

**STANDARD  
& POOR'S**

# S&P/HKEx GEM

INDEX METHODOLOGY



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# Introduction

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Standard & Poor's and Hong Kong Exchanges and Clearing Limited (HKEx) together created the S&P/HKEx GEM index, measuring the Growth Enterprise Market (GEM), an alternative stock market operated by Hong Kong Exchanges and Clearing Limited. GEM offers growth enterprises in Hong Kong an opportunity to raise capital. The S&P/HKEx GEM index measures the performance of these high growth companies. This index is offered as a complement to the S&P/HKEx LargeCap index. S&P/HKEx GEM is a real-time, float-adjusted index, representing approximately 75% of the GEM Board by market capitalization.

## **Highlights**

The S&P/HKEx GEM index, a benchmark for the GEM stocks listed on the Stock Exchange of Hong Kong (SEHK), made its debut on March 3<sup>rd</sup> 2003. The index is float-adjusted for market-capitalization, to reflect shares available for trading to the public, and does not have a fixed number of index constituents.

A quarterly rebalancing process is used to remove companies that comprise less than 0.25% of the weight of the index and add companies whose weight, once included, are greater than 0.5% of the index. Companies must also meet minimum liquidity requirements to be eligible for inclusion. Companies removed during each quarter, through regular corporate actions, will not be replaced at the time of the deletion.

## **Index Family**

The S&P/HKEx index family includes the S&P/HKEx LargeCap index, measuring the SEHK main board, and the S&P/HKEx GEM index, which measures the SEHK Growth Enterprise Market.

# Eligibility Criteria

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## **Index Eligibility**

The S&P/HKEx GEM index is a rules-based index created to represent stocks trading on the Growth Enterprise Market (GEM). An Index Committee maintains the S&P/HKEx GEM index. The Index Committee is comprised of five – three representatives from Standard & Poor’s and two from Hong Kong Exchanges and Clearing Limited (HKEx).

New constituents will be added only on a quarterly basis after the close of trading on the third Friday of the last month of each calendar quarter – i.e., March, June, September and December. All companies with common share listings on GEM are eligible for inclusion in the index.

## **Eligibility Factors**

1. Any company whose shares are candidates for inclusion in the S&P/HKEx GEM index must be listed on GEM. Limited partnerships, income trusts, preferred shares, exchangeable shares, warrants, units, rights, U.S. dollar-denominated securities and other financial instruments the Index Committee deems not appropriate as candidates, are not eligible for inclusion in the index.
2. All classes of common shares – those issued and outstanding that represent the residual equity of the earnings in the company – are eligible for inclusion in the index. For pricing purposes, only one class of common shares for each company will be used in the index calculation. In the event that a company has more than one class of common shares listed on GEM, and such company is included in the index, the outstanding float shares of each class will be combined into and priced at the largest most liquid class, at the Index Committee’s discretion, for the purpose of index calculation.
3. All stocks must be listed on GEM for at least 12 full calendar months, as of the effective date of the quarterly rebalancing, before becoming eligible for inclusion in the S&P/HKEx GEM index. Stocks listed for at least 6 full calendar months will be eligible only if they rank in the top quartile of the index for both size and liquidity. The Index Committee, at its sole and absolute discretion, has the right to add any company before the 12-month period, if the Index Committee determines that the company’s history warrants early inclusion.

**Domicile.** Only companies listed on the Stock Exchange of Hong Kong (SEHK) GEM Board will be considered for inclusion in the S&P/HKEx GEM index. Companies domiciled in Mainland China, listed on the SEHK, will be eligible for inclusion in the index.

**Market Capitalization.** Companies added to the index must meet a minimum market capitalization criterion, as measured by the float-adjusted market capitalization. Float-adjusted market capitalization is measured by excluding the value of shares owned by any entity, including governments, government agencies, other companies or affiliated groups of shareholders. Index weights are determined using the float-adjusted market capitalization.

*Please refer to the Investable Weight Factor section for details.*

**Sector Classification.** Stocks are classified by the Global Industry Classification Standard (GICS<sup>®</sup>). The Standard & Poor's global indices provide geographic and economic balance over the 10 GICS Sectors. These sectors, consistent throughout all the Standard & Poor's indices, are Consumer Discretionary, Consumer Staples, Energy, Financials, Health Care, Industrials, Information Technology, Materials, Telecommunication Services and Utilities.

**Additions.** As measured at the reference date each quarter, to be eligible for addition to the index upon rebalancing a company must meet the following criteria.

- a) The company's relative weight must be at least 0.5% of the aggregate market capitalization of the index, after taking into consideration all share changes, additions and deletions.
- b) The company must have an annual dollar value traded figure greater than or equal to 0.05% of the total annual dollar value traded for the market.
- c) The company cannot have more than 120 non-trading days over the previous 12 full calendar months.

The reference date for data is the last trading day of the month prior to the rebalance implementation.

**Deletions.** As measured at the reference date each quarter, to remain in the index a company must meet the following criteria.

- a) The company's relative weight must be at least 0.25% of the aggregate market capitalization of the index, after taking into consideration all share changes, additions and deletions.
- b) The company must have an annual dollar value traded figure greater than or equal to 0.025% of the total annual dollar value traded for the market.
- c) The company cannot have more than 120 non-trading days over the previous 12 full calendar months.

# Index Construction

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## **Approaches**

The S&P/HKEx GEM index is calculated using a base-weighted aggregate methodology. That means the level of an index reflects the total market value of all the component stocks relative to a particular base period. The total market value of a company is determined by multiplying the price of its stock by the number of shares available after float adjustment. An indexed number is used to represent the result of this calculation in order to make the value easier to work with and track over time. It is much easier to graph a chart based on indexed values than one based on actual market values. The index is calculated in real time.

## **Index Calculations**

Index calculations are based on stock prices taken from the Stock Exchange of Hong Kong (SEHK). The official daily index close is based on constituent prices calculated through the Hong Kong Stock Exchange's Market-on-the-Close process and will be calculated after the market close. Real-time quotes will be provided and updated every 15 seconds through SEHK and recognized international data vendors.

On any given day, the index value is the quotient of the total available market capitalization of the index's constituents and its divisor. Continuity in index values is maintained by adjusting the divisor for all changes in the constituents' share capital after the base date. This includes additions and deletions to the index, rights issues, share buybacks and issuances, spin-offs, and adjustments in availability. The divisor's time series is, in effect, a chronological summary of all changes affecting the base capital of the index. The divisor is adjusted such that the index value at an instant just prior to a change in base capital equals the index value at an instant immediately following that change.

*Please refer to the Index Mathematics document for details on index-level calculations.*

## **Restatements**

The S&P/HKEx Index Committees' preference is to avoid index restatements. However, in situations where it is deemed completely necessary, the Index Committee may consider restating an index. Each situation will be considered as it occurs.

# Index Maintenance

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The entire constituent list for the S&P/HKEx GEM index will be rebalanced based on data referenced at the close of trading on the last day of February, May, August and November. The new index composition will be announced within the first two weeks of the following month, to be effective after the close of business on the third Friday of the last month of that quarter. The review procedures are as follows.

## **Rebalancing**

1. All eligible candidates listed on GEM, as at the reference date, are combined with current index constituents to form the eligible index universe.
2. All companies in the universe are ranked by their total float-adjusted market capitalization, using updated shares and last traded board lot price.
3. A cumulative market value is calculated starting with the largest company and concluding with the smallest company in the universe.
4. The cumulative market values calculated above become the capitalization aggregates used for the relative weight calculations. A relative weight for each company is calculated against the cumulative market value up to and including that stock. i.e. -- Each company's relative weight is calculated using a cumulative market cap, which includes the stock and all the stocks ranked above it in the pool.
5. Any security with a relative weight less than 0.25% is marked as ineligible for inclusion in the index.
6. Any security with a relative weight greater than or equal to 0.5% is marked for potential addition to the index.
7. All companies in the remaining eligible index universe are ranked by their annual dollar value traded figure.
8. For each company, the dollar value traded relative to the overall market's dollar value traded figure is calculated.
9. Any security with a relative dollar value traded less than 0.025% is removed from the eligible index universe.
10. Any security with a relative dollar value traded figure greater than or equal to 0.05% is marked for potential addition to the index.
11. All securities which meet eligibility criteria #6 and #10, and where the number of non-trading days in the previous 12 calendar months number is not fewer than 120 will make up the S&P/HKEx GEM index after the quarterly revision.

**Frequency.** Index rebalancings occur once a quarter, with the index eligible universe measured at the end of middle month of the calendar quarter. All changes become effective after the close of business on the third Friday of the last month of the quarter. Those being March, June, September and December

**Share Updates.** Index share updates occur quarterly in conjunction with the index rebalance.

**5% Rule.** Significant share changes will be implemented as soon practicable after they occur if the number of outstanding shares changes by 5% or more. Share changes of less than 5% will be implemented as stated above. Similarly, changes reflecting float adjustment are applied if they cause a capitalization change of 5% or over. Changes of less than this are applied at annual review in September.

### **Corporate Actions**

Maintaining the S&P/HKEx GEM index includes monitoring and completing the adjustments for company additions and deletions, share changes, stock splits, stock dividends, and stock price adjustments due to restructurings or spin-offs. Some corporate actions, such as stock splits and stock dividends, require simple changes in the common shares outstanding and the stock prices of the companies in the index. Other corporate actions, such as share issuances, change the market value of an index and require an index divisor adjustment to prevent the value of the index from changing.

Adjusting the index divisor for a change in market value leaves the value of the index unaffected by the corporate action. This helps keep the value of the index accurate as a barometer of stock market performance, and ensures that the movement of the index does not reflect the corporate actions of the companies in it. Divisor adjustments are made after the close of trading and after the calculation of the closing value of the index. Any change in the index divisor also affects the corresponding sub-indices and divisors. Each sub-index is maintained in the same manner as the headline index.

Corporate actions such as splits, stock dividends, spin-offs and rights offerings are applied on the ex-date.

When a constituent of the S&P/HKEx GEM index undergoes reorganization as a result of an asset spin-off, plan of arrangement or the like, the successor company's<sup>1</sup> stock will remain in the index subject to the following:

- The company must meet all the criteria for remaining in the index; and
- The successor company's relative weight must be greater than 0.25% of the index, as calculated to include the successor company's market capitalization.

If the successor company remains in the index, an adjustment will be made to the index by calculating an assigned value for the distribution and adjusting the last traded board lot

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<sup>1</sup> The Index Committee will determine which resulting company is deemed to be the successor company.

price of the affected stock by that amount. This change will cause the divisor to be adjusted so that the index level will not be impacted by the stock price change.

The assigned value of such a distribution will be determined by either:

1. The spun-off company's closing value on the HKEx (when both spun-off and parent company are listed), or
2. The average of the bid/ask prices that may be available in the over-the-counter market, or
3. A value as determined by Standard & Poor's.

If the spun-off company represents a relative weight greater than 0.25%, the company will automatically be added to the index. Otherwise, the spun-off company will be placed in the pool of companies eligible for inclusion at the next quarterly rebalancing and must meet all of the S&P/HKEx GEM index criteria for inclusion at that time.

A company will be removed from the index at the first practical date upon confirmation that a takeover bid for that company is successful.

Companies will be removed from the index at the first practical date if they are delisted, become defunct or fail to meet the S&P/HKEx GEM index criteria for eligibility.

In the event a company within the index is declared bankrupt, the company will be removed from the index within five trading days. If the company is halted and does not open on the removal date, then a removal price will be determined by Standard & Poor's.

In the event a stock is halted or suspended from trading for five consecutive trading days, the stock will become subject to review and may be removed at a price determined by the Index Committee.

In the event a company in the index merges or amalgamates with another company or companies, the resulting company will be retained subject to the following:

- The company must meet all standards set out in the criteria for remaining in the index.
- The company's relative weight must be greater than 0.25% of the index, as calculated to include the successor company's market capitalization.

### **Currency of Calculation**

The S&P/HKEx index series is calculated in Hong Kong dollars.

### **Base Date**

The S&P/HKEx GEM index is based at February 28, 2003 with a base value of 1000. The index has a history back to December 31<sup>st</sup> 2002.

### **Investable Weight Factor (IWF)**

The market capitalization of each stock is adjusted to exclude the value of shares held by other index constituents or by other shareholders when any such holding is 5% or more. The proportion of gross market capitalization included for index calculation purposes is called the float shares. The coefficient used to determine float shares is called the investable weight factor (IWF). The IWF will be reviewed and updated annually, in September, except in the situation whereby the IWF changes by 5% or more in one single movement. In this situation the timing of the change will be made as close as practicable to the actual change.

# Index Governance

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## **Index Committee**

The S&P/HKEx GEM index is maintained by the S&P/HKEx Index Committee. The Index Committee, comprised of five members representing both Standard & Poor's and the Hong Kong Exchanges and Clearing Ltd. (HKEx), is responsible for setting policy and determining index composition. A representative appointed by Standard & Poor's chairs the Index Committee.

Meetings are held on a quarterly basis or when warranted by unusual corporate events. Subject to the index policies and guidelines outlined in this document, the Index Committee in its sole and absolute discretion may add or remove any company from any index as part of its index maintenance responsibilities. Deliberations of the Index Committee are kept strictly confidential. This methodology document is continually reviewed with the advice of, and in consultation with, the Index Committee and may be subject to change at any time.

# Index Policy

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## **Announcements**

Index announcements will generally be made five days in advance of implementation of anticipated corporate events whenever practical, bearing in mind that the timing of such events is occasionally uncertain.

Announcements will be made after the daily close of trading on the SEHK by way of a news release. The news release will be distributed to local Hong Kong media outlets, posted on international wire services and on the Standard & Poor's Index Services Web site at [www.indices.standardandpoors.com](http://www.indices.standardandpoors.com)

## **Holiday Schedule**

The S&P/HKEx index series is calculated on every trading day as set in the calendar released by the Stock Exchange of Hong Kong.

## **Real-Time Calculation**

For the S&P/HKEx index series, the opening price is the first trade of any stock. In the event that a stock does not open, the previous closing price or adjusted price is used. The closing index value is calculated using the closing price of each stock that traded during the day and adjusted closing prices of the previous trading day for those stocks that did not trade during the day.

## **Index Precision**

The level of precision for index calculation is as follows:

- Index values are published rounded to two decimal places.
- Share prices are rounded to six decimal places.
- Shares outstanding are expressed in units.
- Investable Weight Factors are rounded to four decimal places.
- Exchange rates are stated to 14 decimal places.
- Market capitalization is stated to four decimal places.
- Index values are calculated to 14 decimal places.

# Index Dissemination

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The S&P/HKEx GEM index is calculated and distributed at 15-second intervals via major data vendors.

Index information is available directly from Standard & Poor's or via major information vendors. At the close of each trading day Standard & Poor's produces daily files that contain all of the information about the index.

## **Tickers**

Index Information and data for the S&P/HKEx GEM index can be found using the following identifiers on the following vendors:

**Bloomberg:** HKSPGEM

**Reuters:** .SPHKGEM

## **FTP**

End of day index data for the S&P/HKEx index series is available via FTP on subscription.

*For further information, please refer to Standard & Poor's Web site at [www.indices.standardandpoors.com](http://www.indices.standardandpoors.com)*

# S&P Contact Information

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## **Index Management**

David M. Blitzler, Ph.D. – Managing Director & Chairman of the Index Committee	
david_blitzler@standardandpoors.com	+1.212.438.3907
Andrew Webb – Director, Asian Index Services	
andrew_webb@standardandpoors.com	+86.10.6569.2919

## **Media Relations**

Angela Wang – Communications	
angela_wang@standardandpoors.com	+8610.6535.2961

## **Index Operations & Business Development**

### **North America**

#### New York

David Kao	+1.212.438.3354
-----------	-----------------

#### Toronto

Jasmit Bhandal	+1.416.507.3203
----------------	-----------------

### **Europe**

#### London

Susan Fagg	+44.20.7176.8888
------------	------------------

### **Asia**

#### Tokyo

Seiichiro Uchi	+813.4550.8568
----------------	----------------

#### Beijing

Andrew Webb	+86.10.6569.2919
-------------	------------------

#### Sydney

Guy Maguire	+61.2.9255.9822
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