



XHF China Oversea Internet Index Calculation and Maintenance Methodology

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Table of Contents

1. Constituents Periodical Review	3
1.1 Review Time.....	3
1.2 Reference Used for Periodical Review	3
1.3 Number of Constituents Adjustment	3
1.4 Buffer Zone	3
1.5 Reserve List	3
1.6 Long Suspension Stocks	4
1.7 Stocks Experiencing Financial Losses	4
2. Temporary Adjustment of Constituents.....	5
2.1 IPO	5
2.2 Merger and Acquisition	5
2.3 Spin-off.....	5
2.4 Suspension	6
2.5 Suspension from Listing and Delisting	6
2.6 Bankruptcy	6
3. Index Calculation.....	7
3.1 Index Real-time Calculation	7
3.2 Free Float.....	7
3.3 Category-Weighted Method.....	7
3.4 Multi-currency Index.....	8
4. Index Maintenance	9
4.1 Formula of Divisor Adjustment Methodology	9
4.2 Circumstances for Index Maintenance.....	9
5. Maintenance of Constituents Shares.....	10
6. Index Dissemination	11
6.1 Dissemination Channels	11
6.2 Dissemination Frequencies	11
Appendix : Free Float.....	12

1. Constituents Periodical Review

Constituents of XHF indexes are reviewed every 6 months. Constituents are adjusted according to the periodical review.

1.1 Review Time

Meetings of XHF Index Advisory Committee are usually held in the end of May and November every year and constituents' adjustment are implemented on the next trading day after the close of the second Friday in June and December each year.

1.2 Reference Used for Periodical Review

Usually, reference used for review in May includes trading data and financial data from May 1st of the previous year to April 30th of the review year (In case of an IPO, data since its fourth trading day after listing are used).

Data used for review in November includes trading data and financial data from November 1st of the previous year to October 31st of the review year (In case of an IPO, data since its fourth trading day after listing are used).

1.3 Number of Constituents Adjustment

Number of constituents adjusted at each periodical review will not exceed A certain proportion for some XHF indexes.

1.4 Buffer Zone

In order to effectively reduce the turnover rate of the index stocks, some of the XHF Index constituents are regularly adjusted using the buffer rules, the specific buffer ratio can be seen in methodology.

1.5 Reserve List

For the sake of index consistency and transparency, some XHF indexes adopt a reserve list policy which is used to implement temporary adjustment between two adjacent periodical reviews. Reserve list is created at each constituents periodical review. Usually, number of stocks in the list is 5% of the number of constituents. If temporary adjustment is needed due to constituents delisting, merger, etc. stocks on the reserve list will be added to the index by rankings in turn. If the number of stocks in the list is less than 50% of the original number, XHF will complement the list according to the reserve list policy and publicize the new reserve list timely.

1.6 Long Suspension Stocks

When reviewing constituents eligibility periodically ----for constituent stocks

- Constituents that have been suspended for 3 months and have not resumed trading as of the deadline of data used for constituents eligibility review will be classified as candidate deletion stocks.
- XHF should report the name list of constituents that have been suspended close to 3 months as of the deadline of data used for constituents eligibility review to the index advisory committee. The committee will discuss and decide whether they should be classified as candidate deletion stocks.
- Constituents that had been suspended for 3 months during the data period used for constituents review and have been resumed trading will remain in the index in principle if they meet constituents requirement.

When reviewing constituents eligibility periodically ----for non-constituent stocks:

- Stocks that have been suspended for 3 months and have not resumed trading as of the deadline of data used for constituents eligibility review will not be able to be selected as candidate new additions.
- XHF should report the name list of stocks that have been suspended close to 3 months and have not resumed trading yet as of the deadline of data used for constituents eligibility review to the index advisory committee.
- Stocks that have been suspended for 3 months during the data period used for constituents review can be included in the index only if they have been resumed trading for 3 months

1.7 Stocks Experiencing Financial Losses

Stocks that suffered losses in financial report are not included in the index in principle at constituents periodical review unless the stocks exert great impact on the representativeness of index.

2. Temporary Adjustment of Constituents

Necessary ongoing adjustments are made by XHF to XHF indexes when some corporate events happened so as to maintain the representativeness and investability of index.

2.1 IPO

If the total share market cap of an IPO (which equals to issue price multiply total A shares) ranks top 10 (compared with all the shares by average daily A share market cap of the past year since the listing announcement of the IPO) in the overall market and it satisfies the requirements of index universe, then fast entry rules are applied for certain index. Namely, it will be 6 added in the index after the close of the tenth trading day. Meanwhile, the last ranked old constituent by daily average market cap of the most recent year will be deleted from the index. If an IPO meets the criteria of fast entry, however, time span between its listing time and the effective day of the next constituents periodical review is less than 20 trading days, fast entry rules are not applied immediately but will be implemented together with the next constituents periodical review.

2.2 Merger and Acquisition

Two constituent companies merge: The stock of the resulting new company will be added to the index and there will be a vacancy. The vacancy will be filled by the highest ranking stock in the reserve list.

One constituent company and one non-constituent company merge: The stock of the resulting new company will be added to the index.

One non-constituent company purchases or takes over one constituent company: If the stock of the resulting new company ranks higher than the highest stock in the reserve list, the new stock will be added to the index. Otherwise, the highest ranking stock in the reserve list will be added to the index.

Merger, spin-off, acquisition and restructuring of non-constituents: If the total market cap of the stock of the resulting new company ranks top 10 in the overall market, fast entry rules are applied here. Otherwise, these corporate events are considered at constituents periodical review

2.3 Spin-off

If one constituent company is split so as to form two or more companies, then whether the resulting companies is eligible for inclusion or not depends on their rankings.

- If two or more of the resulting companies rank higher than the lowest constituent, then the resulting companies that rank higher than the lowest constituent will be added to

the index and the lowest constituent(s) will be removed to keep the number of the index constituents constant.

- If one or more of the resulting companies ranks higher than the lowest constituent, then the (these) new resulting company will be added to the index. If more than 1 companies enter the index, the lowest constituents will be removed to keep the number of the index constituents constant.
- If all of the resulting companies rank lower than the lowest constituent, but some or all of the resulting companies rank higher than the highest stock in the reserve list, then the highest new company will replace the split company to be added to the index.
- If all of the resulting companies rank lower than the lowest constituent and the highest stock in the reserve list, then the highest company in the reserve list will be added to the index.

2.4 Suspension

If a constituent is suspended from trading, XHF will determine whether to delete it from the index or not according to different suspension reasons.

2.5 Suspension from Listing and Delisting

If a constituent company is suspended from listing or delisted from the A share market, it will be removed from the index and be replaced by the highest-ranking company in the reserve list.

2.6 Bankruptcy

If a constituent company enters bankruptcy proceedings, it will be removed as soon as practicable and the highest-ranking stock in the reserve list will be added to the index.

3. Index Calculation

3.1 Index Real-time Calculation

The real-time calculation of XHF Indexes is based on the price data issued by the data provider company Xignite.

(1) The opening index is calculated by the opening price obtained through the daily aggregate auction. In case there is no deal, the opening index is then calculated by the reference opening price provided by the quotation system.

(2) The index is calculated each second till the close of trading. Price of each constituent(X) is defined on the following principle: If there is no deal the whole trading day, X equals the reference opening price, otherwise, X equals the latest traded price. XHF will decide whether or not to calculate the indexes in case of abnormal quotations from the two exchanges.

3.2 Free Float

To reflect the price fluctuation of the real negotiable shares in the market, XHF indexes adopts free float shares (free float) to calculate index exclusive of non-negotiated shares such as strategic holdings, government holdings, etc.

- (1) Long term holdings by founders, families, & senior executives, etc.
- (2) Government holdings
- (3) Strategic holdings
- (4) Employee share plans

If the holdings of shareholders of the four categories and their persons acting in concert is larger than 5%, the holdings will be defined as non-free float. Together with the restricted-shares announced by listed companies, they are all deemed as non-free float shares.

$$\text{Free Float} = \text{Total Shares} - \text{Non-Free Float Shares}$$

XHF estimates free float via various available published information (See Appendix A).

3.3 Category-Weighted Method

XHF indexes uses category-weighted method to adjust constituents' sharers. Namely, XHF will grant certain inclusion factor to the total A shares according to the percentage of free float shares in total A shares to insure index stability.

$$\text{Negotiable Market Cap Ratio} = \text{Free Float} / \text{Total Shares}$$

$$\text{Adjusted Shares} = \text{Total Shares} \times \text{Inclusion Factor}$$

3.4 Multi-currency Index

XHF calculates multi-currency indexes for some XHF indexes to satisfy investors' needs. In the calculation of multi-currency index,

$$\text{Adjusted Market Cap} = \sum(\text{Price} \times \text{Adjusted No. of Shares} \times \text{Foreign Exchange Rate})$$

Here Foreign Exchange Rate from Thomson Reuters (mid-price of quote) will be used, unless otherwise specified. The real time Foreign Exchange Rate from Thomson Reuters will be used to calculate the real-time index, the Foreign Exchange Rate from Thomson Reuters at index closing time will be used to calculating the closing index.

4. Index Maintenance

When changes occur to constituent list or the share structure, or constituents' market value changes due to non-trading factors, the divisor is adjusted to keep the index comparable overtime, that is, XHF indexes adopts the “Divisor Adjustment Methodology” to adjust the old divisor.

4.1 Formula of Divisor Adjustment Methodology

$$\frac{\text{Adjusted Market Cap before Adjustment}}{\text{Old Divisor}} = \frac{\text{Adjusted Market Cap after Adjustment}}{\text{New Divisor}}$$

$$\begin{aligned} \text{Adjusted Market Cap after Adjustment} \\ &= \text{Adjusted Market Cap before adjustment} \\ &+ \text{Adjusted Market Cap increased or decreased} \end{aligned}$$

The new divisor derived from this formula is used for later index calculation.

4.2 Circumstances for Index Maintenance

4.2.1 Corporate Actions that may affect the price of constituents

- **Dividend** : For XHF indexes, no index adjustment is required for dividend payment and the index is allowed to fallback naturally.

Right Issue and Bonus Issue : *The index is adjusted the day before the issuance.*

$$\begin{aligned} \text{Adjusted Market Cap after the Adjustment} \\ &= \text{Ex-right Price} \times \text{Adjusted No. of Shares} \\ &+ \text{Adjusted Market Cap before the Adjustment} \\ &\quad (\text{excluding stocks adjusted for right issue and bonus issue}) \end{aligned}$$

4.2.2 Share changes caused by corporate actions

Share changes: when shares of constituents change due to corporate actions (e.g. re-issuance, listing of right issue), the index is adjusted the day before the changes.

$$\begin{aligned} \text{Adjusted Market Cap after the Adjustment} \\ &= \text{closing price} \times \text{Adjusted sharers after changes} \end{aligned}$$

5. Maintenance of Constituents Shares

To ensure that XHF indexes can reflect trading information of related stocks, XHF maintains constituents shares based on the following rules:

- XHF maintains constituents shares based on announcements of listed companies.
- Temporary Adjustment or Regular Review according to the types of corporate events.
 - (1) If the bonus issue, rights issues, stock split and stock consolidation lead to constituents shares change, the adjustment will be implemented on the ex-right day.
 - (2) For other corporation events, such as second offering and exercise of warrants, if the accumulated change of constituents shares is more than 5%, the adjustment will be implemented immediately. If the accumulated change of constituents shares is less than 5%, the adjustment will be implemented in the next regular review.
- Usually, the effective date of shares adjustment is consistent with that 14 of indicated in the announcement of listed companies which make the shares change larger than 5%. If the announcement date of listed companies is later than the effective date, then the effective date of shares adjustment is the trading day after the announcement date. XHF would provide notice in the CA files after the market close of the day when we find out 5% threshold is breached.
- XHF tracks the changes of free float shares timely and adjusts free float changes resulted from shareholder's behavior semi-annually. The adjustment will be effective on the next trading day after the close of the second Friday in June and December.

6. Index Dissemination

6.1 Dissemination Channels

XHF indexes are released to domestic and foreign public through various means:

- Publicized daily via various news media including Shanghai Securities News, China Securities Journal and Securities Times;
- Published daily through the Internet at XHF's website (www.xhf.com) and social media channels (WeChat official account, Weibo, etc.)

6.2 Dissemination Frequencies

XHF indexes are calculated and disseminated real time. Specifically, XHF indexes quotes are updated every 3 seconds.

Appendix : Free Float

A portion of shares outstanding by listed companies are hardly negotiable in certain period due to shareholders strategic holding, etc. Calculated with such kind of shares, index is not capable of reflecting real investment opportunities. Hence, XHF adopts free float weighted method to calculate index.

1. Scope of Free Float

XHF defines A share free float as shares outstanding and tradable shares in the open stock market. According to XHF's definition, free float is total A shares minus the restricted trading shares and the following non-negotiated shares:

- **Long term holdings by founders, families and senior executives:** Shares held by founders or founder families as well as shares held by members of the directorates and senior managers etc.
- **Government holdings:** Shares held by the government or its subsidiaries.
- **Strategic holdings:** Shares held by strategic investors for long-term strategic interests.
- **Employee share plans:** Shares held by employee share plans.

2. Identification of Free Float

- Restricted shares during the lock-in period are deemed as non-free float.
- For non-restricted shares, if they belong to the four categories and the holdings of shareholders or persons acting in concert is larger than 5%, they will be defined as non-free float, and those smaller than 5% will be defined as free float.
- Restricted shares after the lock-in period are treated the same way as 16 non-restricted shares.

3. Information Source

What XHF uses to identify and calculate free float is all public information that are required to be disclosed by existing laws and regulations, which include:

- Prospectus and listing notice: Information of founders, strategic investors, frozen shares, employee holdings, senior executives' holdings, etc. are available.
- Periodic report: Information of founders, strategic investors, frozen shares, employee holdings, senior executives' holdings and top ten shareholders, etc. are available.
- Temporary reports: Shares change notice, acquisition notice, equity impawning notice, etc. are available.

4. Adjustment of Free Float

XHF tracks the changes of free float shares timely and adjusts free float changes resulted from shareholder's behavior semi-annually. The adjustment will be effective on the 1st trading day of January and July.