

July 5, 2021  
Nikkei Inc.

Changes to the Index Guidebook and the Constituents Selection Rules of  
the Nikkei Stock Average

From May 10 to June 13, Nikkei consulted about the changes to the presumed par value and other methodologies of the Nikkei Stock Average (Nikkei 225). Nikkei asked 6 questions and the majority of the answers to all of these questions were affirmative. As a result, Nikkei concluded that its proposals were supported. At the same time, however, Nikkei received multiple opinions asking further clarifications of the topics such as the timing of the post-announcement adjustment of the Price Adjustment Factor under drastic price fluctuations of a new constituent. To meet such requests, Nikkei partially revised the proposed amendments as presented in Exhibit 1 “Details of the changes to the Index Guidebook and the Constituents Selection Rules”.

In addition to the 6 specific questions, Nikkei also invited consultation participants’ “opinions and ideas to further improve the Nikkei 225” as question No.7. Summary of comments to the question No.7 is shown in Exhibit 2. Nikkei intends to improve the quality of the Nikkei 225 based on these comments.

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Above change from “presumed par value” to “price adjustment factor” and setting rule of the price adjustment factor to new constituents are applied also to the Nikkei 500 Stock Average and Nikkei JASDAQ Stock Average (\*). Please note there will be no 1% cap for new constituents nor limitation of the number of constituents change in a periodic review. Refer to the Index Guidebook of these indexes for details.

(\*) Due to closure of the JASDAQ market by the Tokyo Stock Exchange under its trading section reform planned to become effective in April 2022, Nikkei ceases to calculate and publish the Nikkei JASDAQ Stock Average with the final calculation on April 1, 2022.

Exhibit 1: Details of the changes to the Index Guidebook and the Constituents Selection Rules

(Changes are underlined. Changes after the consultation is in **bold**)

- 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)

[[Index Guidebook](#)] 3: Calculation method

Current Rule	Proposed rule at consultation	New rule after consultation
(Preamble)  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.  Adjusted stock price = stock price x <u>50 (yen) / presumed par value (yen)</u>  Nikkei Stock Average = sum of Adjusted stock price / Divisor	(Preamble)  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>price adjustment factor</u>  Nikkei Stock Average = sum of Adjusted stock price / Divisor	(Preamble)  Same as the left

<u>(2) Presumed par value (final sentence)</u>	<u>(2) Price adjustment factor</u>	<u>(2) Price adjustment factor</u>
<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>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.</u></p> <p><u>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>	<p><b><u>The price adjustment factor (PAF) is a number which adjusts prices of the constituents. PAFs are set and revised as follows.</u></b></p> <p><b><u>① Setting PAF</u></b></p> <p><u>The 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) PAF is evaluated on the base date and rounded down to the nearest 0.1.</u></p> <p><b><u>When a stock of a newly established</u></b></p>

		<p><u><b>holding company is added replacing the delisting original company, value other than 1 may be set in accordance with the ratio of stock transfer, etc. in the establishment of the holding company.</b></u></p> <p><u><b>Also note that 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. In this case, such an adjustment will be announced at least 5 business days before the effective date in principle.</b></u></p>
<p><u>(2) Presumed par value</u></p> <p><u>③ Nikkei announced “Measures to large scale reverse splits” on June 7, 2005.</u></p> <p><u>According to the announcement, in principle, the presume par value is changed to keep the level of the price unchanged when a stock goes a large scale split or reverse split. When a stock with presumed value of 50 yen goes 1 to 2 split,</u></p>	None	<p><u><b>(2) Price adjustment factor</b></u></p> <p><u><b>② Revising PAF</b></u></p> <p><u><b>PAF is revised under following situation.</b></u></p> <p><u><b>- Large-scale stock split or reverse split</b></u></p> <p><u><b>When a constituent goes for a large-scale stock split or reverse stock split, PAF is revised to keep the price level of such a</b></u></p>

the presumed par value will be changed from 50 to 25 (=50/2) yen.

In some cases such as a split of 1 to 3, the presumed par value will not be a dividable number, such as 50/3 yen. However, when the price is adjusted to 50yen par value base, its adjusted price will be 3 times as the original price ( $50 / (50 / 3) = 3$ ) and does not leave a fraction.

constituent unchanged before and after the split/reverse split. However, since the PAF has only 1 digit after the decimal point, above adjustment calculation might result in a fraction. Also, if a result of calculation is less than 0.1, PAF will be set as 0.1. In these cases, the adjusted price before and after the split/reverse split are different. Such difference will be adjusted by the divisor. Revision of PAF under large scale stock split or reverse split will be announced at least 5 days before the effective date in principle.

(3) Divisor  
①Divisor is changed when the following events happen.  
i) Changes in the constituents  
ii) Corporate action such as split, reverse split, paid-in capital increase. However, when the split or the reverse split is in the large scale, presumed par value may be

None

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i) Changes in the constituents  
ii) Corporate action such as split, reverse split, paid-in capital increase. However, when the split or the reverse split is in the large scale, **price adjustment factor** may

adjusted and the divisor may not be changed.		be revised, and the divisor may not be changed so long as <u>the adjusted price is unchanged before and after such split/reverse split.</u>
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In setting PAF for a new constituent, we acknowledged a comment that not only a price level, but a size of market value should be considered. In the course of future reviews, Nikkei will examine a rule incorporating this comment.

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

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

Current Rule	Proposed rule at consultation	New rule after consultation
(Preamble)  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>	(Preamble)  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>	(Preamble)  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> <u>However, constituent change due to corporate reorganization near the time of periodic review is not included in the</u>

		<b><u>limit of 3 above.</u></b>
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Regarding the rule to limit the number of constituent change in a periodic review up to 3, we acknowledge comments that this rule may hamper regeneration of the index constituents. Nikkei will continue to examine a constituent change rule which will keep the index up to date while limiting impact on the market.

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

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

Current Rule	Proposed rule at consultation	New rule after consultation
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> .	Same as the left

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

Current Rule	Proposed rule at consultation	New rule after consultation
(1) High Liquidity Group  Choose highly liquid stocks from the Tokyo Stock Exchange <u>First Section</u> and group them as the “High Liquidity Group”.	(1) High Liquidity Group  Choose highly liquid stocks from the Tokyo Stock Exchange <u>Prime Market</u> and group them as the “High Liquidity Group”.	Same as the left

[Constituent Selection Rules] 3: Extraordinary Replacement Rules

Current Rule	Proposed rule at consultation	New rule after consultation
<p>(1) Deletion for special reasons</p> <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> <ul style="list-style-type: none"> <li>i) Designated as a Securities to be delisted</li> <li>ii) Delisted due to corporate restructuring such as merger, share exchange or share transfer</li> <li>iii) Transfer to <u>the Second Section</u></li> </ul>	<p>(1) Deletion for special reasons</p> <p>Constituents <u>which meet the following criteria are deleted</u> from the index.</p> <ul style="list-style-type: none"> <li>i) Designated as Securities to be delisted <u>or Securities on Alert</u></li> <li>ii) Delisted due to corporate restructuring such as merger, share exchange or share transfer</li> <li>iii) Transfer to <u>the market other than the Prime</u></li> </ul>	Same as the left
<p>(3) Timing of the constituents change</p> <p>The effective date is announced for each event.</p> <ul style="list-style-type: none"> <li>i) Designated as a “Security to be delisted”: five business days after the designation.</li> </ul>	(None)	<p>(3) Timing of the constituents change</p> <p>The effective date is announced for each event.</p> <ul style="list-style-type: none"> <li>i) Designated as a “Security to be delisted” or <b><u>“Security on alert”</u></b>: five business days after the designation.</li> </ul>

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

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

Current Rule	Proposed rule at consultation	New rule after consultation
4th digit is rounded to make the divisor to have <u>3</u> digits after the decimal point.	9th digit is rounded to make the divisor to have <u>8</u> digits after the decimal point.	Same as the left

[Note]

In addition to the above amendments, simple replacements of the words/concepts, such as change from the presumed par value to the price adjustment factor, are made to the text of the Index Guidebook and the Constituent Selection Rules. Some explanations of the Index Guidebook are edited to clarify the meaning and old examples of presumed par value and divisor are deleted. Please refer to the revised Index Guidebook and Constituent Selection Rules for detail. The revised version reflects the changes which become effective from the periodic review of 2021 (introduction of price adjustment factor and related rules (① above), and upper limit of constituents change in a periodic review (② above)). Subject market change (③ above) and expansion of the digits of the divisor (④ above) will be applied to the Index Guidebook and the Constituent Selection Rules in April and June 2022 respectively.

Exhibit 2: Summary of comments to Q7 “opinions and ideas to further improve the Nikkei 225”

In this consultation, Nikkei asked a general question (question No. 7) regarding possible measures to maintain and improve the quality of the Nikkei 225. Please find below the summary of the comments to this question No. 7

[from Security & Financial institution]

In selecting the constituents, discretion of Nikkei shall be removed at a maximum level. For the liquidity, “magnitude of price fluctuation by volume” is not easily calculated and not closely related to true liquidity. Use trading value only is recommended.

[from Security & Financial institution]

It is not desirable that only a few highly priced constituents mostly determine the index. Price adjustment factor of extremely high price stock may be lowered to cap the weight e.g. maximum weight of 5%. Also, a system to adjust the PAF to 1 may help balance the weight of the constituents automatically. Considering continuity of the index, such rule changes may be implemented in steps.

[from Security & Financial institution]

The next task will be to consider setting a weight cap (e.g. 10%) using the price adjustment factor at the periodic review. Also, in case of deletion of a highly weighted constituent, PAF of new and current constituents may be modified to mitigate impact of large basket trading.

[from Security & Financial institution]

Rules to set a weight cap such as 10%, like the one introduced to TOPIX and deletion of constituents which have lower than a specific threshold weight may be considered. When a methodology or policy change is announced, the discussion process and reason of decision should also be published.

[from Security & Financial institution]

Price adjustment factor of current constituents should also be changed. If weight of constituents in the index is far from the market value weight, such constituents might be used to manipulate the index as the index is also an underlying asset of futures trading. Further transparency of sector balancing process or publication of the names

of professionals to whom Nikkei consults should be considered.

[from Security & Financial institution]

A criterion to cap the maximum weight of a single security in the index at 8% is recommended. Fast Retailing is over 10% of index weight; however, due to low free-float shares, the stock is relatively less liquid and more expensive to trade. Index providers abroad also implement caps on single stock weight to ensure diversification of the index.

[from Self-employed, Individual, Others]

Current situation where Fast Retailing or Softbank Group have high weights in the index is not fair. Influence shall be evaluated by market value as TOPIX. Also some of large and high market value stocks are not included in the index. Improvement in this area is requested.

[from Self-employed, Individual, Others]

There are large discrepancies among the constituents' weights. The difference should be within 10 times. To this end, price adjustment factor of current constituents, in addition to new ones, should be reviewed periodically.