Guide for ESG Quality 45 IDX KEHATI

(Appendix of IDX Announcement No. Peng-00408/BEI.POP/12-2021 dated 15 December 2021)

1. INDEX INFORMATION

1.1. General Information

Index Name	**ESG Quality 45 IDX KEHATI**
Index Code	ESGQKEHATI
Description	An index that measures the stock price performance of 45 stocks that consider the quality of financial and ESG aspects with relatively large market capitalization and high liquidity.
Counterparty	Collaboration between Indonesia Stock Exchange (IDX) and Keanekaragaman Hayati (KEHATI) Foundation
Methodology	Capped Free Float Adjusted Market Capitalization Weighted On each periodic review, the constituent weight is capped so the highest weight in the index is no more than 15%.
Base Date	June 1, 2016 (Base Value = 100)
Launch Date	December 20, 2021

1.2. General Selection Criteria

Universe	**Assessed Universe** Stocks included in the Assessed Universe are IDX Composite constituents which have selected under following criteria: 1. Financial and Liquidity Screening. 2. Negative List Screening (ESG). **ESG KEHATI Universe** Stocks included in the ESG KEHATI Universe are stocks in the Assessed Universe which have selected under following criteria: 1. Having ESG Score within the required threshold. ESG Score measure company's ESG performance with environment, social, and governance aspect with criteria set by KEHATI. 2. Do not involved in ESG Controversy.

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Selection Criteria	Issuers in the ESG KEHATI Universe will be ranked based on the highest to lowest ESG & Quality Composite Score. Issuers with the highest composite value will be selected to be included in the index until the number of index constituents reaches 45 constituents.

2. INDEX MAINTENANCE

2.1. Periodic Evaluation

	Major Evaluation	Minor Evaluation
Evaluation Period	May and November	February and August
Effective Date	First trading day of June and December	First trading day of March and September
Process / Purposes	Select the stocks of index constituents.	
	- Adjust changes in the number of listed shares. - Adjust stock weights based on their free float ratios. - Adjust the stock weights based on the cap.	
Announcement	5 exchange days or later prior to the effective date, depends on announcement date of Sharia Securities List from the Financial Services Authority.	

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. Selection Universe

Stocks that are eligible to continue the process of index constituents are stocks in the KEHATI ESG Universe which are selected from the Assessed Universe.

To obtain Assessed Universe, selection will be made from IDX Composite with the following criteria:

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Negative List Screening (ESG)

Company does not have a core business in 9 negative sectors screened by KEHATI:

1. Pesticide
2. Nuclear
3. Weaponry
4. Tobacco
5. Alcohol
6. Pornography
7. Gambling
8. Genetically Modified Organisms
9. Coal Mining

Financial and Liquidity Screening

Selected by considering the following factors:

1. Market Capitalization
2. Total Asset
3. Net Income
4. Free Float
5. Average Trading Value

From the Assessed Universe, stocks in the KEHATI Universe will be selected with the following criteria:

1. Having ESG Score within the required threshold. ESG score assesses the company's ESG performance in environmental, social and governance aspects based on predetermined indicators.
2. Passed the ESG Controversy Screening.

3.2. ESG Score Assessment

The focus of ESG performance assessment includes aspects of the environment, social, and governance. Sources of data on the assessment of the ESG score are as follows:

1. Sustainability Report
2. Financial Statements
3. Listed Company Website
4. External Data Provider
5. Questionnaire
6. Other Sources

The ESG criteria in each of these aspects are:

Environment	Social	Governance
• Sustainable Products and Product Innovation, • Natural Resources and Biodiversity • Energy Usage • Greenhouse Gas Emissions • Waste Management	• Employee Training and Development • Worker Practice • Occupational Health and Safety • Product Safety • Environmental Social Impact	• Shareholder Rights Protection Mechanism • Competencies and Roles of the Board of Commissioners & Directors • Quality and Disclosure of Information • Business Ethics and Stakeholders Engagement • Sustainability Management Practice

3.3. Process of Determining Selected Constituents

3.3.1. Calculation of Stock Quality Ratio

Ratios used in assessing the quality score of each stock included in the universe are as follows:

3.3.1.1. Return on Equity (ROE

ROE is calculated using earnings per share for the last 12 months and book value per share in the most recent reporting.

$$\text{ROE} = \frac{\textit{Trailing 12 month earnings per share}}{\textit{Latest Book Value per Share}}$$

3.3.1.2. Debt to Equity (DER)

DER is calculated using total debt and total equity per the latest financial statement.

$$\text{D/E} = \frac{\textit{Total Debt}}{\textit{Book Value}}$$

3.3.1.3. Earnings Variability (EV)

EV is calculated from the standard deviation of annual profit growth in the last 5 years.

3.3.2. Data Availability Policy

Selection policy of the company is based on the availability of data ratios are as follows:

Condition		Policy
Condition 1	ROE is not available	Company's Quality Score are not calculated and excluded for index constituent selection.
Condition 2	DER is not available, but other two ratio are available	Quality score is calculated using ROE and EV.
Condition 3	EV is not available, but other two are available	Quality score is calculated using ROE and DER.
Condition 4	DER and EV are not available	Quality Score are not calculated and excluded for index constituent selection.
Condition 5	No data available.	Company's Quality Score are not calculated and excluded for index constituent selection.

3.3.3. Quality Score Calculation

After obtaining the stock quality ratios (ROE, DER, and EV), winsorization method is applied to these ratios at 2.5% and 97.5% percentile for each quality ratio to normalize outliers.

To form a quality score, a standardization process is carried out using the z-score of each ratio that has been through winsorization process. The quality score is calculated from average of the three z-scores of these ratios and with the following adjustments:

a. If the average Z-score of stock quality ratios (Z_q) > 0,

$$\text{Quality Score} = 1 + Z_q$$

b. If the average Z-score of stock quality ratios (Z_q) < 0,

$$\text{Quality Score} = \frac{1}{(1 - Z_q)}$$

3.3.4. Modified ESG Score Calculation

To obtain ESG Score that can be compared with a Quality Score, standardization of the ESG Score is also carried out by converting it to a z-score and become the Modified ESG Score. The conversion process begins by applying winsorization method to ESG Score at 2.5% and 97.5% percentile to prevent outliers. The Modified ESG Score is standardized using the z-score and with the following adjustments:

a. If the z-score of the Shares ESG Value (Z_{esg}) > 0,

$$\text{Modified ESG Score} = 1 + Z_{esg}$$

b. If the z-score of the Shares ESG Value (Z_{esg}) < 0,

$$\text{Modified ESG Score} = \frac{1}{(1 - Z_{esg})}$$

3.3.5. ESG & Quality Composite Score

The Quality Score and ESG Modified Score are assigned a weight of 50% each and added together to calculate the ESG-Quality Composite Score:

$$\text{ESG Quality Composite Score} = (0.5 \times \text{Mod. ESG Score}) + (0.5 \times \text{Quality Score})$$

3.3.6. Determination of Selected Constituents

At the initial phase, after obtaining the ESG-Quality Composite Score, 45 companies with the best score will be selected as index constituents.

In the next major evaluation, buffer rules will applied to selection process with the following conditions:

a. **Stage 1**: 35 Constituents with the highest ESG-Quality Composite Score will be selected as constituents.

b. **Stage 2**: Selection of 36-45th index constituents will be carry on by the Index Committee with the following considerations:

- To limit the index turnover magnitude, the 36-45th constituents can be taken from the index constituents in the previous period within rank 36-55 of composite score.
- The adjustments that can be made by the Index Committee are limited to a maximum of 5 constituents.

c. **Stage 3**: The process in Stage 2 is carry on until 45 constituent is fulfilled.

4. METHODOLOGY OF INDEX CALCULATION

4.1. Index Calculation Formula (Weighting Method)

The index uses “Capped Free Float Adjusted Market Capitalization Weighted Average” methodology. This method adds free float ratio factor into the market capitalization. Moreover, the weight of index constituents is capped at 15%.

Index calculation formula is as follows:

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

Where:

Market Cap_i	=	Total listed shares × market price of stock i
$\text{Free Float Ratio}_i$	=	Ratio of number of free float shares to the total listed shares 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. Adjusting Stock Weight Based on Free Float Ratio

In each evaluation period, the weight of each stock is evaluated based on the value of the free float ratio. There is no technical difference in weight adjustment between major evaluation and minor evaluation. In the major evaluation, this process of adjusting weight was preceded by the selection process of the index constituents.

4.2.1. Calculation of Free Float Ratio

The free float ratio of each stock is calculated based on the free float stocks to total listed stocks. The definition of free float is the number of scripless shares 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.

4.2.2. Calculation of Free Float Adjusted Market Capitalization

The free float adjusted market capitalization of each stock is calculated as follows:

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

Where:

MC_i	=	Free float adjusted market capitalization 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

4.2.3. Calculation of Stock Weight

The weight of each stock is calculated as follows:

$$\text{Weight}_i = \frac{MC_i}{\sum_{i=1}^{n} MC_i}$$

Where:

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

4.3. 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.

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, then the process of adjusting stock weight by capping is applied as follows:

4.3.1. Determining the Number of Capped Stocks

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

4.3.2. Calculating the Total Free Float Adjusted Market Capitalization of Capped Stocks

If MC_s is the total free float adjusted market capitalization of capped stocks and c is the cap, then:

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

Where:

MC_s	=	Total free float adjusted market capitalization of all capped stocks
MC_t	=	Total free float adjusted market capitalization of all uncapped stocks
s	=	Number of capped stocks
c	=	Cap

4.3.3. Calculating the Capped Free Float Adjusted Market Capitalization

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

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

4.3.4. Calculating the Number of Shares for the Index

The adjusted number of shares for index (Adj. S_i) of a stock is calculated by rounding the stock's free float adjusted market capitalization divided by the stock price, as the following formula:

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

If a stock is a capped stock, MC_i is equal to $MC_{i.s}$.

4.3.5. Calculating Final Stock Weight

The final weight of each stock 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
$\text{Adj. } MC_i$	=	Market capitalization of stock i after adjustment of free float ratio and capping.
$\sum_{i=1}^{n} \text{Adj. } MC_i$	=	Total market capitalization of all stocks after adjustment of free float ratio and capping.
n	=	Number of constituents

The weight adjustment process is complete if each index constituent does not exceed the cap. The adjustment process should be repeated if there is still any stock that have a weight of more than the cap as a result of the preceding weight adjustment in other stocks.

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