

(Reference Translation)

Free Float Weight Calculation Methodology

July 23, 2018
Tokyo Stock Exchange, Inc.

Published July 23, 2018

DISCLAIMER: This translation may be used for reference purposes only. This English version is not an official translation of the original Japanese document. In cases where any differences occur between the English version and the original Japanese version, the Japanese version shall prevail. This translation is subject to change without notice. Tokyo Stock Exchange, Inc., Japan Exchange Group, Inc., Osaka Securities Exchange Co., Ltd., Tokyo Stock Exchange Regulation and/or their affiliates shall individually or jointly accept no responsibility or liability for damage or loss caused by any error, inaccuracy, misunderstanding, or changes with regard to this translation.

(1) Outline

Free-Float Weight (FFW) is the percentage of listed shares deemed to be available for trading in the market. The TSE calculates FFW for each listed company and uses this value in index calculation. The FFW of Company A may be different from that of Company B.

FFW is calculated by first estimating the number of non-free-float shares (listed shares deemed not to be available for trading in the market) using securities reports and other statutory documents required by the Financial Instruments and Exchange Act, as well as publicly available documents released by each listed company. Next, the non-FFW ratio (Non-free-float shares / total listed shares) is calculated, then FFW is obtained by subtracting the non-free-float factor from 1 ($1 - \text{Non-FFW}$). FFW is expressed as a figure in the range of 0.00000 to 1.00000 in increments of 0.00001.

FFW is reviewed once a year in order to reflect the latest share ownership distribution. The timing of the FFW review varies depending on when earnings are announced. In addition to the periodic review, extraordinary reviews are conducted if FFW changes significantly due to events such as allocation of new shares to a third party.

(2) Periodic Review

The announcement date and effective date of the periodic FFW review varies according to when listed companies announce earnings as below:

Settlement Term	Announcement Date	Effective Date*
January - March	Fifth business day of October	Last business day of October
April - June	Fifth business day of January	Last business day of January
July - September	Fifth business day of April	Last business day of April
October - December	Fifth business day of July	Last business day of July

* Adjustments will be made before markets open.

At the periodic review, FFW is rounded up to the nearest 0.05 as below after subtracting the non-FFW ratio from 1 ($1 - \text{Non-FFW}$). However, companies with low liquidity described in Item (4) below will be multiplied by a fixed liquidity factor of 0.75 to derive the actual FFW used for calculation.

FFW for periodic review

1 – Non FFW	≤ 0.05	≤ 0.10	≤ 0.15	≤ 0.20	≤ 0.25	≤ 0.30	≤ 0.35	≤ 0.40	≤ 0.45	
FFW	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	
≤ 0.50	≤ 0.55	≤ 0.60	≤ 0.65	≤ 0.70	≤ 0.75	≤ 0.80	≤ 0.85	≤ 0.90	≤ 0.95	≤ 1.00
0.50	0.55	0.60	0.65	0.70	0.75	0.80	0.85	0.90	0.95	1.00

(3) Extraordinary Review

The TSE may review FFW in the following cases where it deems that the existing FFW is expected to be significantly affected.

Allocation of new shares to a third party, conversion of preferred shares or exercise of subscription warrants, company spin-off, merger, acquisition, take-over bid (TOB) and other events deemed applicable by the TSE.

(4) Adjustment for companies with low liquidity in comparison to market capitalization

One of the main goals of introducing free-float methodology to an index is to mitigate excessive distortions in individual constituent prices caused by supply and demand imbalances due to index fund management. With this principle in mind, a fixed liquidity factor (0.75) is applied to the FFW derived from securities reports and other public documents for those TOPIX constituents with low liquidity based on past trading compared to market capitalization (currently, this is applied to about 1/10 of all constituent companies).

The companies to which the liquidity factor is applied are reviewed every April and the base date for the review is the last day of February. A list of the companies to which the liquidity factor is applied is published on the fifth business day of April and the liquidity factor is applied to the relevant constituents beginning on the last business day of April. The liquidity factor is also applied to those companies newly introduced into the TOPIX index between March 1 and the end of February of the following year due to a new listing on the TSE First Section (excluding corporate consolidations, etc.), or assignment to the TSE First Section from the TSE Second Section, Mothers market or JASDAQ market from TOPIX introduction until the next review in April.

For example, a company newly listed in February 2009 and included in TOPIX at the end of March 2009 will have the fixed liquidity factor (0.75) applied to the FFW obtained based on securities reports and other publicly available documents until April 2010. At the next periodic

review in April 2010, the company will be reviewed for liquidity factor application along with all other constituents.

(5) Estimation of non-free-float shares

a. Documents

Securities reports and other statutory documents required by the Financial Instruments and Exchange Act as well as the publicly available documents released by listed companies are used to estimate the number of non-free-float shares.

b. Estimation of non-free-float shares

The TSE considers the following to be non-free-float shares:

Shares held by the top 10 major shareholders, treasury and other similar stock (including “Cross-Share Holdings” (shares with limited voting rights as specified in Article 308 (1) of the Companies Act)), shares held by board members and other representatives, and other shares deemed by the TSE to be unavailable for trading in the market.

The TSE may treat shares held by the top 10 major shareholders as free-float shares in the following cases: (The list below is not exclusive.)

Condition	Major shareholder
As a general rule, shares considered as free-float.	Securities finance companies, securities depositories, nominees for depository receipts
<p>Shares likely to be deemed as free-float.</p> <p>Cases where any of the following conditions are met and the TSE deems it appropriate to consider such shares as free-float.</p> <ul style="list-style-type: none"> - There are descriptions in the Securities Report on the type of trust, the purpose of purchase of shares, etc. - It is clear that shares are held by several beneficiaries and managed centrally - It is clear that shares are held for margin transactions 	Trust banks, master trusts, global custodians, insurance companies, securities companies, etc.

(6) Exemption of liability

In the case of any error in index calculation, a computer malfunction, natural disasters or

any other unavoidable circumstances, the TSE may postpone or cancel the calculation of the indices. The TSE shall not, under any circumstances, guarantee the accuracy of the indices and calculation based on this document. Should any error occur in index calculation and calculation based on this document, the TSE shall not be liable for any damages incurred by any person or organization.

(7) Contact

Information Services

Tokyo Stock Exchange, Inc.

email: index@jpx.co.jp