

Nikkei 225 Domestic Exposure 50 Index

Nikkei 225 Global Exposure 50 Index

Index Guidebook

Nikkei Inc.

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(April 15, 2019 version)

1: Introduction

Nikkei 225 Domestic Exposure 50 Index and Nikkei 225 Global Exposure 50 Index are the equal-weighted stock indexes, whose constituents are chosen from the Nikkei 225 using a gauge “Overseas Sales Ratio” (the ratio of overseas sales from outside Japan to the gross sales of each company).

2: Name

(1) (Japanese)	Official : 日経平均内需株 50 指数 Abbreviation : 日経内需株 50
(English)	Official : Nikkei 225 Domestic Exposure 50 Index Abbreviation : Nikkei Domestic Exposure 50
(Japanese)	Official : 日経平均外需株 50 指数 Abbreviation : 日経外需株 50
(English)	Official : Nikkei 225 Global Exposure 50 Index Abbreviation : Nikkei Global Exposure 50

3: Constituents Management

(1) Basic Point

- The number of constituents of the Nikkei 225 Domestic Exposure 50 Index (Nikkei Domestic Exposure 50) and the Nikkei 225 Global Exposure 50 Index (Nikkei Global Exposure 50) are fifty respectively in principle.
- The Periodic Review for both indexes is conducted at the end of October every year. Although the Extraordinary Removal in the constituents results in the index calculation with less than fifty issues, the constituent will not be added until the total number of the constituents becomes less than forty five. The number will be back to fifty at the Periodic Review.

(2) Universe

The index constituents are selected from the Nikkei Stock Average (Nikkei 225) constituents.

(3) Periodic Review

- The Base Date of the Periodic Review shall be the 2nd business day of October of each year. After 2019, each constituent stock shall be selected by the process described below and the constituent change for both indexes shall be effective on the final business day of October. Nikkei make changes to the constituents

with an appropriate notice period in advance of the effective date.

- For the Nikkei Domestic Exposure 50, the Periodic Review shall conduct by the following procedure.

- ① As a result of the Extraordinary Removals, if the number of the constituents is less than fifty on the Base Date, the non-constituent stock with lowest “Overseas Sales Ratio” shall be added sequentially so that the number becomes fifty.
- ② If the difference of “Overseas Sales Ratio” between a constituent stock with the highest “Overseas Sales Ratio” and a non-constituent stock with the lowest “Overseas Sales Ratio” is more than ten percent points, the former constituent stock shall be a deleted candidate, and the latter non-constituent stock shall be an added candidate. This shall not be applied to the stocks added under ①.
- ③ Repeat step ② until no stock meets the criteria.

However, for the each step of ① to ③, in case that companies have the same “Overseas Sales Ratio”, the company with higher liquidity (average daily trading values for a one year) will become an added stock preferentially.

- For the Nikkei Global Exposure 50, the Periodic Review shall conduct by the following procedure.

- ① As a result of the Extraordinary Removals, if the number of the constituents is less than fifty on the Base Date, the non-constituent stock with highest “Overseas Sales Ratio” shall be added sequentially so that the number becomes fifty.
- ② If the difference of “Overseas Sales Ratio” between a constituent stock with the lowest “Overseas Sales Ratio” and a non-constituent stock with the highest “Overseas Sales Ratio” is more than ten percent points, the former constituent stock shall be a deleted candidate, and the latter stock shall be an added candidate. This shall not be applied to the stocks added under ①.
- ③ Repeat step ② until no stock meets the criteria

However, for the each step of ① to ③, in case that companies have the same “Overseas Sales Ratio”, the company with higher liquidity (average daily trading values for a one year) will become an added stock preferentially.

- "Overseas Sales Ratio" is calculated based on overseas sales on a customer location basis reported by Securities Reports of the companies, “Yuho” in Japanese, whose accounting fiscal year has ended till March in each year. If a company doesn't disclose the overseas sales on the customer location basis on the

designated place in the report but disclose the figure similar to the overseas sales on the customer location basis, the figure shall be used. Those figures are rounded down by five percent intervals (e.g. If the actual computed ratio is 58.5%, 55% shall be used as the “Overseas Sales Ratio” of the company).

- The "Overseas Sales Ratio" of a company is less than 10% (including the case that a company doesn't disclose the overseas sales because of its low overseas sales ratio) shall be deemed as 5% uniformly. In case that the "Overseas Sales Ratio" is not reported by a newly established company due to a business integration in its first Securities Reports, the simple summation of the overseas sales of the ex-integration companies shall be used for the calculation of the “Overseas Sales Ratio”. If those ex-integration companies do not disclose the overseas sales because of low overseas sales ratio, the Ratio shall be deemed as 5%.

(4) Extraordinary Removal/Replacement

- In case that a constituent is removed from the Nikkei 225, the constituent stock will be deleted from the Nikkei Domestic Exposure 50 or the Nikkei Global Exposure 50 on the same effective day as the removal from the Nikkei 225.
- As a result of the Extraordinary Removals, new constituents will not be added until the number of constituents becomes less than forty five.
- If it becomes apparent that the number of the constituents becomes less than forty five, the new constituents shall be added so that the number becomes forty five. The new constituent is determined based on the ranking of “Overseas Sales Ratio” which was used for the last Periodic Review. For Nikkei Domestic Exposure 50, one or more non-constituent stocks with the lowest “Overseas Sales Ratios” will be added. For Nikkei Global Exposure 50, one or more non-constituent stocks with the highest “Overseas Sales Ratios” will be added. In case that companies have the same “Overseas Sales Ratio”, the company with higher liquidity (average daily trading values for a one year) will be added.
- Nikkei adds the new constituents with an appropriate notice period in advance of the effective date.

(5) Constituents in the past and on the launch date

- With regards to the Nikkei Domestic Exposure 50 constituents used for the retroactive index calculations (see 4-(7) below), Nikkei chose fifty issues with fifty lowest “Overseas Sales Ratio” from the Nikkei 225 constituents on the Base Date of each year before 2017 and change the constituents on the final business day of the month. In case that companies have the same “Overseas Sales Ratio”, the company with higher liquidity (average daily trading values for a one year) will be prioritized to add and the rule of the Extraordinary Replacements

described in the above (4) has been applied for the retroactive calculations.

- With regards to the Nikkei Global Exposure 50 constituents used for the retroactive index calculations (see 4-(7) below), Nikkei chose fifty issues with fifty highest “Overseas Sales Ratio” from the Nikkei 225 constituents on the Base Date of each year before 2017 and change the constituents on the final business day of the month. In case that companies have the same “Overseas Sales Ratio”, the company with higher liquidity (average daily trading values for a one year) will be prioritized to add and the rule of the Extraordinary Replacements described in the above (4) has been applied for the retroactive calculations.
- The constituents in the period between the Inception Date (December 28, 2001) and the timing of the periodic constituent changes in 2002 for both indexes are selected on the Inception Date as the Base Date in the above-mentioned way and applied on the same day respectively.
- The constituents of both indexes on the launch date were selected as of October 2, 2018 as the Base Date in the above-mentioned way after removing companies delisted till the launch date, and the removals were applied as of October 31, 2018 respectively.

4 : Index Calculation

(1) Basic Point

- The indexes are calculated by equal-weighted methodology. However, the constituents’ weights with low liquidity shall be halved. If the constituents of the Nikkei 225 are in the lowest 20 percentile as ranked by the average daily trading values for a one year, such stocks are treated as “low liquidity” stocks.
- The index level on December 28 2001, the Inception Date is 10,000. The index value of Nikkei 225 on the same day is 10,542.62.
- The unit of the index is “points”. 3th digit is rounded to make the index with 2 digits after the decimal point.
- Calculated on an end-of-day basis, using the share prices on the Tokyo Stock Exchange.

(2) Calculation Formula

- The daily index value shall be calculated by the following formula.

$$\text{Index value} = \Sigma \{ \text{Share price} \times \text{Weight Factor} \} \div \text{Divisor}$$

(3) Share price

- Prices used for the calculation are selected in the following order of priority.
 - ① Special Quote or sequential trade quote、
 - ② Closing price、
 - ③ Base price(The base price is obtained based on the priority order of ex-rights theoretical price, the last special quote price or sequential trade quote price on the previous day, and the closing price on the previous day.)

(4) Weight Factor

- The Weight Factor used for the index calculation (number of shares for the index) shall be compiled on the Base Date of the Periodic Review by the following formula. It is rounded down to integer number, truncating after the decimal points

$$\text{Weight Factor} = 1 \times \text{Liquidity Factor} / \text{Share Price on the Base Date} \times 10^8$$

① Liquidity Factor

The Liquidity Factor is a factor to adjust the weight of the index constituent corresponding to the relative liquidity in the Nikkei 225 components, which is defined as the daily average trading values for the past one year.

The factor shall be defined as 1 for the top 80% constituents with the higher liquidities, and 0.5 for those in the bottom 20% in terms of the liquidity measures.

② Split or reverse split of the constituent stock

After the Weight Factors are assigned, if an index constituent company makes a stock split or reverse split, the Weight Factor shall be adjusted corresponding to the ratio of the split or reverse split on the ex-date.

- For the Extraordinary Replacement in case that the number of the index constituents is less than 45, the Weight Factors shall be determined based on the data on the Base Date used to choose such new constituents while the Weight Factors of the other issues, i.e. continuing constituents, remain unchanged.

(5) Divisor

- The Divisor on December 28th 2001, the Inception Date is determined by the following formula.

$$\text{Divisor} = \Sigma \{ \text{Share prices} \times \text{Weight Factor on the Inception Date} \} / 10000$$

- After the Inception Date, the Divisor are changed every time when the index constituents are changed by using the following formula.

$$\begin{aligned} \text{Divisor tomorrow} &= \text{Divisor today} \\ &\times (\Sigma \{ \text{base prices next day of the index constituents for the next day} \\ &\quad \times \text{Weight Factor for the next day} \}) \\ &\div (\Sigma \{ \text{base prices today of the today's constituents} \\ &\quad \times \text{today's Weight Factor} \}) \end{aligned}$$

- 5th digit is rounded to make the Divisor have 4 digits after the decimal point.

(6) Modification of the index value

- If any event which affects the index value becomes known after the index is calculated, such event is treated as if it occurred on the first index calculation day after it becomes known and Nikkei reflects the modified data into the index calculation from such date. In principle, Nikkei does not restate the past index value.

(7) Retroactive calculation in the past

- The index is retroactively calculated to the Inception Date (December 28th 2001=10,000) on an end-of-day basis.
- The method to determine the constituents used for the retroactive calculation are described in 3-(5).

5: Others

(1) Total Return Index calculation

Nikkei calculates following 4 indexes as the related indexes of the “Nikkei 225 Domestic Exposure 50 Index” and “Nikkei 225 Global Exposure 50 Index” by adding the dividends and the net dividends excluding taxes respectively. These indexes are calculated on an end-of-day basis.

- Nikkei 225 Domestic Exposure 50 Index (Total Return)
- Nikkei 225 Global Exposure 50 Index (Total Return)
- Nikkei 225 Domestic Exposure 50 Index (Net Total Return)
- Nikkei 225 Global Exposure 50 Index (Net Total Return)

The “Nikkei 225 Domestic Exposure 50 Index (Total Return)” and the “Nikkei 225 Global Exposure 50 Index (Total Return)” measure the performance of the “Nikkei 225 Domestic Exposure 50 Index” and the “Nikkei 225 Global Exposure 50 Index”, including the both movements in the index prices and the reinvestment of the dividend incomes from the constituent stocks at the closing ex-dividend dates, corresponding to the Weight Factor respectively. The “Nikkei 225 Domestic Exposure 50 Index (Net Total Return)” and “Nikkei 225 Global Exposure 50 Index (Net Total Return)” will use the dividends after the deductions of the tax for the calculation. The basic points for the index calculation such as the way to use dividends shall adhere to the Nikkei 225 Total Return Index and the Nikkei 225 Net Total Return Index.

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