

Guide for IDX ESG Leaders

Version 1.1 (November 2020)

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1. INDEX INFORMATION

1.1. General Information

Index Name	IDX ESG Leaders
Index Code	IDXESGL
Description	An index that measures price performance of stocks that become leaders in ESG rating and do not have significant controversies selected from stocks with high trading liquidity and good financial performance. The ESG rating and controversy analysis is developed by Sustainalytics.
Methodology	<i>Capped Free Float Adjusted Market Capitalization Weighted Average and ESG Tilt Factored.</i> On each periodic review, the constituent weight is capped so the highest weight in the index is no more than 15%.
Base Date	February 4, 2014
Base Value	100

1.2. General Selection Criteria

Universe	IDX80 index constituents that have ESG risk rating provided by Sustainalytics.
Selection Criteria	<ol style="list-style-type: none"> 1. Companies with involvement in controversies category 4 and 5 are excluded, 2. Companies with ESG risk rating category of high and severe are excluded, and 3. From the remaining universe, companies that have lowest ESG risk ratings are selected (with minimum of 15 constituent and maximum of 30 constituent).

2. INDEX MAINTENANCE

2.1. Periodic Evaluation

	Major Evaluation	Minor Evaluation
Evaluation Period	Beginning of March and September.	Beginning of June and December.
Effective Date	Third Wednesday of March and September. If it's a holiday, the effective date is the following Exchange Day.	Third Wednesday of June and December. If it's a holiday, the effective date is the following Exchange Day.

	Major Evaluation	Minor Evaluation
Process / Purposes	Select the stocks of index constituents.	
	<ul style="list-style-type: none"> - Adjust changes in the number of listed shares. - Adjust stock weights based on their free float ratios and ESG <i>tilt</i> factor from ESG risk rating. - Adjust the stock weights based on the cap. 	
Announcement	At the latest, 5 exchange days prior to the effective date.	

2.2. Incidental Evaluation

Besides the routine evaluation, incidental evaluation can be done at any time if there are significant changes in the number of shares, delisting, or if there is any other information that has significant impact on an index constituent.

3. CONSTITUENT SELECTION PROCESS

3.1. Sustainability ESG Risk Rating and Controversies Assessment

IDX is in partnership with Sustainalytics to provide ESG data. Sustainalytics is a leading institution engaged in ESG research and corporate governance.

The ESG data provided by Sustainalytics include ESG risk rating and controversies which will be used in selecting constituents of IDX ESG Leaders Index. Please visit www.sustainalytics.com for further information regarding the ESG data methodology.

Sustainalytics will conduct ESG risk assessment to be used in IDX ESG Leaders index every January – February and July – August.

3.2. Process of Determining Selected Constituents

From the universe stock and using Sustainalytics' ESG *risk rating* and controversies, the constituent's selection process are as follows:

1. Companies with involvement in controversies category 4 and 5 are excluded¹,
2. Companies with ESG risk rating category of high and severe are excluded,
3. From the remaining universe, companies that have lowest ESG risk ratings are selected (minimum of 15 constituent and maximum of 30 constituent).

¹ Sustainalytics define category 4 as controversies with high impact on environment and society with high business risk. Structural/systemic problems, recurrence of incidents and company has inadequate management systems.

Category 5 defined as controversies with severe impact on environment and society with serious business risk. Exceptional egregious behavior, high frequency of incidents and company has poor management of the controversy.

4. METHODOLOGY OF INDEX CALCULATION

4.1. Index Calculation Formula (Weighting Method)

IDX ESG Leaders Index uses “Capped Free Float Market Capitalization Weighted Average and ESG Tilt Factored” methodology. This method adds ESG tilt factor into the free float market capitalization. Moreover, the weight of index constituents is capped at 15%. ESG tilt factor is calculated from the z-score of ESG risk rating.

Index calculation formula is as follows:

$$\text{Index} = \frac{\sum_{i=1}^n (\text{Market Cap}_i \times \text{Free Float Ratio}_i \times \text{ESG Tilt Factor}_i)}{\text{Base Market Cap}} \times 100$$

Where:

Market Cap _i	=	Total listed shares × market price of stock i
Free Float Ratio _i	=	Ratio of number of free float shares to the total listed shares of stock i
ESG Tilt Factor _i	=	ESG tilt factor of stock i
n	=	Number of index constituents
Base Market Cap _i	=	Market capitalization on the Base Date (adjusted in the evaluation period if there are any changes in the number of shares for the index)

4.2. ESG Tilt Factor Calculation

4.2.1. Z-score Calculation

Z-score is calculated using the mean and standard deviation of ESG risk rating of selected index constituent. The z-score is calculated using the following formula:

$$z_i = \frac{-(x_i - \mu)}{\sigma}$$

Where:

z_i	=	Z-score of stock i
x_i	=	ESG risk rating of stock i
μ	=	Mean of ESG risk rating.
σ	=	Standard deviation of ESG risk rating.

4.2.2. Calculating ESG Tilt Factor

After obtaining z-score (z_i), ESG tilt factor for each stock is calculated as follows:

$$ESG TF_i = \begin{cases} 1 + z_i, & \text{if } z_i \geq 0 \\ \frac{1}{1 - z_i}, & \text{if } z_i < 0 \end{cases}$$

Where:

$ESG TF_i$	=	ESG tilt factor of stock i
z_i	=	z-score of stock i

ESG tilt factor is rounded to two decimals.

4.3. Adjusting Stock Weight Based on Free Float Ratio and ESG Tilt Factor

In each evaluation period, the weight of each share is evaluated based on the value of the free float ratio. There is no technical difference in weight adjustment between major evaluations and minor evaluations. In the major evaluation, this weight adjustment step was preceded by the selection of the index constituents. In addition, in the major evaluation adjustments is applied to the ESG Tilt Factor using the latest ESG risk rating.

4.3.1. Calculation of Free Float Ratio

The free float ratio of each stocks is calculated based on the free float stocks to total listed stocks. The definition of free float since the launch of IDX ESG Leaders index until Major Evaluation in March 2021 is number of scripless stocks owned by investors with ownership of less than 5%.

Starting Major Evaluation in March 2021 and beyond, the definition of free float will be number of scripless stocks owned by investors with ownership of less than 5% excluding stocks owned by management and treasury stock.

The percentage value of the free float ratio is rounded to two decimals.

4.3.2. Calculation of Free Float Market Capitalization

Free float market capitalization with ESG tilt factor adjustment of each stock is calculated as follows:

$$MC_i = P_i \times S_i \times FF_i \times ESG\ TF_i$$

Where:

MC_i	=	Free float market capitalization with ESG tilt score adjustment of stock i
P_i	=	Price of stock i
S_i	=	Total listed shares of stock i
FF_i	=	Free float ratio of stock i
$ESG\ TF_i$	=	ESG tilt factor of stock i

4.3.3. Calculation of Stock Weight

The weight of each stock is calculated as follows:

$$Weight_i = \frac{MC_i}{\sum_{i=1}^n MC_i}$$

Where:

MC_i	=	Free float market capitalization of stock i
n	=	Number of constituents
$\sum_{i=1}^n MC_i$	=	Total free float market capitalization of all constituents

4.4. Stock Weight Capping

On the evaluation period, both major evaluation and minor evaluation, the number of shares is also adjusted to ensure the weight of a stock in the index does not exceed the specified cap. For the IDX ESG Leaders index, the cap is 15%.

If there is no constituent that has a weight exceed the cap, then this step is not necessary. But if there is one or several stocks that have a weight of more than the cap of 15%, then the process of adjusting stock weight by capping is applied, as follows:

4.4.1. Determining the Stock Capping

In this process, the number of stocks with weights above the cap are determined. The number of capped stocks = s and the number of uncapped stocks = $t = 1-s$.

4.4.2. Calculating the Total Market Capitalization of Capped Stocks

If MC_s is the total market capitalization of capped stocks and c is the cap 15%, then:

$$MC_s = \frac{s \times c}{1 - (s \times c)} \times MC_t$$

Where:

MC_s	=	Total free float market capitalization of all capped stocks
MC_t	=	Total free float market capitalization of all uncapped stocks
s	=	Number of capped stocks
c	=	Cap (15%)

4.4.3. Calculating the Market Capitalization of Each Capped Stock

If $MC_{i,s}$ is the market capitalization of a capped stock, then:

$$MC_{i,s} = \frac{1}{s} \times MC_s$$

4.4.4. Calculating the Number of Shares for the Index

The adjusted number of shares for index based on the free float, ESG tilt factor adjustment, and capping (Adj. Si) is calculated by rounding the free float stock market capitalization divided by stock price, as the following formula:

$$Adj.Si = \left[\frac{MC_i}{P_i} \right]_{\text{rounded}}$$

If a stock is a capped stock, the free float market capitalization and ESG tilt factor is adjusted using weight after adjustment ($MC_{i,s}$).

4.4.5. Calculating Stock Weight after Adjustment

The weight of each share after adjustment is calculated as follows:

$$\text{Weight}_i = \frac{\text{Adj. MC}_i}{\sum_{i=1}^n \text{Adj. MC}_i}$$

$$\text{Adj. MC}_i = \text{Adj. S}_i \times P_i$$

Where:

Weight_i	=	Weight for stock index i
Adj. MC_i	=	Market capitalization of stock i after adjustment of free float ratio, ESG tilt factor, and capping.
$\sum_{i=1}^n \text{Adj. MC}_i$	=	Total market capitalization of all stocks after adjustment of free float ratio, ESG tilt factor, and capping.
n	=	Number of constituents

The weight adjustment process is complete if each index constituent does not exceed the cap. The adjustment should be repeated if there are still shares that have a weight of more than 15% as a result of the adjustment in other shares.

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