

Index Consultation Regarding the Changes to the Presumed Par Value  
and other methodologies of the Nikkei Stock Average

Nikkei Inc. is considering some amendments to the methodology of the Nikkei Stock Average (Nikkei 225). Behind considerations are the new developments in the market such as consolidation of trading units and planned reform of the market structure by the Tokyo Stock Exchange. Nikkei has decided to amend the methodology of the Nikkei 225 to better serve the users of the index either as a measure of the market or as an underlying for financial products.

Nikkei 225 is the best-known index of the Japanese equity market and widely used not only for evaluation of the market but for various financial assets. In the process of the review, Nikkei keeps the basic features of the index unchanged. Its constituents are selected from highly liquid stocks with considerations to the industrial sector balance. It will continue to be calculated as a price-weighted index. Nikkei maintains the continuity of the index with history of more than 70 years.

Based on the above policy, Nikkei intends to amend the methodology in consideration of the impact it might have on the market where the size of the assets linked to the index needs attention. Nikkei values the opinions received through this consultation and will continue to review the rules of the Nikkei 225 to reflect the changes in the market in the future.

Nikkei consults on the specific subjects listed below.

- ① **Change from “Presumed Par Value” to “Price Adjustment Factor”, and amendment to the setting rule for new constituents (effective from the 2021 Periodic Review)**

In calculation of the Nikkei 225, price of a constituent has been adjusted by the “presumed par value” which has roots in the old “par value” concept under the Japanese

commercial law before 2001. Since it has passed 20 years since the abolishment of par value under the commercial law, and the concept of par value is no longer commonly acknowledged among market participants, Nikkei will change it to the “Price Adjustment Factor” or “PAF”. The price of a new constituent will not be adjusted (PAF=1) except when a new constituent is highly priced.

**(1) Change from “Presumed Par Value” to “Price Adjustment Factor”**

Function of the price adjustment factor (PAF) is the same as the presumed par value which adjusts the price level of constituents. In calculation of the Nikkei 225, a stock price of a constituent is multiplied by PAF. The value of PAF is the same as “50 divided by the current presumed par value” (up to the first digit under the decimal point). The price used to calculate the Nikkei 225 will not be affected by this change of the concept. Examples: Presumed par value 50 is PAF 1 which is 50/50

Presumed par value 500 is PAF 0.1 which is 50/500

In line with the change above, the methodology is amended as follows. For the avoidance of doubt, this change will not alter the mathematical nature of the calculation formula.

[\[Index Guidebook\]](#) 3: Calculation method, Preamble

Current Rule	Proposed new rule
The Nikkei225 is calculated as a weighted price average where the sum of the constituent stock prices adjusted by <u>the presumed par value</u> is divided by the divisor.	The Nikkei225 is calculated as a weighted price average where the sum of the constituent stock prices adjusted by <u>the price adjustment factor</u> is divided by the divisor.
Adjusted stock price = stock price x <u>50 (yen) / presumed par value (yen)</u>	Adjusted stock price = stock price x <u>price adjustment factor</u>
Nikkei Stock Average = sum of Adjusted stock price / Divisor	Nikkei Stock Average = sum of Adjusted stock price / Divisor

The PAFs of the current constituents at the time of this replacement will be 50 over the

current presumed par value. However, if the result of this calculation yields 2nd digit under the decimal, it will be rounded down to the nearest 0.1 and the fraction will be adjusted by the divisor. Refer to the “[List of the expected Price Adjustment Factor as on May 10, 2021](#)”.

## (2) Rules to set PAF for new constituents

The PAF for a new constituent to be added to the Nikkei 225 as a result of periodic reviews or by extraordinary replacements will be set to 1 in principle, in line with the consolidation of trading unit of the domestic stocks to 100 by the Tokyo Stock Exchange. However, in order to reduce the impact of the addition of a new stock, PAF other than 1 (0.1 to 0.9) may be assigned to an extremely highly priced stock so that its weight in the index becomes less than 1%.

[[Index Guidebook](#)] 3: Calculation method, (2) Presumed par value, final sentence

Current Rule	Proposed new rule
<p><u>(2) Presumed par value</u></p> <p>...</p> <p><u>Nikkei uses “presumed” par value which succeeds the ex-par value, and adjust the constituent prices to the presumed par value of 50 yen base.</u></p>	<p><u>(2) Price adjustment factor</u></p> <p><u>The price adjustment factor (PAF) of a stock to be added to the Nikkei 225 is 1 provided that the value other than 1 (0.1 to 0.9) may be assigned when the price of such stock exceeds 1% of the sum of constituent prices. It is set at the highest value which does not exceed 1% of the sum of the prices by 0.1 interval.</u></p> <p><u>PAF = sum of Adjusted stock price of the constituents x 1% / the stock price of the new constituent.</u></p> <p><u>Note) RAF is evaluated on the base date and rounded down to the nearest 0.1.</u></p> <p><u>However, if the stock price of the new constituent fluctuates drastically after the base date until the effective date of the change, the PAF may be adjusted.</u></p>

Presumed par value has been adjusted when a constituent goes a large-scale stock split or reverse split to keep the adjusted price unchanged. The same rule applies to the PAF and the PAF will be adjusted by the ratio of a large-scale split/reverse split.

**② Upper limit to the number of constituents change in periodic review (effective from the 2021 Periodic Review)**

To maintain the quality of the index, it is important to review the constituents while limiting the impact of the reshuffle, especially when the asset linked to the index is rapidly growing. To this end, an upper limit of 3 is applied to the constituent change in the periodic review.

[\[Constituent Selection Rules\]](#) 2: Rules of the Periodic Review, Preamble

Current Rule	Proposed new rule
Constituents are reviewed annually in accordance with the following rules. Results of the review become effective on the first trading day of October and there is <u>no limit to the number of constituents reshuffled</u> .	Constituents are reviewed annually <u>as evaluated at the end of July (base date)</u> in accordance with following rules. Results of the review become effective on the first trading day of October. <u>The maximum number of the constituents reshuffled is 3.</u>

**③ Subject market change to the Prime Market from the 1st section of the Tokyo Stock Exchange (effective from April 2022)**

Currently, the Nikkei 225 is comprised of market representative stocks listed in the 1st section of the Tokyo Stock Exchange. After the implementation of the new market structure in April 2022, the constituents will be selected from the “Prime” market of the TSE. On this occasion, “Designation as Securities on Alert” is added to the “Deletion for special reasons”.

[\[Constituent Selection Rules\]](#) 1: Constituents, first paragraph

Current Rule	Proposed new rule
The Nikkei225 is calculated with 225 market representative stocks from the Tokyo Stock Exchange <u>First Section</u> .	The Nikkei225 is calculated with 225 market representative stocks from the Tokyo Stock Exchange <u>Prime Market</u> .

[[Constituent Selection Rules](#)] 2: Rules of the Periodic Review, (1) High Liquidity Group

Current Rule	Proposed new rule
Choose highly liquid stocks from the Tokyo Stock Exchange <u>First Section</u> and group them as the “High Liquidity Group”.	Choose highly liquid stocks from the Tokyo Stock Exchange <u>Prime Market</u> and group them as the “High Liquidity Group”.

[[Constituent Selection Rules](#)] 3: Extraordinary Replacement Rules, (1) Deletion for special reasons

Current Rule	Proposed new rule
<p>Constituents <u>removed from the Tokyo Stock Exchange First Section due to the reasons below and others are deleted from the index.</u></p> <p>i) Designated as a Securities to be delisted</p> <p>ii) Delisted due to corporate restructuring such as merger, share exchange or share transfer</p> <p>iii) Transfer to <u>the Second Section</u></p>	<p>Constituents <u>which meet the following criteria are deleted from the index.</u></p> <p>i) Designated as Securities to be delisted or <u>Securities on Alert</u></p> <p>ii) Delisted due to corporate restructuring such as merger, share exchange or share transfer</p> <p>iii) Transfer to <u>the market other than the Prime (*)</u></p>

(\*) Those stocks listed in the first section of the TSE will have a choice not to be traded in the Prime Market. If the issuers of constituent stocks choose not to trade in the Prime Market, such constituents are removed, and new constituents are added on the day of such market transfer. However, depending on the size of the impact of the constituents change, appropriate implementation process such as step-wise removal/addition, may be considered.

**④ Expansion of the digits under the decimal of the divisor (effective from June 2022)**

To improve the precision of the index, digits under the decimal point of the divisor will be expanded from 3 to 8. This will become effective from the first divisor change after June 2022.

[[Index Guidebook](#)] 3: Calculation method, (3) Divisor ③ Digits under the decimal

Current Rule	Proposed new rule
4 <sup>th</sup> digit is rounded to make the divisor to have <u>3</u> digits after the decimal point.	9 <sup>th</sup> digit is rounded to make the divisor to have <u>8</u> digits after the decimal point.

[Question]

Do you agree to the following proposed amendments?

1. Change from “Presumed Par Value” to “Price Adjustment Factor”(PAF)
2. Rules to set PAF for new constituents
3. Upper limit of 3 constituents change in a periodic review
4. Change subject market from the 1st section to the prime market of the TSE
5. Addition of “designation as securities on Alert” to the list of deletion criteria
6. Expansion of the digits under the decimal point from 3 to 8 of the divisor
7. If you have opinions or ideas to further improve the Nikkei 225, please provide.

Please submit your opinion from the consultation section on the following URL.

<https://indexes.nikkei.co.jp/en/nkave/governance>

Consultation closing date: June 13, 2021 (JST)

Although your contribution to this consultation is respected, Nikkei makes a decision at its own discretion. The result of the consultation will be announced as a formal announcement of the new methodologies. Your contribution will not be published although a summary without identity may be used in our documents.

Contact: [https://www1.entryform.jp/nikkei\\_indexes\\_contact\\_en/](https://www1.entryform.jp/nikkei_indexes_contact_en/)