



FTSE Global Factor Index Series – Outlier and Stock Suspension Treatment - Ground Rule Update

26 May 2023

FTSE Russell would like to inform clients of the following update to add outlier and stock suspension treatment to the FTSE Global Factor Index Series Ground Rules, which is effective immediately.

Section 5: Factor Construction was updated to include the below:

5.1 Daily Returns and Outlier Treatment

- 5.1.1 Any daily returns < -100% will be considered bad data. The daily return will be set to 0 and excluded from Step 5.1.3 below.
- 5.1.2 The daily return for stocks not traded during a particular day (i.e. where volume traded = 0) will be set to 0 and excluded from Step 5.1.3 below.
- 5.1.3 Compute robust (to outliers) Z-scores:
 - A. Robust Z-score for a company = (A raw factor measure for a company - median across all underlying benchmark constituents) / a robust standard deviation across all underlying benchmark constituents,
 - B. where Robust standard deviation = Inter-quartile range / 1.35 = (Quartile 3 raw factor measure - Quartile 1 raw factor measure) / 1.35

Note: the number 1.35 above assumes normal distribution. Quartile 1 raw factor measure corresponds to -0.675 standard deviations and Quartile 3 raw factor measure corresponds to 0.675 standard deviations. Therefore, the interquartile range = Q3 - Q1 represents 0.675 - (-0.675) = 1.35 standard deviations.

- 5.1.4 Any returns smaller/larger than a median -10/+10 robust standard deviations of all daily returns on that day will be considered bad data and set to 0.
 - 5.1.5 Any daily returns smaller/larger than a median -3/+3 robust standard deviations of all daily returns on that day will be truncated/winsorized to a median -3/+3 robust standard deviations.
- #### 5.2 Suspended China A stocks
- 5.2.1 If a stock is suspended on a particular day, its price and daily return for that day are not used.
 - 5.2.2 The market cap for suspended stocks is computed by multiplying the market cap one month ago by 1 + one-month stock's industry return (see 5.2.4).
 - 5.2.3 Dividend yield for suspended stocks is computed by dividing the dividend yield one month ago by 1 + one-month stock's industry return (see 5.2.4).
 - 5.2.4 A stock's industry return is defined as the return of the FTSE China A Sector Free Indices index of which that stock is a constituent. Please see the FTSE China A All Cap Index Series ground rules for more information on the FTSE China A Sector Free Indices.

An updated copy of the FTSE Global Factor Index Series Ground Rules (v6.7) is now available using the following link: [FTSE_Global_Factor_Index_Series_Ground_Rules.pdf](#)

Or on the FTSE Russell website: www.ftserussell.com

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