

LIQUIDITY MEASUREMENT AND MONITORING for 02.2017

\*\*The list and free-float coefficients of the MICEX Index stocks as of 16.12.2016, total stocks outstanding as of the corresponding business day of 02.2017. 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	SBER	<b>0,048</b>	0,0806	17	GMKN	<b>0,106</b>	10,2778	33	LSRG	<b>0,192</b>	1,8889
2	GAZP	<b>0,056</b>	0,0778	18	MTSS	<b>0,109</b>	0,2972	34	AFKS	<b>0,195</b>	0,0447
3	HYDR	<b>0,070</b>	0,0007	19	IRAO	<b>0,112</b>	0,004417	35	UWGN	<b>0,199</b>	1,6111
4	VTBR	<b>0,073</b>	0,000049	20	AFLT	<b>0,118</b>	0,2056	36	TATN	<b>0,205</b>	0,7917
5	RSTI	<b>0,073</b>	0,000878	21	MFON	<b>0,119</b>	0,7611	37	AKRN	<b>0,209</b>	7,1667
6	MAGN	<b>0,078</b>	0,0317	22	URKA	<b>0,119</b>	0,2000	38	AGRO	<b>0,224</b>	1,8333
7	RTKM	<b>0,079</b>	0,0650	23	ALRS	<b>0,135</b>	0,1356	39	TRNFP	<b>0,234</b>	444,4444
8	MVID	<b>0,082</b>	0,3056	24	PHOR	<b>0,150</b>	3,8333	40	RUAL	<b>0,241</b>	0,0767
9	MGNT	<b>0,083</b>	8,0556	25	MOEX	<b>0,152</b>	0,1961	41	NMTP	<b>0,279</b>	0,0189
10	NVTK	<b>0,084</b>	0,6389	26	PLZL	<b>0,155</b>	6,8889	42	VSMO	<b>0,296</b>	42,2222
11	UPRO	<b>0,085</b>	0,0023	27	POLY	<b>0,161</b>	1,1389	43	PIKK	<b>0,303</b>	0,8778
12	LKOH	<b>0,086</b>	2,8056	28	SNGS	<b>0,166</b>	0,0531	44	BANE	<b>0,443</b>	15,6111
13	NLMK	<b>0,087</b>	0,1044	29	YNDX	<b>0,167</b>	2,2778	45	MSNG	<b>0,452</b>	0,0124
14	MTLR	<b>0,089</b>	0,1500	30	FEES	<b>0,170</b>	0,000417	<b>Total stocks</b>		<b>0,156</b>	-
15	CBOM	<b>0,095</b>	0,0041	31	DIXY	<b>0,172</b>	0,4556				
16	ROSN	<b>0,097</b>	0,3417	32	CHMF	<b>0,174</b>	1,5556				

## 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	MVID	<b>0,451</b>	1,074	0,42	301 507 858	24	TATN	<b>0,065</b>	0,203	0,32	543 526 565
2	FEES	<b>0,317</b>	1,508	0,21	948 404 165	25	VTBR	<b>0,053</b>	0,137	0,39	470 442 201
3	MTLR	<b>0,296</b>	0,659	0,45	207 601 155	26	ROSN	<b>0,047</b>	0,427	0,11	1 822 216 668
4	AFLT	<b>0,280</b>	0,683	0,41	540 658 703	27	UPRO	<b>0,045</b>	0,251	0,18	77 682 368
5	MOEX	<b>0,263</b>	0,461	0,57	769 972 548	28	MSNG	<b>0,042</b>	0,212	0,20	44 936 432
6	HYDR	<b>0,227</b>	0,988	0,23	908 720 528	29	MFON	<b>0,037</b>	0,244	0,15	145 038 448
7	SBER	<b>0,194</b>	0,404	0,48	6 979 635 404	30	SNGS	<b>0,031</b>	0,126	0,25	357 115 141
8	RSTI	<b>0,190</b>	1,725	0,11	427 882 262	31	NVTK	<b>0,023</b>	0,085	0,27	528 792 835
9	MGNT	<b>0,161</b>	0,256	0,63	1 469 592 642	32	POLY	<b>0,021</b>	0,057	0,37	63 128 995
10	ALRS	<b>0,155</b>	0,454	0,34	1 138 662 129	33	AGRO	<b>0,019</b>	0,093	0,21	19 149 247
11	TRNFP	<b>0,151</b>	0,151	1,00	450 413 097	34	UWGN	<b>0,016</b>	0,080	0,20	14 587 612
12	IRAO	<b>0,151</b>	0,521	0,29	622 966 112	35	AKRN	<b>0,015</b>	0,097	0,16	21 469 998
13	MAGN	<b>0,141</b>	1,083	0,13	638 616 252	36	YNDX	<b>0,015</b>	0,016	0,95	60 043 053
14	GAZP	<b>0,140</b>	0,304	0,46	4 670 768 046	37	NMTP	<b>0,013</b>	0,084	0,15	16 509 268
15	GMKN	<b>0,123</b>	0,373	0,33	1 917 560 908	38	LSRG	<b>0,010</b>	0,029	0,33	9 629 306
16	RTKM	<b>0,104</b>	0,325	0,32	219 475 329	39	URKA	<b>0,009</b>	0,156	0,06	46 157 243
17	PHOR	<b>0,077</b>	0,403	0,19	259 019 347	40	RUAL	<b>0,009</b>	0,092	0,10	45 150 855
18	CHMF	<b>0,076</b>	0,421	0,18	576 714 254	41	CBOM	<b>0,009</b>	0,042	0,21	8 889 676
19	AFKS	<b>0,075</b>	0,208	0,36	168 674 852	42	PIKK	<b>0,005</b>	0,016	0,32	10 019 252
20	DIXY	<b>0,072</b>	0,156	0,46	23 912 550	43	BANE	<b>0,005</b>	0,039	0,12	24 762 721
21	LKOH	<b>0,071</b>	0,153	0,46	1 953 481 197	44	VSMO	<b>0,002</b>	0,015	0,10	2 514 109
22	MTSS	<b>0,069</b>	0,143	0,48	377 024 134	45	PLZL	<b>0,001</b>	0,019	0,05	7 948 631
23	NLMK	<b>0,065</b>	0,465	0,14	466 041 462	<b>Total stocks</b>		<b>0,095</b>	0,347	-	-

### 3. Elasticity\*

		HH			HH
1	MOEX	0,010	24	UPRO	0,050
2	AFLT	0,011	25	DIXY	0,055
3	SBER	0,011	26	ROSN	0,056
4	GAZP	0,014	27	UWGN	0,059
5	HYDR	0,017	28	MFON	0,065
6	FEES	0,017	29	SNGS	0,068
7	MGNT	0,019	30	PHOR	0,093
8	MTLR	0,020	31	CBOM	0,107
9	RSTI	0,021	32	NVTK	0,114
10	ALRS	0,021	33	MSNG	0,120
11	RTKM	0,022	34	URKA	0,136
12	MVID	0,022	35	AGRO	0,138
13	GMKN	0,025	36	POLY	0,175
14	VTBR	0,025	37	NMTP	0,253
15	TRNFP	0,027	38	AKRN	0,271
16	IRAO	0,030	39	YNDX	0,272
17	MAGN	0,030	40	LSRG	0,320
18	LKOH	0,030	41	PIKK	0,433
19	MTSS	0,037	42	RUAL	0,572
20	TATN	0,037	43	BANE	1,300
21	AFKS	0,043	44	VSMO	1,302
22	NLMK	0,045	45	PLZL	2,887
23	CHMF	0,046	<b>Total stocks</b>		<b>0,214</b>

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

	Most liquid	Сред, %	Объем, %	HH	Least liquid	Сред, %	Объем, %	HH
09.2016	1	<b>SBER</b>	<b>AFLT</b>	<b>SBER</b>	1	MVID	PHOR	<b>VSMO</b>
09.2016	2	MTSS	<b>SBER</b>	<b>MOEX</b>	2	<b>LNTA</b>	<b>VSMO</b>	PIKK
09.2016	3	<b>GAZP</b>	<b>MOEX</b>	<b>AFLT</b>	3	RUAL	<b>LNTA</b>	<b>PLZL</b>
09.2016	4	VTBR	FEES	GAZP	4	<b>PIKK</b>	<b>PLZL</b>	<b>LNTA</b>
09.2016	5	NLMK	RSTI	MTSS	5	<b>NKNC</b>	<b>NKNC</b>	<b>NKNC</b>
10.2016	1	<b>SBER</b>	<b>AFLT</b>	<b>SBER</b>	1	MVID	GCHE	<b>VSMO</b>
10.2016	2	<b>GAZP</b>	<b>MOEX</b>	<b>AFLT</b>	2	<b>PIKK</b>	<b>NKNC</b>	GCHE
10.2016	3	RTKM	IRAO	<b>MOEX</b>	3	<b>VSMO</b>	<b>PLZL</b>	<b>PLZL</b>
10.2016	4	MTSS	<b>SBER</b>	MTSS	4	<b>LNTA</b>	<b>VSMO</b>	<b>NKNC</b>
10.2016	5	LKOH	TRNFP	GAZP	5	<b>NKNC</b>	<b>LNTA</b>	<b>LNTA</b>
11.2016	1	<b>GAZP</b>	<b>MOEX</b>	<b>MOEX</b>	1	<b>VSMO</b>	GCHE	RUAL
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>	RSTI	GAZP	5	<b>LNTA</b>	<b>NKNC</b>	<b>NKNC</b>
12.2016	1	BANE	MTLR	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	<b>PIKK</b>	<b>PLZL</b>	<b>PLZL</b>
12.2016	5	<b>MOEX</b>	TRNFP	MTLR	5	<b>VSMO</b>	<b>VSMO</b>	<b>VSMO</b>
01.2017	1	<b>GAZP</b>	<b>AFLT</b>	<b>AFLT</b>	1	LSRG	RUAL	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	RUAL
01.2017	4	<b>SBER</b>	<b>SBER</b>	HYDR	4	<b>PIKK</b>	<b>VSMO</b>	<b>VSMO</b>
01.2017	5	VTBR	MTLR	VTBR	5	<b>RUAL</b>	<b>PLZL</b>	<b>PLZL</b>
02.2017	1	<b>SBER</b>	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	RUAL
02.2017	3	HYDR	MTLR	<b>SBER</b>	3	<b>PIKK</b>	BANE	BANE
02.2017	4	VTBR	<b>AFLT</b>	GAZP	4	<b>BANE</b>	<b>VSMO</b>	<b>VSMO</b>
02.2017	5	RSTI	<b>MOEX</b>	HYDR	5	MSNG	<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 09.2016 – 02.2017:

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):

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

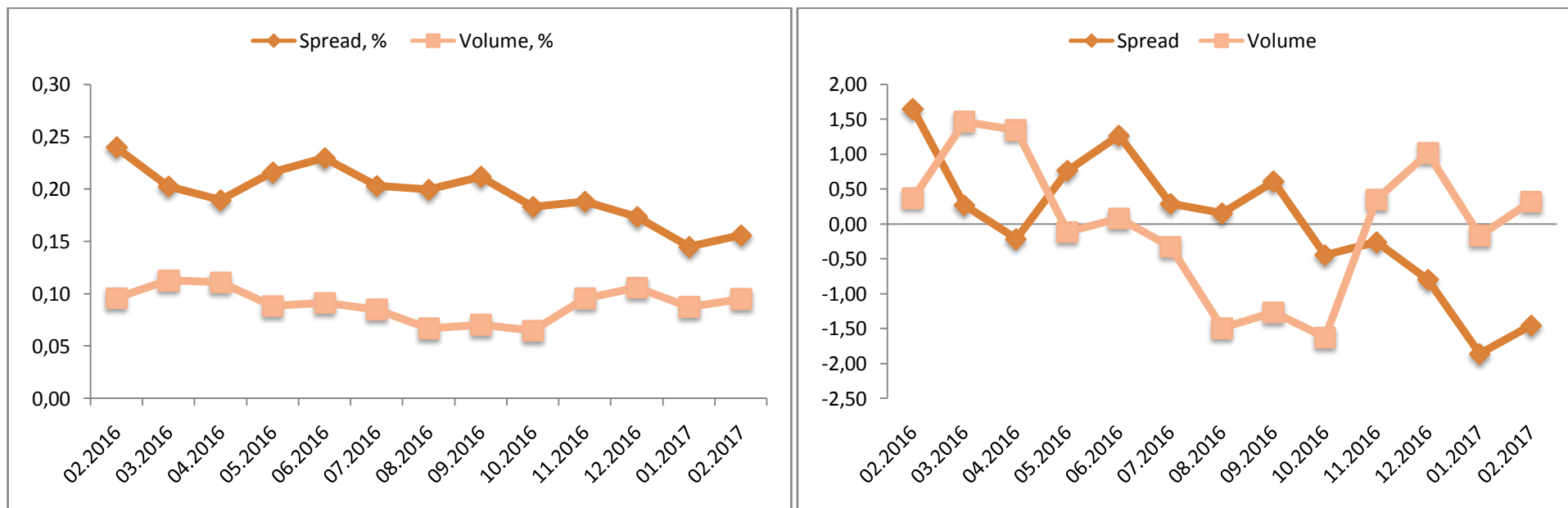
Among the least liquid stocks within a half-year period of 09.2016 – 02.2017:

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, POLY, 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):

**PIKK, VSMO (trading costs), PLZL, VSMO (trading activity), PLZL, 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 February 2017 there was a slight rise in trading activity compared to that in January 2017: the average percentage daily trading volume amounted to 0.095%. Trading costs also rose a little bit: the average percentage daily spread amounted to 0.156%. Thus, in February 2017 liquidity improved in the trading activity dimension but deteriorated in the trading costs dimension.

The right figure displays dynamics of the two liquidity dimensions *in standardized numerical values*. The graph demonstrates that trading activity retained its level above the yearly average while trading costs retained their level at significantly below the yearly average.