

STANDARD  
& POOR'S

# S&P JAPAN EMERGING STOCKS 100

INDEX METHODOLOGY

November 2007

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# Introduction

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The S&P Japan Emerging Stock (JES) 100 is comprised of the largest and most liquid stocks trading on the Jasdaq, Nagoya Centrex, Osaka Hercules, Sapporo Ambitious and TSE Mothers exchanges.

## **Highlights**

The S&P Japan Emerging Stock 100 includes 100 tradable, exchange-listed common stocks trading in the Japanese market of emerging companies.

The index follows a rules-driven methodology with an annual reconstitution.

To ensure investability, there are minimum liquidity requirements.

Turnover is reduced through buffers implemented at each annual rebalancing.

The index uses a float-adjusted, market capitalization weighting scheme. If required, single stock concentration is capped at 10% during the annual rebalancing.

# Eligibility Criteria

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## **Universe**

The eligible universe for the S&P JES 100 is comprised of all stocks trading on the Jasdaq, Nagoya Centrex, Osaka Hercules, Sapporo Ambitious and TSE Mothers exchanges.

## **Investability Criteria**

The universe is narrowed down to an investable set of stocks based on the following criteria:

**Value Traded.** Stocks must have 12-month average daily value traded above ¥ 40 million, as of the reference date.

**Days Traded.** Stocks must have traded for at least 200 days during the 12 months immediately preceding the reference date.

**Exchange Listing.** The stocks must be listed on the Jasdaq, Nagoya Centrex, Osaka Hercules, Sapporo Ambitious or TSE Mothers exchange.

The number of days traded and liquidity criteria are subject to change according to market conditions. These figures are annualized for companies that have been listed for less than a year. The reference date is the last trading date of August.

Stocks passing these criteria form the Investable Universe.

## **Timing of Changes**

**Additions.** Additions are made to the Index only at the time of the annual rebalancing. To be eligible for addition to the index, a company must meet the investability criteria listed above.

**Deletions.** Deletions can occur due to acquisitions, mergers and spin-offs or due to bankruptcies or suspension. Companies may also be removed when they no longer represent the market.

# Index Construction

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## Approaches

The methodology employs a float-adjusted, market capitalization weighting scheme, using the divisor methodology used in most Standard & Poor's equity indices.

There are two steps in the rebalancing of the index. The first is the selection of the 100 companies; the second is the weighting of the index constituents.

## Constituent Selection

The selection of index constituents is done as follows:

1. All stocks in the Investable Universe are sorted on basis of float-adjusted market capitalization.
2. The 100 largest stocks form the Index, subject to a 30 stock buffer for index constituents. If a current index constituent is among the top 130 at the rebalancing, it remains in the index. If not, the stock is deleted and the next largest stock, that is not an index constituent, is added.

## Constituent Weightings

If an initial weighting based on float-adjusted, market capitalization yields no single stock with a weight of greater than 10%, no adjustments are made. The index, then, follows a straightforward float adjusted market capitalization weighted scheme.

However, if one or more stocks have a weight of more than 10%, then their weights are capped as follows:

1. Every stock is given an initial Index Capitalization (IC) equal to its float-adjusted, market capitalization. The Maximum Weight (MW) for each constituent is set to 10%. The weight of a stock is defined as follows:

$$\text{Weight of Stock}_i = \frac{IC_i}{\sum_{i=1}^{100} (IC)_i}$$

2. The IC for each stock is modified as follows:

If  $Weight\ of\ Stock_i > MW$

$$\text{then } IC_i = IC_{i, previous} - (5\% * IC_{i, previous})$$

$$\text{else } IC_i = IC_{i, previous}$$

3. If, for every stock  $i$ , the  $Weight\ of\ Stock_i < MW$  then the process is complete and the weights derived in step 2 are used. If not, steps 1 and 2 are repeated until all stocks meet the maximum weight requirements.

The MW parameter is the maximum weight of each stock at the rebalancing. This parameter can be changed depending upon market circumstances. Steps 1 through 3 modify the market cap-weighting scheme in a looped manner until the MW constraints are satisfied for all index constituents.

### **Index Calculations**

The index is calculated by means of the divisor methodology used in all Standard & Poor's equity indices. 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.*

# Index Maintenance

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Changes in the index level should reflect changes in the total market capitalization of the index that are caused by price movements in the market. They should not reflect changes in the market capitalization of the index, or of the individual stocks, that are caused by corporate actions such as dividend payments, stock splits, distributions to shareholders, mergers, or acquisitions. When a corporate action affects the price of a security – such as when the price drops on a special distribution ex-date – the price of the security is adjusted to reflect the ex-date and the index divisor is adjusted to offset any change in the total market value of the index.

When a stock is replaced by another stock, the index divisor is adjusted so that the change in index market value that results from the addition or deletion does not change the index level.

*Please refer to the Index Mathematics document for mathematical formulae and tables defining specific corporate actions.*

## **Rebalancing**

Constituents are rebalanced annually, with the eligible universe measured at the end of August. All changes become effective after the close business on the third Friday of September.

## **Corporate Actions**

Maintaining the 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.

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

*Please refer to the Index Mathematics documents for a summary of index maintenance adjustments.*

### **Base Date**

The index base date is September 15, 2000. Daily returns are available from that date. The base value, for both the price return and total return series, is 1000.

### **Currency of Calculation**

The S&P Japan Emerging Stock 100 is calculated in Japanese yen.

### **Investable Weight Factor**

Investable Weight Factor =  $1 - \text{Sum of the \% held by 10 major shareholders}$

All issues in the S&P Japan Emerging Stock are assigned a float factor, called an Investable Weight Factor (IWF). The IWF ranges between 0 and 1 and is an adjustment factor that accounts for the publicly available shares of a company. The company's adjusted market capitalization determines an equity issue's relative weight in the index.

Standard & Poor's identifies the following shareholders whose holdings are considered to be control blocks and are subject to float adjustment:

1. Holdings by banks and trust banks (excludes accounts in trust or pension funds)
2. Holdings by insurance companies
3. Holdings by current or former officers and directors of the company, founders of the company, or family trusts of officers, directors or founders
4. Holdings by other publicly traded corporations, venture capital firms, private equity firms, strategic partners or leveraged buy-out groups
5. Holdings by shareholders whose shares have not changed in over two years.

# Index Data

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## **Total Return and Net Return Indices**

Both a price return and a total return index series are calculated. Gross cash dividends are applied on the ex-date of the dividend.

Standard and Poor's calculates daily return series using both gross and net cash dividends reinvested. Net return reinvested is reflective of the return to an investor where dividends are reinvested after the deduction of withholding tax. The tax rate applied is the rate to non-resident institutions that do not benefit from double taxation treaties. The net return reinvested series approximates the returns available to an investor based in Luxembourg, reflecting the minimum possible dividend reinvestment since the highest rates are theoretically applied to Luxembourg-based investors. The rates applied are the current effective rates and are sourced from Ernst and Young's Worldwide Corporate Tax Guide and the Economic Intelligence Unit. These rates are maintained and updated to reflect any ongoing changes.

# Index Governance

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## **Index Committee**

Each of Standard & Poor's global indices is the responsibility of an Index Committee that monitors overall policy guidelines and methodologies, as well as additions and deletions to these indices. The Index Committee is composed of Standard & Poor's staff specialized in the various regional equity markets. In some cases, regional committees include non-Standard & Poor's staff as minority members.

It is the sole responsibility of the Index Committee to decide on all matters relating to methodology, maintenance, constituent selection and index procedures. The Index Committee makes decisions based on all publicly available information, and committee discussions are kept confidential to avoid any unnecessary impact on market trading. As the number of stocks in Standard & Poor's global indices is fixed, changes in the index are generally driven by corporate activity or the inability of a stock to reflect the market due to a large change in size or liquidity. This minimizes turnover, as changes are not based on small changes in size that cross some arbitrarily defined thresholds.

# Index Policy

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## **Announcements**

All corporate actions that reflect changes to index constituents are normally announced five days ahead of the effective date. These announcements are posted on the Web site and sent to clients by email. Quarterly changes are also announced five days before the ex-date.

*All corporate actions are announced via Standard & Poor's Index Services Web site at [www.indices.standardandpoors.com](http://www.indices.standardandpoors.com).*

## **Holiday Schedule**

The S&P Japan Emerging Stock 100 is calculated on all business days.

*A complete holiday schedule for the year is available on the Standard & Poor's Index Services Web site at [www.indices.standardandpoors.com](http://www.indices.standardandpoors.com).*

## **Recalculation Policy**

Standard & Poor's attempts to avoid incorrect data that affects the indices on a best-efforts basis. Incorrect share calculations, corporate actions, and exchange rates are corrected immediately.

## **Real-Time Calculation**

A real-time index is calculated for an index as soon as the first market within the index opens. The opening price is the first trade of any stock in the designated exchange. In the event that a stock does not open, the previous closing price is used. The indices are calculated until five minutes past the exchange goes down, to allow for last-minute revisions by the Tokyo Stock Exchange.

## **Index Precision**

The level of precision for index calculation is as follows:

- Index values are published rounded to two decimal places.
- Shares outstanding are expressed in units.
- Investable Weight Factors (IWF) are rounded to two decimal places except for the IWF changes due to a private placement.
- Index values are calculated to six decimal places.

# Index Dissemination

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Market-sensitive announcements, including the additions or deletions of stocks in the index, are normally made when markets are closed. In general, announcements are made at 04:15 PM Eastern Time.

## **Tickers**

Daily index values, corporate actions, index weights and portfolios can be received via Standard & Poor's FTP site. Additionally, daily index values can be viewed on Bloomberg and Reuters. The tickers are as below:

<b>Index</b>	<b>Bloomberg</b>	<b>Reuters</b>
S&P Japan Emerging Stock 100	SPJES	.SPJES

## **FTP**

Daily stock level and index data are available via FTP on subscription.

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

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