

BIST
NON-MARKET CAP WEIGHTED STOCK INDICES
GROUND RULES METHODOLOGY

1. PURPOSE

BIST Non-Market Cap Weighted Stock Indices have been created to measure the return performances of group of stocks according to index theme where weights determined at the beginning of the index period.

Borsa İstanbul has full control over all indices calculated within the scope of this Methodology and is responsible for all processes related to the creation, calculation and publication of these indices.

Although in Market Cap Weighted Stock Indices, weight of a stock may change other than price fluctuations like corporate actions or free float ratio changes during Index Period.

On the other hand, in Non-Market Cap Weighted Stock Indices, weight of a stock may change only as a result of price fluctuations during index period. If free float market value of a stock changes during Index Period for a reason except for price fluctuations, by re-calculating weighting factor, given stock's weighting will be equalized to last session close weighting before this change. As a result, weighting of stocks in index is not affected from other factors (for example capital decrease/increase, merger/spin-off etc.) except for price and weighting theme.

2. DEFINITIONS AND GENERAL RULES

2.1. Number of Shares

It refers to the number of shares calculated in accordance with Article 5.1.1 titled "Trading Unit (Lot)" of Borsa İstanbul A.Ş. Equity Market Procedure, using the company's issued or paid-in capitals (including the temporary shares which are created in the Central Registry Agency (CRA) during capital increases under the paid-in capital system until the capital is registered and announced) reach within the scope of the announcements made by Borsa İstanbul on the Public Disclosure Platform (PDP - www.kap.org.tr) regarding corporate actions of companies.

The same Number of Shares as BIST Market Cap Weighted Stock Indices are used in the calculation of indices.

2.1.2.2. Market Value

Market value is calculated by multiplying Nnumber of Sshares ~~(including the temporary shares which are created in the Central Registry Agency (CRA) during capital increases under the paid-in capital system until the capital is registered and announced) that represent the capital~~ by the stock price.

2.2.2.3. Free Float Ratio (FFR)

Free Float Ratio has been defined by the Capital Markets Board (CMB) as a concept showing free float rate of the stocks traded on Borsa İstanbul equity markets, and is

calculated and announced by CRA. ~~In calculation of indices, free float ratios that are reviewed according to Article 7.4 are used.~~

The same FFRs as BIST Market Cap Weighted Stock Indices are used in the calculation of indices.

2.3.2.4. Weighting Factor

This is a number used to adjust the weight of a stock in the index. In the index calculation, free float market values are taken into account only after being multiplied by this weighting factor.

2.4.2.5. Weighted FFMV

Weighted FFMV (Weighted Free Float Market Value) is calculated by multiplying the market value by the FFR and the Weighting Factor.

~~2.5.~~ 2.5. Adjusted Prices

~~In case of corporate actions, previous close prices are adjusted by a factor which is obtained via division of the theoretical price (calculated for the corporate action) by the close price.~~

~~2.6.~~ 2.6. Average MV

~~Average MV (Average Market Value) of a stock is calculated by multiplying the number of shares (including the temporary shares created in the CRA during capital increases under the paid-in capital system until the capital is registered and announced) at the end of the Review Period by the arithmetic average of Adjusted Prices (close) for the Review Period.~~

~~2.7.~~ 2.7. Average FFMV

~~Average FFMV (Average Free Float Market Value) is calculated via multiplying the Average MV by the FFR.~~

2.8.2.6. Exchange Rate

Refers to the Forex Buying Rates announced by the Central Bank of Republic of Turkey.

2.9.2.7. Versions of the Indices

Indices are calculated only in return version in a way that reflects cash dividend return, in currencies TL, USD and Euro.

In Non-Market Cap Weighted Indices, on the assumption that the dividend paid shall be reinvested to the same stock, index divisor is not adjusted. However, adjustment is made on the weighting factor of the related stock in order to keep it equal to weights of the constituents at the end of last session.

2.10.2.8. Index Period

Same as Market Cap Weighted versions, the relevant Index Periods are shown in the table below. There are 4 Index Periods for BIST 30 Equal Weighted Return index,

~~namely, January-March, April-June, July-September and October-December. There are 2 Index Periods for BIST Participation 30 Equal Weighted Return index, namely, May-September and October-April.~~

<u>INDEX</u>	<u>INDEX PERIOD</u>
<u>BIST 30 Equal Weighted Return</u>	<u>January - March,</u> <u>April - June,</u> <u>July-September,</u> <u>October-December</u>
<u>BIST Participation 30 Equal Weighted Return</u>	<u>May-September</u> <u>October-April</u>

2.11.2.9. Calculation and Dissemination Frequency

Indices are calculated when Borsa İstanbul Stock Market is open.

~~BIST 30 Equal Weighted Return and BIST Participation 30 Equal Weighted Return indices are calculated during the session once in ten seconds and disseminated in real-time. Foreign currency based indices are calculated and disseminated once at the end of each session.~~

The calculation and dissemination frequency of the indices are shown in the table below.

<u>INDEX</u>	<u>VERSION</u>	<u>CALCULATION AND DISSEMINATION FREQUENCY</u>
<u>BIST 30 Equal Weighted</u>	<u>TL - Return</u>	<u>Once in 10 seconds</u>
<u>BIST Participation 30 Equal Weighted</u>	<u>US\$ - Return</u> <u>Euro - Return</u>	<u>Once at the end of session</u>

2.12.2.10. Data Precision

	DATA PRECISION
Index Values	Rounded to 2 decimal places
Index Divisors	Rounded to 8 decimal places
Free Float Ratio (%)	If Free Float Ratio < 1% Rounded to 2 decimal places, If Free Float Ratio >= 1% Rounded to integer numbers
Weighting Factor	Rounded to 12 decimal places

2.13.2.11. Capping Method

In Non-Market Cap Weighted Indices, weights of constituents are determined in accordance with the weighting theme of the index at the beginning of ~~the~~ each Index Period as described in Article 5.2.

The weights determined at the beginning of ~~the~~ each Index Period can only change due to the movements in prices. Actions other than price movements, like changes in FFR or corporate actions such as capital increase/decrease, dividend payments, and mergers do not change the weights of constituents in the index.

The effects of changes in FFR or corporate actions are eliminated by modifying the Weighting Factors of the constituents. By this modification weights of the constituents at the end of last session remain equal to effective date of the corporate actions or free float changes.

3. CALCULATED INDICES; STARTING DATES AND VALUES

3.1. BIST 30 Equal Weighted Return Index

The Index is created by equalizing the weightings of BIST 30 Index constituents at the beginning of the Index Period.

3.2. BIST Participation 30 Equal Weighted Return Index

The Index is created by equalizing the weightings of BIST Participation 30 Index constituents at the beginning of the Index Period.

3.3. Starting Dates and Values of Indices

Starting values and dates of BIST Non-Market Cap Weighted Stock Indices can be found on the Borsa Istanbul website - BIST Stock Indices page (<https://www.borsaistanbul.com/files/bist-endeks-kodlari-ve-baslangic-degerleri.xlsx>).

3.4. CALCULATION METHOD FORMULA

3.1. Latest price data are used in the index calculations.

Indices are calculated using the following formula in accordance with the index weighting theme referred to in Article 3.4.

$$E_t = \frac{\sum_{i=1}^n (F_{it} / D_t) * N_{it} * H_{it} * K_{it}}{B_t}$$

E_t = Value of the index at time t

n = Number of constituent stocks

F_{it} = Price of the stock "i" at time t

N_{it} = Total ~~N~~number of ~~S~~shares of stock "i" at time t

H_{it} = Free float ratio used in index calculation of the stock "i" at time t

K_{it} = Weighting factor of the stock "i" at time t

D_t = Exchange rate on day t

B_t = Divisor of the index at time t

4. CALCULATED INDICES; STARTING DATES AND VALUES

4.1. BIST 30 Equal Weighted Return Index

~~BIST 30 Equal Weighted Return Index is created by equalizing the weightings of BIST 30 Index constituents at the beginning of the Index Period.~~

~~4.2. BIST Participation 30 Equal Weighted Return Index~~

~~BIST Participation 30 Equal Weighted Return Index is created by equalizing the weightings of BIST Participation 30 Index constituents at the beginning of the Index Period.~~

~~Starting values and dates of BIST Non-Market Cap Weighted Stock Indices can be found on the Borsa Istanbul website BIST Stock Indices page.~~

5. PERIODIC CHANGES

~~Periodic changes on stocks within indices are conducted as follows.~~

~~5.1. Determination of constituents at the beginning of the term.~~

~~5.1.1 BIST 30 Equal Weighted Return Index~~

~~Stocks announced as a BIST 30 constituent for given Index Period also become constituent of this index.~~

~~5.1.2 BIST Participation 30 Equal Weighted Return Index~~

~~Stocks announced as a BIST Participation 30 constituent for given Index Period also become constituent of this index.~~

~~5.2. Determination of weightings of constituents at the beginning of the term.~~

~~5.2.1 BIST 30 Equal Weighted Return Index~~

~~At the beginning of the term weighting factors which equalize the weighting of each stock at the beginning of the term are calculated. This calculation is made for all the stocks announced as constituent of BIST 30.~~

~~5.2.1 BIST Participation 30 Equal Weighted Return Index~~

~~At the beginning of the term weighting factors which equalize the weighting of each stock at the beginning of the term are calculated. This calculation is made for all the stocks announced as constituent of BIST Participation 30.~~

6.5. NON-PERIODIC CHANGES ON CONSTITUENT STOCKS

~~6.1.5.1.~~ Stocks, excluded from BIST 30 Index during Index Period are also excluded from the BIST 30 Equal Weighted Return index effective from the date of exclusion. Excluded stocks are replaced with included ones.

~~6.2.5.2.~~ Stocks, excluded from BIST Participation 30 Index during Index Period are also excluded from the BIST Participation 30 Equal Weighted Return index effective from the date of exclusion. Excluded stocks are replaced with included ones.

7.6. ~~EVENTS REQUIRING ADJUSTMENT IN THE INDICES AND TIMING OF ADJUSTMENTS~~

~~Under such circumstances which require changes on constituent stocks of the indices based on the public disclosures of the companies, the company should have delivered the statement to the Public Disclosure Platform (PDP) until 16:30 (until 12:00 on half days) on the business day that precedes the realization date. Otherwise, the relevant change will be made so that it will be effective on the second business day that succeeds the delivery of the statement to PDP.~~

6.1. Adjustment at the beginning of Index Period

The weights of the stocks in the index at the beginning of the Index Period are determined as explained in Article 3. After all index operations valid for the first trading day of the Index Period, such as corporate actions, changes in FFR and changes in scope of the index are fulfilled; Weighing Factors are calculated to give the final weights determined for each share.

Finally, the new divisor value for the index is calculated with the following formula.

$$B_{t+1} = \left(1 + \frac{\Delta PD}{PD_t} \right) * B_t$$

B_{t+1}	=	<u>Adjusted divisor to be used on day t+1</u>
ΔPD	=	<u>Change in the total Weighted FFMV of the stocks due to the events described below</u>
PD_t	=	<u>Total Weighted FFMV of the stocks on day "t"</u>
B_t	=	<u>Divisor on day t</u>

6.2. Adjustment during the Index Period

a) Adjustment during Index Period due to constituent changes.

After all index transactions like corporate actions, FFR changes effective from the first trading day, weightings of shares in the index are re-calculated in accordance with the Article 6.1.

b) Adjustment during Index Period due to company covered by the Index is taken over by another company not covered by the Index and the resulting company is included in the Index

With using "Number of Shares in Index Portfolio" before merger and "share exchange rate" about merger of the acquired company "The number of Shares of the Resulting Company in Index Portfolio" is calculated. And this value is divided to floating number of share of the resulting company in order to calculate the new Weighting Factor.

The divisor value of the index is not changed.

$$K_{t+1} = \frac{\text{Number of Shares in Index Portfolio}_t * \text{Share Exchange Rate}}{N_{t+1} * H_{t+1}}$$

N_{t+1} = Total number of shares of stock at day t+1

H_{t+1} = Free float ratio used in index calculation of the stock at day t+1

K_{t+1} = Weighting factor of the stock at day t+1

$$\text{Number of Shares in Index Portfolio}_t = N_t * H_t * K_t$$

N_t = Total number of shares of stock at day t

H_t = Free float ratio used in index calculation of the stock at day t

K_t = Weighting factor of the stock at day t

c) Adjustment during Index Period due to free float changes and corporate actions which does not require price change

The new Weighting Factor is calculated by dividing pre-adjustment “The Number of Shares in Index Portfolio” of the company to post-adjustment floating number of the share of the company.

The divisor value of the index is not changed.

$$K_{it+1} = \frac{\text{The Number of Shares in the Index Portfolio}}{N_{it+1} * H_{it+1}}$$

N_{it} = Total number of shares of stock at day t

H_{it} = Free float ratio used in index calculation of the stock at day t

K_{it} = Weighting factor of the stock at day t

$$\text{Number of Shares in Index Portfolio}_t = N_t * H_t * K_t$$

d) Adjustment during Index Period due to corporate actions which require price change

In cases of corporate actions which led to a change in the price of the share covered byt the index, the adjustment is made via changing the Weighting Factor as follows.

$$K_{t+1} = \frac{\text{Weighted FFMV}_t}{\text{FFMV}_t} = \frac{N_t * H_t * F_t * K_t}{N_{t+1} * H_{t+1} * F_{t+1}}$$

F_t = Price of the stock at day t

N_t = Total number of shares of stock at day t

H_t = Free float ratio used in index calculation of the stock at day t

K_t = Weighting factor of the stock at day t

6.3. Events which require adjustment in the indices and the timing of the adjustments:

Under such circumstances which require changes on constituent stocks of the indices based on the public disclosures of the companies, the company should have delivered the statement to the Public Disclosure Platform (PDP) until 16:30 (until 12:00 on half days) on the business day that precedes the realization date. Otherwise, the relevant change will be made so that it will be effective on the second business day that succeeds the delivery of the statement to PDP.

~~A list of corporate actions that will be implemented on the next business day is finalized by 16:30 (12:00 on half days) every day, and announced on the PDP with the subject of “Corporate Actions”.~~

6.3.1. Cash dividend payment

The adjustment is made in accordance with Article [68.2.d](#), on the assumption that the dividend paid shall be reinvested to the same stock to be effective on the ex-dividend date, taking into account the net dividend amount.

6.3.2. Capital increase in cash through rights offering

- a) If the last trade price and/or the adjusted price (in case of dividend and bonus issues) of the stock are equal to or higher than the subscription price;
 - i. The adjustment is made to be effective on the rights issue date, in accordance with Article [68.2.d](#).
 - ii. But if the capital does not reach to the target capital, due to the unsold shares; re-adjustment is made to be effective on the fourth business day following the notification on PDP that the unsold stocks are cancelled, in accordance with Article [68.2.c](#).
- b) If the last trade price and/or the adjusted price (in case of dividend and bonus issues) of the stock is lower than the subscription price;

The adjustment regarding the amount of rights issue is made to be effective on the fourth business day that succeeds the day when the completion of the capital increase process is notified to PDP, after the exercise of the rights issue and the sale of the remaining shares on the Primary Market, in accordance with Article [68.2.c](#).

6.3.3. Capital increase in cash without rights offering

- a) If the shares representing the capital increase are sold via private placement, adjustment is made to be effective on the business day that succeeds the ending date of the sales transaction,
- b) If the shares representing the capital increase are sold via public offering, adjustment is made to be effective on the fourth business day that succeeds the ending date of the sales transaction

in accordance with Article [68.2.c](#).

6.3.4. Change in FFR

The free float ratios that are announced by CRA for the last business day of the week are analyzed and the changes in ratios except those occur during the capital increase process are taken into account.

If the FFR;

- is equal or lower than 50% and there is a change at the rate equal to 5 points or higher;

- is higher than 50% and there is a change at the rate equal to 10 points or higher;

adjustment is made to be effective on the third business day of the following week, in accordance with Article [68.2.c](#). FFR are not adjusted for the weeks consisting of two or less business days. In the event that the FFR is adjusted in cases that require corrections in the indices, the FFR is adjusted taking into account the latest ratios announced by CRA.

If shares held by current shareholders are offered to the public, FFR are adjusted to be effective from the fourth business day succeeding the end date of the transaction, in accordance with Article [68.2.c](#).

If deemed necessary, changes on the ratios can be made with the decision of the Borsa İstanbul Management.

6.3.5. Decrease of capital by acquiring and then canceling the company's own shares

Adjustment is made to be effective on the on the capital decrease date, in accordance with Article [68.2.c](#).

6.3.6. Merger of two or more companies covered by the index

Adjustment is made to be effective from the date of the distribution of the stocks issued as a result of the merger or acquisition, in accordance with Article [68.2.a](#).

6.3.7. A company covered by the index takes over one or more companies not covered by the index

Adjustment is made to be effective from the date of the distribution of the stocks issued as a result of the merger or acquisition, in accordance with Article [68.2.c](#).

6.3.8. A company covered by the index is taken over by another company not covered by the index and the resulting company is included in the index

Adjustment is made to be effective from the date of the distribution of the stocks issued as a result of the merger or acquisition, in accordance with Article [68.2.b](#).

6.3.9. A company covered by the index is taken over by another company not covered by the index and the resulting company is not included in the index

Adjustment is made to be effective from the date of the distribution of the stocks issued as a result of the merger or acquisition, in accordance with Article [68.2.a](#).

6.3.10. Company spin-off (demerger)

Adjustment is made to be effective on the date of the distribution of shares issued due to the spin-off or demerger, in accordance with Article [68.2.d](#).

6.3.11. The sale of shares held ready to sell in public offerings

Adjustment is made to be effective on the fourth business day of the month succeeding the one when the sale has been made considering the delivery of the statement related to the sale to PDP, in accordance with Article [68.2.c](#).

6.3.12. Share transformation of companies with multiple groups of stock altering the number of shares in different groups

Adjustment is made effective on the first business day that succeeds the delivery of the statement concerning the share transformation to PDP, in accordance with Article [68.2.c](#).

[7.1.6.4.](#) If capital increases and/or dividend payments of the traded companies are realized in a currency other than Turkish Lira, Turkish Lira equivalents, calculated by using exchange rates of the last business day before ex-date, are used in index adjustments.

8. ADJUSTMENT METHODOLOGY

8.1. Adjustment at the beginning of Index Period

~~The weights of the stocks in the index at the beginning of the Index Period are determined as explained in Article 5.2. After all index operations valid for the first trading day of the Index Period, such as corporate actions, changes in FFR and changes in scope of the index are fulfilled; Weighing Factors are calculated to give the final weights determined for each share.~~

~~Finally, the new divisor value for the index is calculated with the following formula.~~

$$B_{t+1} = \left(1 + \frac{APD}{PD_t} \right) * B_t$$

~~B_{t+1} = Adjusted divisor to be used on day t+1~~

~~APD = Change in the total Weighted FFMV of the stocks due to the events described below~~

~~PD_t = Total Weighted FFMV of the stocks on day "t"~~

~~B_t = Divisor on day t~~

8.2. Adjustment during the Index Period

~~a) Adjustment during Index Period due to constituent changes.~~

After all index transactions like corporate actions, FFR changes effective from the first trading day, weightings of shares in the index are re-calculated in accordance with the Article 8.1.

- b) Adjustment during Index Period due to company covered by the Index is taken over by another company not covered by the Index and the resulting company is included in the Index

With using “Number of Shares in Index Portfolio” before merger and “share exchange rate” about merger of the acquired company “The number of Shares of the Resulting Company in Index Portfolio” is calculated. And this value is divided to floating number of share of the resulting company in order to calculate the new Weighting Factor.

The divisor value of the index is not changed.

$$K_{t+1} = \frac{\text{Number of Shares in Index Portfolio}_t * \text{Share Exchange Rate}}{N_{t+1} * H_{t+1}}$$

N_{t+1} = Total number of shares of stock at day t+1

H_{t+1} = Free float ratio used in index calculation of the stock at day t+1

K_{t+1} = Weighting factor of the stock at day t+1

$$\text{Number of Shares in Index Portfolio}_t = N_t * H_t * K_t$$

N_t = Total number of shares of stock at day t

H_t = Free float ratio used in index calculation of the stock at day t

K_t = Weighting factor of the stock at day t

- c) Adjustment during Index Period due to free float changes and corporate actions which does not require price change

The new Weighting Factor is calculated by dividing pre-adjustment “The Number of Shares in Index Portfolio” of the company to post-adjustment floating number of the share of the company.

The divisor value of the index is not changed.

$$K_{it+1} = \frac{\text{The Number of Shares in the Index Portfolio}}{N_{it+1} * H_{it+1}}$$

N_{it} = Total number of shares of stock at day t

H_{it} = Free float ratio used in index calculation of the stock at day t

K_{it} = Weighting factor of the stock at day t

$$\text{Number of Shares in Index Portfolio}_t = N_t * H_t * K_t$$

~~d) Adjustment during Index Period due to corporate actions which require price change~~

~~In cases of corporate actions which led to a change in the price of the share covered by the index, the adjustment is made via changing the Weighting Factor as follows:~~

$$K_{t+1} = \frac{\text{Weighted FFMV}_t}{\text{FFMV}_t} = \frac{N_t * H_t * F_t * K_t}{N_{t+1} * H_{t+1} * F_{t+1}}$$

F_t = Price of the stock at day t

N_t = Total number of shares of stock at day t

H_t = Free float ratio used in index calculation of the stock at day t

K_t = Weighting factor of the stock at day t

~~8.3. If capital increases and/or dividend payments of the traded companies are realized in a currency other than Turkish Lira, Turkish Lira equivalents, calculated by using exchange rates of the last business day before ex date, are used in index adjustments.~~

~~8.4. Retroactive correction in the calculated index values:~~

~~No retroactive correction is made in the index values calculated and announced in real time. Retroactive correction in the index values calculated and announced at the end of day can be permitted only by the decision of the Borsa İstanbul Management.~~

7. DATA USED IN CALCULATIONS AND DATA HIERARCHY

7.1. Prices

- a) Latest transaction prices recorded in the BIST Equity Market are used in the index calculations.
- b) Theoretical/reference prices calculated for the stocks due to corporate actions continue to be used until the share is traded.
- c) Stocks are included in the scope of the indices by taking into account the base/reference prices announced by Borsa İstanbul.
- d) If the stock is not traded or the prices of the stocks included in the indices cannot be reached due to the existence of unusual market conditions, the indices continue to be calculated with the latest prices used.

7.2. Free Float Ratios

- a) The same FFRs as BIST Market Cap Weighted Stock Indices are used in the calculation of indices.
- b) If the FFRs of the stocks included in the indices cannot be accessed due to lack of data or in case of unusual market conditions, the indices continue to be calculated with the current FFRs of the stocks.

7.3. Number of Shares

- a) The same Number of Shares as BIST Market Cap Weighted Stock Indices are used in the calculation of indices.
- b) If the corporate actions cannot be implemented in case of unusual market conditions, the indices continue to be calculated with the last known Number of Shares.

7.4. Lists of Constituent Stocks

- a) Indices are calculated with the same lists as BIST Market Cap Weighted Stock Indices.
- b) If the stocks to be included in the indices cannot be determined due to lack of data or in case of unusual market conditions, the indices continue to be calculated with the current list.

9.8. MONITORING AND ADMINISTRATION OF INDICES

~~9.1.8.1.~~ Index Department is responsible for monitoring and administration of Indices.

~~9.2. At periodic reviews, the stocks to be included in the indices or substitute lists are determined by the Index Department, subject to the approval of Borsa İstanbul Management.~~

~~8.2. Borsa İstanbul Management is authorized with regard to issues that are not stipulated by BIST Non-Market Cap Weighted Stock Indices Ground Rules~~the Methodology.

9. CORRECTION IN INDEX VALUES

9.1. No retroactive correction is made in the index values calculated and published in real time.

9.2. Retroactive correction in the index values calculated and published at the end of day can be permitted only by the decision of the Borsa İstanbul Management.

10. EFFECTIVE DATE

This Methodology takes effect on 10/11/2022.