



FTSE UK Index Series Guide to Calculation Method for the Median Liquidity Test

v1.7



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Section 1

Purpose of the Guide

1.0 Purpose of the Guide

1.1 The aims of the guide are:

1. to describe how the liquidity test is conducted;
2. to make it easier for users to replicate the liquidity test in order to support their investment and trading activities.



Section 2

Liquidity Screening Process

2.0 Liquidity Screening Process

Each security will be tested for liquidity annually in June by calculation of its monthly median of daily trading volume.

For the annual test, liquidity will be calculated from the first business day in May of the previous year to the last business day of April in the current year.

For each month, the daily volume for each security is calculated as a percentage of the shares in issue for that day adjusted by the free float at the end of the month. These daily values are then ranked in descending order and the median is taken by selecting the value for the middle ranking day if there is an odd number of days and the mean of the middle two if there is an even number of days.

Where the testing period is less than 12 months, the liquidity test will be applied on a pro-rata basis (please refer to Appendix A).

When calculating the median of daily trading volume of any security for a particular month, a minimum of 5 trading days in that month must exist, otherwise the month will be excluded from the test.

Daily totals with zero trades are included in the ranking, therefore a security that fails to trade for more than half of the days in a month will have a zero median trading volume for that month.

Only exchange trading days will be included in the calculation i.e. exchange holidays will be excluded.

Any period of suspension will not be included in the test.

Where a security has a market quote in multiple currencies, only volume data from the eligible Sterling quote will be used in the liquidity test.

Liquidity Thresholds:

- A - Securities which do not turnover at least 0.025% of their shares in issue (after the application of any investability weightings*) based on their monthly median for at least ten of the twelve months prior to the annual index review, will not be eligible for inclusion in the FTSE UK Index Series until the next annual review.
- B - An existing constituent which does not turnover at least 0.015% of its shares in issue (after the application of any investability weightings*) based on its monthly median per month for at least eight of the twelve months prior to the annual index review will be removed and will not be eligible for inclusion in the FTSE UK Index Series until the next annual review.

- C - New issues which do not have a twelve month trading record must have a minimum 20 day trading record when reviewed. They must turnover at least 0.025% of their shares in issue (after the application of any investability weightings*) based on their monthly median each month, on a pro-rata basis since premium listing or UK Nationality allocation date if non-UK incorporated (refer to Appendix A & B). This rule will not apply to new issues added under the Fast Entry Rule except for demutualisations (see Rule 6.5 of the FTSE UK Index Series).
 - A new issue that fails the liquidity test will not be eligible for inclusion in the UK Index Series until the next annual review.
 - *When testing liquidity the published free float weight on the final trading day of each month will be used for the calculation of the liquidity test for that month.
 - D - In assessing liquidity, data will be aggregated from venues exhibiting a market share of greater than 2%, venues currently aggregated can be seen in Appendix C. If the company fails the liquidity screen on this basis, data may also be obtained from Depository Receipt (DR) trades. For the purpose of this rule, where the majority of trading is in the DR, 100% of DR trading will be aggregated with 50% of the trades in the UK. Where the majority of trading is in the UK, 50% of DR trading will be aggregated with 100% of the trades in the UK.
 - E - At the sole discretion of FTSE, the above percentage figures may be adjusted by up to 0.01% at a market review so that, in FTSE's opinion, the index better reflects the liquid investable market. This discretion may only be exercised across the FTSE All-Share Index and may not be applied to individual securities. If FTSE intends to exercise this discretion, it must make a public statement to that effect at least two weeks prior to the regular June review meeting. Any adjusted percentage parameters will be maintained until the next annual review.
 - F – There is no liquidity requirement for constituents of the FTSE Fledgling Index.

In assessing liquidity, data will be obtained from a constituent's exchange in the country in which the company is classified by FTSE. If the constituent fails the liquidity screen on this basis, data may also be reviewed from other markets (including trading in ADRs and GDRs) and the trading volumes aggregated for the purpose of this Rule. Trading volumes from other markets will not normally be considered unless the majority of the liquidity is met from the constituent's exchange in the country in which the company is classified. When considering whether to include liquidity from other markets, the FTSE Russell Europe, Middle East & Africa Regional Equity Advisory Committee will take into account factors such as currency risk and time zone difference.



Section 3

Liquid Calculation Method

3.0 Liquidity Calculation Method

- 3.1 For each month the daily trading volumes, as a percentage against that security's free float adjusted shares, are ranked and the median value selected.

Example Calculation of Daily Trading Volume %:

Company A has 40m shares in issue, a free float of 50% and a daily trading volume of 20,000 shares.

$$\begin{aligned} \text{Daily volume (\%)} &= \text{daily trading volume} / \text{free float adjusted shares} \\ &= 20,000 / 20,000,000 = 0.1\% \end{aligned}$$

Please Note:

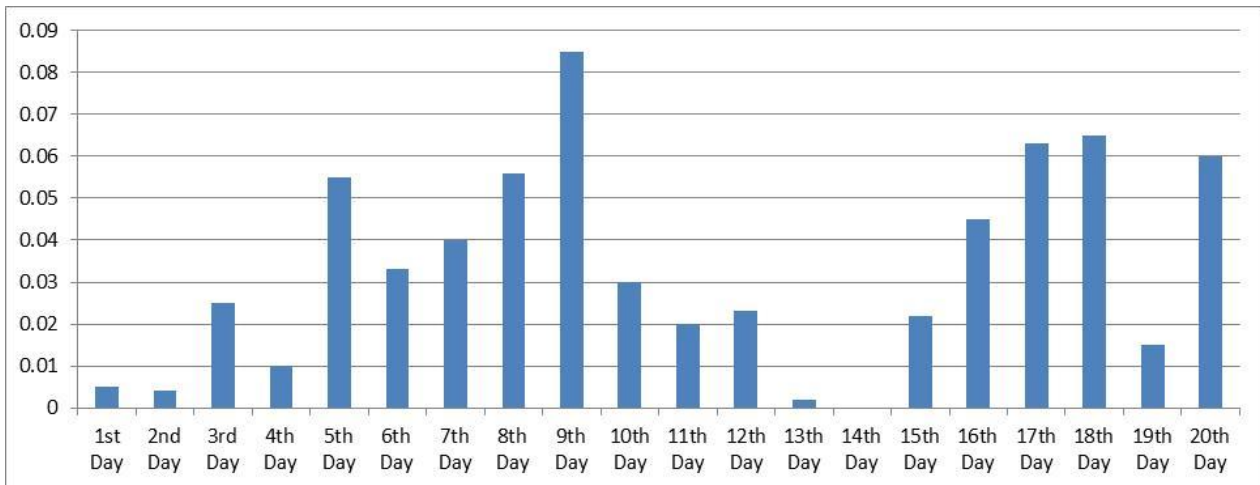
- When testing liquidity the published free float weight at the end of each month will be used for the calculation of that month.
- Shares in issue used for the calculation is that as of the date of volume traded.

3.2 Monthly Median Liquidity Test

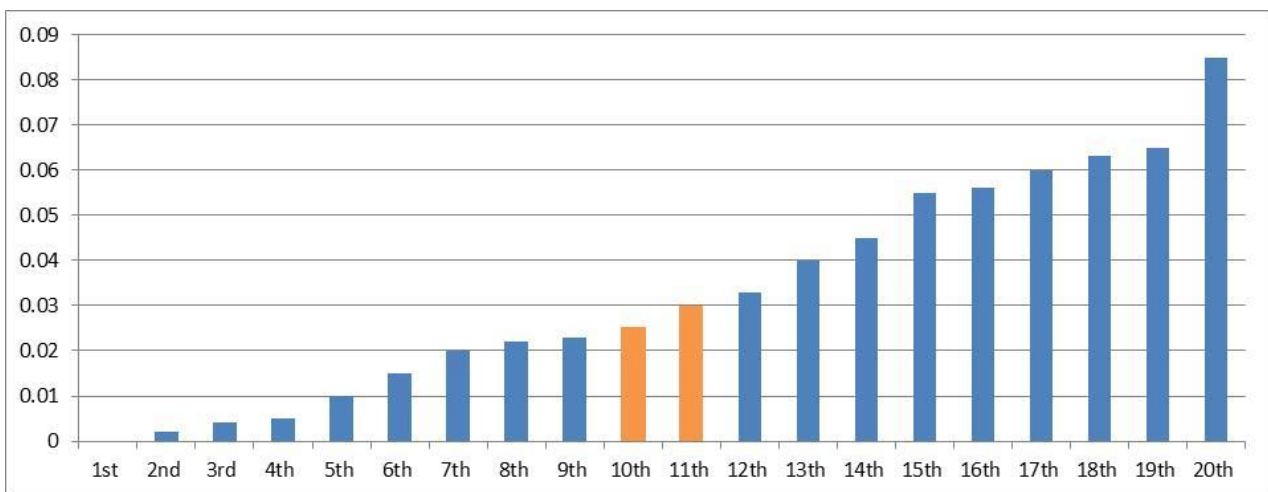
The tables below illustrate the ranking of the daily trading volumes % and the calculation of the median monthly value.

The example assumes that there is an even number of days in the month

Step 1: Daily traded volume (%)



Step 2: Daily traded volume (%) - RANKED



$$\begin{aligned}
 \text{Monthly median (\%)} &= (10^{\text{th}} + 11^{\text{th}} \text{ day}) / 2 \\
 &= (0.025\% + 0.03\%) / 2 = \mathbf{0.0275\%}
 \end{aligned}$$



Appendix A: Pro-Rata Pass Requirements

New Issues

Months Tested	Minimum Monthly Pass Rate Required
1 month	1 month
2 months	2 months
3 months	3 months
4 months	4 months
5 months	5 months
6 months	5 months
7 months	6 months
8 months	7 months
9 months	8 months
10 months	9 months
11 months	10 months
12 months	10 months

Current Constituents

Months Tested	Minimum Monthly Pass Rate Required
1 month	1 month
2 months	2 months
3 months	2 months
4 months	3 months
5 months	4 months
6 months	4 months
7 months	5 months
8 months	6 months
9 months	6 months
10 months	7 months
11 months	8 months
12 months	8 months



Appendix B: FTSE UK Index Series Liquidity – Test Cases

Test case	Liquidity Test
New Issue / AIM Transfer / Newly Eligible (UK incorporated)	From date of Premium listing on Main Market Pass = index inclusion Fail = fail until June annual test
New Issue / AIM Transfer / Newly Eligible (non-UK incorporated)	From date of FTSE 'UK' Nationality allocation Pass = index inclusion Fail = fail until June annual test

Please note: When calculating the median of daily trades per month a minimum of 5 trading days in each month must exist, otherwise the month will be ignored and not used in the count. The liquidity test will be applied on a pro-rata basis where the testing period is less than 12 months. **Refer to Appendix A**

Appendix C: Volume Data - Venues

Volume data from the following venues are aggregated for the purpose of the FTSE liquidity test:

London Stock Exchange
Cboe CXE
Cboe BXE
Cboe OTC
Turquoise



Appendix D: Further Information

A Glossary of Terms used in FTSE's Ground Rule documents can be found using the following link:
<http://www.ftse.com/products/downloads/Glossary.pdf>

Further information on the FTSE UK Index Series is available from FTSE Russell.

For contact details please visit the FTSE Russell website or contact FTSE Russell client services at info@ftserussell.com.

Website: www.ftserussell.com

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