

TIP Corporate Actions and Events Methodology

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I. Introduction

1. This document states the TIP Corporate Actions and Events Methodology (below, the “Methodology”) issued by the Taiwan Index Plus Corporation (below, “TIP”). The Methodology can be found on the TIP website (<https://www.taiwanindex.com.tw/en>).
2. The purpose of the Methodology is to provide descriptions on the handling methods for aperiodically corporate actions and events.
3. As corporate actions and events are complex and constantly changing, and cannot be fully summarized, TIP may separately decide on the processing methods for specific corporate actions and events, and when needed, announce adjustments through technical notices on the TIP website (<https://www.taiwanindex.com.tw/en>).
4. This Methodology is regularly checked and updated by TIP, and announced on the company’s website (<https://www.taiwanindex.com.tw/en>).
5. When there is a discrepancy between this Methodology and a specific index methodology, the processing method specified in the specific index methodology shall prevail.
6. TIP reserves the right to interpret and adjust any matters not covered by this Methodology.

II. Index Categories

TIP's indices are divided into three categories, by index type: the Market-Value Reference Index Category; the Market-Value Investment (including Equal Weight) Index Category; and the SmartBeta Investment Index Category.

III. TIP Index Calculation Formula¹

$$Index_t = \frac{\sum_{i=1}^n cp_{i,t} \times s_{i,t} \times p_{i,t}}{Divisor_t} \times \text{Base value}$$

Where

$s_{i,t}$ = **number of issued shares** of constituent i on day t

$p_{i,t}$ = **price** of constituent i on day t (latest trading price or closing price)

n = number of index constituents

$Divisor_t$ = **index divisor** adopted for the index on day t

$cp_{i,t}$ = **adjustment coefficient** of constituent i on day t

Coefficients that may be adopted include:

$c_{i,t}$ = **weight adjustment coefficient** of constituent i on day t

$b_{i,t}$ = **original factor coefficient** of constituent i on day t without weight limitation

$f_{i,t}$ = **free float coefficient** of constituent i on day t

$s_{i,t} \times p_{i,t}$ = **market value** of constituent i on day t

$f_{i,t} \times s_{i,t} \times p_{i,t}$ = **free float adjusted market capitalization** of constituent i on day t

$cp_{i,t} \times s_{i,t} \times p_{i,t}$ = **index market value** of constituent i on day t

$\sum_{i=1}^n cp_{i,t} \times s_{i,t} \times p_{i,t}$ = **total index market value** on day t , which is the total market value of all constituents in the index on day t

¹ For details of the terminologies, refer to the [TIP Index Glossary and Statistical Calculations](#).

Index Category	$cp_{i,t}$ Composition	$cp_{i,t}$ Formula
Market-Value Reference Index Category	$c_{i,t}$	$\frac{\text{weight of constituent}}{\text{weight of market value}}$
Market-Value Investment (including Equal Weight) Index Category	$c_{i,t} \times f_{i,t}$	
SmartBeta Investment Index Category	$c_{i,t} \times b_{i,t}$	

IV. Explanation of Corporate Actions and Events Processing

Companies listed on the TWSE or on the TPEx may (as a result of funding, capital reduction, dividend payments, mergers and acquisitions, organizational adjustments, market supervision, and other reasons) have corporate actions and events that may affect the **number of shares issued**, which may in turn result in events that affect the company's **market value** in ways that are not due to **price** fluctuations; or a suspension of constituent trading, termination of TWSE or TPEx listing, or change in trading methods may lead to the addition or deletion of constituents or **number of shares issued** and changes in the **total index market value** (the sum of changes in the **index market value**). TIP has developed corresponding principles for handling different corporate actions and events to accurately try to achieve index goals. In particular, the Market-Value Reference Index Category is a traditional market reference indicator that primarily reflects the change of **market value** caused by the fluctuation of constituent **prices**. To avoid discontinuities from index interruption caused by changes in total index market value due solely to corporate actions and events, the method of adjusting the index divisor without changing the adjustment coefficient is adopted to maintain index continuity. For the Market-Value Investment (including Equal Weight) Index Category and the SmartBeta Investment Index Category, we evaluate the practical demand for indexed investment applications, and then adjust the **adjustment coefficient** or the **index divisor** to maintain the continuity of the index. In addition, based on different index compilation forms², there are slight differences in the **index divisors'** adjustment methods.

Below, we delineate four categories of corporate actions and events: Merger (including share conversion and cash acquisition); capital reduction; ex-right and ex-dividend; and other. Using this Methodology's classifications, the principles for handling corporate actions and events are explained for different index types. All operations are

² The index compilation form splits into price index and total return index in accordance with the "[General Principles for TIP Securities Indices](#)".

processed on the trading day before ($t-1$) the day of the corporate action or event (t). The data source for corporate actions and events is the announcements of TWSE- or TPEx-listed companies on the TWSE, TPEx or Market Observation Post System.

(I) Principles for Handling Different Types of Mergers

1. The merging company uses cash-only to merge with a constituent or a non-constituent.

Event date (t) Index Category	Trading suspension date	Delisting date of the merged company
Market-Value Reference Index Category	a. <u>At least one merged company is a constituent (not limited to one company)</u> ➤ The index market value of the merged company on ($t-1$) is taken as the "retained index market value" and continues to be calculated in the index. If t is the ex-dividend date, the ex-dividend reference price is calculated using the "retained index market value".	a. <u>At least one merged company is a constituent (not limited to one company)</u> ➤ Delete the constituent. ➤ Index market value change = $(-1) \times$ retained index market value
Market-Value Investment (including Equal Weight) Index Category and SmartBeta Investment Index Category	b. <u>The merged companies are non-constituents (not limited to one company)</u>	b. <u>The merged companies are non-constituents (not limited to one company)</u> ➤ Has no bearing on index; no handling required. c. <u>Merging company</u> ➤ Has no bearing on index; no handling required. d. <u>Index divisor</u> ➤ If any <u>merged company</u> is a constituent, calculate the total index market value

	➤ Has no bearing on index; no handling required. c. <u>Merging company</u> ➤ No change; no handling required.	change and adjust the index divisor.
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2. The merging company is a non-constituent, and merges with a constituent through methods that include issuing new shares (share conversion)

Event date (t) Index Category	Trading suspension date
Market-Value Reference Index Category	a. <u>Merged company (not limited to one company).</u> ➤ Delete the constituent. ➤ Index market value change= $(-1) \times \text{index market value on } (t - 1)$. b. <u>Index divisor</u> ➤ Calculate the total index market value change and adjust the index divisor.
Market-Value Investment (including Equal Weight) Index Category and SmartBeta Investment Index Category	

3. The merging company is a constituent, and merges with a constituent or a non-constituent entirely though issuing new shares (share conversion)³

Event date (t) Index Category	Trading suspension date	Delisting date of the merged company/merging company's new share listing date
Market-Value Reference Index Category	a. <u>At least one merged company is a constituent (not limited to one company)</u> ➤ Use the index market value of the merged company on $(t - 1)$ as the “retained index market value” and kept in the index for further calculation. If t is also an ex-dividend date, keep	a. <u>At least one merged company is a constituent (not limited to one company)</u> ➤ Delete the constituent. ➤ Index market value change = $(-1) \times$ retained index market value. b. <u>The merged companies are non-constituents (not limited to one company)</u> ➤ Has no bearing on index; no handling required. c. <u>Merging company</u> ➤ Issued shares on t = issued shares on $(t - 1)$ + new issued shares due to merger announcement. ➤ Adjustment coefficient on t = adjustment coefficient on $(t - 1)$.

³ If the merged company is not a TWSE- or TPEx-listed company, then the handling of corporate actions and events are moved to IV(IV)5. “Change of issued shares without affecting the original shareholders’ shareholding”.

	the “retained index market value” and adopt the ex-dividend reference price for calculation. b. <u>The merged companies</u>	➤ Index market value change = adjustment coefficient on $t \times$ issued shares on $t \times$ price on $(t - 1) -$ index market value on $(t - 1)$. d. <u>Index divisor</u> ➤ Calculate the total index market value change and adjust the index divisor.
Market-Value Investment (including Equal Weight) Index Category and SmartBeta Investment Index Category	<u>are non-constituents (not limited to one company)</u> ➤ Has no bearing on index; no handling required. c. <u>Merging company</u> ➤ No change; no handling required.	a. <u>At least one merged company is a constituent (not limited to one company)</u> ➤ Delete the constituent. ➤ Index market value change = $(-1) \times$ retained index market value. c. <u>The merged companies are non-constituents (not limited to one company)</u> ➤ Has no bearing on index; no handling required. c. <u>Merging company</u> ➤ Issued shares on $t =$ <i>issued shares on $(t - 1)$</i> + new issued shares due to merger announcement. ➤ Adjustment coefficient on $t =$ (index market value on $(t - 1) -$ index market value change of the merged company) / (price on $(t -$

		1) $\times$ issued shares on t). ➤ Index market value change = adjustment coefficient on $t \times$ issued shares on $t \times$ price on $(t - 1) -$ index market value on $(t - 1)$. d. <u>Index divisor</u> ➤ Total index market value change = 0; no adjustment to index divisor.
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4. The merging company is a constituent, and merges with a constituent or a non-constituent though issuing new shares (share conversion) and cash acquisition⁴

Event date (t) Index Category	Trading suspension date	Delisting date of the merged company/merging company's new share listing date
Market-Value Reference Index Category	a. <u>At least one merged company is a constituent (not limited to one company)</u> ➤ The index market value of the merged company on ($t-1$) is taken as the "retained index market value" and continues to be calculated in the index. If t is the ex-dividend date, the ex-dividend reference price is calculated using the "retained index market value". b. <u>The merged companies are non-</u>	a. <u>At least one merged company is a constituent (not limited to one company)</u> ➤ Delete the constituent. ➤ Index market value change = $(-1) \times$ retained index market value. d. <u>The merged companies are non-constituents (not limited to one company).</u> ➤ Has no bearing on index; no handling required. c. <u>Merging company</u> ➤ Issued shares on t = issued shares on $(t - 1)$ + new issued shares due to merger announcement. ➤ Adjustment coefficient on t =

⁴ If the merged company is not a TWSE- or TPEx-listed company, then the handling of corporate actions and events are moved to IV(IV)5. "Change of issued shares without affecting the original shareholders' shareholding".

	<u>constituents (not limited to one company)</u> ➤ Has no bearing on index; no handling required. c. <u>Merging company</u> ➤ No change; no handling required.	adjustment coefficient on $(t - 1)$. ➤ Index market value change = adjustment coefficient on $t \times$ issued shares on $t \times$ price on $(t - 1) -$ index market value on $(t - 1)$. d. <u>Index divisor</u> ➤ Calculate the total index market value change and adjust the index divisor.
Market-Value Investment (including Equal Weight) Index Category and SmartBeta Investment Index Category		a. <u>At least one merged company is a constituent (not limited to one company)</u> ➤ Delete the constituent. ➤ Index market value change = $(-1) \times$ retained index market value. e. <u>The merged companies are non-constituents (not limited to one company)</u> ➤ Has no bearing on index; no handling required. c. <u>Merging company</u> ➤ Issued shares on $t =$ issued shares on $(t - 1) +$ new issued shares due to merger announcement.

		➤ Adjustment coefficient on t = (index market value on $(t - 1)$ – merged company's index market value change $\times$ share conversion weight) / (issued shares on $t \times$ price on $(t - 1)$). ➤ Share conversion weight = (price of the merged company one the day before the trading suspension date – cash for each share) / price of the merged company one the day before the trading suspension date. ➤ Index market value change = adjustment coefficient on $t \times$ issued shares on $t \times$ price on $(t - 1)$ – index market value on $(t - 1)$. d. <u>Index divisor</u> ➤ Calculate the total index market value change and adjust the index divisor.
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5. A number of constituents convert into a holding company or merge to establish a newly establishing company, and the newly establishing company meets the index universe requirement

Event date (t) Index Category	Trading suspension date	Delisting date of the share converting company/holding or newly establishing company's new share listing date
Market-Value Reference Index Category	a. <u>At least one share conversion company is a constituent (not limited to one company)</u> ➤ The index market value of the share conversion company on $(t-1)$ is taken as the "retained index market value" and continues to be calculated in the index. If t is the	a. <u>At least one share conversion company is a constituent (not limited to one company)</u> ➤ Delete the constituent. ➤ Index market value change = $(-1) \times$ retained index market value. b. <u>The share conversion companies are non-constituents (not limited to one company).</u> ➤ Has no bearing on index; no handling required. c. <u>Holding company or newly establishing company</u> ➤ Included as a constituent. ➤ Issued shares on t = issued shares of the newly establishing company announced. ➤ Adjustment coefficient on t = representative company's adjustment coefficient on $(t - 1)$.

	ex-dividend date, the ex-dividend reference price is calculated using the "retained index market value". b. <u>The share conversion companies are non-constituents (not limited to one company)</u> ➤ Has no bearing on index; no handling required.	➤ Index market value change = adjustment coefficient on $t \times$ issued shares on $t \times$ reference listing price. ➤ If several constituents are merged into a newly establishing company and there is a cash acquisition, then IV(I)2 or IV(I)4 above shall apply. d. <u>Index divisor</u> ➤ Calculate the total index market value change and adjust the index divisor.
Market-Value Investment (including Equal Weight) Index Category and SmartBeta Investment Index Category		a. <u>At least one share conversion company is a constituent (not limited to one company)</u> ➤ Delete the constituent. ➤ Index market value change = $(-1) \times$ retained index market value. b. <u>The share conversion companies are non-constituents (not limited to one company)</u> ➤ Has no bearing on index; no handling required. c. <u>Holding company or newly establishing company</u> ➤ Included as a constituent. ➤ Issued shares on t = issued shares of the newly establishing

		company announced. ➤ Adjustment coefficient on $t = (-1) \times \text{index market value change of the share conversion company} / (\text{issued shares on } t \times \text{reference listing price})$. ➤ Index market value change = adjustment coefficient on $t \times \text{issued shares on } t \times \text{reference listing price}$. ➤ If several constituents are merged into a newly establishing company and there is a cash acquisition, then IV(I)2 or IV(I)4 above shall apply. d. <u>Index divisor</u> ➤ Other than cash acquisition, if total index market value change = 0, then no adjustment to index divisor.
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(II) Principles for Handling Different Types of Capital Reductions

1. The constituent's capital reduction is cash refund or capital reduction for making up losses

Event date (t) Index Category	Trading suspension date	Trading resumption date
Market-Value Reference Index Category	<u>Company with capital reduction</u> ➤ The index market value of the capital reduction company on ($t-1$) is taken as the "retained index market value" and continues to be calculated in the index. If t is the ex-dividend date, the ex-dividend reference price is calculated using the "retained index market value".	a. <u>Company with capital reduction</u> ➤ Issued shares on t = issued shares on $(t - 1) \times$ Share ratio of post-reduction to pre-reduction. ➤ Adjustment coefficient on t = adjustment coefficient on $(t - 1)$. ➤ Index market value change = adjustment coefficient on $t \times$ issued shares on $t \times$ reference price after trading resumption – retained index market value (to making up losses of the index market value change = 0 of the company with capital reduction due to loss).
Market-Value Investment (including Equal Weight) Index Category and SmartBeta Investment Index Category		b. <u>Index divisor</u> ➤ Calculate the total index market value change and adjust the index divisor.

2. A newly establishing company is established for the split part of the constituent, or the split part is assigned to the existing company, but the newly establishing company or existing company does not meet the index universe requirement

Event date (t) Index Category	Demerged Company's trading suspension date
Market-Value Reference Index Category	a. <u>Demerged Company</u> ➤ Delete the constituent. ➤ Index market value change = $(-1) \times \text{index market value on } (t - 1)$. b. <u>Index divisor</u> ➤ Calculate the total index market value change and adjust the index divisor.
Market-Value Investment (including Equal Weight) Index Category and SmartBeta Investment Index Category	

3. A newly establishing company is established for the split part of the constituent, or the split part is assigned to the existing company and meets the index universe requirement, but the newly establishing company does not meet the sampling universe requirement, or the existing company is not a constituent

Event date (t) Index Category	Demerged Company's trading suspension date	Demerged Company's trading resumption date
Market-Value Reference Index Category	a. <u>Demerged Company</u> ➤ The index market value of the demerged company on (t-1) is taken as the "retained index market value" and continues to be calculated in the index. If t is the ex-dividend date, the ex-dividend reference price is calculated using the "retained index market value".	a. <u>Demerged Company</u> ➤ Issued shares on t = issued shares on (t - 1) × Share ratio of post-reduction to pre-reduction. ➤ Adjustment coefficient on t = adjustment coefficient on (t - 1). ➤ Index market value change = adjustment coefficient on t × issued shares on t × reference price after trading resumption - retained index market value.
Market-Value Investment (including Equal Weight) Index Category and SmartBeta Investment Index Category	b. <u>Newly establishing or existing company</u>	b. <u>Newly establishing or existing company</u> ➤ Has no bearing on index; no handling required. c. <u>Index divisor</u>

	➤ Has no bearing on index; no handling required.	➤ Calculate the total index market value change and adjust the index divisor.
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4. The existing company is a constituent, and merges the split part of the demerged company⁵ entirely with new shares (share conversion)

Event date (t) Index Category	Demerged Company's trading suspension date	Demerged Company's resumption suspension date/existing company's new share listing date
Market-Value Reference Category Index	a. <u>The demerged company is a constituent</u> ➤ The index market value of the demerged company on ($t-1$) is taken as the "retained index market value" and continues to be calculated in the index. If t is the ex-dividend date, the ex-dividend reference price is calculated using the "retained index market value".	a. <u>The demerged company is a constituent</u> ➤ Issued shares on t = issued shares on ($t - 1$) $\times$ Share ratio of post-reduction to pre-reduction. ➤ Adjustment coefficient on t = adjustment coefficient on ($t - 1$). ➤ Index market value change = adjustment coefficient on $t \times$ issued shares on $t \times$ reference price after trading resumption – retained index market value. b. <u>The demerged company is a non-constituent</u> ➤ Has no bearing on index; no handling required.

⁵ If the demerged company is not a TWSE- or TPEx-listed company, then the handling of corporate actions and events are moved to IV(IV)5. "Change of issued shares without affecting the original shareholders' shareholding".

	b. <u>The demerged company is a non-constituent</u> ➤ Has no bearing on index; no handling required. c. <u>Existing company</u> ➤ No change; no handling required.	c. <u>Existing company</u> ➤ Issued shares on t = issued shares on $(t - 1)$ + new issued shares due to merger announcement. ➤ Adjustment coefficient on t = adjustment coefficient on $(t - 1)$. ➤ Index market value change = adjustment coefficient on t × issued shares on t × price on $(t - 1)$ – $(t - 1) \times$ index market value. d. <u>Index divisor</u> ➤ Calculate the total index market value change and adjust the index divisor.
Market-Value Investment (including Equal Weight) Index Category and SmartBeta Investment Index Category		a. <u>The demerged company is a constituent</u> ➤ Issued shares on t = issued shares on $(t - 1)$ × Share ratio of post-reduction to pre-reduction. ➤ Adjustment coefficient on t = adjustment coefficient on $(t - 1)$. ➤ Index market value change = adjustment

		coefficient on $t \times$ issued shares on $t \times$ reference price after trading resumption – retained index market value. a. <u>The demerged company is a non-constituent</u> ➤ Has no bearing on index; no handling required. b. <u>Existing company</u> ➤ Issued shares on $t =$ issued shares on $(t - 1) +$ new issued shares due to merger announcement. ➤ Adjustment coefficient on $t =$ (index market value on $(t - 1)$ – index market value change of demerged company / (issued shares on $t \times$ price on $(t - 1)$). ➤ Index market value change = adjustment coefficient on $t \times$ issued shares on $t \times$ price on $(t - 1) -$ index market value on $(t - 1)$. c. <u>Index divisor</u> ➤ Total index market value change = 0; no
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		adjustment to index divisor .
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5. The existing company is a constituent, and merges the split part of the demerged company⁶ with new shares (share conversion) or cash acquisition

Event date (t) Index Category	Demerged company's trading suspension date	Demerged company's resumption suspension date/existing company's new share listing date
Market-Value Reference Index Category	a. <u>The demerged company is a constituent</u> ➤ The index market value of the demerged company on ($t-1$) is taken as the "retained index market value" and continues to be calculated in the index. If t is the ex-	a. <u>The demerged company is a constituent</u> ➤ Issued shares on t = issued shares on ($t - 1$) $\times$ Share ratio of post-reduction to pre-reduction. ➤ Adjustment coefficient on t = adjustment coefficient on ($t - 1$). ➤ Index market value change = adjustment coefficient on $t \times$ issued shares on $t \times$ reference price after trading resumption – retained index market value. b. <u>The demerged company is a non-constituent</u> ➤ Has no bearing on index; no handling required.

⁶ If the demerged company is not a TWSE- or TPEx-listed company, then the handling of corporate actions and events are moved to IV(IV)5. "Change of issued shares without affecting the original shareholders' shareholding".

	dividend date, the ex-dividend reference price is calculated using the "retained index market value". b. <u>The demerged company is a non-constituent</u> ➤ Has no bearing on index; no handling required. c. <u>Existing company</u> ➤ No change; no handling required.	c. <u>Existing company</u> ➤ Issued shares on $t = \text{issued shares on } (t - 1) + \text{new issued shares}$ due to merger announcement. ➤ Adjustment coefficient on $t = \text{adjustment coefficient on } (t - 1)$. ➤ Index market value change = adjustment coefficient on $t \times \text{issued shares on } t \times \text{price on } (t - 1) - \text{index market value on } (t - 1)$. d. <u>Index divisor</u> ➤ Calculate the total index market value change and adjust the index divisor.
Market-Value Investment (including Equal Weight) Index Category and SmartBeta		a. <u>Demerged company</u> ➤ Issued shares on $t = \text{issued shares on } (t - 1) \times \text{Share ratio of post-reduction to pre-reduction}$. ➤ Adjustment coefficient on $t = \text{adjustment coefficient on } (t - 1)$. ➤ Index market value change = adjustment coefficient on $t \times \text{issued shares on } t \times \text{reference price after trading resumption}$

Investment Index Category		– retained index market value. b. <u>The demerged company is a non-constituent</u> ➤ Has no bearing on index; no handling required. c. <u>Existing company</u> ➤ Issued shares on $t = \text{issued shares on } (t - 1) + \text{new issued shares}$ due to merger announcement. ➤ Adjustment coefficient on $t = (\text{index market value on } (t - 1) - \text{index market value change of the split company} \times \text{share conversion weight}) / (\text{issued shares on } t \times \text{price on } (t - 1))$. ➤ Share conversion weight = $(\text{price of the demerged company one the day before the trading suspension date} - \text{cash for each share}) / \text{price of the demerged company one the day before the trading suspension date}$. ➤ Index market value change = $\text{adjustment coefficient on } t \times \text{issued shares on } t \times \text{price on } (t - 1) - \text{index market value on } (t - 1)$. d. <u>Index divisor</u> ➤ Calculate the total index market value change and adjust the index divisor.
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6. A newly establishing company is established for the split part of the constituent, and the newly establishing company meets the index universe requirement

Event date (t) Index Category	Demerged company's trading suspension date	Demerged company's resumption suspension date/newly establishing company's new share listing date
Market-Value Reference Index Category	Demerged company ➤ The index market value of the demerged company on ($t-1$) is taken as the "retained index market value" and continues to be calculated in the index. If t is the ex-dividend date, the ex-dividend reference price is calculated using the "retained index market value".	a. Demerged company ➤ Issued shares on t = issued shares on $(t - 1)$ × Share ratio of post-reduction to pre-reduction. ➤ Adjustment coefficient on t = adjustment coefficient on $(t - 1)$. ➤ Index market value change = adjustment coefficient on t × issued shares on t × reference price after trading resumption – retained index market value. b. Newly establishing company ➤ Included as a constituent. ➤ Issued shares on t = issued shares of the

		newly establishing company announced. ➤ Adjustment coefficient on t = adjustment coefficient of the demerged company on t. ➤ Index market value change = adjustment coefficient on $t \times$ issued shares on $t \times$ reference listing price. c. <u>Index divisor</u> ➤ Calculate the total index market value change and adjust the index divisor.
Market-Value Investment (including Equal Weight) Index Category and SmartBeta Investment Index Category		a. <u>Demerged company</u> ➤ Issued shares on t = issued shares on $(t - 1) \times$ Share ratio of post-reduction to pre-reduction. ➤ Adjustment coefficient on t = adjustment coefficient on $(t - 1)$. ➤ Index market value change = adjustment coefficient on $t \times$ issued shares on $t \times$ reference price after trading resumption – retained index market value. b. <u>Newly establishing company</u> ➤ Included as a constituent.

		➤ Issued shares on t = issued shares of the newly establishing company announced. ➤ Adjustment coefficient on $t = (-1) \times \text{index market value change of the demerged company} / (\text{issued shares on } t \times \text{reference listing price})$. ➤ Index market value change = adjustment coefficient on $t \times \text{issued shares on } t \times \text{reference listing price}$. c. <u>Index divisor</u> ➤ Total index market value change = 0; no adjustment to index divisor.
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(III) Principles for Handling Constituent Ex-dividend and Ex-right

1. Ex-dividend

Event date (t) Index Category	Ex-dividend date
Market-Value Reference Index Category	a. <u>Ex-dividend constituent</u> ➤ Issued shares on t = issued shares on $(t - 1)$. ➤ Adjustment coefficient on t = adjustment coefficient on $(t - 1)$. ➤ If a price index, index market value change = 0. ➤ If a total return index, index market value change = $(-1) \times \text{adjustment coefficient on } t \times \text{issued shares on } t \times \text{cash dividend per share.}$ b. <u>Index divisor</u> ➤ Except with a price index, calculate the total index market value change and adjust the index divisor.
Market-Value Investment (including Equal Weight) Index Category and SmartBeta Investment Index Category	

2. Ex-right (capital increase in cash and stock dividend)

Event date (t) Index Category	Ex-right date
Market-Value Reference Index Category	a. <u>Ex-right constituent</u> ➤ Issued shares on t = issued shares on $(t - 1) \times (1 + \text{stock dividend ratio})$. ➤ Adjustment coefficient on t = Adjustment coefficient on $(t - 1)$. b. <u>Index divisor</u>
Market-Value Investment (including Equal Weight) Index Category and SmartBeta Investment Index Category	➤ Total index market value change = 0; no adjustment to index divisor.

3. Ex-right (capital increase in cash and paid share allotment)

Event date (t) Index Category	Ex-right date ⁷
Market-Value Reference Category Index	a. <u>Ex-right constituent</u> ➤ Issued shares on t = issued shares on $(t - 1)$ + announced new shares from capital increase. ➤ Adjustment coefficient on t = adjustment coefficient on $(t - 1)$. ➤ Index market value change = Adjustment coefficient on t × subscription price × announced new shares from capital increase. b. <u>Index divisor</u> ➤ Calculate the total index market value change and adjust the index divisor.
Market-Value Investment (including Equal Weight) Index Category and SmartBeta Investment Index Category	a. <u>Ex-right constituent</u> ➤ Issued shares on t = issued shares on $(t - 1)$ + announced new shares from capital increase. ➤ Adjustment coefficient on t = adjustment coefficient on $(t - 1)$ × issued shares on $(t - 1)$ / issued shares on t. ➤ Index market value change = adjustment coefficient on t × issued shares on t × price on $(t - 1)$ – index market value on $(t - 1)$.

⁷ If the ex-right date is the same as the suspended trading date for capital reduction, then the event date will be the trading resumption date for the capital reduction.

	b. <u>Index divisor</u> ➤ Total index market value change = 0; no adjustment to index divisor.
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(IV) Principles for Handling Other Types of Constituents

1. Trading method change due to financial reason

Event date (t) Index Category	Effective date of trading method change	Fifth trading day after the effective date of trading method change
Market-Value Reference Index Category	<u>Constituent with trading method change</u> ➤ No processing required; continue calculating.	If no normal trading is resumed on t , process the following: a. <u>Constituent with trading method change</u> ➤ Delete the constituent. ➤ Index market value change = $(-1) \times$ index market value on $(t - 1)$ b. <u>Index divisor</u> ➤ Calculate the total index market value change and adjust the index divisor.
Market-Value Investment (including Equal Weight) Index Category and SmartBeta Investment Index Category		

2. Trading method change due to supervision reason

Event date (t) Index Category	Effective date of trading method change	One month after the effective date of trading method change
Market-Value Reference Index Category	<u>Constituent with trading method change</u> ➤ No processing required; continue calculating.	If no normal trading is resumed on t , process the following: a. <u>Constituent with trading method change</u> ➤ Delete the constituent. ➤ Index market value change = $(-1) \times$ index market value on $(t - 1)$. b. <u>Index divisor</u> ➤ Calculate the total index market value change and adjust the index divisor.
Market-Value Investment (including Equal Weight) Index Category and SmartBeta Investment Index Category		

3. Change of par value

Event date (t) Index Category	Trading suspension date	Trading resumption date
Market-Value Reference Index Category	<u>Constituent with par value change</u> ➤ No processing required; continue calculating.	a. <u>Constituent with par value change</u> ➤ Issued shares on t = issued shares on $(t - 1) \times$ par value before the change / par value after the change. ➤ Adjustment coefficient on t = adjustment coefficient on $(t - 1)$. b. <u>Index divisor</u> ➤ Total index market value change = 0; no adjustment to index divisor .
Market-Value Investment (including Equal Weight) Index Category and SmartBeta Investment Index Category		

4. Trading suspension due to factors other than the above, or direct delisting from TWSE or TPEx without trading suspension, and therefore not meeting the index universe requirement

Event date (t) Index Category	Trading suspension date / Delisting date
Market-Value Reference Index Category	a. <u>Constituent with trading suspension or TWSE or TPEx delisting</u> ➤ Delete the constituent. ➤ Index market value change = $(-1) \times \text{index market value on } (t - 1)$. b. <u>Index divisor</u>
Market-Value Investment (including Equal Weight) Index Category and SmartBeta Investment Index Category	➤ Calculate the total index market value change and adjust the index divisor.

5. Change of issued shares without affecting the original shareholders' shareholding⁸

Event date (t) Index Category	The sixth trading day of each month
Market-Value Reference Index Category	a. <u>Constituent with change in issued shares</u> ➤ Issued shares on t = issued shares on $(t - 1)$ + change of issued shares without affecting the original shareholders' shareholding. ➤ Adjustment coefficient on t = adjustment coefficient on $(t - 1)$. ➤ Index market value change = adjustment coefficient on t × change of issued shares without affecting the original shareholders' shareholding × price on $(t - 1)$. b. <u>Index divisor</u> ➤ Calculate the total index market value change and adjust the index divisor.
Market-Value Investment (including Equal Weight) Index Category and SmartBeta Investment Index Category	a. <u>Constituent with change in issued shares</u> ➤ Issued shares on t = issued shares on $(t - 1)$ + change of issued shares without affecting the original shareholders' shareholding. ➤ Adjustment coefficient on t = adjustment coefficient on $(t - 1)$ × issued shares on $(t - 1)$ / issued shares on t. ➤ Index market value change = adjustment coefficient on t ×

⁸ For example, corporate actions and events such as convertible bonds or convertible preferred shares into common shares, exercising employee stock warrants to issue common shares, listing of new shares with employee restricted stock, share assignment for issuing new shares, issuing overseas global depository receipts, handling private placement shares, canceling repurchased shares (treasury stock), canceling redeemed shares (new shares with employee restricted stock), failure of capital increase in cash, and share cancellation and capital reduction, as well as difference in issued shares due to operation mode, or other non-market transactions that affect the total market value.

	issued shares on $t \times$ price on $(t - 1) -$ index market value on $(t - 1)$. b. <u>Index divisor</u> ➤ Total index market value change = 0; no adjustment to index divisor.
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V. Index Universe Handling Principles

To balance the objectives of index compilation and investment availability, in addition to following the individual index methodology to generate the index universe on the data cutoff date, a stock will not be included in the index universe on the data cutoff date in case there is a change in the trading method announced for the stock, or the fourth situation in IV.(IV) “Principles for Handling Other Types of Constituents” occurs, or the stock will be terminated from TWSE or TPEx listing after the data cutoff date.

VI. Principles for Handling Specific Situations of Index Constituents to Be Effective After Regular Review

Unless otherwise specified in the individual index methodology, the corporate actions and events that occur between the data cutoff date for periodic review and the periodic review effective date (R date) may affect the investable nature of the index after the periodic review takes effect. In view of this, in order to balance the relationship between index compilation and investment practices, the period from the index review date (inclusive) to $R-2$ (inclusive) is defined as the validation period. The constituents are reviewed during the validation period, and if necessary, adjustments are made to constituents that have changed their trading methods, ceased trading, or terminated listing on the TWSE or the TPEX, and the stock number principle⁹ of the individual index compilation rules will be referred to in order to decide whether to supplement new constituents.

Constituents to be effective will be excluded after the periodic review if any of the following situations apply during the validation period:

- (1) Stocks that are not existing constituents and are suspended from trading on $R-1$ or during the validation period (if any);
- (2) Stocks that have been listed or announced to be listed as stocks with changes in trading methods;
- (3) Stocks that already have or are announced to have the fourth situation in IV.(IV) “Principles for Handling Other Types of Constituents” in the future, or stocks delisted from the TWSE or TPEX.

⁹ If it is a fixed stock number or a fixed interval of stock number, then select new constituents to supplement in accordance with the index methodology; if the stock number is not fixed and more than ten, then do not supplement.

After the periodic review, if a constituent company has been converted or is announced to be converted into a holding company or newly established company during the validation period, the stock may be adjusted to the stock of a holding company or newly established company.

Disclaimer

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