

Tokyo Stock Exchange  
Index Guidebook  
(TOPIX High Dividend Yield 40 Index)

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Tokyo Stock Exchange, Inc.

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## Contents

<b>Record of Changes</b> .....	3
<b>Introduction</b> .....	4
<b>I. Outline of the Index</b> .....	4
<b>II. Index Calculation</b> .....	5
1. Outline .....	5
2. Formula .....	5
3. Stock Price Used for Calculation .....	5
4. Number of Shares Used for Index Calculation .....	5
5. Constituent Selection .....	6
<b>III. Adjustments to Base Market Value</b> .....	9
1. Events that Require Adjustment.....	9
2. Adjustment Method .....	12
<b>IV. Other</b> .....	15
1. Publication/Dissemination of Index Data .....	15
2. Licensing.....	15
3. Contact.....	16

## Record of Changes

DATE	Changes
2017/8/9	• The first edition
2018/7/23	• Clarification of the treatment of “Rights Offering” and “Gratis Allotment of Shares”
2019/8/30	• Modified an error
2020/3/31	• Revised the date for adjusting base market value following the shortening of stock settlement cycle to T+2
2020/6/30	• Revision to bring forward the date for minor adjustments related to ex-dividend
2020/12/25	• Clarification of the stock price used for calculation, etc.
2022/4/4	• Revisions pertaining to cash equity market restructuring

## **Introduction**

- Tokyo Stock Exchange, Inc. (TSE) calculates and publishes the TOPIX High Dividend Yield 40 Index in accordance with the methods described in this document. If an event not specified in this document occurs, or if TSE determines that it is difficult to use the methods described in this document, TSE may use an alternative method of index calculation as it deems appropriate.
- Copyright of this document is owned by TSE and any copies, reprints, and reproductions of this document in whole or in part are prohibited without the prior approval of TSE. This document is prepared solely for the understanding of indices calculated and published by TSE and is not to be construed as a solicitation for trading any securities or related financial instruments. Information expressed in this document is subject to change without notice; and, in those cases, TSE undertakes no obligation to update any recipients of this document. TSE shall accept no liability or responsibility for any loss or damage arising from errors, delays, or termination of the calculation or publication of TOPIX High Dividend Yield 40 Index, changes to its calculation or publication method, the use of TOPIX High Dividend Yield 40 Index or all or any part of this document or other similar events.
- TSE calculates both price and total return versions of TOPIX High Dividend Yield 40 Index.

## **I. Outline of Index**

- The TOPIX High Dividend Yield 40 Index is composed of 40 issues with relatively high latest actual dividend yields, selected from among constituents of TOPIX 100. These constituents are selected based on the actual dividends of each issue and on the stock prices on the periodic selection base dates.
- A liquidity factor as set in the Free Float Weight Calculation Methodology and the TOPIX cap-adjustment ratio are applied for index calculation.
- A periodic review of constituents will be conducted once a year (on the last business day of June).
- The base date for index calculation is August 25, 2017. The base value is 1,000.

## II. Index Calculation

### 1. Outline

- The TOPIX High Dividend Yield 40 Index is calculated using free-float adjusted market capitalization weighting. The index is denominated in points and is calculated to the second decimal place (values beyond the second decimal are rounded).

### 2. Formula

$$\text{Index} = \frac{\text{CMV}}{\text{BMV}} \times \text{Base Point}$$

CMV = Current market value

BMV = Base market value

Current Market Value

$$= \sum (\text{Number of Shares for Each Constituent} \\ \times \text{Stock Price for Each Constituent})$$

### 3. Stock Price Used for Calculation

- The stock prices used for calculating and adjusting base market value for the TOPIX High Dividend Yield 40 Index are prices from auction trading on TSE and are determined by the following order of priority:

(1) Special Quote or Sequential Trade Quote, (2) Contract Price, (3) Base Price for Index Calculation when neither (1) or (2) are available (determined in the following order: (1) Theoretical Ex-rights Price, (2) Most Recent Special Quote or Sequential Trade Quote on or before the previous trading day, (3) Most Recent Contract Price before the previous trading day.)

### 4. Number of Shares Used for Index Calculation

- The number of shares used for index calculation is determined by multiplying the total number of listed shares by the free-float weight ratio following cap-adjustment (FFW).

$$\text{Number of Shares Used for Index Calculation for Each Stock} \\ = \text{Total Number of Listed Shares} \times \text{FFW Ratio following cap-adjustment}$$

- In general, the "total number of listed shares" in the above formula is equal to the number of listed shares; but, in some cases, these numbers are different due to corporate actions such as stock splits. For example, in a stock split, the number of listed shares changes on the listing change date, which comes after the effective date. On the other hand, the total number of listed shares used in index calculation (before FFW adjustment) changes on the ex-rights date, leading to a brief period in which the two numbers are different.
- Also, the total number of listed shares used in index calculation (before FFW adjustment) is generally equal to the number of issued shares; but, in the case of Nippon Telegraph and Telephone Corporation, Japan Tobacco, Inc., and Japan Post Holdings Co., Ltd., the government of Japan holds some issued shares that have not been listed, leading these two numbers to be different.
- FFW ratio used in TOPIX High Dividend Yield 40 Index is the FFW ratio after cap-adjustment (FFW ratio after applying a liquidity factor as set in the Free Float Weight Calculation Methodology and the TOPIX cap-adjustment ratio (no transition factor applied) multiplied by the cap-adjustment coefficient) with a maximum 5.0% constituent ratio based on market capitalization weight on the periodic selection base date. In cases where the cap is exceeded following periodic selection, the cap-adjustment ratio shall not be altered until the periodic selection application date of the following year.
- However, in cases where there is a considerable change in the constituent weight due to, for example, a periodic review of the free float weight described below or corporate consolidation, merger, acquisition, etc. of a TOPIX High Dividend Yield 40 Index constituent, an extraordinary revision of the cap-adjustment ratio of constituents may be conducted.

## **5. Constituent Selection**

### **(1) Periodic Review**

#### **a. Summary**

- At the periodic review conducted every June, constituents of TOPIX 100 are included in and removed from the TOPIX High Dividend Yield 40 Index based on the Selection Criteria in b. as of the base date.
- The base date for the periodic review is the final business day of May of each year. The list of constituent changes is published on the fifth business day prior to the last business day of June, and index calculation applying such constituent changes begins on the last business day of June.

## **b. Selection Criteria**

- The selection process is conducted as follows.
  - (i) Eligible constituents
    - Issues selected as constituents of TOPIX 100 as of the base date are eligible. However, issues that fall under either of the following cases are excluded from the list of eligible constituents.
      - Issues designated as Securities to be Delisted as of the base date
      - Issues designated as Securities on Alert as of the base date
  - (ii) Calculation of actual dividends in the most recent year
    - Actual dividends are dividend-per-share figures as released in earnings reports. Actual dividends in the most recent year are, from earnings reports released by listed companies as of the base date, the total dividends for the period from April of the year preceding the year that contains the base date to the latest March, provided that these have reached the ex-rights date. However, if levels of stock prices fluctuate as of the base date due to stock splits or reverse splits, etc., the dividends are revised to levels comparable to the stock price levels as of the base date. In addition, dividends may be adjusted if TSE deems that such dividends need adjustment in light of comparability with other constituents due to changes of accounting period, etc.
  - (iii) Calculation of dividend yields
    - Dividend yields are produced by dividing the actual dividend (in the most recent year) by the stock price. The stock price used in dividend yield calculation is the stock price used for index calculation of a constituent, which is the stock price used when calculating the last index price on the base date. (For more details, see "3. Stock Price Used for Calculation".)
  - (iv) Selection of constituents
    - For the first round of constituent selection, 40 constituents are selected in descending order of the high dividend yield calculated in iii.
    - In subsequent selections, previous constituents whose dividend yields rank within the top 50 based on the calculation in (iii) are selected once again. If the number of constituents is less than 40, new constituents are selected in descending order of high dividend yield until the number of constituents reaches 40.

## **(2) Removal of Constituents in addition to the Periodic Review**

- In cases where constituents are delisted, designated as Securities to be Delisted, or designated as Securities on Alert, they shall be removed from the TOPIX High Dividend Yield 40 Index.

**(3) Inclusion of Constituents in addition to the Periodic review**

- In the event a constituent of the TOPIX High Dividend Yield 40 Index is delisted due to a stock transfer, stock swap, merger for creating a new company or demerger, and, moreover, the newly created, surviving, or succeeding company is listed without delay, if the delisted issue was a constituent of TOPIX High Dividend Yield 40 Index, then TSE adds the new issue to the index.
- In the event a constituent of the TOPIX High Dividend Yield 40 Index is delisted due to a stock swap or absorption-type merger, in which stocks of the surviving company or the parent company holding all shares of the constituent company is not a constituent of the TOPIX High Dividend Yield 40 Index, then TSE adds stocks of the surviving company or the parent company to the index.
- Even if the number of constituents in the TOPIX High Dividend Yield 40 Index decreases between periodic reviews due to the removal of constituents by means other than the periodic review as described in the previous item (2), no supplementary inclusions are made to meet the intended number of constituents (inclusions to meet the intended number of constituents are only made during the periodic review in June).

### III. Adjustments to Base Market Value

Whenever the market value of the index changes due to an increase or decrease in constituent issues, capital raising, or similar events other than market fluctuations, the base market values for the TOPIX High Dividend Yield 40 Index are adjusted as follows to maintain continuity.

#### 1. Events that Require Adjustment

##### 1) Inclusion or Removal of Constituents

	Event Requiring Adjustment	Adjustment Date (*5)	Stock Price Used for Adjustment	
Inclusion	New listing of a newly formed company resulting from a corporate consolidation, etc. (*1) that results in a TOPIX High Dividend Yield 40 Index constituent being delisted and the new company being included in the TOPIX High Dividend Yield 40 Index	New listing date (*2)	Base price	
	Delisting of a constituent of the TOPIX High Dividend Yield 40 Index due to a stock-swap or absorption-type merger in which stocks of the surviving company or the parent company holding all shares of the constituent company is not a constituent of the TOPIX High Dividend Yield 40 Index	Delisting date	Stock price at end of trading on business day before delisting date	
	Periodic review in June	Last business day of August	Stock price at end of trading on business day before adjustment date	
Removal	Delisting	New listing of a newly formed company resulting from a corporate consolidation, etc. (*1) that results in a TOPIX High Dividend Yield 40 Index constituent being delisted and the new company being included in the TOPIX High Dividend Yield 40 Index	New listing date of the newly formed company (normally two business days following the delisting date)	Stock price at end of trading on business day before delisting date (*3)
		Delisting other than those stated above (e.g. non-surviving company as a result of merger/acquisition, etc.)	Delisting date	Stock price at end of trading on business day

	Event Requiring Adjustment	Adjustment Date (*5)	Stock Price Used for Adjustment
			before adjustment date
	Designation as Securities to be Delisted or Securities on Alert	Four business days after such a designation (*4)	Stock price at end of trading on business day before adjustment date
	Periodic review in June	Last business day of August	Stock price at end of trading on business day before adjustment date

\*1: Stock transfer, stock swap, merger for creating a new company, or demerger.

\*2: Next business day when the new listing date falls on a holiday

\*3: The stock price at the end of trading on the business day before the delisting date is used to calculate the index for the period from the delisting date to the removal date.

\*4: If the date of designation as Securities to be Delisted or Securities on Alert falls on a holiday, it will be the fifth business day.

\*5: Adjustments to the base market value are made after the end of trading on the business day before the adjustment date (i.e., before the market opens on the adjustment date). The same shall apply hereinafter.

## 2) Changes in Number of Shares Used for Index Calculation

Event Requiring Adjustment	Adjustment Date	Stock Price Used for Adjustment
Change of FFW ratio following cap-adjustment	Date of change	Stock price at end of trading on business day before adjustment date
Public offering	Additional listing date (the next day following the payment date) (*1)	Stock price at end of trading on business day before adjustment date
Third-party allotment	Five business days after additional listing date, which is two business	Stock price at end of trading on business day

Event Requiring Adjustment		Adjustment Date	Stock Price Used for Adjustment
		days after payment date	before adjustment date
Capital increase via paid-in allotment of shares to shareholders		Ex-rights date	Payment price per share
Exercise of subscription warrants		Last business day of the month following exercise	Stock price at end of trading on business day before adjustment date
Conversion of preferred stock, etc.		Last business day of the month following conversion	Stock price at end of trading on business day before adjustment date
Cancellation of treasury stock		Last business day of the month following cancellation	Stock price at end of trading on business day before adjustment date
Merger /Stock swap	Situations in which a constituent of an index calculated by TSE (*2) is the non-surviving entity (mergers/stock swaps between two issues that are both constituents of an index calculated by TSE)	Delisting date of the non-surviving entity	Stock price at end of trading on business day before adjustment date
	Situations other than those described above	Additional listing date (effective date)	Stock price at end of trading on business day before adjustment date
Sale of shares held by the Japanese government (Nippon Telegraph and Telephone, Japan Tobacco, and Japan Post Holdings only)		Date determined by TSE (*3)	Stock price at end of trading on business day before adjustment date
Rights Offering (limited to cases where the allotted subscription warrant securities are listed) (*4)		Ex-rights date	Payment price per share
Demerger (absorption-type)		Additional listing date (effective date)	Stock price at end of trading on business day before adjustment date

Event Requiring Adjustment	Adjustment Date	Stock Price Used for Adjustment
Other adjustments (*5)	Last business day of the month in which the information announced in "Sho-ho" (TSE Notice) or the last business day of the following month	Stock price at end of trading on business day before adjustment date

Note: Since market value does not change when there is a stock price revision made due to an increase (or decrease) in the number of shares used for index calculation such as a stock split, reverse stock split, or gratis allotment of shares (limited to cases where treasury stock is allotted), etc., no adjustment is made to the base value.

\*1: Next business day when the additional listing date falls on a holiday (the same applies hereafter).

\*2: As a general rule, limited to constituents of an index calculated by TSE that are common stocks

\*3: Generally the delivery date

\*4: The number of shares for Rights offering used for calculating indices will correspond to the number of shares to be allocated to shareholders. The case where the allotted subscription warrant securities are not listed is treated as "Exercise of subscription warrants".

\*5: For example, situations in which an issuer of convertible bonds or other securities conducts a stock split; the number of shares calculated based on ratios for stock splits, reverse stock splits, or share allotments to shareholders, etc. is different than the final number of shares determined after the effective date; or revisions have been made by listed companies after data has been reflected in index calculation.

### 3) Data Source

- Information on the reason for base market value adjustments, details on the adjustment, the adjustment date, and other data is available through the "Sho-ho" (TSE Notice) published daily by TSE based on reports, etc. submitted by issuers (please refer to the appendix for information on calculating FFW).
- If an issuer revises the contents of a previously published report that resulted in an index adjustment, retroactive index adjustments will NOT be made based on the revised contents.

## 2. Adjustment Method

### 1) Indices that do not reflect dividends (i.e. price indices)

#### A) Adjustment Method

- The base market value will be adjusted according to the formula below in order to maintain the continuity of the index:

$$\frac{\text{Previous Business Day Market Value}}{\text{Old Base Market Value (Before Adjustment) - Adjustment Base Market Value}} = \frac{(\text{Previous Business Day Market Value} \pm \text{Adjustment Amount})}{\text{New Base Market Value (After Adjustment)}}$$

\*Adjustment Amount = Increase (Decrease) in Number of Shares Used for Index Calculation × Stock Price Used for Adjustment

Therefore,

$$\text{New Base Market Value} = (\text{Old Base Market Value} \times (\text{Previous Business Day Market Value} \pm \text{Adjustment Amount})) / (\text{Previous Business Day Market Value})$$

#### B) Adjustment Example

- If, for example, the old base market value is ¥20 trillion and the previous day's market value is ¥400 trillion, then the index value on the previous day will be:

$$\text{Previous Day's Index} = ¥400 \text{ tn} \div ¥20 \text{ tn} \times 100 = 2,000.00 \text{ points}$$

- Now, suppose that the number of listed shares of Stock A used for index calculation increases by 100 million shares due to a public offering. If its closing price on the previous day was ¥2,000, then the adjustment amount is 100 million shares × ¥2,000 = ¥200 billion. The new base market value, therefore, is:

$$\text{New Base Market Value} = ¥20 \text{ tn} \times (¥400 \text{ tn} + ¥200 \text{ bn}) \div ¥400 \text{ tn} = ¥20.01 \text{ tn}$$

- As illustrated below, if there is no price change in any constituent, then the value for the index today is the same as the previous day: 2,000 points. Thus, continuity in the index is maintained though adjustments to base market value even if the market value of constituents changes due to public offering.

$$(¥400 \text{ tn} + ¥200 \text{ bn}) \div ¥20.01 \text{ tn} \times 100 = 2,000 \text{ points}$$

## 2) Total Return Index

- Dividends used in calculating the Total Return Index are gross (i.e. before tax)
- Since the dividend amount for the current period is not fixed as of the ex-dividend date, adjustments made to reflect dividends in the base market value are made in two stages: 1) adjustment using estimated dividends and 2) minor adjustments made to reflect differences between estimated dividend and dividend amount announced in the earnings report, etc.

### A) Adjustments Using Estimated Dividends

- The total dividend amount for all constituents is calculated on ex-dividend dates using estimated dividends, and the base market value is adjusted as above. In principle, the estimated dividend amount used is as follows:
  - i. Dividend amount for the current period as announced in timely disclosure documents, if available
  - ii. Dividend amount for the previous period if the dividend for the current period is not fixed (e.g. the dividend is not announced in disclosure documents as i. above, or the amount is not determined, etc.)
- The base market value adjustment method is basically as described in the previous section, except an adjustment is made to reflect dividends as follows:

New Base Market Value =

$$\frac{\text{Old Base Market Value} \times (\text{Previous Business Day Market Value} - \text{Total Dividends} \pm \text{Adjustment Amount})}{\text{Previous Business Day Market Value}}$$

\*Dividends per Constituent = Number of Shares Used for Index Calculation on Business Day before Ex-Dividend Date × Estimated Dividend per Share

\*Total Dividends = Sum of Dividends for All Constituents

\*Adjustment Amount = Increase (Decrease) in Number of Shares Used for Index Calculation × Share Price Used for Adjustment

### B) Minor Adjustment Made to Reflect Difference Between Estimated Dividend and Dividend Announced in the Earnings Report, etc.

- Minor adjustments are made with respect to those constituents for which the estimated

dividend used on the ex-dividend date and the dividend announced in the earnings report or the notice of dividends of surplus (hereinafter the “earnings report, etc.”) are different. Specifically, the total dividend adjustment amount is calculated and the base market value adjustments are made on the last business day of the month in which the dividend is announced in the earnings report, etc. (hereinafter the “publication date”; if the publication date is one business day before the last business day of the month or the last business day of the month, adjustments will be as a general rule, made on the last business day of the next month).

New Base Market Value =

$$\frac{\text{Old Base Market Value} \times (\text{Previous Business Day Market Value} - \text{Total Adjusted Dividends} \pm \text{Adjustment Amount})}{\text{Previous Business Day Market Value}}$$

\* Adjusted Dividend per Constituent = Number of Shares Used for Index Calculation on Business Day before Ex-Dividend Date × (Dividend Announced in Earnings Report, etc. – Estimated Dividend per Share)

\* Total Adjusted Dividends = Sum of Adjusted Dividends for All Constituents

\* Adjustment Amount = Increase (Decrease) in Number of Shares Used for Index Calculation × Stock Price Used for Adjustment

#### IV. Other

##### 1. Publication/Dissemination of Index Data

###### 1) Index Values

- The Price Return Index and Total Return Index of the TOPIX High Dividend Yield 40 Index are calculated daily at market close.

###### 2) Index Data

- Index data relating to the TOPIX High Dividend Yield 40 Index (base market value, number of shares for each constituent, etc.) is provided for a fee through the Index Data Service.

##### 2. Licensing

- TSE reserves all calculation, publication, and other rights pertaining to the TOPIX High Dividend Yield 40 Index. As such, commercial use of such indices in the composition and/or sale of financial products such as funds or linked bonds (including using the index as the basis for options, swaps, warrants, or other OTC derivatives) or provision of index data requires a license from TSE.

### **3. Contact**

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