

LIQUIDITY MEASUREMENT AND MONITORING for 08.2019

\*\*The list and free-float coefficients of the MICEX Index stocks as of 22.06.2019, total stocks outstanding as of the corresponding business day of 08.2019. 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	SBER	<b>0,018</b>	0,0391	17	HYDR	<b>0,070</b>	0,0004	33	RUAL	<b>0,132</b>	0,0357
2	ROSN	<b>0,031</b>	0,1250	18	MTSS	<b>0,072</b>	0,1864	34	MVID	<b>0,144</b>	0,6273
3	VTBR	<b>0,031</b>	0,000012	19	MOEX	<b>0,072</b>	0,0677	35	FIVE	<b>0,146</b>	3,090909
4	GAZP	<b>0,035</b>	0,0791	20	CHMF	<b>0,074</b>	0,7091	36	DSKY	<b>0,165</b>	0,1473
5	SBERP	<b>0,040</b>	0,0764	21	NVTK	<b>0,077</b>	0,9818	37	LNTA	<b>0,232</b>	0,5045
6	NLMK	<b>0,050</b>	0,0718	22	SNGS	<b>0,084</b>	0,0218	38	PIKK	<b>0,239</b>	0,9227
7	SNGSP	<b>0,053</b>	0,0168	23	CBOM	<b>0,088</b>	0,0052	39	RNFT	<b>0,398</b>	2,3545
8	AFLT	<b>0,054</b>	0,0591	24	MAGN	<b>0,089</b>	0,0352	40	SFIN	<b>0,833</b>	3,9818
9	YNDX	<b>0,060</b>	1,4455	25	PLZL	<b>0,094</b>	6,5909				
10	LKOH	<b>0,060</b>	3,1364	26	RTKM	<b>0,094</b>	0,0768				
11	ALRS	<b>0,061</b>	0,0445	27	UPRO	<b>0,102</b>	0,0027				
12	GMKN	<b>0,062</b>	9,2727	28	FEES	<b>0,102</b>	0,000179				
13	MGNT	<b>0,064</b>	2,2955	29	PHOR	<b>0,114</b>	2,8182				
14	AFKS	<b>0,065</b>	0,0074	30	IRAO	<b>0,118</b>	0,0049	<b>Total stocks</b>		<b>0,115</b>	-
15	TATN	<b>0,069</b>	0,4955	31	TRNFP	<b>0,122</b>	186,3636				
16	TATNP	<b>0,069</b>	0,4409	32	POLY	<b>0,124</b>	1,0773				

## 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>0,459</b>	0,459	1,00	888 354 046	24	NLMK	<b>0,078</b>	0,489	0,16	673 335 353
2	AFLT	<b>0,433</b>	1,055	0,41	522 790 489	25	TRNFP	<b>0,074</b>	0,231	0,32	174 266 173
3	TATNP	<b>0,415</b>	0,415	1,00	392 973 858	26	FEES	<b>0,058</b>	0,323	0,18	129 756 346
4	SNGSP	<b>0,351</b>	0,481	0,73	860 014 961	27	RUAL	<b>0,055</b>	0,345	0,16	228 581 314
5	MOEX	<b>0,343</b>	0,592	0,58	731 209 696	28	DSKY	<b>0,053</b>	0,155	0,34	34 651 008
6	MVID	<b>0,329</b>	1,935	0,17	252 975 261	29	UPRO	<b>0,052</b>	0,328	0,16	88 088 440
7	ALRS	<b>0,232</b>	0,683	0,34	1 259 875 210	30	FIVE	<b>0,048</b>	0,117	0,41	278 489 204
8	SBER	<b>0,216</b>	0,450	0,48	10 301 778 817	31	RTKM	<b>0,042</b>	0,131	0,32	87 828 155
9	VTBR	<b>0,207</b>	0,765	0,27	1 069 588 604	32	SNGS	<b>0,038</b>	0,151	0,25	353 086 081
10	MGNT	<b>0,189</b>	0,266	0,71	691 937 186	33	ROSN	<b>0,035</b>	0,316	0,11	1 500 781 047
11	LKOH	<b>0,176</b>	0,327	0,54	6 534 849 274	34	PHOR	<b>0,035</b>	0,139	0,25	110 828 152
12	AFKS	<b>0,161</b>	0,488	0,33	176 991 764	35	NVTK	<b>0,021</b>	0,102	0,21	827 777 303
13	IRAO	<b>0,138</b>	0,417	0,33	605 977 258	36	CBOM	<b>0,020</b>	0,110	0,18	31 623 733
14	GAZP	<b>0,137</b>	0,299	0,46	7 455 022 204	37	SFIN	<b>0,016</b>	0,042	0,37	8 423 020
15	GMKN	<b>0,128</b>	0,337	0,38	3 066 662 033	38	PIKK	<b>0,011</b>	0,063	0,18	28 883 743
16	MTSS	<b>0,123</b>	0,273	0,45	637 424 687	39	LNTA	<b>0,010</b>	0,046	0,21	10 320 785
17	PLZL	<b>0,114</b>	0,716	0,16	1 095 245 642	40	RNFT	<b>0,002</b>	0,022	0,09	3 399 657
18	CHMF	<b>0,112</b>	0,560	0,20	909 129 180						
19	MAGN	<b>0,106</b>	0,662	0,16	471 902 380						
20	POLY	<b>0,100</b>	0,223	0,45	418 151 041						
21	HYDR	<b>0,094</b>	0,494	0,19	218 385 823						
22	TATN	<b>0,089</b>	0,278	0,32	1 404 758 590						
23	YNDX	<b>0,082</b>	0,085	0,96	582 252 713		<b>Total stocks</b>	<b>0,135</b>	0,384		

### 3. Elasticity\*

		HH			HH
1	SBERP	0,004	24	MVID	0,026
2	SNGSP	0,005	25	CBOM	0,031
3	TATNP	0,005	26	DSKY	0,033
4	AFLT	0,006	27	FEES	0,036
5	MOEX	0,006	28	POLY	0,037
6	SBER	0,009	29	ROSN	0,038
7	MGNT	0,010	30	RTKM	0,040
8	ALRS	0,010	31	UPRO	0,043
9	VTBR	0,010	32	SNGS	0,053
10	MTSS	0,012	33	PHOR	0,060
11	LKOH	0,015	34	RUAL	0,063
12	GAZP	0,016	35	FIVE	0,076
13	HYDR	0,016	36	NVTK	0,117
14	GMKN	0,017	37	LNTA	0,220
15	CHMF	0,018	38	PIKK	0,229
16	IRAO	0,018	39	SFIN	0,239
17	AFKS	0,021	40	RNFT	0,942
18	PLZL	0,022	41		
19	TRNFP	0,024			
20	NLMK	0,024	43		
21	TATN	0,025	44		
22	YNDX	0,025	45		
23	MAGN	0,026	<b>Total stocks</b>		<b>0,066</b>

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

	Most liquid	Spread, %	Volume, %	HH	Least liquid	Spread, %	Volume, %	HH
03.2019	1	<b>SBER</b>	<b>SBERP</b>	<b>SBERP</b>	1	LNTA	PHOR	PIKK
03.2019	2	MOEX	AFLT	MOEX	2	TRMK	CBOM	PHOR
03.2019	3	LKOH	MOEX	AFLT	3	PIKK	NVTK	FIVE
03.2019	4	<b>SBERP</b>	MTLR	SBER	4	<b>RNFT</b>	<b>PIKK</b>	<b>NVTK</b>
03.2019	5	<b>GAZP</b>	SBER	<b>SNGSP</b>	5	<b>SFIN</b>	<b>RNFT</b>	<b>RNFT</b>
04.2019	1	<b>SBER</b>	<b>SBERP</b>	<b>SBERP</b>	1	LNTA	CBOM	FIVE
04.2019	2	LKOH	MVID	MOEX	2	FIVE	NVTK	NVTK
04.2019	3	ROSN	MOEX	SBER	3	PIKK	PHOR	PHOR
04.2019	4	MOEX	SBER	<b>SNGSP</b>	4	<b>SFIN</b>	<b>PIKK</b>	<b>PIKK</b>
04.2019	5	<b>SBERP</b>	MGNT	AFLT	5	<b>RNFT</b>	<b>RNFT</b>	<b>RNFT</b>
05.2019	1	<b>GAZP</b>	<b>SBERP</b>	<b>SBERP</b>	1	PIKK	ROSN	NVTK
05.2019	2	<b>SBER</b>	MOEX	MOEX	2	TRNFP	CBOM	FIVE
05.2019	3	MOEX	TATNP	<b>SNGSP</b>	3	MVID	LNTA	PIKK
05.2019	4	<b>SBERP</b>	AFLT	AFLT	4	<b>RNFT</b>	<b>PIKK</b>	LNTA
05.2019	5	CHMF	SNGSP	MGNT	5	<b>SFIN</b>	<b>RNFT</b>	<b>RNFT</b>
06.2019	1	<b>SBER</b>	<b>SBERP</b>	<b>SBERP</b>	1	FIVE	NVTK	NVTK
06.2019	2	<b>GAZP</b>	AFLT	MOEX	2	LNTA	SFIN	FIVE
06.2019	3	<b>SBERP</b>	MOEX	MVID	3	TRNFP	CBOM	LNTA
06.2019	4	LKOH	MGNT	AFLT	4	<b>SFIN</b>	<b>PIKK</b>	<b>SFIN</b>
06.2019	5	MGNT	MVID	<b>SNGSP</b>	5	<b>RNFT</b>	<b>RNFT</b>	<b>RNFT</b>
07.2019	1	<b>SBER</b>	SNGSP	<b>SBERP</b>	1	MVID	LNTA	NVTK
07.2019	2	<b>SBERP</b>	AFLT	<b>SNGSP</b>	2	LNTA	CBOM	LNTA
07.2019	3	<b>GAZP</b>	TATNP	TATNP	3	PIKK	SFIN	SFIN
07.2019	4	VTBR	AFKS	AFLT	4	<b>RNFT</b>	<b>PIKK</b>	<b>PIKK</b>
07.2019	5	ROSN	MOEX	MOEX	5	<b>SFIN</b>	<b>RNFT</b>	<b>RNFT</b>
08.2019	1	<b>SBER</b>	<b>SBERP</b>	<b>SBERP</b>	1	DSKY	CBOM	NVTK
08.2019	2	ROSN	AFLT	<b>SNGSP</b>	2	LNTA	SFIN	LNTA
08.2019	3	VTBR	TATNP	TATNP	3	PIKK	PIKK	PIKK
08.2019	4	<b>GAZP</b>	SNGSP	AFLT	4	<b>RNFT</b>	LNTA	SFIN
08.2019	5	<b>SBERP</b>	MOEX	MOEX	5	<b>SFIN</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 03.2019 - 08.2019:

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, SBER, SBERP.**

Stocks, appearing no less then 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, SBERP (trading costs) AFLT, MOEX, SBERP (trading activity), AFLT, MOEX, SBERP, SNGSP (elasticity).**

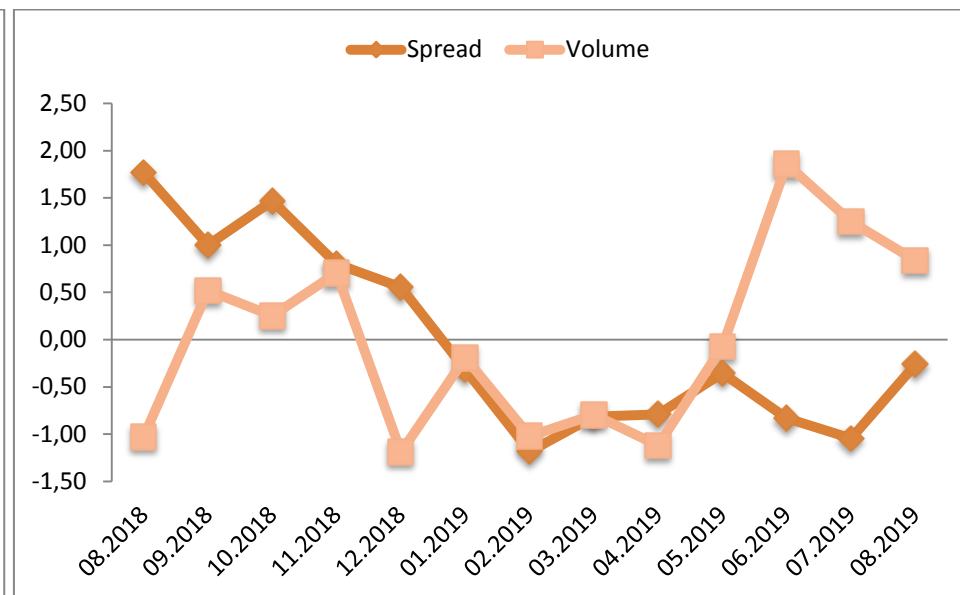
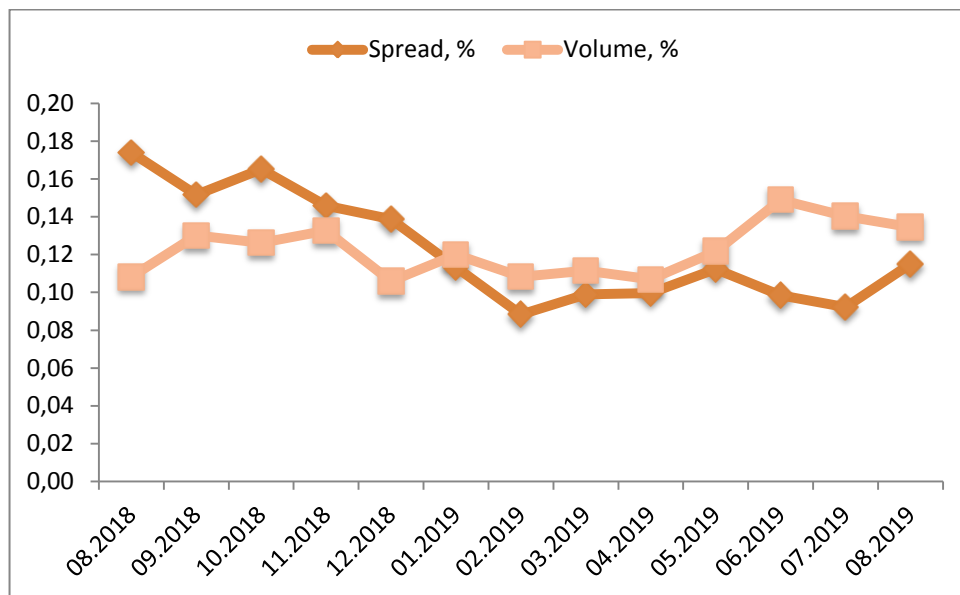
Among the least liquid stocks within a half-year period of 03.2019 - 08.2019:

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):

**LNTA, PIKK, RNFT, SFIN.**

2. Stocks, appearing no less then 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):

**LNTA, PIKK, RNFT, SFIN (trading costs), CBOM, PIKK, RNFT (trading activity), NVTK, PIKK, 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 August 2019 significantly increased compared to the previous month to 0.115%. Trading activity measured by average percentage daily trading volume in August 2019 decreased compared to the previous month to 0.135%. In August 2019 liquidity was in an equilibrium state: the trading activity metric and the trading costs metric moved in the opposite direction.

The right figure displays dynamics of the two liquidity dimensions *in standardized numerical values*. In August 2019 trading costs were near the average level over a 1-year period while trading activity was significantly above the average level over a 1-year period. Large trading volumes and a descending trend over the last three months are due to a seasonal factor, i.e., the beginning and the end of the season when ex-dividend dates traditionally occur.