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## ON THE STATE OF THE INVESTMENT ENVIRONMENT IN THE TELECOMMUNICATION INDUSTRY

The article discusses the issues of transformation of the investment environment in the telecommunications industry of the Russian Federation in modern conditions. An analysis of external factors influencing the development of the telecommunications industry in the Russian Federation was carried out, and global trends in the development of the industry were identified. Based on statistical analysis, the main participants in the global telecommunications services market were identified, as well as market features, namely the growth of mergers and acquisitions and the prevalence of venture capital.

The domestic market for telecommunications services has been studied, the main participants and market volume have been identified. The main factors for the development of the telecommunications services market in the Russian Federation have been identified. The main methods of financing investment programs of the main market participants have been identified, including companies' own funds (net profit, depreciation charges), bonds, project financing through the instruments of the Project Finance Factory, trade financing from telecommunications equipment manufacturers.

Current areas of investment in the telecommunications industry are summarized, including the creation of digital assets, deployment of services based on the 5G generation network, big data analysis tools, modernization and expansion of infrastructure, and compliance with legal requirements. An analysis of the investment strategies of the main market players was carried out.

The main directions for transforming the investment environment of the telecommunications industry of the Russian Federation in modern conditions have been identified in the form of focusing on domestic investors, using IPOs on the Moscow Exchange, and intensifying project financing programs.

*Keywords:* investment environment, investment project, financial instruments, telecommunications industry.

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big data.

(5G),

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) (11,5% 9,1%)  
 (6,3%), (4%), (3,8%), (3,4%), (2,4%), (1,7%).  
 2020 . 2021 . (21,71%), (16,67%),  
 (16,15%), (12,19%), (11,96%).  
 (18,36%).  
 (3,5%) (3,41%).

I. -10 , 2020-  
 2021 . , % \*

/			-10					
	2020	2021	2020	2010-20	2019	2020	2021	
1	33 534,42	40 814,49	49,30	-1,93	-10,67	-2,44	21,71	
)	17 526,09	21 439,95	25,80	-2,60	-12,98	-4,59	22,33	
2	10 808,98	10 855,98	15,90	5,52	-11,16	17,16	0,43	
3	7 837,00	7 563,00	11,50	-3,26	-11,21	-1,90	-3,50	
4	4 292,53	4 146,10	6,30	1,89	33,97	-1,85	-3,41	
5	2 736,03	3 069,62	4,00	6,11	18,74	-4,04	12,19	
6	2 599,33	2 122,17	3,80	—	16,05	41,60	-18,36	
7	2 282,77	—	3,40	9,22	6,30	13,53	—	
8	1 633,76	1 906,06	2,40	—	2,99	-13,04	16,67	
9	1 134,10	1 269,70	1,70	-3,98	-6,73	-6,54	11,96	
10	1 132,73	1 315,68	1,70	3,55	-3,95	32,92	16,15	
10	67 991,65	—	100,00	—	—	—	—	
1	33 229,00	37 817,80	57,90	-0,27	-10,09	0,49	13,81	
)	16 164,36	18 187,90	28,20	-0,78	-9,51	-4,66	12,52	
2	6 992,31	6 524,86	12,20	2,48	-8,72	17,58	-6,69	
3	5 193,00	5 607,00	9,10	-4,32	-11,85	3,61	7,97	
4	2 722,94	2 641,25	4,70	—	3,96	-4,76	-3,00	
5	2 179,32	2 311,23	3,80	—	10,22	31,45	6,05	
6	1 606,30	1 513,28	2,80	4,59	-2,45	-9,73	-5,79	
7	1 389,56	1 259,59	2,40	2,51	21,26	8,40	-9,35	
8	1 372,70	1 463,53	2,40	-1,53	-8,27	0,57	6,62	
9	1 351,04	1 522,71	2,40	4,76	12,74	19,41	12,71	
10	1 332,30	951,91	2,30	6,71	-1,39	9,46	-28,55	
10	57 368,47	61 613,17	100,00	—	—	—	—	

\* [9]

(3,8%), (2,8%), (2,4%), (4,7%),  
 2020-2021 . (13,81%), (2,3%),  
 (%), (6,62%) (6,05%).  
 — 28,55%.  
 (9,35%), (6,69%), (5,79%) (3%).

(.2).

2021 . 20,5% [9].  
 2020-2021 . 14,8% 732 982 [8].  
 87,02%.

2 224,35 2021 . 20  
 . 2020 . 2021 . ( 28,67%),  
 ( 26,83%) ( 19,93%).

2. -10  
 2021 ., % \*

/		-					/				
		2021	2000	2005	2010	2021	2010-21	2019	2020	2021	
1	(1)	811,65	4,51	17,72	27,79	31,75	5,52	-2,32	5,82	17,61	
2		414,57	24,06	25,18	21,41	16,22	1,65	-1,76	1,18	12,61	
	)	123,89	10,20	9,96	7,43	4,85	0,28	0,09	-1,09	6,51	
3	,	398,61	—	—	—	—	7,90	-3,01	5,56	28,67	
	)	0,20	0,41	0,26	0,11	0,01	-18,13	22,10	18,33	-2,72	
	)	398,41	—	—	—	—	8,00	-3,03	5,55	28,70	
4	( ) ,	213,75	5,99	4,44	5,37	8,36	8,53	7,61	19,82	19,93	
5		166,36	6,08	6,51	5,97	6,51	5,07	-20,89	5,37	17,47	
6		161,76	7,65	7,98	7,86	6,33	2,22	-5,62	10,09	26,83	
7		161,05	15,90	9,82	8,34	6,30	1,62	-2,13	-5,28	14,54	
8	(2)	128,00	0,07	0,11	0,35	5,01	32,68	11,61	17,00	18,87	
9		93,53	5,43	4,73	4,16	3,66	3,05	-5,89	5,53	12,29	
10	(1)	73,47	3,53	2,98	3,74	2,87	1,79	0,10	-3,12	8,73	
	10	2 224,35	73,63	79,73	85,12	87,02	—	—	—	—	
1	(1)	623,71	4,39	11,78	15,70	21,93	7,62	-3,57	10,92	23,75	
2		556,89	26,05	27,59	25,59	19,58	1,89	-1,85	2,93	15,79	
	)	286,39	14,47	14,65	13,44	10,07	1,69	-2,20	3,84	15,10	
3		412,24	21,28	17,11	16,07	14,50	3,43	-6,08	3,07	17,53	
4	,	405,19	—	—	—	—	7,56	-7,11	4,90	26,40	
	)	67,00	1,31	0,44	0,61	2,36	—	-21,70	2,00	16,66	
5	(2)	134,59	5,34	5,46	4,98	4,73	3,91	-2,34	12,20	20,85	
6	( ) ,	109,62	3,82	2,83	2,63	3,85	8,10	6,03	17,23	26,84	
7		101,51	6,01	4,92	4,65	3,57	1,91	-0,49	1,11	11,99	
8		94,24	3,36	2,76	2,71	3,31	6,31	6,92	4,12	14,59	
9	(2)	92,00	0,10	0,17	0,41	3,23	25,90	15,44	23,44	18,11	
10	(1), (3)	76,19	2,86	2,65	3,22	2,68	2,68	3,37	-10,52	22,15	
	10	2 267,98	74,52	75,70	76,57	79,75	—	—	—	—	

:(1) :(2) ;(3)

\* [9]

2020 . 2021 . 15,05 %  
 789 152 [8].

79,75%.

2021 . 2 267,98  
 20 ( ) -  
 ), -  
 2020-2021 . ( 26,84 %), ( 26,4 %), ( -  
 23,75 %), ( 22,15 %) ( 20,85 %). -  
 2020-2021 . -10. -  
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 : , -  
 , -  
 , -  
 3G/4G ( — 5G) [10]. -  
 , , , [9]. -  
 , « , » [10]. -  
 , -  
 0,7 %). 2020 . 1,73 . ( ( 11,6 %)  
 ( 5,8 %) ( 0,3 %), ( 1,1 %)  
 ( 1,5 %). — 12 %, — 10 %, -  
 — 57 %, — 4 %, — 3 % [6]. -  
 — 6 %, 2020 . 257 ( 1,3 %  
 3,5 ). 320 ./ . COVID-19 ( ,  
 ) [6]. : (78,5 2020 .), « -  
 » (70,4 ), « » (49,9 ), « 2 » (46,6 ). 2020 . -  
 177 ). ( 4,53 % 334,5 .) 2 ( 8,39 % -  
 2 « -  
 » [6]. -  
 ( — ) 2020 . -  
 201,1 . 36,1 ( 2,1 %), -  
 — 475 ./ [6]. -  
 2020 . 61 %, -  
 B2B - -  
 ; B2C- -  
 . 2020 . -  
 — « 96 % , -  
 73 % » [6]. -  
 2020 ., 2,2 %), - (3880 , « » (12 365 -  
 10,3 %) [6]. (3839 , -

2020 . 46,1

( 1,8 %). 2020 . 81 % [6].

IPTV- 2020 . 104,6 . ( 2 %).

700 . ( 7,7 %),

0,8 %, — 0,1 % [6].

« » ( 2020 . 57 % ) .

IPTV; 36 % — 10 %, — 9 %, — 28 % [6].

17 %, - 2020 . 95,7

( 11,6 % - ) . (56 %),

— (18 %), — (5 %). 21 % [6].

2021 . 1,8 . (

4,05 %) [11]. 2020 . ;

2021 . 259 ( 2020 . 0,78 %)

( )

2 [11]. — 0,8 %, — 3,0 %

, [11].

46,4 . 2021 . 0,5 %

82 % . IPTV. — 81 %

. ( 1,5 %). 2021 . 106,1

, [11].

2021 . 87,9 . ( 8,1 %)

8,5 % 19,6 [11]. —

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[11].

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2008-2012 . ( , ,

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[12].

[13] 40–60 %

( 100 ) (3-5 )

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» [13]. 2005-2010 .

[13–14].

[13, 15].

[16].

[16].

1990–2000- . [17]

2018 .

[18–20].

( — )

1) — ( )

( );

2) (operation and maintenance — &M contract) —

3) ( ) — ;



4) — (Build-own-operate (BOO) projects) —  
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 [17].  
 1) ( , , , )—  
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 2) 5G— ,  
 5G, ;  
 3) — ( —  
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 4) ;  
 5) BSS/OSS—  
 BSS/OSS , ;  
 6) — ,  
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 7) [14].  
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[14]

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« » 2020 .

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) 5G /IoT( ) ;

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[14].

« » 2018-2019 .,

« » ( 5G).

), [14].

2019 . « » 4G 5G.

(VEON Ltd).

« ».

[14].

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« 2 » 2019 .

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« »	,	-

\* [14]

[14].

— [14].

- 1) ( ) , — );
- 2) ( ) , [14].

« / », « — :« / », « » [14].

2023

9 IPO 4 SPO

140

5G.

2018 .

- « , ») « — « » « - « — » — ( — ) .
- ( IPO ) .
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  18. « » ( « « « . »

« » [ ] : -  
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19. : -  
[ ] // -  
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20. 2022-2024  
[ ] . — : docs.yandex.ru/docs/view?tm=1647181719&tl  
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