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STOXX<sup>®</sup>

# DISTRIBUTION POINTS CALCULATION GUIDE



STOXX

INNOVATIVE. GLOBAL. INDICES.

# STOXX® DISTRIBUTION POINTS CALCULATION GUIDE

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# 1. INTRODUCTION TO THE STOXX INDEX GUIDES

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The STOXX index guides are separated into the following sub-sets:

- » The **STOXX Calculation guide** provides a general overview of the calculation of the STOXX indices, the dissemination, the index formulas and adjustments due to corporate actions
- » The **STOXX Index Methodology guide** contains the index specific rules regarding the construction and derivation of the portfolio based indices, the individual component selection process and weighting schemes
- » The **STOXX Strategy guide** contains the formulas and description of all non-equity/strategy indices
- » products
- » The **STOXX Dividend Points Calculation guide** describes the dividend points products
- » The **STOXX Distribution Points Calculation guide** describes the distribution points products
- » The **STOXX ESG guide** contains the index specific rules regarding the construction and derivation of the ESG indices, the individual component selection process and weighting schemes
- » The **iSTOXX guide** contains the index specific rules regarding the construction and derivation of the iSTOXX indices, the individual component selection process and weighting schemes
- » The **STOXX Reference Rates guide** contains the rules and methodologies of the reference rate indices
- » The **STOXX Statistical Calculations** guide provides a detailed view of definitions and formulas of the statistical calculations as utilized in the reports, factsheets, indices and presentations produced by STOXX

All rule books are available for download on <http://www.stoxx.com/indices/rulebooks.html>

# 1. INTRODUCTION TO THE STOXX INDEX GUIDES

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## 1.1. HISTORY OF CHANGES TO THE STOXX DISTRIBUTION POINTS CALCULATION GUIDE

» September 2016: Introduction of the EURO STOXX 50® Distribution Points index

# STOXX® DISTRIBUTION POINTS CALCULATION GUIDE

## 2. STOXX<sup>®</sup> DISTRIBUTION POINTS

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### 2.1. STOXX DISTRIBUTION POINTS INDICES

#### 2.1.1. OVERVIEW

The STOXX® Distribution Points indices aim to reflect the returns from all distributions to shareholders of the components of the corresponding STOXX parent index. Distributions include, among others, regular cash dividends, taxes from special cash dividends and stock dividends, taxes from spin-offs. Taxes are applied as appropriate for each individual event.

#### 2.1.2. HISTORICAL DATA

Historical index data is available on a daily basis back to the base date (December, 18 2015).

#### 2.1.3. IDENTIFIERS

Name	ISIN	Symbol
EURO STOXX 50 <sup>®</sup> Distribution Points (EUR)	CH0334725220	SX5EDD
<further indices as listed in the STOXX vendor code sheet>		

# 3. CALCULATION

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## 3.1. CALCULATION FORMULA

The Distribution Points indices are calculated as the sum of all distributions, measured in distribution points, of the constituents of the corresponding STOXX parent index, cumulated over time:

Distribution Index<sub>t</sub> = Distribution Index<sub>t-1</sub> + DP<sub>t</sub>

$$DP_t = \sum_{i=1}^n DP_{i,t}$$

As opposed to the STOXX<sup>®</sup> DVP indices, the STOXX<sup>®</sup> Distribution Points indices are not reset to zero on a periodic basis.

### Tax rates applied to Corporate Actions:

The tax rates are assumed to be constant and standardized by country, unless differently communicated by the company for the relevant the corporate action. For non-taxable events, the tax rate is set to zero in the subsequent formulas.

### Treatment of Corporate Actions:

By defining  $Q_{i,t} = \frac{s_{i,t} \cdot ff_{i,t} \cdot cf_{i,t} \cdot X_{i,t-1}}{D_t}$

Where:

$s_{i,t}$  = total number of shares of company i effective on day t

$ff_{i,t}$  = free-float factor of company i effective on day t

$cf_{i,t}$  = capping factor of company i effective on day t

$X_{i,t}$  = exchange rate relevant for the corporate action on day t-1

$D_t$  = divisor of the parent STOXX Price (EUR) index effective on day t

and:

B = number of shares obtained/returned for A shares held

$p_B$  = price at which shares B are obtained/returned

$p_{i,t-1}$  = close price on day t-1 of company i ( $p_{A,t-1}$  when shares A and B are involved)

$tax_{i,t}$  = withholding tax applicable to the corporate action of company i on day t

#### 1. Cash dividend

$$DP_{i,t} = d_{i,t} \cdot Q_{i,t}$$

# 3. CALCULATION

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## 2. Special cash dividend

$$DP_{i,t} = d_{i,t} \cdot \text{tax}_{i,t} \cdot Q_{i,t}$$

## 3. Stock dividend

$$DP_{i,t} = p_{i,t-1} \cdot \frac{B}{A+B} \cdot \text{tax}_{i,t} \cdot Q_{i,t}$$

## 4. Stock dividend (from treasury shares)

- a. If treated as standard cash dividend:

$$DP_{i,t} = p_{i,t-1} \cdot \frac{B}{A+B} \cdot Q_{i,t}$$

- b. If treated as special cash dividend:

$$DP_{i,t} = p_{i,t-1} \cdot \frac{B}{A+B} \cdot \text{tax}_{i,t} \cdot Q_{i,t}$$

## 5. Stock dividend of another company

$$DP_{i,t} = p_{B,t-1} \cdot \frac{B}{A} \cdot \text{tax}_{i,t} \cdot Q_{i,t}$$

## 6. Return of capital and share consolidation

$$DP_{i,t} = \text{CapitalReturn} \cdot \frac{A}{B} \cdot \text{tax}_{i,t} \cdot Q_{i,t}$$

## 7. Repurchase of shares/self-tender

$$DP_{i,t} = (p_B - p_{i,t-1}) \cdot \frac{B}{A-B} \cdot \text{tax}_{i,t} \cdot Q_{i,t}$$

## 8. Spin-off

Spin-offs are applied on the effective date using an estimated price for the spun-off company and no further adjustment is performed in the index.

If the spun-off company starts being traded on the effective date, the index will be restated at day end by using the actual close price of the spun-off company.

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# 3. CALCULATION

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$$DP_{i,t} = p_B \cdot \frac{B}{A} \cdot \text{tax}_{i,t} \cdot Q_{i,t}$$

## 9. Rights issues

If the rights start being traded on the effective date, the index will be restated at day end by using the actual close price of the spun-off company.

- a. from regular shares,
  - i. if regular:

$$DP_{i,t} = (p_{i,t-1} - p_B) \cdot \frac{B}{A+B} \cdot \text{tax}_{i,t} \cdot Q_{i,t}$$

- ii. if highly or extremely dilutive:

$$DP_{i,t} = (p_{i,t-1} - p_B) \cdot \frac{B}{A+B} \cdot \text{tax}_{i,t} \cdot Q_{i,t}$$

If the highly or extremely rights start trading being traded on the effective date, the index will be restated at day end by using the actual close price of the rights.

- b. from treasury shares,
  - i. if treated as standard cash dividend:

$$DP_{i,t} = (p_{i,t-1} - p_B) \cdot \frac{B}{A+B} \cdot Q_{i,t}$$

- ii. if treated as special cash dividend:

$$DP_{i,t} = (p_{i,t-1} - p_B) \cdot \frac{B}{A+B} \cdot \text{tax}_{i,t} \cdot Q_{i,t}$$

## 3.2. COMPUTATIONAL ACCURACY

Figures of the published STOXX® Distribution Points indices are rounded to two decimal places. All relevant parameters for the calculation of the STOXX indices are described in the STOXX rule books available on [www.stoxx.com](http://www.stoxx.com).



# 3. CALCULATION

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## 3.3. DISSEMINATION DAYS AND TIME

The STOXX® Distribution Points indices are calculated on a daily basis according to STOXX dissemination calendar. The index value is disseminated via the data feed at 00:00:10 CET.