

Methodology of SSE STAR Value 50 Strategy Custom Index

SSE STAR Value 50 Strategy Custom Index selects 50 securities with lower operating risks and valuation from STAR market as constituents. The index is to measure the performance of securities of listed companies with value characteristics of STAR market.

1. Index Name and Index Code

- Index Name: SSE STAR Value 50 Strategy Custom Index
- Shortened Name: STAR Value 50 Custom
- Index Code: 950228

2. Base Date and Base Value

The base date is December 31, 2019. The base value is 1000.

3. Index Eligibility

3.1 Index Universe

The index universe includes stocks and CDRs issued by red-chip enterprises listed on SSE Science and Technology Innovation Board satisfying the following conditions.

(1) The listing time is more than six months. For securities with the daily average total market value since its initial listing ranked top 5 on SSE Science and Technology Innovation Board, the listing time is more than three months.

(2) Non -*ST securities.

3.2 Eligible Securities

Liquidity Criteria: securities ranked in the top 90% in the index universe and 80% in the securities listed in SSE in terms of average daily trading value over the last year in descending order are eligible for inclusion.

3.3 Constituents Selection

(1) Standardize the quality, value and low-volatility sub-indicators¹. Aggregate the sub-indicators into quality, value and low-volatility score in equal weight in respect:

- Quality: short-term debt coverage and ROE;
- Value: the inverse of free-float market capitalization to cash flow from operating activities and the inverse of free-float market capitalization to operating revenue;
- Low-volatility: the inverse of volatility during the past year and the inverse of residual volatility during the past year.

(2) Rank the securities with quality score in descending order, select the top 50% securities in each sector as candidates.

(3) Adjust the value and low-volatility as follows:

$$factor\ score_{indicator} = \begin{cases} -\left[\left(\frac{i-1}{N} - 0.5\right)^2 - \left(\frac{i}{N} - 0.5\right)^2\right] \times \frac{2N}{M}, & \text{if indicator score} \neq 0.5 \\ 0, & \text{if indicator score} = 0.5 \end{cases}$$

where M is the number of securities meeting liquidity screening criteria, N is the number of securities for which the indicator score is not 0.5, and i represents the sorted rank of the factor scores for securities with valid factor scores in ascending order.

Calculate the scores of value and low-volatility indicators within the securities that meet the investability screening criteria.

(4) Calculate the composite factor score and free-float market capitalization score, where composite factor score is the sum of value and low-volatility score, and the free-float market capitalization score is calculated as the percentage of the free float market capitalization of securities meeting the criteria for investability among screened securities.

(5) Rank the eligible securities by total score in descending order, where total score is the sum of the composite factor score and free-float market capitalization score, and select top 50 securities as constituents.

¹ Standardize the sub-indicators as follows:

$$\text{score of sub_indicators} = \begin{cases} 1 - \frac{\text{rank} - 1}{\text{number of securities in the universe} - 1}, & \text{if sub_indicators not null} \\ 0.5, & \text{if sub_indicators null} \end{cases}$$

4. Index Weights and Calculations

The index is calculated according to the following formula:

Current Index = Current Total Adjusted Market-Cap / Divisor × Base Value

Where Current Total Adjusted Market-Cap = \sum (Security Price × Number of Free Float Adjusted Shares × Weight Factor)

For the calculation of number of free float adjusted shares, please refer to CSI Index Calculation and Maintenance Methodology for further details. The value of Weight Factor is between 0 and 1, which is calculated at each rebalancing date, so that the weight is calculated with the following formula, and the weight of each constituent is capped at 15%, and the total weight of constituents largest 5 constituents is capped at 60%.

$$= \begin{cases} \text{weight}(\text{security}_i) & \\ \text{total score}_i, & \text{if composite factor score}_i \leq 0 \\ \text{total score}_i + \frac{(1 - W)\text{composite factor score}_i}{\sum \text{composite factor score}_i}, & \text{if composite factor score}_i > 0 \end{cases}$$

where W is the sum of total score of the constituents.

5. Constituents and Index Weights Adjustment

5.1 Constituent's Periodical Review

The index is adjusted and rebalanced quarterly and the adjustment will be effective as of the next trading day after the 2nd Friday in March, June, September and December.

Weight Factor is assigned to each constituent at each rebalancing date. The effective date is the same as that of the constituent adjustment. The Weight Factor stays the same until next rebalancing date.

5.2 Ongoing Review

When special events occur, CSI will review the index accordingly. Delisted securities will be deleted from the constituents. Please refer to Index Calculation and Maintenance Methodology for further details.