

LIQUIDITY MEASUREMENT AND MONITORING for 04.2017

\*\*The list and free-float coefficients of the MICEX Index stocks as of 16.03.2017, total stocks outstanding as of the corresponding business day of 04.2017. 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>0,050</b>	0,0640	17	ALRS	<b>0,119</b>	0,1080	33	TRMK	<b>0,182</b>	0,1342
2	SBER	<b>0,058</b>	0,0937	18	GMKN	<b>0,120</b>	10,6000	34	UWGN	<b>0,184</b>	1,4474
3	MVID	<b>0,067</b>	0,2500	19	AFLT	<b>0,122</b>	0,2075	35	SNGS	<b>0,186</b>	0,0521
4	NLMK	<b>0,069</b>	0,0735	20	MTSS	<b>0,126</b>	0,3450	36	YNDX	<b>0,188</b>	2,4444
5	MTLR	<b>0,070</b>	0,1105	21	ROSN	<b>0,126</b>	0,4075	37	NMTP	<b>0,193</b>	0,0128
6	MOEX	<b>0,073</b>	0,0810	22	TATN	<b>0,141</b>	0,4842	38	PHOR	<b>0,195</b>	4,6000
7	MGNT	<b>0,089</b>	8,2000	23	AFKS	<b>0,146</b>	0,0320	39	AGRO	<b>0,196</b>	1,3500
8	MFON	<b>0,092</b>	0,5600	24	CHMF	<b>0,151</b>	1,2100	40	TRNFP	<b>0,218</b>	392,1053
9	LKOH	<b>0,093</b>	2,7500	25	IRAO	<b>0,154</b>	0,0062	41	UPRO	<b>0,220</b>	0,0057
10	URKA	<b>0,096</b>	0,1500	26	RTKM	<b>0,155</b>	0,1168	42	POLY	<b>0,221</b>	1,6500
11	VTBR	<b>0,101</b>	0,000066	27	CBOM	<b>0,158</b>	0,0069	43	RUAL	<b>0,249</b>	0,0711
12	MAGN	<b>0,104</b>	0,0370	28	LSRG	<b>0,161</b>	1,4250	44	DIXY	<b>0,274</b>	0,6250
13	RSTI	<b>0,107</b>	0,000980	29	MSNG	<b>0,166</b>	0,0038	45	PIKK	<b>0,285</b>	0,8100
14	FEES	<b>0,109</b>	0,000200	30	AKRN	<b>0,169</b>	5,5500	<b>Total stocks</b>		<b>0,146</b>	-
15	NVTK	<b>0,111</b>	0,7750	31	PLZL	<b>0,170</b>	7,5000				
16	HYDR	<b>0,112</b>	0,001000	32	BANEP	<b>0,177</b>	2,1500				

## 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	FEES	<b>0,453</b>	2,156	0,21	1 054 344 710	24	AFKS	<b>0,063</b>	0,174	0,36	132 112 088
2	MTLR	<b>0,431</b>	0,959	0,45	290 907 417	25	DIXY	<b>0,061</b>	0,133	0,46	17 185 655
3	MOEX	<b>0,414</b>	0,726	0,57	1 043 569 802	26	TRMK	<b>0,057</b>	0,191	0,30	44 032 155
4	MVID	<b>0,282</b>	0,671	0,42	191 524 251	27	MTSS	<b>0,048</b>	0,101	0,48	265 198 561
5	AFLT	<b>0,251</b>	0,611	0,41	471 715 643	28	ROSN	<b>0,043</b>	0,388	0,11	1 472 658 723
6	ALRS	<b>0,230</b>	0,676	0,34	1 547 458 691	29	UPRO	<b>0,032</b>	0,179	0,18	52 992 339
7	SBER	<b>0,224</b>	0,467	0,48	7 672 163 824	30	MFON	<b>0,032</b>	0,210	0,15	119 284 750
8	TRNFP	<b>0,199</b>	0,199	1,00	568 325 005	31	SNGS	<b>0,031</b>	0,125	0,25	312 070 625
9	BANEP	<b>0,176</b>	1,466	0,12	63 162 527	32	PHOR	<b>0,028</b>	0,147	0,19	84 825 374
10	HYDR	<b>0,171</b>	0,742	0,23	588 590 478	33	NVTK	<b>0,026</b>	0,097	0,27	562 008 523
11	RSTI	<b>0,166</b>	1,510	0,11	301 793 326	34	AGRO	<b>0,023</b>	0,110	0,21	19 173 753
12	GAZP	<b>0,163</b>	0,355	0,46	4 969 852 875	35	NMTP	<b>0,021</b>	0,142	0,15	27 249 471
13	MGNT	<b>0,113</b>	0,180	0,63	976 715 147	36	LSRG	<b>0,020</b>	0,060	0,33	17 781 013
14	IRAO	<b>0,112</b>	0,385	0,29	467 942 759	37	PIKK	<b>0,019</b>	0,061	0,32	36 360 652
15	MSNG	<b>0,102</b>	0,511	0,20	90 315 268	38	POLY	<b>0,019</b>	0,052	0,37	61 753 466
16	GMKN	<b>0,093</b>	0,282	0,33	1 299 885 968	39	YNDX	<b>0,017</b>	0,018	0,95	68 646 140
17	RTKM	<b>0,092</b>	0,289	0,32	178 567 310	40	UWGN	<b>0,017</b>	0,083	0,20	14 792 903
18	MAGN	<b>0,082</b>	0,627	0,13	322 368 612	41	CBOM	<b>0,011</b>	0,054	0,21	11 963 392
19	VTBR	<b>0,080</b>	0,205	0,39	678 568 488	42	AKRN	<b>0,011</b>	0,067	0,16	14 221 585
20	CHMF	<b>0,075</b>	0,417	0,18	504 415 068	43	URKA	<b>0,008</b>	0,133	0,06	36 807 546
21	TATN	<b>0,069</b>	0,215	0,32	520 719 475	44	RUAL	<b>0,007</b>	0,075	0,10	32 236 031
22	LKOH	<b>0,068</b>	0,147	0,46	1 681 845 469	45	PLZL	<b>0,002</b>	0,033	0,05	13 873 407
23	NLMK	<b>0,067</b>	0,478	0,14	424 762 506	<b>Total stocks</b>		<b>0,105</b>	0,376	-	-

### 3. Elasticity\*

		HH			HH
1	MOEX	0,007	24	UWGN	0,056
2	MVID	0,008	25	AFKS	0,058
3	FEES	0,010	26	MTSS	0,061
4	SBER	0,012	27	ROSN	0,061
5	AFLT	0,013	28	DIXY	0,075
6	GAZP	0,013	29	MFON	0,080
7	ALRS	0,014	30	UPRO	0,088
8	MTLR	0,016	31	TRMK	0,090
9	HYDR	0,018	32	SNGS	0,094
10	BANEP	0,022	33	NVTK	0,109
11	TRNFP	0,022	34	AGRO	0,122
12	GMKN	0,025	35	PHOR	0,125
13	RSTI	0,028	36	CBOM	0,134
14	VTBR	0,029	37	PIKK	0,145
15	RTKM	0,030	38	NMTP	0,165
16	MGNT	0,033	39	LSRG	0,174
17	LKOH	0,038	40	POLY	0,191
18	IRAO	0,039	41	URKA	0,243
19	NLMK	0,044	42	AKRN	0,276
20	CHMF	0,046	43	YNDX	0,310
21	MAGN	0,048	44	RUAL	0,697
22	MSNG	0,050	45	PLZL	1,141
23	TATN	0,050	<b>Total stocks</b>		<b>0,114</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
11.2016	1	<b>GAZP</b>	<b>MOEX</b>	<b>MOEX</b>	1	<b>VSMO</b>	GCHE	<b>RUAL</b>
11.2016	2	<b>SBER</b>	<b>AFLT</b>	<b>SBER</b>	2	AKRN	<b>PLZL</b>	<b>VSMO</b>
11.2016	3	BANE	IRAO	<b>AFLT</b>	3	GCHE	<b>LNTA</b>	<b>PLZL</b>
11.2016	4	FEES	<b>SBER</b>	BANE	4	<b>NKNC</b>	<b>VSMO</b>	<b>LNTA</b>
11.2016	5	<b>MOEX</b>	<b>RSTI</b>	<b>GAZP</b>	5	<b>LNTA</b>	<b>NKNC</b>	<b>NKNC</b>
12.2016	1	BANE	<b>MTLR</b>	BANE	1	NMTP	PHOR	AKRN
12.2016	2	URKA	<b>AFLT</b>	<b>AFLT</b>	2	UWGN	PIKK	PHOR
12.2016	3	<b>SBER</b>	<b>MOEX</b>	<b>MOEX</b>	3	<b>RUAL</b>	<b>RUAL</b>	<b>RUAL</b>
12.2016	4	<b>GAZP</b>	<b>SBER</b>	<b>SBER</b>	4	PIKK	<b>PLZL</b>	<b>PLZL</b>
12.2016	5	<b>MOEX</b>	<b>TRNFP</b>	<b>MTLR</b>	5	<b>VSMO</b>	<b>VSMO</b>	<b>VSMO</b>
01.2017	1	GAZP	<b>AFLT</b>	<b>AFLT</b>	1	LSRG	<b>RUAL</b>	AKRN
01.2017	2	<b>AFLT</b>	HYDR	<b>MOEX</b>	2	TRNFP	CBOM	<b>PIKK</b>
01.2017	3	NLMK	<b>MOEX</b>	<b>SBER</b>	3	<b>VSMO</b>	PIKK	<b>RUAL</b>
01.2017	4	<b>SBER</b>	<b>SBER</b>	HYDR	4	PIKK	<b>VSMO</b>	<b>VSMO</b>
01.2017	5	VTBR	<b>MTLR</b>	VTBR	5	<b>RUAL</b>	<b>PLZL</b>	<b>PLZL</b>
02.2017	1	SBER	MVID	<b>MOEX</b>	1	NMTP	CBOM	<b>PIKK</b>
02.2017	2	<b>GAZP</b>	FEES	<b>AFLT</b>	2	<b>VSMO</b>	PIKK	<b>RUAL</b>
02.2017	3	HYDR	<b>MTLR</b>	<b>SBER</b>	3	PIKK	BANE	BANE
02.2017	4	VTBR	<b>AFLT</b>	<b>GAZP</b>	4	BANE	<b>VSMO</b>	<b>VSMO</b>
02.2017	5	RSTI	<b>MOEX</b>	HYDR	5	MSNG	<b>PLZL</b>	<b>PLZL</b>
03.2017	1	<b>SBER</b>	FEES	<b>MOEX</b>	1	TRNFP	YNDX	PIKK
03.2017	2	<b>GAZP</b>	<b>MOEX</b>	<b>AFLT</b>	2	NMTP	<b>RUAL</b>	<b>RUAL</b>
03.2017	3	URKA	<b>MTLR</b>	<b>SBER</b>	3	<b>RUAL</b>	BANE	BANE
03.2017	4	<b>AFLT</b>	MVID	<b>GAZP</b>	4	<b>VSMO</b>	<b>VSMO</b>	<b>VSMO</b>
03.2017	5	<b>MOEX</b>	<b>AFLT</b>	HYDR	5	BANE	<b>PLZL</b>	<b>PLZL</b>
04.2017	1	<b>GAZP</b>	FEES	<b>MOEX</b>	1	UPRO	CBOM	URKA
04.2017	2	<b>SBER</b>	<b>MTLR</b>	<b>MVID</b>	2	POLY	AKRN	AKRN
04.2017	3	<b>MVID</b>	<b>MOEX</b>	FEES	3	<b>RUAL</b>	URKA	YNDX
04.2017	4	NLMK	<b>MVID</b>	<b>SBER</b>	4	DIXY	<b>RUAL</b>	<b>RUAL</b>
04.2017	5	MTLR	<b>AFLT</b>	<b>AFLT</b>	5	PIKK	<b>PLZL</b>	<b>PLZL</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 11.2016 - 04.2017:

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):

**AFLT, MOEX, MVID, SBER.**

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, MOEX, MTLR (trading activity), AFLT, MOEX, SBER (elasticity).**

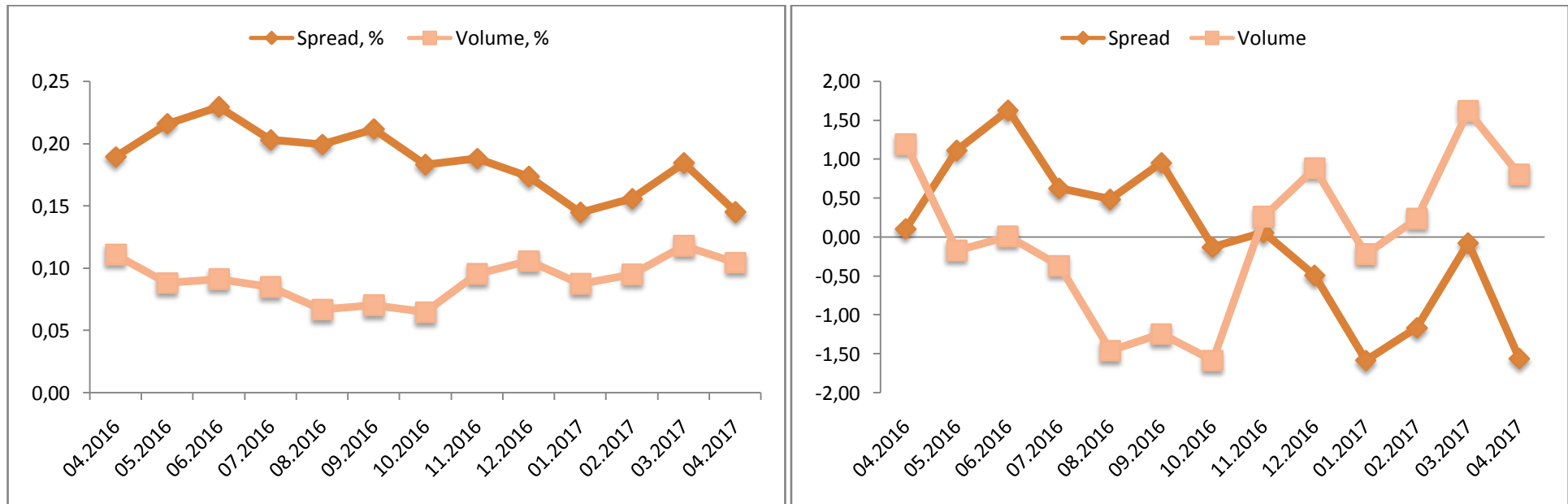
Among the least liquid stocks within a half-year period of 11.2016 - 04.2017:

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):

**BANE, LNTA, NKNC, PIKK, RUAL, VSMO.**

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):

**VSMO (trading costs), PLZL, VSMO (trading activity), PLZL, RUAL, VSMO (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*. In April 2017 trading activity and trading costs decreased relative to March 2017, respectively, from 0.118% to 0.105% (in the average percentage daily trading volume) and from 0.185% to 0.146% (in the average percentage daily spread). Compared to the equilibrium state liquidity dynamics is inconsistent: deterioration in trading activity is accompanied with improvement in trading costs. This trend has been prevailing since December 2016.

The right figure displays dynamics of the two liquidity dimensions *in standardized numerical values*. April 2017 is featured with a large negative shift in trading activity and trading costs which is a counterbalance to a large positive shift in March 2017. Trading activity stays above the yearly average value while trading costs have reached their minimum value over the yearly period.