

**STANDARD  
& POOR'S**

# S&P GLOBAL CHALLENGERS 40 INDEX

INDEX METHODOLOGY

May 2007

# Table of Contents

---

Introduction	3
<b>Highlights</b>	<b>3</b>
Eligibility Criteria	4
<b>S&amp;P Global Challengers List Eligibility</b>	<b>4</b>
<b>S&amp;P Global Challengers List Reconstitution</b>	<b>5</b>
<b>S&amp;P Global Challengers List Construction</b>	<b>5</b>
Index Construction	7
<b>Index Membership</b>	<b>7</b>
<b>Constituent Weightings</b>	<b>7</b>
<b>Index Calculations</b>	<b>8</b>
Index Maintenance	9
<b>Rebalancing</b>	<b>9</b>
<b>Corporate Actions</b>	<b>9</b>
<b>Base Date</b>	<b>9</b>
Index Data	10
<b>Total Return and Price Return Indices</b>	<b>10</b>
Index Policy	11
<b>Announcements</b>	<b>11</b>
<b>Holiday Schedule</b>	<b>11</b>
<b>Unscheduled Market Closures</b>	<b>11</b>
Index Dissemination	12
<b>Index Data</b>	<b>12</b>
<b>Tickers</b>	<b>12</b>

S&P Contact Information	13
<b>Index Management</b>	<b>13</b>
<b>Media Relations</b>	<b>13</b>
<b>Index Operations &amp; Business Development</b>	<b>13</b>
Disclaimer	14

# Introduction

---

The S&P Global Challengers 40 Index is a liquid, geographically diversified basket of mid-size companies that show the highest growth along dimensions encompassing intrinsic and extrinsic growth factors.

The index is a subset of the S&P Global Challengers List, an annual list of 300 mid-sized companies from around the world that have shown the highest growth characteristics and are expected to emerge as challengers to global blue chips. The list is refreshed once a year in April.

## **Highlights**

The S&P Global Challengers List identifies 300 companies globally using two metrics of external growth – sales growth and stock price appreciation – and two metrics of internal growth – earnings growth and employee growth. Each company in the list is assigned a growth score based on standardized values of each of the four variables.

The top 40 scoring companies in the S&P Global Challengers List, with sufficient liquidity as well as reasonable market-cap, price and volatility, are included in the index. Companies listed on emerging market exchanges are not included in the index.

The index is geographically diversified. At most 25 companies and at least 5 companies from each region are included in the index.

The index is equally weighted, with weights adjusted at each rebalancing. This occurs on the last trading date of April of each year.

Index mechanics are similar to other S&P equal weighted indices. Corporate actions follow those of the S&P/Citigroup BMI.

*For more information on S&P equal weighting methodology, please refer to the Index Mathematics methodology document.*

*For more information on the S&P/Citigroup BMI, please refer to the S&P/Citigroup Global Equity Indices methodology document.*

# Eligibility Criteria

---

The S&P Global Challengers 40 Index is a subset of the S&P Global Challengers List.

## **S&P Global Challengers List Eligibility**

**Universe.** The universe for the S&P Global Challengers List consists of publicly listed common shares of companies from countries around the world. The universe does not, however, consider ADRs or GDRs and, in the case of listings on multiple exchanges, considers only the listing in a company's home country. The universe also considers only the primary share class of a company.

**Inclusion Factors.** From the universe of listed companies, those included on the Global Challengers List must first meet the size criteria. All eligible companies must have at least US\$ 500 million and at most US\$ 5 billion in total market capitalization, among all share classes, as of December 31 of the year prior to the index reconstitution date. Further, the companies must satisfy all of the following extrinsic and intrinsic factors:

### *Extrinsic Factors.*

- **Price appreciation.** All eligible companies must have positive three-year price appreciation as of December 31 of the year prior to index reconstitution.
- **Sales growth.** All eligible companies must have positive three-year sales growth as of the company's latest fiscal year.

### *Intrinsic Factors.*

- **Earnings per share growth.** All eligible companies must have positive three-year earnings-per-share growth as of the company's latest fiscal year.
- **Employee growth.** All eligible companies must have positive three-year employee count growth as of the company's latest fiscal year.

Assuming that year 0 is the base year in our calculation, three-year factor growth rates are computed using the change between the initial and final values at the end of year 0 and year 3, respectively. Intermediate factors values between these years are not taken into consideration.

## S&P Global Challengers List Reconstitution

The list is revised once a year in April. The cut-off date for the data used in the reconstitution is March 31.

**Exclusion Criteria.** Companies are excluded from the eligible universe due to the following:

### *Data Unavailability*

- A company has not reported its annual fiscal financials within the 13 months prior to the index reconstitution date (April of each year). The 13-month window allows for different fiscal year-ends for the different companies.
- A company does not report data on the number of employees in its annual reports. The employee data are needed to calculate employee count growth rates.

### *Incalculable Growth Rates*

- A company's EPS, sales and employee count growth rates cannot be calculated. These include companies for which the EPS, sales and employee counts are less than or equal to zero. It also excludes companies with shrinking losses.

### *S&P/ Citigroup Broad Market Index (BMI) Membership*

- A company which is not a member of the S&P/ Citigroup BMI will also be excluded from consideration.

*For more information on the S&P/Citigroup BMI, please refer to the S&P/Citigroup Global Equity Indices methodology document.*

## S&P Global Challengers List Construction

The final list is constructed using the following guidelines:

1. **Foreign Exchange.** Local currency is used to represent all currency-related data items. This ensures that foreign exchange fluctuations do not bias the construction of the list.
2. **Factor Standardization.** Three-year growth rates are calculated for share price, EPS, sales and employee count. These represent the factors relevant to list construction. The factors are standardized across the eligible universe by using the following formula:

$$F = \frac{x - \mu}{\sigma}$$

where:

F = Standardized growth rate factor

x = Growth rate for an individual company

$\mu$  = Average growth rate for the eligible universe

$\sigma$  = Standard deviation of the growth rate for the eligible universe

3. **Data Cleaning.** In order to remove the bias of one excessively high growth rate for a particular company, the data are modified further to remove the effect of statistical outliers. This is achieved by capping all standardized factors at 2.5. Effectively, the growth rates are capped up to 2.5 times the standard deviation from the mean.
4. **Factor Scoring.** The standardized growth rate factors are then summed to determine the aggregate score of each company.
5. **Final List Construction.** The final list consists of the 300 companies with the highest aggregate scores, in addition to four positive growth rate factors.

# Index Construction

---

## Index Membership

From the S&P Global Challengers List, the S&P Global Challengers 40 Index is constructed by further screening the companies based on the following criteria:

- 1. Liquidity:** The companies must have a six-month average daily trading value above the Liquidity Threshold. Currently the Liquidity Threshold is US\$ 4 million.
- 2. Geography:** At most 25 companies and at least 5 companies are included in the index from each region. There are three regions, which are classified as the Americas, Europe and the Asia/ Pacific. Companies from emerging markets are not included in the index. Emerging market countries include, but are not limited to, China, Greece, India, Indonesia, Israel, Malaysia, Mexico, Pakistan, South Africa, South Korea, South Korea, Taiwan, Thailand, and Turkey.
- 3. Price:** The companies must have a three-month average daily price above the Average Price Threshold. Currently, the Average Price Threshold is set at US\$ 10.
- 4. Market Capitalization:** To be included in the index, companies must meet the Market Capitalization Threshold as of March 31<sup>st</sup>. Currently, the Market Capitalization Threshold is set at US\$ 1 billion.
- 5. Volatility:** Companies must have a three-month daily return volatility (calculated as the standard deviation of daily price returns for the three months ending March 31<sup>st</sup>) less than the Volatility Threshold. The Volatility Threshold is currently defined as 4%.

The final index consists of the top 40 companies with the highest growth factor scores in the Global Challengers List , which meet the above criteria.

The Liquidity Threshold, Average Price Threshold, Market Capitalization Threshold and Volatility Threshold are subject to change from time to time based on market conditions.

## Constituent Weightings

The index is equally weighted. At rebalancing, each constituent is assigned an equal weight, with the weights reset on the next annual rebalancing date.

## Index Calculations

The index is calculated by means of the divisor methodology used in all Standard & Poor's equity indices. The index value is simply the index market value divided by the index divisor:

$$\text{Index Value} = \frac{\text{Index Market Value}}{\text{Divisor}} \quad (1)$$

$$\text{Index Market Value} = \sum_{i=1}^N (\text{Index Shares})_i \times (\text{Price})_i \quad (2)$$

where N is the number of stocks in the index.

At the beginning of each rebalancing, Index Shares are set so that each constituent has equal weight.

$$(\text{Index Shares})_{i, \text{ after rebalancing}} = \frac{K}{(\text{Price})_{i, \text{ rebalance date}}} \quad (3)$$

where K is an arbitrary or nominal value used to ensure each company's "shares" number is derived to establish equal weighting in the index. Currently that value is 1,000,000.

In order to maintain index series continuity, it is also necessary to adjust the divisor at each rebalancing.

$$(\text{Index Value})_{\text{before rebalancing}} = (\text{Index Value})_{\text{after rebalancing}} \quad (4)$$

Therefore,

$$(\text{Divisor})_{\text{after rebalancing}} = \frac{(\text{Index Market Value})_{\text{after rebalancing}}}{(\text{Index Value})_{\text{before rebalancing}}} \quad (5)$$

# Index Maintenance

---

## Rebalancing

Rebalancings are announced in the last week of April to be effective after the close of the first trading day in May of each year.

## Corporate Actions

<b>Change in the S&amp;P/Citigroup BMI</b>	<b>Adjustment made to the S&amp;P Global Challengers 40 Index</b>	<b>Divisor adjustment?</b>
Constituent deletion	If the constituent is a member of the index, it is dropped.	Yes
Share changes between quarterly share adjustments	None	No
Periodic share or float factor changes	None	No

<b>Corporate Action</b>	<b>Adjustment made to the S&amp;P Global Challengers 40 Index</b>	<b>Divisor adjustment?</b>
Spin-off	No weight change. The price is adjusted to the Price of the Parent Company minus (Price of Spin-off company/Share Exchange Ratio). Index Shares change so that the company's weight remains the same as its weight before the spin-off.	No
Rights Offering	The price is adjusted to the Price of the Parent Company minus (Price of Rights Offering/Rights Ratio). Index Shares change so that the company's weight remains the same as its weight before the rights offering.	No
Stock Split	Index Shares are multiplied by and the price is divided by the split factor.	No
Share Issuance or Share Repurchase	None.	No
Special Dividends	The price of the stock making the special dividend payment is reduced by the per share special dividend amount after the close of trading on the day before the dividend ex-date.	Yes

## Base Date

For both the price return and total return series the base value is 1000 on May 1, 2001. Daily returns are available from May 1, 2001.

# Index Data

---

## **Total Return and Price Return Indices**

Each index will have a total return counterpart, which assumes dividends are reinvested in the index after the close on the ex-date. On any given date  $t$ :

$$\text{Total Return Multiplier}_t = \frac{[\text{Index Value}_t + \text{Index Dividend Points}_t]}{\text{Index Value}_{t-1}} \quad (6)$$

$$\text{Total Return Index Value}_t = (\text{Total Return Index Value}_{t-1}) \times (\text{Total Return Multiplier}_t) \quad (7)$$

$$\text{Index Dividend Points}_t = \sum_{i=1}^N (\text{Index Shares})_{i,t} \times (\text{Ex - dividends})_{i,t} / \text{Divisor}_t \quad (8)$$

# Index Policy

---

## **Announcements**

The reconstituted index members are announced three to five days before the rebalancing date. Announcements of index additions and deletions are made at 5:15 p.m. U.S. Eastern Time.

## **Holiday Schedule**

The index is calculated when the U.S. equity markets are open.

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

## **Unscheduled Market Closures**

In situations where an exchange is forced to close early due to unforeseen events, such as computer or electric power failures, weather conditions or other events,

Standard & Poor's will calculate the closing price of the indices based on (1) the closing prices published by the exchange, or (2) if no closing price is available, the last regular trade reported for each stock before the exchange closed. In all cases, the prices will be from the primary exchange for each stock in the index. If an exchange fails to open due to unforeseen circumstances, the index will use the prior day's closing prices. If all exchanges fail to open, Standard & Poor's may determine not to publish the index for that day.

# Index Dissemination

---

## Index Data

Complete data for index replication (including share counts, tickers and data on index levels and returns) are available through Standard & Poor's by subscription, via FTP.

## Tickers

<b>Index</b>	<b>Bloomberg</b>
S&P Global Challengers 40 (USD)	SPGLC4DP
S&P Global Challengers 40 (Euro)	SPGLC4EP
S&P Global Challengers 40 Total Return (USD)	SPGLC4DT
S&P Global Challengers 40 Total Return (Euro)	SPGLC4ET

*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

---

## **Index Management**

David M. Blitzler, Ph.D. – Managing Director & Chairman of the Index Committee	
david_blitzler@standardandpoors.com	+1.212.438.3907
Siddharth Panjwani – Manager, Index Strategy	
siddharth_panjwani@standardandpoors.com	+1.212.438.7419

## **Media Relations**

David Guarino – Communications	
dave_guarino@standardandpoors.com	+1.212.438.1471

## **Index Operations & Business Development**

### **North America**

#### New York

Maureen O’Shea	+1.212.438.2046
Wendy Chan	+1.212.438.4080

#### Toronto

Tony North	+1.416.507.3204
------------	-----------------

### **Europe**

#### Paris

Christopher O’Brien	+33.1.40.75.77.91
---------------------	-------------------

#### London

Susan Fagg	+44.20.7176.8388
------------	------------------

### **Asia**

#### Tokyo

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

#### Beijing

Andrew Webb	+86.10.6560.2919
-------------	------------------

#### Sydney

Jason Hill	+61.2.9255.9872
------------	-----------------

# Disclaimer

---

The report is published by Standard & Poor's, 55 Water Street, New York, NY 10041. Copyright © 2007. Standard & Poor's is a division of The McGraw-Hill Companies, Inc. All rights reserved. Standard & Poor's does not undertake to advise you of changes in the information contained in this report.

These materials have been prepared solely for informational purposes based upon information generally available to the public from sources believed to be reliable. Standard & Poor's makes no representation with respect to the accuracy or completeness of these materials, the content of which may change without notice. The methodology involves rebalancings and maintenance of the indices that are made periodically during each year and may not, therefore, reflect real time information. Standard & Poor's disclaims any and all liability relating to these materials and makes no express or implied representations or warranties concerning the accuracy or completeness of the report.

No portion of this publication may be reproduced in any format or by any means including electronically or mechanically, by photocopying, recording or by any information storage or retrieval system, or by any other form or manner whatsoever, without the prior written consent of Standard & Poor's.

Analytic services and products provided by Standard & Poor's are the result of separate activities designed to preserve the independence and objectivity of each analytic process. Standard & Poor's has established policies and procedures to maintain the confidentiality of non-public information received during each analytic process.