

LIQUIDITY MEASUREMENT AND MONITORING for 04.2018

\*\*The list and free-float coefficients of the MICEX Index stocks as of 16.03.2018, total stocks outstanding as of the corresponding business day of 04.2018. Free-float coefficients are estimated by the Moscow Exchange.\*\*

**1. Trading costs**

		Percentage spread, %	Absolute spread, rubles			Percentage spread, %	Absolute spread, rubles			Percentage spread, %	Absolute spread, rubles
1	GAZP	<b>0,035</b>	0,0505	17	RTKM	<b>0,097</b>	0,0636	33	PIKK	<b>0,171</b>	0,5318
2	SBER	<b>0,048</b>	0,1045	18	NLMK	<b>0,102</b>	0,1523	34	DSKY	<b>0,186</b>	0,1705
3	MGNT	<b>0,048</b>	2,2727	19	MFON	<b>0,103</b>	0,5045	35	CBOM	<b>0,213</b>	0,0100
4	ROSN	<b>0,054</b>	0,1818	20	ALRS	<b>0,105</b>	0,0914	36	POLY	<b>0,213</b>	1,2545
5	LKOH	<b>0,055</b>	2,1818	21	CHMF	<b>0,114</b>	1,0500	37	AGRO	<b>0,221</b>	1,4318
6	HYDR	<b>0,062</b>	0,000464	22	MAGN	<b>0,119</b>	0,0543	38	PHOR	<b>0,221</b>	5,2727
7	MOEX	<b>0,063</b>	0,0732	23	SNGS	<b>0,120</b>	0,0350	39	PLZL	<b>0,232</b>	8,9091
8	SBERP	<b>0,073</b>	0,1432	24	AFKS	<b>0,124</b>	0,0134	40	MVID	<b>0,241</b>	0,9682
9	SNGSP	<b>0,075</b>	0,0223	25	AFLT	<b>0,125</b>	0,1864	41	TRMK	<b>0,245</b>	0,1886
10	GMKN	<b>0,075</b>	7,8636	26	YNDX	<b>0,134</b>	2,8636	42	NMTP	<b>0,439</b>	0,0318
11	TATN	<b>0,077</b>	0,4977	27	IRAO	<b>0,134</b>	0,0052	43	UWGN	<b>0,826</b>	5,7273
12	FEES	<b>0,078</b>	0,000136	28	NVTK	<b>0,147</b>	1,0909	44	RNFT	<b>1,291</b>	6,6136
13	VTBR	<b>0,085</b>	0,000044	29	UPRO	<b>0,151</b>	0,0041	45	SFIN	<b>1,745</b>	10,1591
14	MTLR	<b>0,086</b>	0,1023	30	TATNP	<b>0,155</b>	0,6682	<b>Total stocks</b>		<b>0,209</b>	-
15	MTSS	<b>0,090</b>	0,2591	31	RUAL	<b>0,159</b>	0,0432				
16	RSTI	<b>0,094</b>	0,000750	32	TRNFP	<b>0,169</b>	295,4545				

## 2. Trading activity

		Trading volume, %	Trading volume (adjusted for free-float), %	FF	Trading volume, units of securities			Trading volume, %	Trading volume (adjusted for free-float), %	FF	Trading volume, units of securities
1	SBERP	<b>1,089</b>	1,089	1,00	2 066 559 221	24	IRAO	<b>0,105</b>	0,360	0,29	419 443 388
2	SBER	<b>0,502</b>	1,045	0,48	23 650 924 244	25	DSKY	<b>0,096</b>	0,282	0,34	64 278 205
3	AFLT	<b>0,456</b>	1,013	0,45	744 358 843	26	TATN	<b>0,085</b>	0,267	0,32	1 187 016 913
4	MTLR	<b>0,423</b>	0,846	0,50	205 502 858	27	ROSN	<b>0,085</b>	0,772	0,11	2 991 170 574
5	PIKK	<b>0,418</b>	2,323	0,18	853 089 547	28	MVID	<b>0,083</b>	0,308	0,27	60 110 794
6	MOEX	<b>0,365</b>	0,629	0,58	955 733 423	29	RUAL	<b>0,075</b>	0,471	0,16	290 865 306
7	SNGSP	<b>0,342</b>	0,468	0,73	791 193 890	30	PLZL	<b>0,072</b>	0,449	0,16	364 268 547
8	MGNT	<b>0,317</b>	0,480	0,66	1 523 325 517	31	MAGN	<b>0,072</b>	0,447	0,16	361 759 243
9	VTBR	<b>0,265</b>	0,679	0,39	1 790 958 995	32	POLY	<b>0,066</b>	0,179	0,37	165 422 988
10	AFKS	<b>0,226</b>	0,628	0,36	234 374 918	33	NLMK	<b>0,063</b>	0,393	0,16	568 980 991
11	GMKN	<b>0,189</b>	0,498	0,38	3 047 874 194	34	YNDX	<b>0,057</b>	0,060	0,95	349 174 533
12	MFON	<b>0,186</b>	0,884	0,21	542 138 437	35	SNGS	<b>0,052</b>	0,208	0,25	540 088 791
13	TATNP	<b>0,176</b>	0,176	1,00	112 574 195	36	UPRO	<b>0,050</b>	0,311	0,16	85 546 112
14	RSTI	<b>0,166</b>	1,507	0,11	260 314 889	37	SFIN	<b>0,047</b>	0,161	0,29	32 098 645
15	ALRS	<b>0,150</b>	0,441	0,34	951 946 770	38	UWGN	<b>0,044</b>	0,168	0,26	35 926 666
16	FEES	<b>0,150</b>	0,832	0,18	330 980 046	39	NVTK	<b>0,037</b>	0,138	0,27	837 678 683
17	TRNFP	<b>0,145</b>	0,453	0,32	395 599 589	40	PHOR	<b>0,028</b>	0,110	0,25	84 810 136
18	HYDR	<b>0,127</b>	0,506	0,25	397 564 902	41	CBOM	<b>0,025</b>	0,116	0,22	32 449 199
19	GAZP	<b>0,126</b>	0,273	0,46	4 214 208 856	42	AGRO	<b>0,025</b>	0,120	0,21	21 980 934
20	MTSS	<b>0,119</b>	0,247	0,48	677 747 939	43	TRMK	<b>0,023</b>	0,076	0,30	17 848 971
21	LKOH	<b>0,111</b>	0,241	0,46	3 712 411 766	44	RNFT	<b>0,011</b>	0,055	0,20	16 986 328
22	CHMF	<b>0,110</b>	0,548	0,20	839 073 518	45	NMTP	<b>0,005</b>	0,035	0,15	7 338 236
23	RTKM	<b>0,106</b>	0,330	0,32	176 546 637	<b>Total stocks</b>		<b>0,166</b>	0,481	-	-

### 3. Elasticity\*

		HH			HH
1	SBERP	0,006	24	IRAO	0,034
2	MOEX	0,007	25	ROSN	0,049
3	AFLT	0,008	26	NLMK	0,057
4	SNGSP	0,009	27	SNGS	0,057
5	MGNT	0,011	28	MVID	0,058
6	SBER	0,011	29	MAGN	0,059
7	VTBR	0,014	30	DSKY	0,063
8	AFKS	0,017	31	UPRO	0,064
9	MTLR	0,018	32	CBOM	0,075
10	TRNFP	0,019	33	POLY	0,079
11	RTKM	0,020	34	NVTK	0,089
12	GAZP	0,022	35	YNDX	0,099
13	FEES	0,022	36	PLZL	0,102
14	TATNP	0,023	37	SFIN	0,137
15	HYDR	0,023	38	PIKK	0,158
16	GMKN	0,023	39	RUAL	0,166
17	ALRS	0,026	40	PHOR	0,183
18	MTSS	0,027	41	AGRO	0,205
19	LKOH	0,027	42	TRMK	0,221
20	MFON	0,028	43	UWGN	0,302
21	CHMF	0,028	44	RNFT	0,405
22	RSTI	0,032	45	NMTP	1,344
23	TATN	0,033	<b>Total stocks**</b>		<b>0,071</b>

\* From 10.2015 performance in the elasticity dimension is assessed through the HUI-HEUBEL Liquidity Ratio (hereinafter HH).

\*\* Excluding NMTP.

	Most liquid	Spread, %	Volume, %	HH	Least liquid	Spread, %	Volume, %	HH
11.2017	1	<b>GAZP</b>	<b>AFLT</b>	<b>AFLT</b>	1	<b>LNTA</b>	AGRO	<b>RNFT</b>
11.2017	2	<b>SBER</b>	MVID	<b>MOEX</b>	2	PHOR	LSRG	LSRG
11.2017	3	GMKN	<b>MGNT</b>	<b>MGNT</b>	3	MVID	<b>NMTP</b>	<b>LNTA</b>
11.2017	4	ROSN	<b>MOEX</b>	RTKM	4	DIXY	AKRN	<b>NMTP</b>
11.2017	5	ALRS	RTKM	SBER	5	<b>RNFT</b>	<b>LNTA</b>	AKRN
12.2017	1	<b>GAZP</b>	AFKS	<b>AFLT</b>	1	<b>NMTP</b>	YNDX	TRMK
12.2017	2	<b>SBER</b>	<b>AFLT</b>	<b>MOEX</b>	2	<b>UWGN</b>	<b>RNFT</b>	RUAL
12.2017	3	ROSN	<b>MOEX</b>	<b>MGNT</b>	3	MVID	RUAL	<b>RNFT</b>
12.2017	4	ALRS	MTLR	SBER	4	<b>LNTA</b>	<b>LNTA</b>	<b>LNTA</b>
12.2017	5	GMKN	<b>MGNT</b>	AFKS	5	<b>RNFT</b>	AKRN	<b>NMTP</b>
01.2018	1	<b>GAZP</b>	<b>AFLT</b>	<b>AFLT</b>	1	<b>NMTP</b>	PHOR	AGRO
01.2018	2	<b>MOEX</b>	<b>MOEX</b>	<b>MOEX</b>	2	MVID	YNDX	YNDX
01.2018	3	<b>SBER</b>	<b>MGNT</b>	SNGSP	3	<b>UWGN</b>	<b>RNFT</b>	RUAL
01.2018	4	GMKN	SBERP	SBERP	4	<b>RNFT</b>	RUAL	<b>RNFT</b>
01.2018	5	LKOH	SNGSP	<b>MGNT</b>	5	SFIN	<b>NMTP</b>	<b>NMTP</b>
02.2018	1	<b>SBER</b>	<b>MGNT</b>	<b>AFLT</b>	1	<b>UWGN</b>	RUAL	RUAL
02.2018	2	<b>GAZP</b>	<b>AFLT</b>	<b>MGNT</b>	2	<b>AGRO</b>	<b>RNFT</b>	PIKK
02.2018	3	LKOH	SBERP	<b>MOEX</b>	3	<b>NMTP</b>	PIKK	<b>RNFT</b>
02.2018	4	<b>MOEX</b>	SNGSP	SBERP	4	<b>RNFT</b>	AGRO	AGRO
02.2018	5	<b>SNGSP</b>	<b>MOEX</b>	<b>SNGSP</b>	5	SFIN	<b>NMTP</b>	<b>NMTP</b>
03.2018	1	<b>GAZP</b>	<b>AFLT</b>	<b>AFLT</b>	1	<b>AGRO</b>	TRMK	TRMK
03.2018	2	<b>SBER</b>	<b>MGNT</b>	<b>MGNT</b>	2	<b>NMTP</b>	<b>RNFT</b>	PIKK
03.2018	3	LKOH	SBERP	SBERP	3	<b>UWGN</b>	PIKK	AGRO
03.2018	4	CHMF	<b>MOEX</b>	<b>SNGSP</b>	4	<b>RNFT</b>	AGRO	<b>RNFT</b>
03.2018	5	<b>SNGSP</b>	<b>SNGSP</b>	<b>MOEX</b>	5	SFIN	<b>NMTP</b>	<b>NMTP</b>
04.2018	1	<b>GAZP</b>	SBERP	SBERP	1	<b>TRMK</b>	CBOM	AGRO
04.2018	2	<b>SBER</b>	SBER	MOEX	2	<b>NMTP</b>	AGRO	<b>TRMK</b>
04.2018	3	MGNT	<b>AFLT</b>	<b>AFLT</b>	3	<b>UWGN</b>	TRMK	UWGN
04.2018	4	ROSN	MTLR	SNGSP	4	<b>RNFT</b>	<b>RNFT</b>	<b>RNFT</b>

The table to the left provides statistics on liquidity at a level of an individual stock.

Among the most liquid stocks within a half-year period of 10.2017 - 04.2018:

1. Stocks, appearing at least once in the top-5 list of the most liquid stocks in the three dimensions simultaneously (highlighted in red in the table): **MOEX, SNGSP.**

Stocks, appearing no less than 5-6 months in the top-5 list of the most liquid stocks in any of the dimensions (displayed in red bold font in the table):

**GAZP, SBER (trading costs) AFLT, MGNT, MOEX (trading activity), AFLT, MGNT, MOEX (elasticity).**

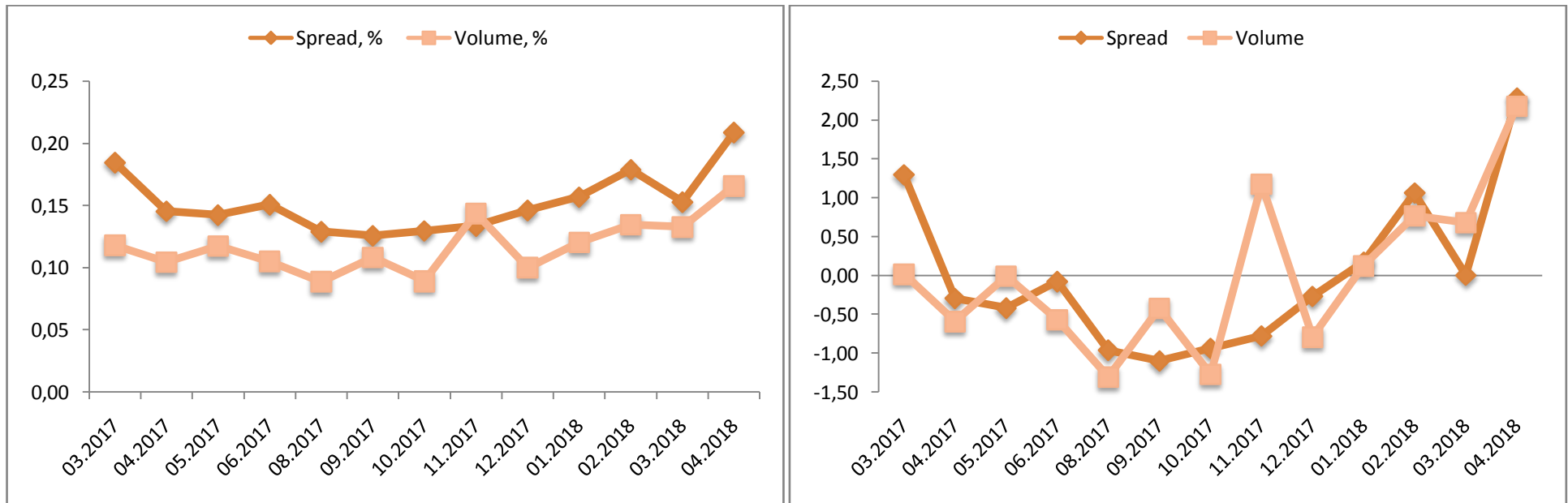
Among the least liquid stocks within a half-year period of 10.2017 - 04.2018:

1. Stocks, appearing at least once in the list of the 5 least liquid stocks in the three dimensions simultaneously (highlighted in blue in the table):

**AGRO, LNTA, NMTP, RNFT, TRMK.**

2. Stocks, appearing no less than 5-6 months in the list of the 5 least liquid stocks in any of the dimensions (displayed in blue bold font in the table):

**NMTP, RNFT, UWGN (trading costs), NMTP, RNFT (trading activity), NMTP, RNFT (elasticity).**



The figures above provide liquidity dynamics **at an aggregate level**. The left figure displays dynamics of the two liquidity dimensions *in original numerical values*. Trading costs measured by average percentage daily spread in April 2018 increased compared to the previous month to 0.209%. Trading activity measured by average percentage daily trading volume in April 2018 also increased compared to the previous month to 0.166%. In April 2018, following the previous 3-month trend, liquidity was in a disequilibrium state: the trading activity metric and the trading costs metric moved in the same direction.

The right figure displays dynamics of the two liquidity dimensions *in standardized numerical values*. In April 2018 trading costs and trading activity reached their maximum level over the yearly period, significantly exceeding the second and the third highest levels.