

LIQUIDITY MEASUREMENT AND MONITORING for 06.2019

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 06.2019. 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 | 0,027 | 0,0647 | 17 | YNDX | 0,067 | 1,6316 | 33 | PHOR | 0,141 | 3,4737 |
| 2 | GAZP | 0,028 | 0,0647 | 18 | NVTK | 0,069 | 0,8947 | 34 | MVID | 0,142 | 0,6053 |
| 3 | SBERP | 0,037 | 0,0768 | 19 | DSKY | 0,073 | 0,0621 | 35 | PIKK | 0,168 | 0,6211 |
| 4 | LKOH | 0,038 | 1,9737 | 20 | RTKM | 0,073 | 0,0579 | 36 | FIVE | 0,184 | 3,815789 |
| 5 | MGNT | 0,038 | 1,4474 | 21 | HYDR | 0,074 | 0,000432 | 37 | LNTA | 0,195 | 0,4158 |
| 6 | NLMK | 0,041 | 0,0705 | 22 | CBOM | 0,075 | 0,0045 | 38 | TRNFP | 0,211 | 339,4737 |
| 7 | MOEX | 0,042 | 0,0374 | 23 | CHMF | 0,075 | 0,8105 | 39 | SFIN | 0,424 | 2,0947 |
| 8 | AFLT | 0,043 | 0,0421 | 24 | SNGS | 0,076 | 0,0195 | 40 | RNFT | 0,450 | 2,6526 |
| 9 | SNGSP | 0,046 | 0,0189 | 25 | TATNP | 0,079 | 0,4842 | | | | |
| 10 | ROSN | 0,051 | 0,2132 | 26 | UPRO | 0,081 | 0,0021 | | | | |
| 11 | MAGN | 0,052 | 0,0234 | 27 | POLY | 0,082 | 0,6158 | | | | |
| 12 | VTBR | 0,052 | 0,000021 | 28 | IRAO | 0,084 | 0,0038 | | | | |
| 13 | GMKN | 0,052 | 7,3684 | 29 | PLZL | 0,092 | 5,1579 | | | | |
| 14 | AFKS | 0,055 | 0,0052 | 30 | TATN | 0,094 | 0,7211 | Total stocks | | 0,099 | - |
| 15 | ALRS | 0,058 | 0,0516 | 31 | FEES | 0,099 | 0,000191 | | | | |
| 16 | MTSS | 0,063 | 0,1711 | 32 | RUAL | 0,112 | 0,0284 | | | | |

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 | 0,723 | 0,723 | 1,00 | 1 522 392 605 | 24 | TATN | 0,079 | 0,245 | 0,32 | 1 314 076 248 |
| 2 | AFLT | 0,519 | 1,266 | 0,41 | 568 501 508 | 25 | RTKM | 0,066 | 0,205 | 0,32 | 134 025 121 |
| 3 | MOEX | 0,450 | 0,775 | 0,58 | 904 595 798 | 26 | YNDX | 0,063 | 0,065 | 0,96 | 445 148 418 |
| 4 | MGNT | 0,292 | 0,412 | 0,71 | 1 126 639 504 | 27 | UPRO | 0,061 | 0,379 | 0,16 | 97 165 424 |
| 5 | MVID | 0,282 | 0,882 | 0,32 | 216 459 550 | 28 | POLY | 0,054 | 0,141 | 0,38 | 186 996 121 |
| 6 | TATNP | 0,263 | 0,263 | 1,00 | 237 314 316 | 29 | DSKY | 0,048 | 0,142 | 0,34 | 30 516 705 |
| 7 | IRAO | 0,256 | 0,777 | 0,33 | 1 226 339 673 | 30 | SNGS | 0,045 | 0,178 | 0,25 | 406 766 867 |
| 8 | SNGSP | 0,250 | 0,343 | 0,73 | 796 301 361 | 31 | PHOR | 0,043 | 0,172 | 0,25 | 136 638 666 |
| 9 | SBER | 0,249 | 0,520 | 0,48 | 12 945 223 517 | 32 | RUAL | 0,042 | 0,264 | 0,16 | 161 677 200 |
| 10 | VTBR | 0,224 | 0,831 | 0,27 | 1 149 605 367 | 33 | ROSN | 0,042 | 0,380 | 0,11 | 1 858 852 487 |
| 11 | ALRS | 0,212 | 0,624 | 0,34 | 1 373 346 288 | 34 | FIVE | 0,038 | 0,093 | 0,41 | 216 888 684 |
| 12 | GAZP | 0,204 | 0,444 | 0,46 | 11 239 326 623 | 35 | LNTA | 0,031 | 0,111 | 0,28 | 31 793 751 |
| 13 | HYDR | 0,178 | 0,938 | 0,19 | 446 253 567 | 36 | NVTK | 0,026 | 0,125 | 0,21 | 1 040 037 720 |
| 14 | AFKS | 0,169 | 0,513 | 0,33 | 155 242 097 | 37 | SFIN | 0,020 | 0,049 | 0,40 | 10 980 654 |
| 15 | FEES | 0,168 | 0,935 | 0,18 | 413 133 264 | 38 | CBOM | 0,018 | 0,097 | 0,18 | 28 310 222 |
| 16 | LKOH | 0,122 | 0,222 | 0,55 | 4 787 540 597 | 39 | PIKK | 0,012 | 0,066 | 0,18 | 28 791 774 |
| 17 | MTSS | 0,121 | 0,270 | 0,45 | 661 013 492 | 40 | RNFT | 0,004 | 0,019 | 0,20 | 6 434 989 |
| 18 | GMKN | 0,116 | 0,306 | 0,38 | 2 602 472 116 | | | | | | |
| 19 | TRNFP | 0,107 | 0,334 | 0,32 | 267 740 953 | | | | | | |
| 20 | CHMF | 0,096 | 0,481 | 0,20 | 868 270 302 | | | | | | |
| 21 | PLZL | 0,094 | 0,585 | 0,16 | 700 755 152 | | | | | | |
| 22 | NLMK | 0,092 | 0,575 | 0,16 | 942 194 856 | | | | | | |
| 23 | MAGN | 0,080 | 0,500 | 0,16 | 407 479 427 | | Total stocks | 0,149 | 0,406 | | |

3. Elasticity*

| | | HH | | | HH |
|----|-------|-------|---------------------|------|--------------|
| 1 | SBERP | 0,003 | 24 | RTKM | 0,028 |
| 2 | MOEX | 0,003 | 25 | PLZL | 0,028 |
| 3 | MVID | 0,004 | 26 | TATN | 0,029 |
| 4 | AFLT | 0,005 | 27 | SNGS | 0,033 |
| 5 | SNGSP | 0,005 | 28 | YNDX | 0,035 |
| 6 | MGNT | 0,008 | 29 | NLMK | 0,035 |
| 7 | TATNP | 0,008 | 30 | POLY | 0,038 |
| 8 | SBER | 0,009 | 31 | ROSN | 0,042 |
| 9 | ALRS | 0,009 | 32 | PHOR | 0,043 |
| 10 | VTBR | 0,011 | 33 | CBOM | 0,048 |
| 11 | GAZP | 0,012 | 34 | RUAL | 0,059 |
| 12 | LKOH | 0,013 | 35 | PIKK | 0,089 |
| 13 | MTSS | 0,013 | 36 | NVTK | 0,099 |
| 14 | AFKS | 0,014 | 37 | FIVE | 0,104 |
| 15 | HYDR | 0,015 | 38 | LNTA | 0,106 |
| 16 | GMKN | 0,016 | 39 | SFIN | 0,159 |
| 17 | IRAO | 0,018 | 40 | RNFT | 0,671 |
| 18 | FEES | 0,018 | 41 | | |
| 19 | CHMF | 0,020 | | | |
| 20 | DSKY | 0,020 | 43 | | |
| 21 | UPRO | 0,020 | 44 | | |
| 22 | MAGN | 0,024 | 45 | | |
| 23 | TRNFP | 0,025 | Total stocks | | 0,048 |

* 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 |
|---------|-------------|--------------|--------------|--------------|--------------|-------------|-------------|-------------|
| 01.2019 | 1 | SBER | MOEX | SBERP | 1 | TRNFP | PHOR | TRMK |
| 01.2019 | 2 | SBERP | SBERP | MOEX | 2 | PIKK | UPRO | PIKK |
| 01.2019 | 3 | ROSN | MGNT | AFLT | 3 | UPRO | CBOM | UPRO |
| 01.2019 | 4 | GAZP | AFLT | SBER | 4 | SFIN | NVTK | RUAL |
| 01.2019 | 5 | MOEX | MTLR | SNGSP | 5 | RNFT | PIKK | RNFT |
| 02.2019 | 1 | SBER | AFLT | AFLT | 1 | CBOM | NVTK | LNTA |
| 02.2019 | 2 | GAZP | SBERP | SBERP | 2 | TRNFP | UPRO | UPRO |
| 02.2019 | 3 | ROSN | MOEX | MOEX | 3 | PIKK | CBOM | NVTK |
| 02.2019 | 4 | LKOH | SBER | SBER | 4 | SFIN | PIKK | PIKK |
| 02.2019 | 5 | SNGSP | MGNT | MGNT | 5 | RNFT | RNFT | RNFT |
| 03.2019 | 1 | SBER | SBERP | SBERP | 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 | SBERP | MTLR | SBER | 4 | RNFT | PIKK | NVTK |
| 03.2019 | 5 | GAZP | SBER | SNGSP | 5 | SFIN | RNFT | RNFT |
| 04.2019 | 1 | SBER | SBERP | SBERP | 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 | SNGSP | 4 | SFIN | PIKK | PIKK |
| 04.2019 | 5 | SBERP | MGNT | AFLT | 5 | RNFT | RNFT | RNFT |
| 05.2019 | 1 | GAZP | SBERP | SBERP | 1 | PIKK | ROSN | NVTK |
| 05.2019 | 2 | SBER | MOEX | MOEX | 2 | TRNFP | CBOM | FIVE |
| 05.2019 | 3 | MOEX | TATNP | SNGSP | 3 | MVID | LNTA | PIKK |
| 05.2019 | 4 | SBERP | AFLT | AFLT | 4 | RNFT | PIKK | LNTA |
| 05.2019 | 5 | CHMF | SNGSP | MGNT | 5 | SFIN | RNFT | RNFT |
| 06.2019 | 1 | SBER | SBERP | SBERP | 1 | FIVE | NVTK | NVTK |
| 06.2019 | 2 | GAZP | AFLT | MOEX | 2 | LNTA | SFIN | FIVE |
| 06.2019 | 3 | SBERP | MOEX | MVID | 3 | TRNFP | CBOM | LNTA |
| 06.2019 | 4 | LKOH | MGNT | AFLT | 4 | SFIN | PIKK | SFIN |
| 06.2019 | 5 | MGNT | MVID | SNGSP | 5 | RNFT | RNFT | RNFT |

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 01.2019 - 06.2019:

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 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):

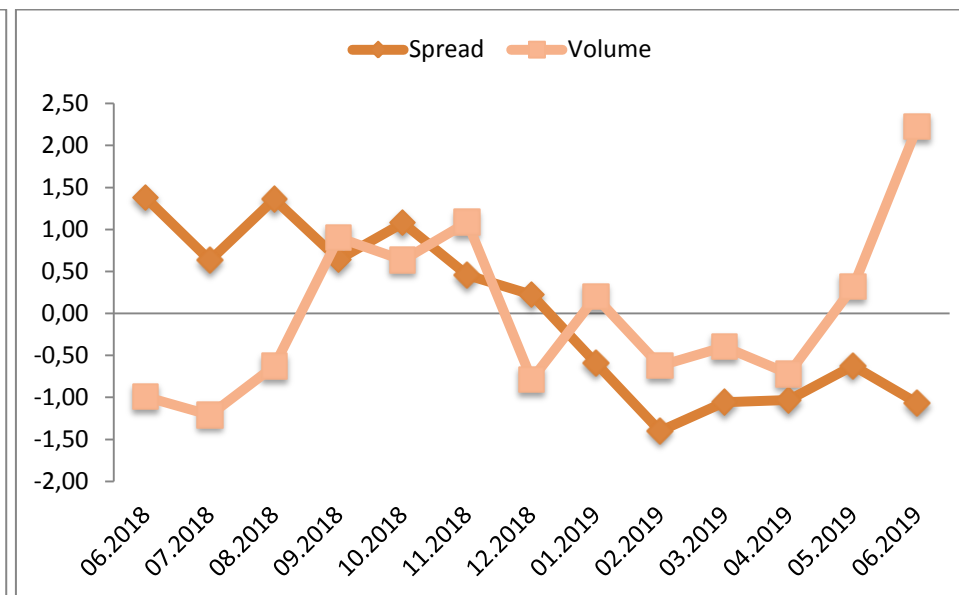
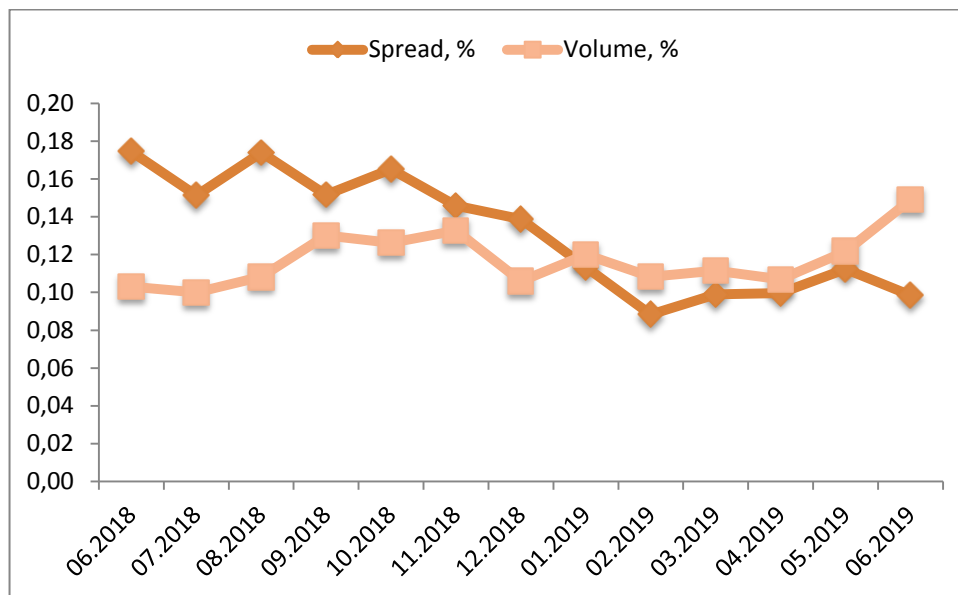
GAZP, SBER, SBERP (trading costs) AFLT, MOEX, SBERP (trading activity), AFLT, MOEX, SBERP, SNGSP (elasticity).

Among the least liquid stocks within a half-year period of 01.2019 - 06.2019:

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): **PIKK, RNFT, SFIN, UPRO.**

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, RNFT, SFIN (trading costs), CBOM, NVTK, 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 June 2019 decreased compared to the previous month to 0.099%. Trading activity measured by average percentage daily trading volume in June 2019 increased compared to the previous month to 0.149%. In June 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 June 2019 trading costs were below the average level over a 1-year period while trading volume reached maximum over a 1-year period. This can be explained by the ex-dividend date traditionally falling on June.