

TIP Customized Taiwan Multi-Factor High Dividend 30 Index

I. Introduction

The universe of the TIP Customized Taiwan Multi-factor High Dividend 30 Index (abbr., the “TIP Taiwan MFHD30 Index”) is composed of the top 300 stocks by market capitalization that are listed on the Taiwan Stock Exchange (TWSE) and the Taipei Exchange (TPEX). After being screened by the liquidity test, quality factors and downside risk, 30 stocks are selected primarily by size, with comprehensive consideration given to low volatility and dividend yield; the weight of each individual constituent is determined via its free float market capitalization, integrating dividend yield indicators, so as to manifest the portfolio performance of stock investments with financial quality, low volatility, and cash dividends.

II. Calculation and Management

1. The index types of the TIP Taiwan MFHD30 Index include the “Price Index” and the “Total Return Index”, which are maintained and managed by TIP. Taiwan Stock Exchange (TWSE) is designated to carry out the real-time calculation and dissemination.
2. TIP conducts periodic reviews of constituents according to the index rules.
3. TIP retains the closing market capitalization records of all constituents.
4. Refer to the “[General Principles for TIP Securities Indices](#)” for the principles of index development, maintenance, and management.

III. Eligibility of Constituents

1. Sampling Universe:
 - A. Index Universe: Common stocks listed on the TWSE and the TPEX, excluding managed stocks, emerging stocks, and stocks with altered trading methods or suspended from trading; however, those suspended from trading due to corporate actions, including but not limited to capital reduction, conversion to holding company, exchange of shares into the shares of newly established companies or change of par value may still be included in the Index Universe.
 - B. Sampling Range: The 300 stocks with the largest market capitalization in the Index Universe.
2. Criteria of Constituent Selection:
 - A. Liquidity test:

A stock in the top 80% of total trading volume in the last 12 calendar months that meets any of the following criteria shall be deemed to pass the liquidity test.

- a. A stock in the top 20% of total trading volume in the last 12 calendar months.
- b. The free float turnover ratio reaches at least 3% for at least 8 months in the last 12 calendar months; for stocks listed on the TWSE or the TPEx less than one year ago, the free float turnover ratio must reach at least 3% for the last 3 calendar months.

B. Index Screening :

- a. Phase 1: Stocks that pass the liquidity test and meet the following criteria:
 - i. **Profitability:** The sum of the operating profits in the last four quarters is positive.
 - ii. **Dividend policy:** For periodic review in June, a stock should be excluded if its board of directors resolved to distribute no dividends or has not yet adopted any resolution regarding the cash dividends by the data cut-off date or if the stock has quoted ex-dividend by the effective date.
- b. Phase 2: Stocks that pass Phase 1 screening and meet the following criteria:
 - i. **Quality indicators:** The lowest 25% of stocks in the financial and non-financial industries are excluded, based on return on assets and return on equity, respectively.
 - ii. **Downside risk:** The stocks with the highest 10% semi-standard deviation, calculated by 126-day daily gross up return, are excluded.

C. Sorting methods:

- a. **Volatility indicator:** The reciprocal of the standard deviation of daily gross up return for the past 252 days is calculated.
- b. **Dividend indicator:** The dividend rate is calculated based on the average in the following indicators:
 - i. Average cash dividend in the past three years
 - ii. Cash dividends in the last year
 - iii. Sum of earnings per share in the last four quarters $\times$ average cash dividend payout rate in the last three years
- c. After adjustments¹ to **volatility indicators** and **dividend indicators**, priority is given to those with a free float adjusted market capitalization of NT\$20 billion or more; if the number of the constituents is not 30, 30 constituents are selected in the

¹ Values are 95% winsorized before standardization.

following order:

- i. The adjusted **dividend indicators** are non-negative.
- ii. The adjusted **volatility indicators** are arranged in descending order of priority.

3. Weighting Method:

- A. The weight of each individual constituent is determined via its free float adjusted market capitalization, and the weight is then adjusted according to the **dividend indicator**.
- B. According to free float adjusted market capitalization with weight then adjusted according to the **dividend indicator**, with the exception of financial industry stocks, the initial weight for a single industry shall not exceed 15%.
- C. The weight of each individual constituent has a maximum limit of 8%, and shall not exceed 5 times of the free float adjusted market capitalization ratio; if it is not possible to achieve the weight allocation, the multiplier limit may be adjusted by gradual relaxation thereof, but the multiplier shall still not exceed 8%.

IV. Index Calculation

1. Index Calculation Frequency:

- A. Starting July 4, 2022, the real-time TIP Taiwan MFHD30 Index is calculated and disseminated every five seconds during the trading hours of the TWSE and the TPEX, based on the latest trading prices of the constituent stocks. The end-of-day (EOD) index is calculated once a day after the market closes.
- B. TIP also compiles the TIP Taiwan MFHD30 Total Return Index, which adjusts the TIP Taiwan MFHD30 Index after considering the cash dividend factor, in order to reflect cash dividend-included returns. The index is calculated and disseminated once every day after the market closes.

2. Calculation Formula:

- A. TIP Taiwan MFHD30 Index as a “Price Index”:

$$Index = \frac{Total\ Index\ Market\ Values}{Index\ Divisor} \times base\ value$$

$$Index_t = \frac{\sum_{i=1}^n cp_{i,t} \times s_{i,t} \times p_{i,t}}{Divisor_t} \times 5000$$

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

n = number of index constituents

$p_{i,t}$ = price of constituent i on day t

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

$cp_{i,t}$ = the adjustment coefficient of constituent i on day t is decided in accordance with the “SmartBeta Investment Index Category” described in the “[TIP Corporate Actions and Events Methodology](#)”.

Divisor = index divisor of “Price Index”; after the market closes, the index divisor is adjusted in accordance with the “SmartBeta Investment Index Category” described in the “[TIP Corporate Actions and Events Methodology](#)” to maintain the index continuity. The adjustment method is as follows:

Index divisor = index divisor on the previous day

$$\times \left(\frac{\text{total index market values at the previous day's close} \pm \text{total index market values changes}}{\text{total index market values at the previous day's close}} \right)$$

Note 1: The base date is set on May 20, 2022, and the base index is set at 5000 points.

Note 2: The index divisor on the base date is the total index market values at that time.

$$\sum_{i=1}^n cp_{i,launch} \times s_{i,launch} \times p_{i,launch}, \text{ launch} = \text{base date}$$

B. TIP Taiwan MFHD30 Total Return Index as a “Total Return Index”:

$$\text{Index} = \frac{\text{Total Index Market Values}}{\text{Index Divisor}} \times \text{base value}$$

$$\text{Index}_t = \frac{\sum_{i=1}^n cp_{i,t} \times s_{i,t} \times p_{i,t}}{\text{DivisorTR}_t} \times 5000$$

DivisorTR = index divisor of the “Total Return Index”; after the market closes, the index divisor is adjusted in accordance with the “SmartBeta Investment Index Category” under the “[TIP Corporate Actions and Events Methodology](#)” to maintain the index continuity. The adjustment method is as follows:

Index divisor = index divisor on the previous day

$$\times \left(\frac{\text{total index market values at the previous day's close} \pm \text{total index market values changes}}{\text{total index market values at the previous day's close}} \right)$$

V. Constituent Adjustment and Index Maintenance

1. Periodic Review and Adjustment of Constituents:

A. The constituents are reviewed twice a year, with the 17th trading day of June and December as the review dates, and the data cut-off dates are the 10th trading day of June and December². A fixed number of 30 constituents is selected after each periodic

² Where otherwise prescribed, such other rules shall apply.

review.

- B. Constituents replacement limit: At each periodic review, the number of constituent replacements is capped at a maximum of 14 stocks.
 - C. The results of the constituent periodic review will become effective following a five-trading-day after the review date. The index is rebalanced over 5 consecutive trading days starting from the review effective date (the rebalancing period). A transitional weight is allocated to each security in the index during the rebalancing period.
 - D. For the index divisor maintenance, the closing data of each previous trading day during the rebalancing period is adopted to calculate the difference, which is used as the total index market value changes between the total index market value of the new portfolio and the original one .
 - E. If the review data of holding companies or newly established companies is insufficient, and the representative companies of the converted stocks meet the Sampling Universe qualification, the data of the representative companies or their stocks may be used in the review.
2. TIP Taiwan MFHD30 Index is a “SmartBeta Investment Index Category”. The related maintenance such as the non-periodic adjustment of constituents, the adjustment coefficient, the number of issued shares, and the index divisor is handled according to the [“TIP Corporate Actions and Events Methodology”](#). If a constituent is removed as a result of the above reasons, the vacancy created will not be filled.
3. Principles for implementation of the Free Float Coefficient:
- A. If the free float coefficient is lower than 10%, it will not be included in the Sampling Universe .
 - B. The update for the free float coefficient shall be in conjunction with the effective date of constituent periodic review.
 - C. The free float coefficient are updated based on the last data generated from TIP’s [“TIP Free Float Coefficient Calculation Guide”](#).