



Index Methodology

# MSCI High Dividend Yield Indexes Methodology

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# 1 Introduction

MSCI has created the MSCI High Dividend Yield Indexes to serve as a performance benchmark for investors focusing on dividend yield and to help investors obtain and manage exposure to the opportunity set of securities with high Dividend Income and Quality Characteristics. The MSCI High Dividend Yield Indexes objectively and passively depict the high dividend yield opportunity set within MSCI equity indexes and are intended to reflect dividend yield focused investment processes.

The MSCI High Dividend Yield Indexes:

- Are derived from country, regional, or composite level MSCI Equity indexes (herein, “Parent Indexes”).
- Include only securities that offer a higher than average dividend yield relative to their respective Parent Index and pass dividend sustainability screens
- Securities entering the index must have a dividend yield which is at least 30% higher than the respective Parent Index yield
- Only securities with reasonable payout and a non-negative 5Y Dividends per share (DPS) growth rate<sup>1</sup> are eligible for inclusion in the High Dividend Yield Index.
- Offer reasonably broad market coverage
- Have moderate turnover due to the use of a market cap weighted scheme and appropriate buffer rules and
- Are free float market capitalization weighted to ensure that their performance can be replicated in institutional and retail portfolios of reasonable size.

This Methodology book describes a generic methodology that can be applied to create MSCI High Dividend Yield Indexes from any of the existing MSCI global or domestic equity indexes. The dividend persistence screening (section 2.2.2) is currently not applied to MSCI High Dividend Yield Indexes derived from Parent Indexes including the Small Cap size segment with the exception of USA and Australia.

MSCI also calculates MSCI Dividend Tilt Indexes with an aim to reflect the performance of a high dividend yield strategy with high investment capacity. Please refer to Appendix III for further details on the methodology of MSCI Dividend Tilt Indexes.

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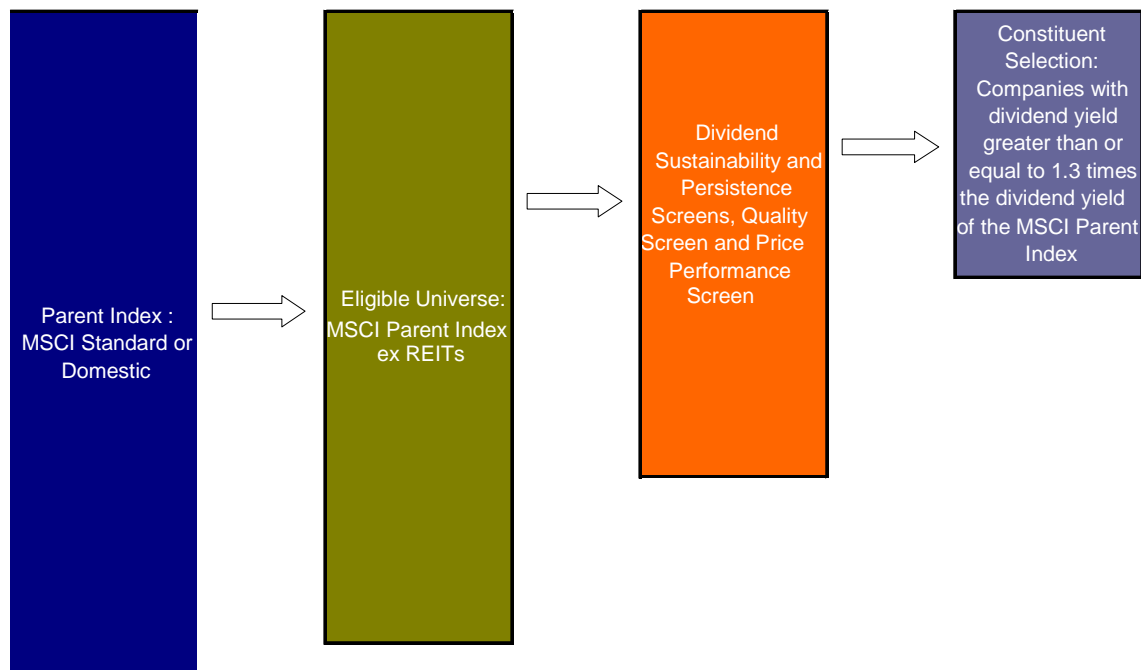
<sup>1</sup> See appendix for definition of 5Y DPS growth rate and its calculation.

## 2 MSCI High Dividend Yield Index Construction

The MSCI High Dividend Yield Index construction is based on a six -step process:

- Defining the eligible universe
- Applying dividend sustainability and persistence screening
- Applying quality screening
- Applying price performance screening
- Selecting high yielding securities
- Weighting the securities in an index

### MSCI High Dividend Yield Index Construction



## 2.1 Defining the Eligible Universe

All securities belonging to the underlying Parent Index are eligible for inclusion in the MSCI High Dividend Yield Index, with the exception of Real Estate Investment Trusts (REITs). REITs have structurally very high dividend yield and, if included, would represent a very significant proportion of the MSCI High Dividend Yield Index. Also, typically, regulatory constraints restrict the inclusion of REITs in meaningful proportions in many institutional portfolios.

## 2.2 Dividend Sustainability and Persistence Screening

Dividend yield strategies typically target not only high dividend yield but also companies where that dividend is sustainable and/or persistent. Therefore, MSCI High Dividend Yield Indexes consider the following dividend sustainability and persistence screens in order to achieve a better representation of the opportunity set available to managers following high dividend yield investment processes:

- Dividend sustainability screening: Securities whose dividend payout is extremely high or negative, and therefore, where future dividend payments might be in jeopardy are not considered for inclusion
- Dividend persistence screening: Securities without a good historical track record of consistent dividend payment are also not considered for inclusion

### 2.2.1 Applying the Dividend Sustainability Screening

Securities with zero or negative payout ratios are not considered for inclusion in the MSCI High Dividend Yield Indexes as they either do not pay dividends or have negative earnings which may put their future dividend payments at risk.

Additionally, securities with an extremely high payout ratio, which occurs when earnings are low relative to dividends and may also indicate that the dividend payment might not be sustainable in the future, are also not considered for inclusion in the MSCI High Dividend Yield Indexes. Under this screen, securities with extremely high payout ratios, defined to be the top 5% of securities by number within the universe of securities with positive payout, are not considered eligible for inclusion in the index. The use of a relative payout ratio screen ensures that the companies at most relative risk of dividend cuts are excluded irrespective of the absolute level of the payout.

### 2.2.2 Applying the Dividend Persistence Screening

Securities with a negative 5Y DPS growth are also excluded from the index as their dividend growth is shrinking which could be a precursor to lower dividends. Securities which have insufficient data to calculate a 5Y DPS growth rate are not excluded from the index.

## 2.3 Quality Screening

Securities with negative Quality Z-score are not considered for inclusion in the MSCI High Dividend Yield Indexes.

The Quality Z-scores are calculated using fundamental variables such as Return on Equity, Earnings Variability and Debt to Equity. For the details on computation of the Quality Z-score, please refer to the section 2.2.3 of MSCI Quality Indexes Methodology

([http://www.msci.com/eqb/methodology/meth\\_docs/MSCI\\_Quality\\_Indexes\\_Methodology\\_March2014.pdf](http://www.msci.com/eqb/methodology/meth_docs/MSCI_Quality_Indexes_Methodology_March2014.pdf))

The Quality Screening will not be applied to MSCI High Dividend Yield Indexes derived from Parent Indexes including the Small Cap size segment.

## 2.4 Price Performance Screening

Securities ranked in the bottom 5% of the universe of securities with negative 1-year Price Performance are excluded from the index.

## 2.5 High Dividend Yield Security Selection

Securities that have passed the above screens are then considered for inclusion in the High Dividend Yield index. Only securities with a dividend yield greater than or equal to 1.3 times the dividend yield of the Parent Index are included in the High Dividend Yield Index. For example, MSCI compares the yield of a European security to the yield of the MSCI Europe Index to determine if it is eligible for inclusion in the MSCI Europe High Dividend Yield Index. By contrast, MSCI compares the yield of the same security to the yield of the MSCI World Index to determine if it is eligible for inclusion in the MSCI World High Dividend Yield Index.

## 2.6 Constituent Weighting

The constituents of the MSCI High Dividend Yield Indexes are first weighted based on their free float market capitalization, and are then capped at the issuer level in order to mitigate concentration risk. The excess weight of such issuers is distributed among the remaining constituents in proportion to their free float market capitalization. The issuer level capping is applied only at Semi-Annual Index Reviews.

- Issuers in the MSCI High Dividend Yield Indexes based on broad parent MSCI Indexes (e.g. MSCI World Index, MSCI Emerging Markets Index etc.) will be capped at 5%
- Issuers in the MSCI High Dividend Yield Indexes based on narrow parent MSCI Indexes will be capped at the maximum weight in the Parent Index.

MSCI defines Narrow Parent Indexes as those indexes where the largest capitalization weight in the Index is more than 10%.

Note that the capping of the issuer weight is done for the pro forma index as of the effective date, based on the closing prices as of the index review announcement date. In case, any issuer weight breaches the cap as a result of market price movements or corporate events between the announcement date and the effective date, the capping is not applied again. Similarly, even if any issuer weight breaches the cap as a result of market price movements or corporate events between two Semi-Annual Index Reviews, no capping is applied.

## 3 Maintenance of the MSCI High Dividend Yield Indexes

### 3.1 Semi-Annual Index Review

The MSCI High Dividend Yield Indexes are rebalanced semi-annually. Changes are implemented as of the close of the last business day of May and November, to coincide with the Semi-Annual Index Reviews of their Parent Indexes. The pro forma Indexes are announced nine business days before the effective date.

The fundamental data used to determine the High Dividend Yield Indexes is maintained monthly. For the May and November Semi-Annual Index Reviews, the fundamental data as of the end of April and the end of October is used respectively.

The Semi-Annual Index Review involves a comprehensive review of the MSCI High Dividend Yield Indexes. During each Semi-Annual Index Review, the constituents of the underlying Parent Index are screened for potential inclusion in the High Dividend Yield Index according to the screening process described in Section 2.

Existing constituents of the current High Dividend Yield Index will also be evaluated for continued inclusion using the following screening process:

- If a security is already an Index constituent, it will remain in the index until it reaches the top 2% by increasing order of dividend payout. If it is within the top 2% limit, it will be excluded from the Index.
- If a security is already an Index constituent but its 5Y DPS growth rate turns negative, it will still be allowed to remain in the Index, provided that the 1Y DPS growth rate<sup>2</sup> of that security is non-negative. This allows current Index constituents that suffer only a temporary decline in the 5Y DPS growth rate to remain in the index and thus avoid excessive index turnover. Securities which do not have sufficient data to calculate a 5Y DPS growth rate or 1Y DPS growth rate would still be eligible to remain in the index.
- If a security is already an Index constituent, it will remain in the index as long as its Quality Z-score is higher than or equal to -0.5.
- If a security is already an Index constituent, it will remain in the index as long as its dividend yield is higher than or equal to the Parent Index yield.

### 3.2 Quarterly Index Reviews

The Quarterly Index Review of the Parent Indexes will not result in any change in the MSCI High Dividend Yield Indexes except for deletions from the Parent Indexes. Changes in the number of shares (NOS) and Foreign Inclusion Factor (FIF) that occur as part of the Quarterly Index Review of the Parent Indexes are also reflected in the MSCI High Dividend Yield Indexes.

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<sup>2</sup> See appendix for definition of 1Y DPS growth and its calculation.

### 3.3 Ongoing event related changes

Between Semi-Annual Index Reviews, the MSCI High Dividend Yield Indexes follow the event maintenance of the Parent Index.

#### 3.3.1 IPOs and other Early Inclusions

IPOs and other newly listed securities will only be considered for inclusion at the next Semi-Annual Index Review, even if they qualify for early inclusion in the Parent Indexes.

#### 3.3.2 Additions and Deletions due to Corporate Events

There will be no early inclusion of new securities to the High Dividend Yield Index, except when the new security results from an event affecting an existing constituent (e.g., spin off, merger).

A constituent deleted from the Parent Index following a corporate event will be simultaneously deleted from the MSCI High Dividend Yield Index.



# Appendix I: Variable Definitions and Computations

This appendix provides details on the definitions and computations of the variables used to screen the securities for index construction and maintenance.

## Dividend yield (D / P)

$$D / P = \text{Current Annualized Dividend per Share} / \text{Price of Security}$$

The current annualized dividend per share is the trailing 12-month dividend per share derived from the current fiscal year end dividend per share plus the difference between the interim dividend per share of the current fiscal year and the previous fiscal year. For the USA and Canada, the current annualized dividend per share is calculated by annualizing the latest published quarterly dividend. Yields are gross, before withholding tax, and take into account special tax credits when applicable.

## Payout Ratio (PO)

The payout ratio is calculated as follows:

$$PO = \text{Dividends per share} / \text{Earnings per share}$$

The most recently reported earnings value is used to for earnings per share while the current annualized dividend per share is used for dividends.

## 5Y DPS Growth

For the calculation of the 5Y DPS Growth, first a regression (ordinary least squares method) is applied to the last 5 yearly DPS.

$$DPSt = a \cdot t + b$$

Where:

- a, the slope coefficient,
- b, the intercept,
- t, the year expressed in number of months.

Then, an average DPS is estimated:

$$\tilde{D} \tilde{P} \tilde{S} = \frac{\sum_{i=1}^n DPS_i}{n}$$

The growth trend is finally obtained as follows:

$$5Y \text{ DPS } G = \frac{ADPS}{\tilde{D} \tilde{P} \tilde{S}}$$

In order to compute a meaningful long-term historical growth trend for the DPS, 5 years of comparable data are generally required. In the event that comparable restated pro forma data are unavailable, MSCI may restate the data using adjustments. A minimum of the last four DPS values are required for calculating the growth and growth trends for securities without sufficient DPS values are considered to be missing (except in the case of IPOs where it will be on a case-by-case basis.).

### 1Y DPS Growth

The 1Y DPS growth rate is the difference between the current and previous annual DPS.

$$1Y \text{ DPS } G = \frac{DPS_t - DPS_{t-12}}{DPS_{t-12}}$$

Where:

- $t$  is the year expressed in number of months.

The 1Y DPS growth is used for assessing the continued eligibility of existing constituents whose 5Y DPS growth has turned negative.

## Appendix II: Calculation of Market Mean

This appendix explains the calculation of the market mean used in the determination of the market average dividend yield.

The market mean is the market capitalization weighted average of the variable and is computed as follows:

$$\frac{\sum_{i=1}^n (\text{Current security price} \times \text{Total current security shares outstanding} \times \frac{1}{\text{Exchange Rate}} \times \text{Inclusion Factor})}{\sum_{i=1}^n (\text{Security level per share figure} \times \text{Total current security shares outstanding} \times \frac{1}{\text{Exchange Rate}} \times \text{Inclusion Factor})}$$

Where,

n=number of securities included in the calculation.

If any per share figure is not available for a particular security, the security is not included in the calculation for that particular ratio.

Only securities with non-missing variables are included in the market mean and standard deviation.

## Appendix III: Constructing MSCI Dividend Tilt Indexes

The MSCI Dividend Tilt Indexes aim to reflect the performance of a high dividend yield strategy with high investment capacity. The MSCI Dividend Tilt Indexes are created by including all the dividend-paying constituents in the Parent Index that passed the screens as described in Section 2.1 to 2.4, and tilting the market capitalization weights of these securities based on their Dividend Yield Score. Dividend Yield Scores are calculated for all the securities eligible for inclusion in the Dividend Tilt Index and as described below.

$$Z = \frac{(x - \mu)}{\sigma}$$

Where:

- Z is the Dividend Yield Z-score
- $x$  is the Dividend Yield for a given security included in the Dividend Tilt Index
- $\mu$  is the equal weighted mean of the Dividend Yield of all the securities included in the Dividend Tilt Index
- $\sigma$  is the equal weighted standard deviation of the Dividend Yield of all the securities included in the Dividend Tilt Index

Z scores are then winsorized at +/-3 i.e. the Z-scores above 3 are capped at 3 and Z-scores below -3 are capped at -3.

The Dividend Yield Score is then computed from the Dividend Yield Z-Score as follows:

$$\text{Dividend Yield Score} = \begin{cases} (1 + Z) & , \quad Z > 0 \\ (1 - Z)^{-1} & , \quad Z < 0 \end{cases}$$

All the securities included in the MSCI Dividend Tilt Indexes are weighted by the product of their market capitalization weight in the Parent Index and the dividend yield score.

Dividend Tilt Index Weight = Dividend Yield Score \* Market Capitalization Weight in the Parent Index.

The above weights are then normalized to 100%. Constituent weights are capped at an issuer level in a similar way to the MSCI High Dividend Yield Indexes as described in section 2.6.

The MSCI Dividend Tilt Indexes follow the same rebalancing schedule and corporate events treatment as the MSCI High Dividend Yield Indexes as described in section 3.

**The following sections have been modified since February 2013:**

1. Introduction
  - Update of the introduction of the MSCI High Dividend Yield Indexes
2. MSCI High Dividend Yield Index Construction
  - Added Quality Screen and Price Performance Screen in the process list
- 2.6 Free Float-Adjusted Constituent Weights
  - Clarification of constituent weighting and issuer level capping

**The following sections have been modified since May 2014:**

- 3.2 Quarterly Index Reviews
  - Clarification on treatment of FIF/NOS changes at the Quarterly Index Review

**The following sections have been modified since October 2014:**

1. Introduction
  - Update of the introduction of the MSCI High Dividend Yield Indexes

## Appendix III. Constructing MSCI Dividend Tilt Indexes

- Addition of Appendix III containing methodology details of MSCI Dividend Tilt Indexes

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<sup>1</sup> As of June 30, 2014, as reported on September 30 2014 by eVestment, Morningstar and Bloomberg