
- Organization of the monitoring by the Accounts Chamber of the Russian Federation of the indices of the "Ecology" national project;

[1] The information on the national project. URL: http://government.ru/rugovclassifier/848/events/; The charter of the "Ecology" national project. URL: http://government.ru/info/35569/.
[2] Federal Law No.195-FZ of July 26, 2019 "On Staging of the Experiment on Establishing Quotas on Pollutant Emissions and Amendment of Individual Statutory Acts of the Russian Federation as Regards Reduction of Air Pollution."
[3] Resolution No. 181 of December 25, 2019 of the Government of the Russian Federation
[4] Resolution No.149 of February 13, 2019 of the Government of the Russian Federation.
[5] Resolution No.143 of February 13, 2019 of the Government of the Russian Federation.
[6] Resolution No.540 of April 30, 2019 of the Government of the Russian Federation.
[7] URL: http://www.kremlin.ru/acts/assignments/orders/59450.

- Organization of the public monitoring and comprehensive audit of the waste treatment industry (the Public Chamber of the Russian Federation and the All-Russia People's Front).

Among the factors which slow down the full-scale implementation of the national project, it is necessary to point out the following:

- A lack of measures aimed at the implementation of the state policy priorities in waste treatment, particularly, minimization of waste generation;
- Insufficient information and non-transparency in decision-making;
- The "Nasha Priroda" (Our Nature) federal government information system's failure to work;
- Lack of a single concept of ecological education in Russia; the failure of the mechanism of collection, storage and transportation of valuable recoverable resources;
- Lack of mandatory separate accumulation and collection of municipal solid waste (MSW) in territorial schemes of most regions of the Russian Federation;
- Negatively-charged emotional background of the implementation of the waste management reforms;
- Regional operators' bankruptcy risks and other.

According to sociological surveys, every second resident of the Russian Federation is satisfied with the organization of collection and removal of the municipal solid waste with the highest share of such persons found in the Privolzhsky Federal Okrug and the Urals Federal Okrug. At the same time, the launch of the MSW reform was accompanied in numerous regions (the Archangelsk Region, the Tyumen Region and other) by standoffs and conflicts over dump-sites.

There is a particular concern over MSW and building waste shipments from Moscow and the Moscow Region to regions either with no waste treatment facilities or own MSW landfills filled nearly to full capacity (the Vladimir Region, the Yaroslavl Region and other). Such factors trigger off social tensions, protests and distrust to the authorities and any decisions they make. Such developments may lead to a situation where the authorities' moves in respect of the waste treatment sector and the processes of building of infrastructure facilities and networking with investors are blocked and obstacles are created on the way of implementation of the "Ecology" national project. Also, there are doubts about ecological expediency of the decision on setting MSW heat processing equal to waste treatment.[1]

Within the framework of the "Clean Air" federal project, a comprehensive plan of air pollution reduction in large industrial centers was approved. In addition, during 2019 the regulatory framework for the establishment of the automated control over pollutant emissions and pollutants discharges continued to be formed. [2] In 2019, the methods of assessment of target indicators of all federal projects included in the national project, as well as almost all (98 out of 99) regulatory acts, which were to be adopted, were approved.

Overall, the measures implemented in 2019 within the framework of the national project and federal projects which were a part thereof were aimed at achieving intermediate results in terms of the quantity of the national project's target indicators, that is, over ¾ of target indicators. At year-end 2019, target values were achieved as regards 41 indicators. For example, within the framework of the "Comprehensive System of Municipal Solid Waste Treatment" federal project the volume of MSW sent for processing exceeded the target value. Within the

[1] URL: https://sozd.duma.gov.ru/bill/568200-7.
[2] URL: http://docs.cntd.ru/document/553884118.

framework of the "Forests Preservation" federal project, targets values of the "ratio of the forest restoration area and forest cultivation area to the felled forest and lost wood area" indicator and the "forest restoration and forest cultivation area" indicator were surpassed.

In 2019, the implementation of the "Ecology" national project was highly criticized by the Accounts Chamber of the Russian Federation. In auditors' opinion, the charter of the Ecology" national project fails to reflect its contribution to the achievement of the national goals of development, the implementation of the national project is carried out with faults and the deadlines of various activities are not met.[1]

Despite the fact that at year end 2019 the cash administration of the national project turned out to be at a low level (66.3 percent[2]), in terms of achievement of the indicators' target values it cannot be said that the "Ecology" national project lags behind a lot. At the same time, it is necessary to mention problem lines of activities of this project. In particular, within the framework of the "Preservation of the Baikal Lake" federal project, there were difficulties with implementation of measures, so target indicators' values failed to be achieved.

The "Safe and Quality Highways" national project (SQH)

The "Safe and Quality Highways" national project is aimed at upgrading the standard of highways in big cities and metropolitan areas.[3] Despite some "starting premise" created, in the framework of the "Safe and Quality Highways" priority project which was carried out in 38 large metropolitan areas (with the population of over 400,000 people) in 2016–2018 (its implementation was expected until 2025[4]) and improvement of the situation in the road sector on roads of large metropolitan areas, the implementation of the national project was characterized by some lag and a failure to meet the deadlines already in 2019 (in most cases the minimum delay amounted to 1–3 months) and these factors formed negative expectations at the initial stage of implementation of the project in terms of meeting the deadlines set for achievement of the key reference points of the national project.

For example, the official report on the conclusion of agreements between the subjects of the Russian Federation and the Federal Road Transport Agency (FRTA) appeared on April 9, 2019[5] with a month delay as compared with the initially planned date (March 1, 2019). However, as of that date the process of conclusion of agreements was not completed: at the official website of the FRTA it was reported that the process of conclusion of agreements was fully completed with municipal governments of 16 subjects out of 83 subjects of the Russian Federation (19 percent of participants). In mid-2019, the information on completion of a number of measures was unavailable on the official websites of the agencies and the mass media monitoring the implementation of the national project despite a delay of 1–6 months as compared with the initially set deadline.

[1] URL: https://www.interfax.ru/russia/69092.

[2] URL: https://futurerussia.gov.ru/nacionalnye-proekty/scetnaa-palata-na-nacproekty-v-2019-godu-bylo-zatraceno-9145-zaplanirovannyh-sredstv.

[3] The information on the national project. URL: http://government.ru/rugovclassifier/844/events/; The charter of the "Safe and Quality Highways" national project. URL: http://government.ru/info/35558/.

[4] The charter of the "Safe and Quality Highways" priority project was approved by the Presidium of the Presidential Council on Strategic Development and Priority Projects (Record No. 10 of November 21, 2016). URL: http://bkdrf.ru/uploads/documents/18_04_18/паспорт%20приоритетного%20проекта.pdf.

[5] The FRTA agreed on allocation of funds on the "Road" national project with all regions. URL: https://tass.ru/nacionalnye-proekty/6310367.

The difficulties in implementation of road projects emerged in individual regions, too. So, at the meeting[1] of the SQH project committee held on June 5, 2019 it was underlined that the deadlines for signing contracts in 2019 failed to be met (the process was to be completed no later than May 31, 2019) in individual regions where the share of concluded contracts was below 40 percent (the Tver Region, the Republic of Mordovia, the Jewish Autonomous Region; the Republic of Crimea and the Chukot Autonomous Okrug – less than 10 percent). At the same time, it is noteworthy that in respect of the total of 6,200 facilities included into the competitive tendering plan-schedule contracts were concluded on 4,900 facilities (78.8 percent).

The contractual work-related problems were complicated by difficulties in correct assessment of the initial and current condition of motor roads in a number of regions in terms of compliance thereof with the regulatory requirements. In particular, a substantial misstatement of the statistics as regards the share of motor roads complying with the regulatory requirements was identified and this fact was made public on the SQH official website.[2] Similar substantial statistical distortions affect seriously the achievement of the target values of the national project's indicator. As regional parameters determine the overall target index across all regions, failures may lead to ineffective strategic decisions which are taken at the federal, regional and municipal levels.

Due to the fact that the national project suggests conclusion with subjects of the Russian Federation of the agreements on the implementation of the national project where target indicators and the dynamics thereof are taken into account, errors of statistical measurement of target indicators affect negatively the process of implementation of projects at the level of each region, too. To minimize such deviations, it is advisable to carry out regular random inspections of regional statistical services to readjust measurements of the provided indicators.

The additionally outlined problems became more complicated primarily because of the concentration of the main portion of the activities to be carried out under the national project at the end of 2019 and later periods. In individual cases, at the launch of the national project this situation did not permit to remove the regulatory barriers and had an impact on the achievement of target values of some SQH project indicators in 2019. For example, the implementation of the activities in respect of the reduction of the period of approval of the required regulatory acts at the federal level to unite overhaul, road repairing and maintenance jobs in one lot was planned only late in 2019 (in compliance with the charter of the SQH project it was scheduled for December 31, 2019). At the same time, in 2019 "within the framework of the implementation of the regional project the share of the contracts on road activities envisaging the fulfillment of jobs based on the principle of a life cycle contract which permits various types of road jobs to be united into a single contract" should be equal at least to 10 percent of the overall number of new state contracts on fulfillment of overhaul, road repairing and maintenance jobs. At the same time, in compliance with the existing regulatory base the inclusion of the combination of various types of jobs in a single contract is inadmissible and, consequently, apart from direct limitation on such contracts' implementation, this factor will affect the availability of debt

[1] For more details, see: URL: https://www.mintrans.ru/press-center/region-news/9135.

[2] In particular, based on the results of the year 2018 the share of motor roads of regional importance complying with the regulatory requirements is much lower than in 2017: the Amur Region (-45.4 percentage point), the Magadan Region (-53.5 percentage point), the Kursk Region (-17.3 percentage point), the Perm Territory (-13.5 percentage point), the Altai Territory (-11.4 percentage point. For more details, see: URL: http://bkdrf.ru/news/read/mintrans-i-rosavtodor-proveryat-statisticheskie-dannye-regionov-o-sostoyanii-dorozhnoy-seti.

financing for contractors within the framework of the life cycle contract (LCC) (banks' refusal to grant loans).

At the same time, based on the results of 2019 according to the official statistics all target indicators of the national project were achieved, including the indicator "share of the contracts on road activities envisaging the fulfillment of jobs based on the principle of a life cycle contract which permits various types of road jobs to be united into a single contract" which value was equal to 12.5 percent. The deviations from the deadlines were observed with only eight activities which were planned to be carried out in 2019. In most cases they were related to delays in approval of developed regulatory documents (for example, regulatory acts on road safety, introduction of the "free flow" toll-charging system, relevant control over toll payments on toll roads and other) and procurement procedures.

The "Labor Productivity and Employment Support" national project

A key goal of the "*Labor Productivity and Employment Support" national project*[1] consists in promotion of labor productivity in the economy as a whole[2] and selectively at individual enterprises (as in the federal project on target support of enterprises), as well as creation of opportunities for retraining and employment at a new job in case of release of the workforce as a result of implementation of the first two goals. The key activities of the national project are aimed at the removal of barriers which increase transactional costs of all enterprises on introduction and the subsequent diffusion of technologies, business processes' best practices and management models developed within the framework of the target support of enterprises which are participants in the national project and formation of institutional foundations of long-term growth in labor productivity and, consequently, economic output.

At the same time, it is important to point out the disadvantages of the structuring of the national project related to the lack of direct compliance of target indicators of Executive Order No.204 with the pattern of the national project; the lack of reference to the related national goals set out in Executive Order No.204 (the implementation of the project is expected to facilitate, for example, the achievement of the goal to enter the top-5 global economies); the lack of hierarchy of projects and activities therein. Also, their correlation with one another is not elaborated enough.

In 2019, the implementation of the national project was carried out with varying degrees of success across its individual lines of activities. So, in 2019 over 1200 enterprises were involved in the activities of the national project (over 100 percent of the target number set for the year), over 10,000 employees of enterprises were trained to new approaches how to increase labor efficiency (over 100 percent of the target number of 9,380 employees set for the year), 33 regional centers of competence (with the planned number of 31 centers set for the year) were established.[3] The support measures provided within the framework of national project were used by 110 mid-sized and large enterprises of the non-oil and gas sector (as compared with the planned 60 enterprises). Overall, in 2019 37 subjects of Russian Federation took part in the national project (against the planned 29 subjects of the Russian Federation).

[1] The information on the national project. URL: http://government.ru/rugovclassifier/865/events/; The Charter of the "Labor Efficiency and Employment Support" national project. URL: http://government.ru/info/35567/.

[2] The "System-Based Measures on Upgrading Labor Productivity" federal project includes the main horizontal measures aimed at upgrading overall labor efficiency in the economy.

[3] The Federal Competence Center, производительность.рф. (efficiency.rf)

It is to be noted that training of managerial human resources of enterprises – participants in the national project – was slower than expected because of the diversified nature of the planned educational activities. A similar situation was observed with training of participants in the "School of Export" national project of the Russian Export Center: less than a half of companies was covered by training during the year. The main factors behind this situation include a high price of training (participant-companies pay 50 percent of the price) and organization-related problems.

It is to be noted that the actual official statistical data on the achieved values of the labor productivity index at mid-sized and large enterprises of the non-oil and gas sector at year-end 2019 will be available only in July 2020 by virtue of problems related to the organization of the evaluation process. So, it is infeasible to assess the efficiency of the implemented measures in terms of this key indicator of the national project.

Further results of the activities of the national project will depend crucially on the mechanisms of implementation and the criteria of provision of one or another form of support. It is feasible to identify the following *key risks*.

1. Despite its horizontal ideology, the "System-Based Measures to Upgrade Labor Productivity" federal project depends largely on the selection of participant-enterprises. A number of privileges – particularly soft-term financing – are envisaged only for companies which actually receive support within the framework of another federal project ("Target Support …") in networking with the Federal Competence Center. However, the need of linking the soft-term financing to concrete actions aimed at upgrading labor productivity where investments are required is not taken into account. In the final analysis, this approach is coupled instantly with the following three risks:

a) Ineffective lines of companies' development, which are not related to efficiency upgrading can be financed;
b) Substantial destabilization of operation of individual markets owing to intensive state interference amid lack of concrete justified criteria of target support of enterprises (it primarily concerns the "Target Support of Upgrading of Labor Efficiency at Enterprises" federal project) may happen;
c) The work with enterprises which lag behind in terms of labor productivity is left beyond the framework of the project.

2. In addition, there is a shift of focus of support towards enterprises with a rather high level of labor productivity. It stems from the conditions of provision of state support and inclusion of firms into pilot projects which they are selected for with a number of criteria taken into account. It is noteworthy that the mechanisms of technological diffusion between firms which are not participants in the project remain unclear, while the achievement of the annual labor productivity growth rates of 5 percent by 2024 is referred to all mid-sized and large enterprises of the non-oil and gas sector of the economy. So, the substantial risk of implementation of the federal project is the risk of a possible scaling of input measures from the level of pilot projects to broader horizons. In addition, the target support measures for enterprises – for instance, consultations of experts of the Federal Competence Center – envisaged in the federal project may undoubtedly boost efficiency at some enterprises by means of removal or upgrading of various ineffective components of the business process. However, this approach suggests a rather limited effect. The specified support measures promote efficiency at enterprises actually one-time (or on the horizon of a few years depending on the scale of production and the need

of the required transformation), but do not offer the mechanisms of sustainable long-term growth in labor productivity in the mid-term and, the more so, long-term prospects.

3. As regards the technological diffusion, the national project is aimed mainly at the transfer of foreign technologies and the exchange of expertise between companies participating in the project. At the same time, the OECD believes that the main mechanism of technological diffusion[1] is the effective networking between the fundamental science and the private sector aimed at ensuring long-term and sustainable growth. In combination with the selection of the recipients of national project measures, it can be related to the risk of a failure to ensure long-term sustainable growth in labor productivity and economic output. Instead, a short-term effect of growth in labor productivity and output at individual enterprises is highly likely and it will remain during the implementation of federal and national projects. In such a case, the self-sustaining mechanism of efficiency growth (and, subsequently, economic growth) may never be started at all.

The "Science" national project

The "Science" national project[2] (hereinafter SNP) plays an important role in achievement of the national goal: "the speed-up of the technological development of the Russian Federation and promotion of the number of entities engaging in technological innovations up to 50 percent of the total number thereof." A key goal of the SNP is the establishment of research and educational centers (REC), which should become R&D engines in the forthcoming years.

To some extent, a portion of activities of the SNP are of the nature which is typical of the previous years. Owing to the previous years' preliminary work, in 2019 within the framework of the SNP 5 REC, 7 world-class research centers (4 mathematical centers and 3 genetic centers) and over 280 research labs for the youth were established. [3] In 2019, the values of all target indicators of the SNP were achieved and the national project's cash administration was equal to 99.1 percent[4] (the best index value among all national projects in 2019). However, Russia's position in the world's ratings and in terms of the national project's key indices did not change. So, as regards the unit weight in the overall number of patent requests for inventions submitted worldwide in the fields determined by the priorities of science and technology, Russia occupies the 8th position in the world (the 9th position in 2018), while as regards the index of the number of research in full-time equivalent among the world's leading countries it is likely to be rated the 5th (the 4th place in 2018).

At the same time, for successful implementation of the SNP it is crucially important to ensure the institutional consistency of the SNP's selected target indicators and the proposed complex of activities and models in respect of which the selected indicators and activities facilitate the achievement of the national goal.

As per the findings of the research by the R&D Club, 77 percent and 84 percent of large Russian companies have never bought licenses (patens) from higher educational establishments

[1] *Demmou, L., Wörgötter A.* Boosting Productivity in Russia: Skills, Education and Innovation // OECD Economics Department Working Papers. No. 1189. OECD Publishing, Paris, 2015. URL: https://doi.org/10.1787/5js4w26114r2-en.

[2] The information on the national project. URL: http://government.ru/rugovclassifier/851/events/; The charter of the "Science" national project. URL: http://government.ru/info/35565/.

[3] The 12th Meeting of the Board on Promotion of Competitiveness of Russia's Leading Universities among the World's Leading Research and Educational Centers. URL: http://government.ru/news/38200/.

[4] URL: https://futurerussia.gov.ru/nacionalnye-proekty/kassovoe-ispolnenie-nacproekta-nauka-v-2019-godu-prevysilo-99.

(HEE) and HEE-established companies, respectively.[1] The existing institutional gap between the science and industry is expected to be overcome by means of REC. However, the synergistic effect from the combination of science, education and industry can be achieved only within the framework of specific projects, which determine the list of REC participants, their research lines in the framework of specific industries with the global market situation taken into account. However, the SNP does not identify the request of large companies for development of various technologies as a key stimulating mechanism of REC designing. In addition, as per the charter of the SNP, in the first year of establishment of the REC the funding of its operations out of extra-budgetary sources is expected to surpass by 100 percent the financing out of the federal budget (by 500 percent in 2024). This factor alone points to the leading role of real sector companies in designing REC, but it is not reflected in the SNP's activities.

As of 2017, Russia's share in global expenditures on science as regards academic staff was equal to the mere 2 percent, while those of the US, to 26 percent, China – 21 percent, the EU – 20 percent and Japan – 9 percent. In 2018, the two-thirds of Russia's internal costs on R&D were financed out of the state budget and only by one-third (33.8 percent), by the business. It is noteworthy that in 2017 the business accounted for 60.1 percent of R&D costs, while the public sector, for the mere 30.4percent.[2] In other words, Russia demonstrates a non-traditional pattern of R&D financial sources and costs among economically developed countries.

The expected two-fold growth in internal costs on R&D by 2024 upon the implementation of the SNP is expected to be facilitated primarily by the business sector's funds which volume is planned to be increased by 300 percent (from RUB 265 billion to RUB 1060 billion). For this purpose, work with the private sector within the framework of the national project should be stepped up.

The "Digital Economy of the Russian Federation" National Program

A larger portion of the activities of the "*Digital Economy of the Russian Federation" national program*[3] planned for 2018–2019 is of a preparatory nature. The implemented measures should outline the rules of regulation of industries with their utilization of digital technologies and a switchover to new models of organization of activities taken into account (the "Statutory Regulation of the Digital Environment" federal project), the principles and lines of development of the information and communication technology (ICT) market (the "Digital Infrastructure" federal project), labor market needs in personnel amid the new methods of organization and operation of markets (the "Personnel for Digital Economy" federal project), goal-setting in information security (the "Information Security" federal project), the key criteria of the development of end-to-end digital technologies with market needs taken into account (the "Digital Technologies" federal project), as well as goal-setting in the public and municipal services sector (the "Digital State Management" federal project).

A lack of the data on the development of the digital economy in Russia in the official information does not permit to assess adequately the results of implementation of the national project. In particular, at present there is no information on the indicators: "the share of costs on

[1] *Makeyeva A., Savelyev A.* Undergraduate Education // The Kommersant daily. July 6, 2016. URL: https://www.kommersant.ru/doc/3006400.

[2] *Ratai T.V.* Internal Coats on R&D in the Russian Federation: Growth Begins to Take Shape // The Bulletin of the Institute of Statistical Research and Knowledge-Based Economy, NRU HSE of September 19, 2018 г.

[3] The information on the national project. URL: http://government.ru/rugovclassifier/614/events/; The charter of the "Digital Economy of the Russian Federation" national project. URL: http://government.ru/info/35568/.

the development of the digital economy, as % of GDP", "the share of the Russian Federation in the global volume of data storage and processing services rendered", "the number of backbone centers for data processing in federal okrugs", "the average period of idleness of state information systems caused by computer attacks", while the values of the indicators "the share in money terms of purchased and (or) leased by state corporations and companies with state participation of domestic software" and "the share in money terms of purchased and (or) leased by federal executive authorities of subjects of the Russian Federation and other state authorities of domestic software" are estimated in terms of individual agencies.[1] At the same time, it is necessary to point out a low cash administration of the national project (73.3 percent[2] – the lowest index value across all national projects), delays in approval of the federal law "On Experimental Legal Regimes", which is crucial for development of end-to-end technologies and other regulatory acts stimulating technological development.

At the same time, it is noteworthy that a substantial portion of target indicators of the national project was not calculated until 2019; the development of the methodology took place late in 2018 – early in 2019 and as of the year-end they either lacked an official approval (discussion and further elaboration were needed) or the additional data for comprehensive calculation of target values was required.[3]

Apart from the target indicators proposed in the national program, it seems feasible to expand their list by means of including, among other things, indicators which characterize the efficiency of utilization of the created infrastructure, the competitiveness of purchased software, reduction of the intermediary services market and other.

A portion of measures became to a large extent[4] activities aimed at identifying the legal environment for utilization of digital decisions in different sectors of the economy and promoting accessibility and volumes of the ICT infrastructure.[5] However, these decisions are of nationwide importance. The formation of the legal environment for implementation of the goal at the regional level is delayed.

Further development of the national program can be related with additional risks, including the following:

1) Infrastructure risks. Despite the approval of the concept of building and development of narrow band wireless "Internet of things" communication networks, lack of the required infrastructure and uncertainty over frequency selection in the development of 5G/IMT-2020

[1] This information is not available in the public domain.

[2] URL: https://www.minfin.ru/ru/press-center/?id_4=36929-predvaritelnye_dannye_ob_ispolnenii_raskhodov_federalnogo_byudzheta_na_ryealizatsiyu_natsionalnykh_proektov_na_1_yanvarya_2020_goda.

[3] For example, for calculation of the indicator: "domestic costs on development of the digital economy by means of all sources on the basis of the share in the country's gross domestic product, %" requires collection of the data in compliance with the following updated forms: form No. 3-inform, form No.2-science, form No.85-K, form No.OO-2, form No.SPO-2, form No. PO, form No.1-DOP, Form No.1-PK.

[4] Except for the "Digital State Governance" federal project.

[5] In particular, legal efforts were determined for formation of the electronic civil document flow, as well as the legal environment for legal and notarial procedures owing to the development of the digital economy; the Single Register of Russian Software was developed; seven road maps for development of end-to-end digital technologies were approved; the norms ensuring preferences for Russian-made computer, server and telecommunication equipment, software and other were legally guaranteed.

networks[1] may result in the extension of the period of introduction of a large portion of end-to-end technologies. In addition, the data flow rate and technical requirements to hardware peripherals depend on the frequency band selection in which 5G networks are going to be put into operation. One of the debated options – the creation of 5G/IMT-2020 networks with use of a 25.25–27.5 GHz frequency band may entail additional risks related to a lack of relevant equipment and technologies for development and building of networks;

2) Financial risks. A large portion of activities suggests provision of state support to companies dealing with development of digital technologies. It is to be noted that direct subsidies will not motivate market participants to boost their efficiency; on the contrary, subsidized companies will be prompted to adopt a rent-seeking behavior. Accordingly, it seems necessary to promote businesses' interest in digital transformation processes to ensure growth in the share of the private sector's R&D costs on information and communication technologies;

3) Regulatory risks. A substantial portion of activities under the "Statutory Regulation of the Digital Environment" federal project suggesting the reduction of regulatory barriers for development of the digital economy should be carried out in 2019-2020. It is noteworthy that a large portion of regulatory acts, which were meant to create the technical feasibility and rules of utilization of digital technologies within the framework of experimental legal regimes, legal and notarial procedures, the electronic civil document flow, protection of intellectual property rights and other were neither developed, nor developed partially, so their adequate development is going to be impeded owing to this factor.

The "Culture" national project

The trajectory of implementation of the "Culture" national project[2] is mainly the continuation of the implemented program lines of activity of the RF Ministry of Culture. The national project follows the logic of the previous stage, includes no innovation instruments aimed at solving the objectives of development and pursues the idea of the status quo being preserved, while all activities and planned results formalize to a great extent the activities which have already been carried out.

The national project is focused on upgrading the material and technical base of the sector and does not regard the non-government sector of culture as a zone of its interest and influence. The emphasis on the modernization of the physical infrastructure of the sector which is explicitly evident in the pattern of the national project cannot bring about the expected cultural breakthrough as it is not underpinned by the system-based work to promote the standard and variety of cultural products and services meeting the broad audience's new requests through the development of the "soft" infrastructure, that is, education, new types of cultural activities, new models of operation of cultural institutions and management formats. Actually, the situation of the cultural infrastructure and its material and technical equipment require urgent measures aimed at modernization thereof, however, it makes sense only in case the institutes of culture are modernized, too.

Further elaboration of the charter of the national project took place in 2019. As compared with the version of the end of 2018, the budget of the "Digital Environment" federal project

[1] The pilot project on the 5G-network launch in Russia is being carried out on various frequencies. For example, in Moscow base stations were put into operation on 4.8–4.99 GHz frequency in Skolkovo, on 28 GHz frequency in Moskva-City, Vorobievy Hills and Tverskaya Street and on both frequency bands at the VDNKh.

[2] The information on the national project. URL: http://government.ru/rugovclassifier/842/events/; The charter of the "Culture" national project. URL: http://government.ru/info/35562/.

increased considerably (by nearly 200 percent) with its content remaining unchanged in terms of the range of activities (an activity suggesting "production and placement in the Internet of the information content aimed at promotion the civil identity and moral and spiritual values among the youth" was added without specification what is meant by this activity). This federal project is formed in compliance with the strictly structured sectorial logic without the nongovernment segment of the digital environment taken into account. In the comments, there is a mention of the fact that commercial and non-profit organizations can be included in the list of resources on the voluntary basis and in accordance with the procedure established by the Ministry of Culture of the Russian Federation, but it is obvious that such institutions have no motivation to do it and the Ministry of Culture just makes the data collection job easier for itself without networking with subordinated entities and planning the creation of more complex statistical data collection mechanisms in the sphere of culture as a whole. No extra-budgetary funding in the budget pattern of the national project is envisaged and this is indirect evidence of the fact that the project has its own sectorial specifics. It is to be noted that a larger portion of the budget of the national project is meant for either creation or modernization of the infrastructure (the "Cultural Environment" federal project). The funds which are expected to be allocated on the implementation of the national project are comparable with developed countries' budgets on culture, but they are less than one could expect for an ambitious project. For example, with recalculation into the annual budget it is 2.5 times lower than in the UK, 6 times lower than in Germany and 10 times lower than in France. Overall, the cash administration of the national project was equal to 99.0 percent in 2019.

The "Culture" national project uses only two target indicators: "growth of 15 percent in the number of visits to institutions of culture (an accrued method)" and "growth of 400 percent in the number of applications (million applications) to digital resources in the sphere of culture." Target values as regards both the indicators were achieved in 2019. They were not related directly to any declared national goals; only the latter is indirectly related to the goal: "facilitation of the speed-up introduction of digital technologies in the economy and social services." The fact that it is the least "resource-intensive" national project and, most importantly, the extent of its correlation with other national projects is very low is indirect evidence of culture not being treated as an important factor of the national development and inclusion of culture in a number of national projects is likely to be a political move rather than one determined by the managerial logic of strategic development.

At the same time, the methods – proposed by the Ministry of Culture – of evaluation of the efficiency of implementation of the "Culture" national project (the form of official statistical reporting) were used as far back as the Soviet period and continued to be utilized in the Russian Federation for several decades without significant modifications. The only advantage consists in the fact that institutions of culture are familiar with those methods.

A serious disadvantage of the proposed instrument is the fact that it does not include in the statistics the non-government sector of culture which has been constantly growing in the past few years and plays an ever more important role in upgrading the conditions for self actualization and discovery of talents of Russian citizens.

The very number of visits to institutions of culture is not a critical value pointing to the efficiency of their operation. The replacement of the extent of participation of citizens in cultural life by the indicator of visits to institutions of culture as the main indicator of the implementation of the national project reduces considerably the effect of the national project on the standard of cultural life of the population.

The national project is formed in terms of the sectorial logic and aimed at solving issues and tasks which are topical to the public sector and includes virtually no measures aimed at motivation of the non-profit and commercial sectors in the sphere of culture, though they are developing actively at present (except for provision of grants to non-commercial organizations with a vague description of their activities).

In reality, a large portion of cultural organizations, particularly, in large cities has long become familiar with modern technologies of work with the audience, fundraising and other forms of work which quite comply with international professional standards, but neither officials nor even experts see any effect from those activities.

The "Small and Mid-Sized Business and Support of Individual Entrepreneurial Initiative" national project

The "*Small and Mid-Sized Business and Support of Individual Entrepreneurial Initiative"* national project[1] (hereinafter SMB) includes a few objectives which generally comply with the pattern of the federal projects:

- Upgrading conditions for entrepreneurial activities;
- Expansion of the access of SMB to financial resources, including soft-term financing;
- Acceleration of small and mid-sized business entities;
- Establishment of the system of support of farmers and promotion of rural cooperation;
- Popularization of entrepreneurship.

The prospects of achievement of the goals of the "Small and Mid-Sized Business and Support of Entrepreneurial Initiative" vary considerably across Russian regions.

The main target indicators of the SMB national project are as follows: the number of the employed in the SMB sector, including individual entrepreneurs (IE) (19.6 million persons in 2019; 25 million persons by 2024); the share of SMB in GDP (20.5 percent in 2019; 32.5 percent by 2024) and the share of SMB's exports in the overall volume of non-oil and gas exports (8.8 percent in 2019; 10 percent by 2024).

The data on the share of SMB in GDP are published once a year with a big delay[2], so in a shorter time interval it is infeasible to trace the effect of federal projects on this indicator. In previous years, the dynamics was ambiguous owing partially to the modification of methods.[3] Growth in the share of SMB in GDP which started in 2017 changed for a decline in 2018: 23 percent in 2015; 21.6 percent in 2016; 21.9[4] percent in 2017; 20.2 percent[5] in 2018.

[1] The information on the national project. URL: http://government.ru/rugovclassifier/864/events/; The charter of the "Small and Mid-Sized Business and Support of Individual Entrepreneurial Initiative". URL: http://government.ru/info/35563/.

[2] The deadlines of official publication of the statistical information were determined in the Federal Plan of Statistical Work, that is, annually on December 31 of the year following the reporting year; the assessment is carried out by the Rosstat and the Federal Tax Service of the Russian Federation.

[3] According to the Rosstat, the comparison of the presented data for 2015–2016 in the dynamics is not correct because of the modification of the criteria of attribution of business entities to the SMB entities in 2016.

[4] Institutional restructuring in the economy and the number of large and mid-sized enterprises and entities. The Rosstat, 2018. URL: http://www.gks.ru/wps/wcm/connect/rosstat_main/rosstat/ru/statistics/publications/catalog/doc_1139841601359; The report on the findings of the research into the situation and development of SMB in the Russian Federation, outputs of implementation of measures of support SMB and development of the evaluative forecast of SNB development. Moscow: AO "Corporation "MSP", 2018. URL: https://corpmsp.ru / about/deyatelnost/monitoring-okazaniya-podderzhki-subektam-msp/rezultati_issledovaniya/.

[5] The Rosstat registered a decrease in the share of small business in the economy. URL: rbc.ru/economics/28/01/2020/5e2eda219a79473c798d3692.

At year-end 2019, the share of exports by SMB, including individual entrepreneurs in the overall volume of the non-oil and gas exports amounted to 9.8 percent (8.6 percent in 2018), having surpassed the target values of 8.8 percent. However, as regards the number of persons employed in the SMB sector, including individual entrepreneurs, the target value of 19.6 million persons was not achieved. At year-end, it was equal to 19.3 million persons (19.2 million persons in 2018).

The main difficulties within the framework of implementation of the national project were related to delays[1] in approval of the regulatory regime, in particular, in respect of the rules and principles of organization of nonstationary and mobile trade by SMB and submission of tax reporting. In addition, it is to be noted that there are difficulties related to provision of financial support to SMB entities: the indicators seen in 2019 were below the planned ones, which can be explained to some extent by quite high initial requirements set to the receipt of easy-term loans and insufficient number of SMB entities which could meet the loan-granting criteria. At the same time, the statistical reporting on a substantial number of indicators within the framework of implementation of the national project will be available in Q1 – early in Q2 2020, so, it is infeasible to assess the risks. Overall, as of the end of 2019 41 activities (results) under the national project were carried out, while the implementation of seven other activities was delayed. The cash administration of the national project was equal to 93.1 percent.

Further implantation of the national project should be carried out with the need of upgrading the statistical reporting system and digitalization thereof taken into account. A special attention should be paid to the regions of Far North (the Arctic zone of the Russian Federation) where the difficulties in operation both of SMB entities and the statistical reporting system are even more evident.

The "International Cooperation and Exports" national project

The "International Cooperation and Exports" national project[2] can be an example of the effect of macroeconomic trends and a number of historical episodes, as a consequence of which one or another production oriented more on meeting the needs of the domestic market rather than exports was established, on the implementation of national goals and is an important indicator of accomplishment of plans of structural transformation of the economy. Growth in value of exports of non-oil and gas commodities, as well as services is the goal of this project. However, to facilitate sustainable growth in the volume of sophisticated products in exports it is important for Russian manufacturers, on one side, to upgrade the quality and sophistication of goods of Russian exports (including by means of boosting efficiency and opening up new commodity and technological niches in which potential competitive advantages of the Russian industry could be used), while, on the other side, win new geographic markets, including those in developed countries. Exporters' focusing on traditional sales markets and lack of considerable structural changes in the Russian manufacturing (an increase in the share of competitive world-class production) can be an explanation of the fact why the commodity diversification fall short of the planned targets. An important step to achievement of the goals

[1] The federal draft law "On Amendment of the Federal Law "On the Principles of State Regulation of Commercial Activities in the Russian Federation" and Article 28 of the Federal Law "On the Main Guidelines for Organization of Local Government in the Russian Federation" (as Regards Upgrading the Legal Framework of Organization of Nonstationary and Retail Trade."

[2] The information on the national project. URL: http://government.ru/rugovclassifier/866/events/; The charter of the "International Cooperation and Exports" national project. URL: http://government.ru/info/35564/.

of the national project is the selection of such economic policy instruments – aimed at modification of the exports pattern – which are adequate to the complexity of the problems that exporters encounter. In particular, export subsidies and loans can happen to be insufficient in those cases where for the sake of achievement of higher export results companies need to carry out large-scale transformations, including technical overhaul, use of new technologies, renewal of their staff of engineers, designers and managers and other. The complexity of problems which companies have to deal with may be the result of previous decisions in conformity with which the company was established to meet the internal demand, rather than work for exports. In such a situation, a company may need large investments to carry out a large-scale restructuring, rather than target support. It does not mean that the government is not obligated to provide such a company with resources for restructuring, nor should it give the support which fails definitely to facilitate the achievement of the expected results.

At year-end 2019, Russia's non-oil and gas exports amounted to USD 154.6 billion, which means they were slightly short of the target of USD 160 billion. Despite overall growth as compared with 2018, target values failed to be achieved in 2019 as regards the volume of exports of individual types of products:

- Light industry: USD 1.4 billion (USD 1.2 billion in 2018) with a target level of USD 1.5 billion;
- Iron and steel industry: USD 47.9 billion (USD 42.1 billion in 2018) with a target level of USD 51.0 billion;
- Pharmaceutical and cosmetics industries: USD 1.6 billion (USD 1.4 billion in 2018) with a target level of USD 1.8 billion;
- Engineering: USD 34.1 billion (USD 33.0 billion in 2018) with a target level of USD 37.0 billion;
- Timber industry: USD 10.9 billion (USD 9.5 billion in 2018) with a target level of USD 12.4 billion.

At the same time, exports of chemical products, including petrochemicals and gas refining products increased to USD 24.7 billion in 2019 (USD 17.4 billion in 2018) with the target value of USD 22.4 billion; it can be explained, among other things, by gradual appreciation of prices of export products on the global market.

In addition, it is noteworthy that despite growth in absolute terms as compared with 2018 (USD 52.4 billion) the volume of trade turnover between Russia and the member states of the Eurasian Economic Union failed to be achieved; at year-end 2019 it was equal to USD 57.2 billion with the target value of USD 58.9 billion.

Probably, the selection of high values of target indicators for the national project was largely determined by success in exports seen in the past few years. So, agro-industrial exports, as well as exports of services recently grew at a double-digit rate. Such results formed positive expectations of sustainable growth in export revenues and facilitated drafting of plans envisaging further growth in such revenues owing, among other things, to growth in real volumes of exports.

Slow growth in non-oil and gas exports can be also explained by the withdrawal of a number of foreign manufacturers from the Russian market because of their businesses becoming unprofitable. For example, late in March 2019 the Ford Company made public its decision to exist the Russian automotive market. The company announced that it would close up its carmaking division in Russia.

At the same time, in 2019 all activities aimed at underpinning exporters within the framework of the national project were carried out and the values of the target indicators – "conclusion of agreements on support of corporate programs of upgrading competitiveness in industry" and "efficiency of measures to support exports of products of the agricultural sector" were achieved. Overall, in 2019 cash administration of the national project was equal to 89.1 percent.

The structural transformation of the economy and building up of volumes of non-oil and gas exports envisaged by the "International Cooperation and Exports" national project are important steps towards achievement of sustainable economic growth rates. This objective can be attained by means of promotion of the competitive edge of the Russian non-oil and gas products; the entry by the most successful Russian companies to global markets is a reliable indicator of this process. At the same time, the consolidation of the role of exporters selling more sophisticated products on the international market can proceed in different ways. More successful exporters (more competitive and efficient companies) sell more goods not only to their geographic neighbors, but also wealthy economies, while less successful ones, which Russia is attributed to, sell their products mainly to their close geographic neighbors. A switchover to the first model is not easy and requires elaborate monitoring and planning. In particular, based on the instruments of state support of exports it is necessary to find such decisions that are adequate to problems hindering companies' export development and important not only for achievement of the target indicator values of the national project which is a step towards structural transformation of the economy, but also for the long-term development of the non-oil and gas sector.

In this regard, it seems important within the framework of further implementation of the national project to carry out regular monitoring of the commodity and geographic diversification of Russian exports and work out in detail export plans with the geographic diversification taken into account. Target indicators can be achieved, among other things, by means of successful accomplishment of a number of deals and not through structural restructuring of the economy with promotion of companies' efficiency, the competitive edge of their products and relevant sustainable export expansion.

"Comprehensive Plan of Modernization and Expansion of the Trunk Infrastructure"

"Comprehensive Plan of Modernization and Expansion of the Trunk Infrastructure"[1] (hereinafter "Comprehensive Plan") is first aimed within the framework of its transport part at promotion of internal and external (with territories of other countries by means of, among other things, development of international transportation corridors) links between Russian territories by way of modernization and upgrading of the transport infrastructure of all types. Second, the energy part of the Comprehensive Plan" is focused on guaranteed provision of affordable electric power for transportation of oil, petrochemicals, natural gas and gas-condensate.

In 2018–2019, simultaneously with implementation of individual activities the work was actively carried out on ranging and selection of projects for implementation within the framework of the "Comprehensive Plan". For example, the parameters of some key projects

[1] Approved by Resolution No.2101-r of September 30, 2018 of the Government of the Russian Federation URL: http://static.government.ru/media/files/MUNhgWFddP3UfF9RJASDW9VxP8zwcB4Y.pdf; The information on the "Comprehensive Plan of Modernization and Expansion of the Trunk Infrastructure.. URL: http://government.ru/rugovclassifier/867/events/.

were still specified till the end of 2019.[1] At the same time, according to the statements[2] of the Minister of Transport of the Russian Federation, as early as mid-2019 (as of the beginning of June) 88 percent of the facilities of the "Comprehensive Plan" were contracted or entered the bidding phase. Overall, according to various statements[3] in 2019 substantial risks in terms of attraction of extra-budgetary funding for implementation of the national project in the next 5–6 years are nonexistent because large volumes of funding are not planned to be attracted, except for cases of "road concessions with a state capital and building (of the infrastructure) of high-speed railway service."

Within the framework of elaboration of the "Comprehensive Plan", there was substantial growth (as of mid-2019) in the share of extra-budgetary funding for federal projects: "The Northern Sea Route" (+8.0 percentage point), "The Railway Transport and Transit" (+1.3 percentage point) and "Communication Routes Between the Economic Growth Centers" (+6.0 percentage point), while a comparable decline of the share of the extra-budgetary funding took place in the "Transport and Logistics Centers" federal project.

At the same time, it is not quite clear what actual share of extra-budgetary funds is planned to be used within the framework of implementation of the current version of the "Comprehensive Plan" because there is actually a transfer of elaboration of these issues within the framework of implementation of a certain portion of projects to the sphere of responsibility of companies which directly or indirectly carry out functions in respect of development of the transport infrastructure (OAO "RZhD", GK "Avtodor", GK "Rosatom").

The most capital intensive federal projects accounted for the highest growth in the share of extra-budgetary expenditures; such projects suggest building of a large volume of the transport infrastructure[4], which factor increases risks of a failure to implement projects in terms of the timelimits set as it happened, for example, in implementing a number of large highway projects (the building of M11 "Moscow – St. Petersburg"[5], TsKAD (Central Ring Road)[6] and other). In case of TsKAD, a major problem of implementation of the project was investors' failure to meet their obligations; that situation prompted the renewal of the debates on the need of a search for new instruments or upgrading of the existing ones to attract extra-budgetary funding for infrastructure projects.

Overall, in 2019 despite a substantial volume of organizational work and preliminary measures, a certain portion of target indicators of the "Comprehensive Plan" was achieved. It can be stated that there was growth in air mobility of the population (from 0.7 flights per person

[1] There is uncertainty as regards the development of the high-speed railway infrastructure URL: https://www.vedomosti.ru/economics/articles/2019/06/25/805042-pravitelstvo-vsm?utm_source=vk.com&utm_medium=social&utm_campaign=kuda-imenno-stroit-vsm-iz-moskvy--do-k. In accordance with the Resolution No. DM-P9-9403 of October 30, 2019 of Dmitri Medvedev, Chairman of the Government of the Russian Federation to inquiry No. MA-P9-39476 of October 28, 2019 of Maxim Akimov, Deputy Chairman of the Government of the Russian Federation the deadlines and stages of implementation of the project of building of the Moscow-Kazan Highway were changed; relevant amendments are to be introduced into the project charter in 2020.

[2] For more details, see: URL: https://futurerussia.gov.ru/nacionalnye-proekty/509831.

[3] For more details, see: URL: https://tass.ru/nacionalnye-proekty/6504733.

[4] "The Routes of Communication between the Economic Growth Centers": the share in the overall volume of funding of the Comprehensive Plan" is equal to 27 percent, while in the "Railway Transport and Transit" project and the "Russia's Seaports" project to 20 percent and 15 percent, respectively.

[5] For example, in 2018 (URL: https://ria.ru/20181004/1530014281.html) and 2019 (URL: https://www.rbc.ru/spb_sz/14/11/2018/5bec0d4a9a7947d73baa6ab7).

[6] For example, see: URL: https://www.rbc.ru/business/01/02/2019/5c5316dc9a79476221e6a8c4.

a year in 2018 to 0.87 flights in 2019 with a target value of 0.75), growth in exports of transportation services amounted to USD 19.3 billion (USD 16.9 billion in 2018). At the same time, in 2019 a number of target indicators of the "Comprehensive Plan" did not suggest substantial or any growth whatsoever (for example, it concerns the indicators of the delivery time of transit container carriage in "North-South", "West-East", "Europe-Western China" and other route lines), while, for instance, in 2019 the Logistics Performance Index was not calculated by the World Bank at all. In addition, as regards a number of indicators which reflect the implementation of the "infrastructure" portion of activities, target values set for 2019 were not achieved. So, for example, an increase in production facilities of seaports amounted to 23.95 million tons instead of the planned 35.5 million tons, the "share of highways operating without overload in the overall length of highways related to the "Europe-Western China" international transport route" remained at the level of the previous year – 26.9 percent (against the target level of 31.5 percent in 2019).

At year-end 2019, the cash administration within the framework of the project amounted to over 88.0 percent. It can be explained by delays in implementation of a number of capital-intensive activities, in particular, the building of the "Moscow-Nizhny Novgorod-Kazan" highway and modernization of airport infrastructure facilities.

It is to be noted that late in 2019 the selection and elaboration of projects for inclusion into the transport part of the "Comprehensive Plan" continues.[1] So, based on the results of the meeting of the project committee of the transport part of the "Comprehensive Plan" held on December 4, 2019, three projects with two more projects sent for further elaboration were included in the "waiting list."[2] Further implementation of the "Comprehensive Plan" should be carried out with an emphasis made on timely and accurate implementation of the planned activities in order to ensure timely commissioning of infrastructure facilities.

6.8.3. Funding of national projects

Cash administration in 2019

The above-described progress in implementation of national projects, its specifics and difficulties were reflected in the rates of cash administration: during the year in the framework of almost all national projects they were rather low despite the fact that at year-end 2019 the average value was equal to 91.6 percent (*Table 24*). As seen from the report[3] of the Accounts Chamber, as of May 2019, the level of administration of expenditures on national projects amounted to the mere RUB 221 billion or 12.8 percent of the annual volume. As of the beginning of October 2019, the share of cash administration in respect of all national projects did not exceed 70 percent, amounting on average to 50 percent – 60 percent[4], thus, suggesting delays in implementation of national projects in 2019. As of the beginning of October, the levels of administration of expenditures on implementation of national projects "Ecology", "Digital Economy of the Russian Federation", "Labor Productivity and Employment Support" and the "Comprehensive Plan of Modernization of the Infrastructure" were much below the average

[1] The "Comprehensive Plan" can be supplemented by projects worth a trillion. URL: https://www.vedomosti.ru/economics/articles/2019/11/21/816801-kompleksnii-plan.
[2] URL: http://government.ru/news/38513/.
[3]URL: http://audit.gov.ru/activities/audit-of-the-federal-budget/36983/?clear_cache=Y.
[4] As of October 17, 2019, cash administration across national projects of the Russian Federation amounted to 59 percent, which factor was noted by Alexei Kudrin at the RF State Duma at the first reading of the three-year budget. URL: https://tass.ru/nacionalnye-proekty/7033979.

level of 59 percent for all national projects. As regards these national projects, there were risks related to the implementation of a portion of activities on a pro forma basis for the purpose of either spending funds or not implementing a portion of planned activities at all.

At year-end 2019, in respect of three national projects the level of administration of budget expenditures was equal to less than 80 percent: substantial lagging was observed as regards "Education", "Digital Economy" and "Ecology" national projects as early as September 2019.

Table 24

Cash administration of budget expenditures on national projects in 2019

National project (program)	Administration of budget expenditures, %		
	As of October 1, 2019	As of January 1, 2020 (as compared with the national project charter)	As of January 1, 2020 (as compared with the summary budget breakdown)
"Science"	66.2	99.1	99.1
"Culture"	64.7	99.0	99.0
"Healthcare"	67.5	98.0	98.0
Safety and Quality of Highways"	55.8	97.1	97.1
"Demography"	65.0	95.6	95.6
Comprehensive Plan of Modernization of Infrastructure"	39.4	95.2	88.0
"Housing and Urban Environment"	56.3	93.8	93.8
"Small and Mid-Sized Business and Support of Individual Entrepreneurial Initiative"	55.7	93.3	93.1
"Labor Productivity and Employment Support"	38.8	89.6	89.6
"International Cooperation and Export"	41.8	88.8	88.8
"Education"	58.5	79.5	79.6
"Digital Economy of the Russian Federation"	12.3	71.9	74.5
"Ecology"	22.1	66.8	66.3
Average	59.0	91.6	89.4

Source: the analytical report on the progress in execution of the federal budget and budgets of state extra-budgetary funds of the Russian Federation in January-September 2019.[1] The Accounts Chamber of the Russian Federation, 2019; the Treasury of the Russian Federation.

As regards the "Digital Economy" national project, which implementation in 2019 was carried out at low rates of cash administration, the difficulties were related to key federal projects included in it, particularly, the "Information Security" federal project and "Digital Technologies" federal project whose implementation did not actually begin as of October 2019.

It is noteworthy that in 2020-2022 the expected growth in expenditures on national projects in respect of which the cash administration of federal budget expenditures in 2019 was at the level below the average may create risks of a failure to implement all planned activities under the national project in question, as well as risks of inefficient distribution of resources.

The planned expenditures on implementation of national projects in 2020–2022

From the distribution of national projects by the year, it is seen that the expenditures on their implementation in 2019 should have amounted to about 10 percent of the federal budget, however, as early as 2022 this share is expected to grow by 3 percentage point to 13 percent. So, despite the importance of national projects for the country's breakthrough scientific, technological and socioeconomic development and the increase in the share of project financing in the federal budget, the main portion of its expenditures is spent on other instruments. The

[1] URL: http://audit.gov.ru/promo/analytical-report-federal-budget-2019-3/index.html.

accounting of extra-budget funding of national projects does not radically change the situation as it is planned that the share of federal budget expenditures in the overall volume is to be equal to about 50 percent.

The year-on-year growth in total expenditures on national projects will amount to 10.2 percent; 10.7 percent and 21.4 percent in 2020, 2021 and 2022, respectively. Also, it is noteworthy that growth in the federal budget share aimed at funding national projects in 2022 (12.4 percent) as compared with 2019 (9.7 percent) will amount to 2.7 percentage point.[1]

Within the framework of the national projects in 2020–2022, the main volume of federal budget expenditures will be directed on the "Demography" national project, the "Healthcare" national project, the "Comprehensive Plan of Modernization of the Infrastructure" and the "Digital Economy of the Russian Federation" national project, which corresponds to the importance of the indicators of these national projects. At the same time, the expenditures on the "Small and Mid-Sized Business and Support of the Individual Entrepreneurial Initiative" national project, as well as the "Labor Productivity and Employment Support" remain at a rather low level despite the importance of goals and target indicators[2] set within the framework these national projects. It is noteworthy that the above specified national projects should have a significant effect on achievement of such key national goals as:

- Goal No.8 "Entering by the Russian Federation the world' top five largest economies and facilitation of economic growth rates which are above the global ones with preservation of macroeconomic stability, including the rate of inflation at the level of maximum 4 percent";
- Goal No. 3 "Facilitation of sustainable growth in individuals' real incomes, as well as growth in the level of pension benefits above the level of the rate of inflation";
- Goal No.4 "Ensuring of a two-fold reduction of the rate of poverty in the Russian Federation."

Insufficient volumes of funding of national projects may provoke risks of a failure to achieve target indicators of national projects and have an adverse effect on other national projects and achievement of national goals of the development of the Russian Federation.

In 2020–2022, expenditures are expected to be increased by 21 percent, 18 percent and 4 percent on the "Science" national project, the "Demography" national project and "Safe and Quality Highways", respectively. Federal budget expenditures are planned to be reduced by 2 percent and 5 percent on the "Ecology" national project and the "International Cooperation and Exports" national project, respectively, while as regards the "Small and Mid-Sized Business and Support of Individual Entrepreneurial Initiative" national project the volume of expenditures remains virtually unchanged. A substantial reduction of expenditures on the "International Cooperation and Exports" national project raises some questions by virtue of the importance of this national project for this country's industrial development and exports potential growth.

[1] In 2019, within the framework of expenditures on national projects it was planned to allocate RUB 1746 billion or 9.7 percent of the overall volume of federal budget expenditures.

[2] It is noteworthy that the extra-budgetary funding is almost unavailable on these national projects, either. In accordance with the approved charters of the "Small and Mid-Sized Business and Support of the Individual Entrepreneurial Initiative" national project and the "Labor Productivity and Employment Support" national project, in 2020–2022 the level of extra-budgetary funding will amount to RUB 24.4 billion and RUB 3.2 billion, respectively (that is, 13 percent and 15 percent of the level of federal budget expenditures on the specified national projects in 2020–2022).

* * *

In 2019, with large-scale work on national projects begun it became feasible to form a sustainable basis for further activities. The implementation of some of these activities was affected by general macroeconomic trends in the Russian economy which in some cases delayed or even slowed down the achievement of national goals and trajectories of movement of national projects' target indicators. The first full-scale year of work on the implementation of national projects produced mixed results, among which it is feasible to highlight some key aspects.

1. Despite a considerable volume of regulatory and organizational work, the scheme of achievement of national goals has not been built in full. The aggregate of national projects does not ensure complete coverage of all national goals, which achievement is believed to be ensured to a great extent by the existing state programs of the Russian Federation and its subjects, as well as federal (regional) projects included in those programs and other activities.
2. In 2019, the existing system of management of implementation of national projects and achievement of national goals assumed a rather complicated pattern. With its authority to allocate funds on implementation of national projects, the Budget Funds Chief Controller may put pressure on individual regions, thus, complicating the process of signing three-year agreements between the Federation and regions.
3. Throughout the year 2019, the adjustment and updating of the parameters of charters of national projects brought about changes in the required funding. Coupled with the low level of cash administration across all national projects, it had a negative effect on the dynamics of target indicators. With this factor and the planned increase in the volume of expenditures on implementation of national projects in 2021-2022 taken into account, the risks of implementation of the activities on a pro-forma basis in the years to come for disbursement purposes are getting higher.
4. As of the end of 2019, the work on development, adjustment and approval of the methods of calculation and evaluation of target indicators of national and federal projects was not completed.
5. It is worth mentioning positive trends related to growth in federal budget expenditures in 2020 and the 2021-2022 planned period on national projects and, consequently, growth in funding through project instruments as compared with current expenditures. However, in this regard, two questions arise. First, growth in expenditures on some national projects with a simultaneous decrease in others may reduce aggregate multiplicative effects for the entire economy. Second, it concerns the balanced distribution of expenditures between national projects because the level of expenditures across individual national projects turned out to be rather low despite their importance for facilitation of the breakthrough in the socioeconomic, scientific and technological development and achievement of national goals set out in Executive Order No.204 of the President of the Russian Federation.

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For Notes

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