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.

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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.

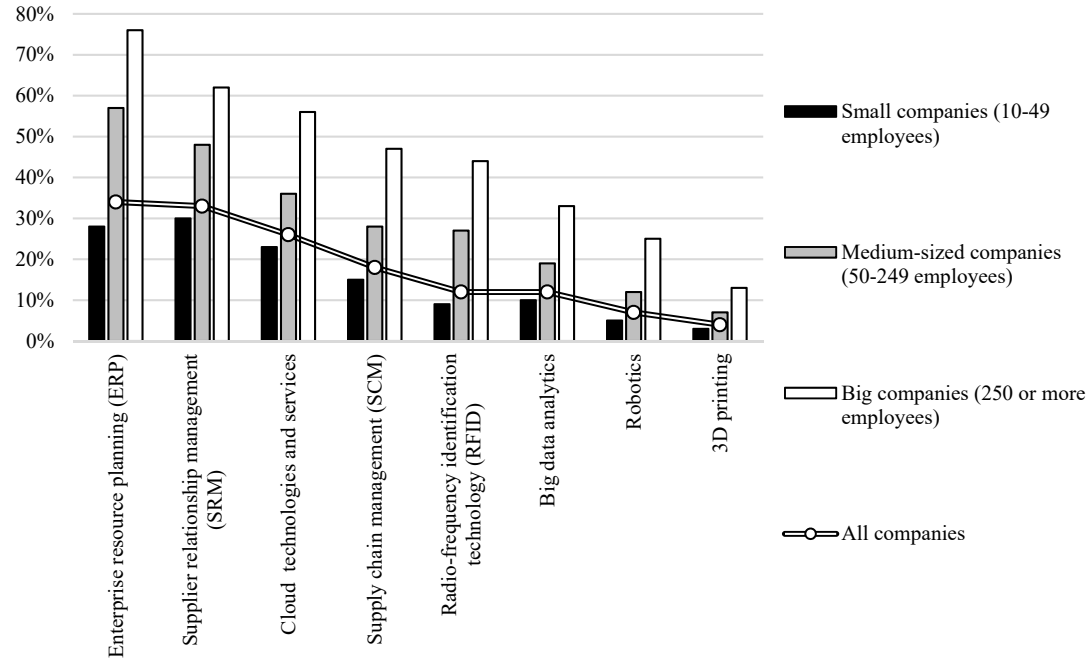
Researches have noted a number of constraints that have to do with productivity growth in the economy achieved through digital transformation. On the one hand, digitalization increases companies' responsiveness to new technologies[1], but the process of digital transformation is a trigger in itself, 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.

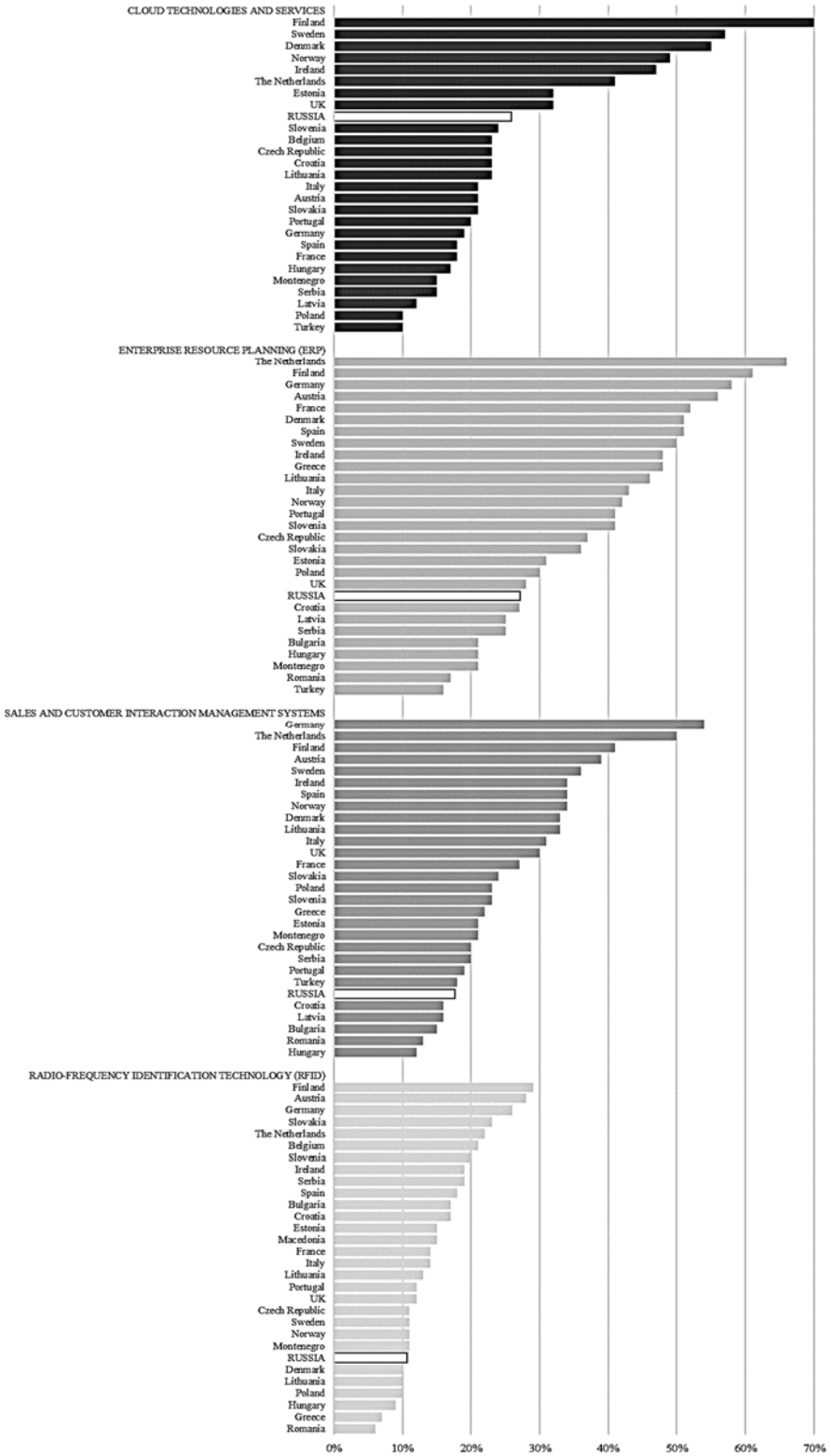


Fig. 2. The relative share of manufacturing companies using different types of digital technology: cross-country comparisons

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.

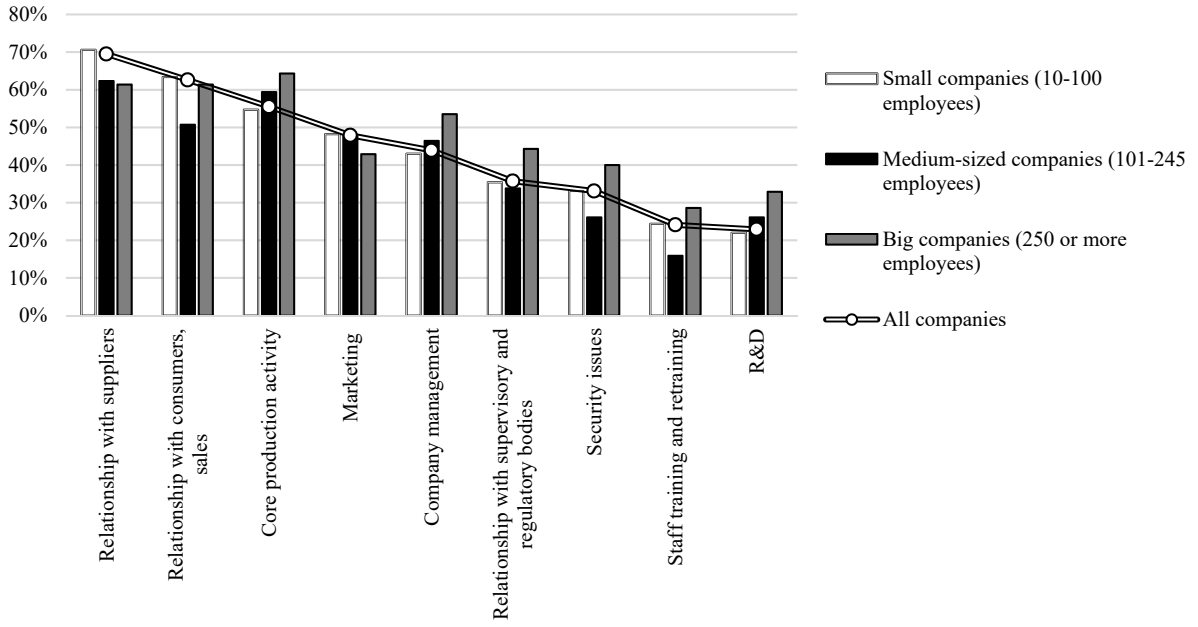


Fig. 3. The main fields where manufacturing companies apply digital technologies: frequency of mention by the heads of companies where digital technologies are used

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.