



中華證券交易服務有限公司

CHINA EXCHANGES SERVICES  
COMPANY LIMITED

# **CES SCHK Pan-Entertainment and Leisure Index**

## **Calculation and Maintenance Methodology**

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China Exchanges Services Company Ltd. (CESC) has appointed Shenzhen Securities Information Co., Ltd. (SSIC) for index calculation, maintenance and dissemination. The index calculation and maintenance methodology is developed by mutual agreement between CESC and SSIC.

## **1. PERIODIC REVIEW OF CONSTITUENTS**

In order to characterize the market characteristics better and dynamically track the corresponding market performance, unless otherwise specified in the index methodology, equity indices shall be reviewed every six months in principle and the index constituents shall be adjusted based on the review results.

### **1.1 Review Dates**

Unless otherwise specified in the index methodology, The CES SCHK Pan-Entertainment and Leisure Index (CES SCHK E&L) shall be regularly adjusted semi-annually in principle, and the constituents shall be generally reviewed at the beginning of May and November each year. The periodic adjustments of constituents shall be semi-annually implemented on the next trading day after the second Friday in June and December each year. Announcements of the adjustment list shall usually be published two weeks prior to the implementation of the review results.

### **1.2 Reference Basis**

The constituent observation period is half a year, and the observation deadline is April 30 and October 31 of each year. When periodic review is conducted in May each year, the reference basis is generally the transaction data and financial data from November 1 of the previous year to April 30 of the review year. When periodic review is conducted in November each year,

the reference basis is generally the transaction data and financial data from May 1 to October 31 of the review year.

If the index methodology has other requirements for the review of constituents, the adopted data and constituent selection rules shall be implemented in accordance with specific index methodology.

During the observation period, in order to eliminate the impact of abnormal fluctuations on the survey indicators, the data of the first three trading days of the newly listed stocks shall not be included in the scope of observation. The data on the first day of the resumption of the share-trading reform or on the listing day of share-trading reform consideration shares shall not be included in the scope of observation, either.

Unless otherwise specified in the index methodology, the industry classification standard used in the index review shall be CNI Industry Classification Standard (“CICS”) in principle. For further details, please refer to the CNI Index’s official website.

### 1.3 Adjustment Quantity and Buffer Rules

In order to reduce the index adjustment turnover effectively, when periodic review is conducted, the number of constituents to be adjusted and a buffer zone shall be set that the number of constituents to be adjusted for each time generally does not exceed a prescribed ratio. Buffer rules shall be used when periodic review is conducted. The specific adjustment ratio and buffer zone can be found in the methodology for each index.

### 1.4 Reserve List

When periodic review is conducted, a reserve list shall be set up at the same time for the interim adjustment between adjacent periodic adjustments. When

interim adjustments need to be conducted due to suspension of listing, delisting, implementation of ST or \*ST, etc., the top ranked stocks in the reserve list shall be selected as the new constituents.

The number of stocks in the reserve list is generally 5% of the index constituent size. When the number of stocks in the reserve list is less than 5%, CESC and SSIC shall supplement the reserve list and announce it in a timely manner.

### 1.5 Handlings of Long-term Suspension Stocks

In principle, for the original constituents, when periodic review is conducted:

(1) Constituents whose actual trading days account for less than 50% of the total trading days during the observation period yet have not resumed trading until the observation deadline, will be added into the candidate deletion list.

For long-term suspension stocks included in the candidate deletion list, if their rankings do not meet the criteria of constituents according to the index methodology, they will be removed from the index when periodic review is conducted.

(2) Constituents whose actual trading days account for less than 50% of the total trading days during the observation period but have already resumed trading on the observation deadline, will be retained in the index in principle if they meet the criteria of constituents.

For stocks which have not been included in the index, when periodic review is conducted:

(1) Stocks that have been suspended from trading and have not resumed

trading until the observation deadline cannot be selected as candidate constituents.

(2) Stocks whose actual trading days account for less than 50% of the total trading days during the observation period but have already resumed trading on the observation deadline, cannot be selected as candidate constituents in principle unless the stock may affect the representativeness of the index.

If the newly selected stocks experience long-term suspension after the announcement of adjustment list, the adjustment list shall not be accordingly re-adjusted in principle.

## 1.6 Handlings of Stocks with Abnormal Operations, Abnormal Transactions, Market Manipulations or Major Violations

(1) For ST and \*ST stocks, if they are not original constituents, they will not be selected as candidate constituents, and if they are original constituents, they will be directly removed.

(2) In principle, when periodic review is conducted, stocks with financial losses cannot be selected as candidate constituents unless the stock may affect the representativeness of the index.

(3) In principle, stocks whose most recent financial statements follow non-standard audit opinions cannot be selected as candidate constituents unless the stock may affect the representativeness of the index.

(4) When periodic review is conducted, if an original constituent has delisting risks following the inspection conducted by the Securities Regulatory Commission due to violations of regulations yet has not

eliminated the risks until the observation deadline, then it will be preferentially removed from the index in principle.

(5) Non-constituent stocks that have been administratively punished, warned, ordered to rectify, or publicly condemned by the regulatory authorities in the past year cannot be selected as new constituents of the index in principle.

(6) When periodic review is conducted, stocks deemed by the regulatory authorities to have abnormal operations, abnormal transactions, market manipulations, or major violations, cannot be selected as candidate constituents of the index in principle.

## **2. INTERIM ADJUSTMENT OF CONSTITUENTS**

When the following circumstances occur, the interim adjustment mechanism shall be initiated for index constituents.

### **2.1 Initial Public Offering**

Some indices have quick insertion rules, specifically: If a newly issued company's average daily total market cap among the first 5 trading days comprehensively ranks top 10 in the overall A-share market, the newly issued stock shall be added into these indices after the 15th trading day to replace the original constituent with the smallest average daily total market cap. If a listed company's daily total market cap reaches top 10 in the A-share market due to M&A, quick insertion rules can also be put into effect.

Indices with quick insertion rules shall be specified in index methodologies.

## 2.2 Merger and Acquisition

Merger of two constituent companies: The merged new company stock retains constituent qualification, and the resulting vacancy shall be filled by the top-ranking stock in the reserve list.

One non-constituent company merges into one constituent company: The merged new company stock retains constituent qualification.

One constituent company merges into one non-constituent company: If the merged new company stock ranks higher than the top-ranking stock in the reserve list does, the new company stock shall be selected as a new constituent. Otherwise, the top-ranking stock in the reserve list shall be selected as a new constituent.

Merger, acquisition and consolidation of two non-constituent companies: If the merged new company's daily total market cap among the first 5 trading days reaches top 10 in the A-share market, quick insertion rules can be put into effect.

## 2.3 Spin-off

When one constituent company is spun off to form two or more companies, whether the resulting companies should be selected as index constituents depends on their rankings.

If a resulting company ranks higher than the lowest-ranking original constituent does, then it shall be added into the index. If more than one resulting company is selected as constituent, then the lowest-ranking original constituents shall be removed to keep the number of the index constituents constant.

If every resulting company ranks lower than the lowest-ranking original constituent does, but every resulting company (or some resulting companies) ranks higher than the top-ranking stock in the reserve list does, then the resulting company with the highest ranking shall be added into the index.

If every resulting company ranks lower than both the lowest-ranking original constituent and the top-ranking stock in the reserve list do, then the top-ranking stock in the reserve list shall be added into the index.

## 2.4 Suspension of Trading

The interim adjustment mechanism is not applicable to this kind of event.

## 2.5 Suspension of Listing and Delisting

If a constituent is suspended from listing, it will be removed from the day of suspension of listing, and the top-ranking stock in the reserve list shall be added into the index.

If a constituent is delisted, it will be removed from the first trading day of the delisting period, and the top-ranking stock in the reserve list shall be added into the index.

Constituent companies may be suspended from listing or delisted due to major irregularities (such as fraudulent financial reports). After deliberation by CESC and SSIC, they will be removed from the index, and the top-ranking stock in the reserve list shall be added into the index.

## 2.6 Bankruptcy

If a constituent company files for bankruptcy or is sentenced to bankruptcy, it will be removed from the index, and at the same time, whether to fill up the constituent vacancy should depend on specific index methodology.

## 2.7 Implementation of Risk Warning

If a constituent is issued to be prefixed by ST or \*ST, it will be removed from the constituents on the next trading day after the second Friday of the next month following the implementation of risk warning, and the top-ranking stock in the reserve list shall be added into the index.

## 2.8 Stock Classified as Eligible for Sell Only under “Stock Connect” (Only applicable for indices which index universe is based on Stock Connect eligible securities)

For indices comprised of eligible securities for Stock Connect, if a constituent company is classified as eligible for sell only or removed from “Stock Connect”, it will be removed from the index and replaced by the highest ranking stock in the reserve list (if applicable).

## 2.9 Other Circumstances

In the future, there may be more circumstances that are complicated yet have not been considered in rules or methodologies. CESC and SSIC shall determine the appropriate handling method based on the open and transparent market principles, and make supplement or modification in due course.

### **3. INDEX MAINTENANCE**

To ensure that the index can reflect the trading information of relevant stocks in a timely manner, CESC and SSIC maintain the constituents of the equity index in accordance with the following rules.

CESC and SSIC maintain constituent companies based on the corresponding event types announced by the listed companies. According to different types of corporate events, real-time adjustments or periodic adjustments shall be implemented on stock shares, specifically:

#### **3.1 Real-time Adjustment**

When constituent companies conduct rights issue (such as bonus issue and reserve issue) or stock dividend, the free float of constituents shall be adjusted on the Ex-date.

When constituent companies conduct secondary offering or rights issue, the free float of constituents shall be adjusted on the listing day of the new share.

When constituent companies exercise convertible bond, repurchase shares or exercise warrants, the free float of constituents shall be adjusted on the next trading day of its announcement day.

#### **3.2 Periodic Adjustment**

When free float changes owing to non-corporate events such as share increase (or decrease) in major shareholders and listing of restricted stocks, etc., the free float periodic adjustments shall take effect on the next trading day after the second Friday in June and December each year based on the shareholding data announced in the latest periodic reports and the temporary announcements.

## 4. INDEX CALCULATION

CESC and SSIC calculate the closing price for equity indices and the real-time price for some equity indices. If there are circumstances that are not clearly defined in the existing index calculation and maintenance rules or methodologies, or needs to judge the use of data or index construction with experience due to special matters, CESC and SSIC can jointly evaluate the processing plan, stakeholders shall be consulted for opinions if necessary.

### 4.1 Index Real-time Calculation

For the real-time calculation of A-share equity indices, the real-time trading prices of constituents come from the trading system of domestic Stock Exchanges.

Steps of practical operation are as follows: The index opening-price is calculated by using the stock opening-price obtained through the daily call auction (If there is no deal, the index opening-price shall be calculated by using the reference opening-price provided by the quotation system). The index shall be calculated every 3 seconds till the close of trading. Price of each constituent (P) is determined as follows:

(1) If there is no transaction in the whole trading day, P equals to the reference opening-price.

(2) If transaction exists in the trading day, P equals to the latest trading price.

CESC and SSIC will decide whether to continue the index calculation in case of abnormal quotations from domestic Stock Exchanges.

For the real-time calculation of other equity indices, the real-time trading

prices of constituents come from domestic Stock Exchanges and official authorized institutions in other markets, and the real-time exchange rates come from Refinitiv.

## 4.2 Free Float

Free float refers to the actual floating shares that can be traded in the market. The confirmation of the free float is based on the non-restricted shares, excluding the non-restricted shares held by the following shareholders and their concerted parties:

- (1) State owned (juridical person) shareholders;
- (2) Strategic investors;
- (3) Founders of the company, families, and senior executives.

Free float= The number of non-restricted shares in the latest announcement of changes in share capital- $\Sigma$  non-restricted shares held by the above three types of shareholders and their concerted parties with a shareholding ratio of more than 5%

For the definition and adjustment rules of free float, please refer to Appendix A.

## 4.3 Index Calculation

The index is calculated in the unit of "point", accurate to 4 decimal places.

CESC and SSIC calculate both total return index and price index to meet investors' needs. The difference between total return index and price index is

that when constituent companies pay dividends, the index point of the total return index will not fall back naturally.

#### (1) Price Index

The index is constructed by Paasche weighted method based on the following formula for daily real-time calculation:

$$PI_t = PI_{t-1} \times \frac{\sum(\text{transaction price} \times \text{constituent weight} \times \text{weight factor} \times \text{exchange rate})}{\sum(\text{closing price}_{t-1} \times \text{constituent weight} \times \text{weight factor} \times \text{exchange rate})}$$

#### (2) Total Return Index

The total return index is the derivative index of price index. The calculation of total return index takes the reinvestment income of constituent dividends into consideration. The calculation formula of total return index is:

$$TRI_t = TRI_{t-1} \times \frac{\sum(\text{transaction price} \times \text{constituent weight} \times \text{weight factor} \times \text{exchange rate})}{\text{denominator}}$$

Where

$$\text{denominator} = \sum(\text{closing price}_{t-1} \times \text{constituent weight} \times \text{weight factor} \times \text{exchange rate}) - \text{cash dividend before tax}$$

## 5. INDEX DISSEMINATION

### 5.1 Dissemination Channels

The CES SCHK Pan-Entertainment and Leisure Index is disseminated via various channels:

- Real-time quotes shall be disseminated via the Shenzhen Stock Exchange information release system and Internet access service;
- Quotes shall be daily disseminated via data transmission channels such as SSCC and FTP;
- Published daily through the Internet at CESC's website:  
<http://www.cesc.com/>;
- Published daily through the Internet at CNI's website:  
<http://www.cnindex.com.cn/>.

### 5.2 Publication Frequencies

The real-time calculated and published equity indices shall be updated every 3 seconds.

## 6. INDEX RULES REVIEW

CESC and SSIC may take non-scheduled reviews on index rule documents, such as the *Index Calculation and Maintenance Methodology* and *Index Methodology*, and may make changes to index rules as appropriate specifically based on market environment changes, market participants' feedback and problems identified in the process of index management.

## 7. INFORMATION DISCLOSURE

To maintain the objectiveness, independence and authority of the indices, CESC has adopted a stringent information disclosure policy to ensure transparency, openness and fairness.

- Any personnel of CESC and SSIC are forbidden to divulge any information to any third party, including private media interviews before such information is disclosed to the public.
- Media used for information disclosure includes but not limited to website of CESC and SSIC.

## Appendix A: The Definition and Regulation of Free Float

### 1. The Definition of Free Float

The CES SCHK Pan-Entertainment and Leisure Index is constructed by Paasche weighted method and weighted by free float.

The free float refers to the real floating shares that can be traded in the market. The confirmation of the free float will be based on the non-restricted shares, excluding the non-restricted shares held by the following shareholders and their concerted parties:

- State owned (juridical person) shareholders;
- Strategic investors;
- Founders of the company, families and senior executives.

The weight of free float = the number of non-restricted shares in the latest announcement of changes in share capital -  $\Sigma$  non-restricted shares held by the above three types of shareholders and their concerted parties with a shareholding ratio of more than 5%.

That is: The weight of free float in A shares = the latest number of non-restricted A shares -  $\Sigma$  non-restricted A shares held by the above three types of shareholders and their concerted parties with a shareholding ratio of more than 5%.

The weight of free float in B shares = the latest number of non-restricted B shares -  $\Sigma$  non-restricted B shares held by the above three types of shareholders and their concerted parties with a shareholding ratio of more

than 5%.

The weight of free float in Hong Kong shares = the latest number of non-restricted Hong Kong shares -  $\Sigma$  non-restricted Hong Kong shares held by the above three types of shareholders and their concerted parties with a shareholding ratio of more than 5%.

Recognition and processing of free float shall be derived from publicly available shareholder information, i.e. public information disclosed by listed companies in accordance with laws and regulations, including but not limited to the following:

- Prospectus, Listing Notice (Stock Capitalization Table, Top 10 Shareholders and Top 10 Floating Share Shareholders Table etc.)
- Periodic Report (Statement of Stock Capital, Top 10 Shareholders and Top 10 Floating Share Shareholders Table etc.)
- Interim Notice (Change of Share Capital Notice, Notice of Major Increase, Decrease and Merge in Shareholding)

## **2. Daily Adjustment Rules under Maintenance Rules of Free Float**

The maintenance of free float is based on the data published by the temporary announcements and periodic reports of listed companies. Both real-time adjustment and periodic adjustment shall be adopted:

### **2.1 Real-time Adjustment**

On the day of reserve issue and stock dividend, the weight of corresponding constituent shares shall be revised according to the actual number of shares issued. When constituent companies conduct rights issue, the weight of

corresponding constituent shares shall be revised according to the ratio of rights issue on the ex-right day. When constituent companies issue new shares, the free float of constituents shall be revised on the listing day of added shares. When constituent companies exercise convertible bonds, repurchase shares or exercise warrants, the free float of constituents shall be revised on the next trading day of its announcement day due to the date of effective adjustment of stock capital is earlier than announcement date. When constituent companies conduct share-trading reform resumption, the free float of constituents shall be revised according to the free float after paying consideration.

## 2.2 Periodic Review

In order to avoid frequent changes in constituent weight and make convenience for funds to track the indices, the change of free float owing to non-corporate business (such as the listing of share-trading reform shares, the circulation of initial shares, the circulation of offline placement shares, the circulation of private placement shares obtained by major shareholders and strategic investors, share increase and decrease in major shareholders, etc.) are reviewed semi-annually. Free float adjustments take effect on the next trading day after the second Friday in June and December of each year.

## Appendix B: Index Glossary

1. Constituents – Stocks included in the index calculation.
2. Constituent Weight – The free float of a constituent.
3. Free Float – The actual number of tradable floating shares of a listed company, which is the number of floating shares after the non-restricted shares exclude the "non-restricted shares held by the following three types of shareholders and their concerted parties with an aggregated shareholding ratio over 5%": ① State-owned (juridical person) shareholder; ② Strategic investor; ③ Company founder, family or company executives.
4. Free Float Market Value – The stock price multiplied by the free float.
5. Reserve List – A reserve list shall be established when periodic review is conducted. When the index has a constituent vacancy due to risk warning, delisting, merger, etc., or has other reasons for temporary replacement of constituents, the top-ranking stocks in the reserve list shall be selected as the new constituents in turn. The number of stocks in the reserve list is generally 5% of the index constituent size.
6. Periodic Review – The qualifications and weights of index constituents shall be re-evaluated following a specific cycle (usually monthly, quarterly, semi-annually or annually). The adjustment process can ensure that the index continues to characterize the overall performance of the market or market segments at the time of construction.
7. Weight Limitation – The weight of constituents shall not exceed the set upper limitation.
8. Weight Factor – Used to adjust the initial weight of the constituents to meet the weight upper limitation requirement.

9. Corporate Event – Refers to the corporate events such as dividends, bonus issues and rights issues, etc., which can lead to the changes of price or shares.
10. Action of Shareholders – Mainly refers to shareholders' equity changes such as increasing shareholdings, decreasing shareholdings, listing of restricted shares, etc.
11. Buffer Zone – In order to effectively reduce the turnover rate of index constituents, some indices shall follow the buffer rules to conduct the periodic review. Please refer to the index methodologies for specific buffer ratios.
12. Base Day – The date corresponding to the index base point.
13. Base Point – The initial value of the index, which is the benchmark value for continuous calculation and comparison of the current index.
14. Quick Insertion Rules – Securities that meet the requirements for quick insertion rules shall be included in the index after the end of the 15th trading day of their listing.
15. Sector Index – A kind of index reflecting the performance of companies in different industry sectors based on different industry classification standards (such as the CNI Industry Classification Standard, the Securities Regulatory Commission's Industry Classification Guidelines for Listed Companies).
16. Announcement Day – The date that the periodic review result is announced.
17. Extreme Value Management – An extreme value processing method to ensure that the observation result shall not be greatly affected by extreme values.

18. Style Index – A kind of index reflecting the specific style or investment characteristics of the market.
19. Ex-Price – The reference opening-price of the next trading day adjusted based on specific corporate events.

## Contact Us

For further details on CES SCHK Pan-Entertainment and Leisure Index,  
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