

# **INDEX CALCULATION POLICY**

**March 29, 2019**

## **INTRODUCTION**

Nomura Securities Co., Ltd. (NSC) recognizes that when there are material changes in methodologies for an index or a cessation of an index, which after all is a core piece of financial infrastructure, there can also be a large impact on financial markets. The Index Operations Dept. (IOD: administrator of NSC's indices) has set out procedures and processes governing situations in which it is deemed necessary and appropriate to make material changes to methodologies for indices, implement a cessation of an indices, or take any other such action. The rule book take precedence if there is any inconsistency between the rule books and this policy.

## **PROCESS – CALCULATION OF INDEX**

For index calculation methodologies, please see the rule book for each index.

<Nomura Japan FI Index Series>

- NOMURA-BPI
- NOMURA-BPI/Extended
- NOMURA-BPI/Ladder
- NOMURA J-TIPS Index

<Nomura FI Customized Index Series>

<Russell/Nomura Japan Equity Index Series>

- Russell/Nomura Japan Index

<Nomura Thematic Equity Index Series>

- Russell/Nomura Fundamental Prime Index
- Nomura Japan Equity High Dividend 70
- Nomura Japan Equity High Dividend 70, Net Total Return US Dollar Hedged Index
- Nomura Japan Equity High Dividend 70, Total Dividend Weighted
- Nomura JP Consecutively incr. Dividend Stock
- Nomura Enterprise Value Allocation Index
- Nomura Agribusiness Index
- Nomura AI Companies 70
- Nomura Japan Equity Beta Select Indices
- Nomura High-yield J-REIT Index
- Nomura Japan Equity TOP400 Ex-Financials Index
- Nomura Robot Companies 70
- Nomura Japan Equity Growth Potential Index
- Nomura Shareholder Yield 70

Input data for index calculation are as follows.

**Equity**

Input data	Vendor	Source	Details
<p><b>Nomura composite share price</b></p>	<p>Nomura Research Institute, Ltd.</p>	<p>Japan Exchange Group (the First Section of the Tokyo Stock Exchange, the Second Section of the Tokyo Stock Exchange, Mothers, JASDAQ, TOKYO PRO Market), Nagoya Stock Exchange, Sapporo Securities Exchange, Fukuoka Stock Exchange</p>	<p>The Nomura composite share price is the share price on the stock exchange selected for each stock on the basis of trading frequency and volume over the preceding 60 business days. As a general rule, the exchange is selected on a daily basis. The share price is selected according to the following order of precedence:</p> <p>Contract price on selected exchange (see note) &gt; standard price on selected exchange &gt; Nomura composite share price on previous business day</p> <p>Note : priority is given to the special quotation price or continuous confirmed quotation price on selected exchange if these are available.</p>

<b>Input data</b>	<b>Vendor</b>	<b>Source</b>	<b>Details</b>
<b>Number of shares outstanding for index calculation purposes</b>	Nomura Research Institute, Ltd.	Japan Exchange Group (The First Section of the Tokyo Stock Exchange, The Second Section of the Tokyo Stock Exchange, Mothers, JASDAQ, TOKYO PRO Market), Nagoya Stock Exchange, Sapporo Securities Exchange, Fukuoka Stock Exchange	Changes in the number of shares are reflected pursuant to the index rules according to the timing of changes in the capital structure of a component stock based on reports on corporate action of listed companies.
<b>Exchange Rate (Bank of Japan)</b>	Nomura Research Institute, Ltd.	Bank of Japan	Closing price for spot rate of the foreign exchange rate (telegraphic transfer middle rate as of 5pm (JST)) published by the Bank of Japan.
<b>Exchange Rate (WN/ Reuters)</b>	Nomura Research Institute, Ltd.	Refinitiv Benchmark Services Limited	Closing price for spot rate and one month forward rate of the foreign exchange rate (telegraphic transfer middle rates as of 4pm (GMT)) published by Refinitiv Benchmark Services Limited.  In case where the exchange rate is not available, the previous date value will be used for the calculation.
<b>Actual dividend</b>	Nomura Research Institute, Ltd.	Financial Results of each company	—
<b>Dividend forecasts published by the companies</b>	Nomura Research Institute, Ltd.	Financial Results of each company	—

Input data	Vendor	Source	Details
<b>Dividend forecasts by Toyo Keizai Inc.,</b>	Nomura Research Institute, Ltd.	Toyo Keizai Inc.,	In case where dividend forecasts published by the companies are not available, Toyo Keizai's dividend forecasts will be used.
<b>Tax rate dividend on income</b>	Nomura Securities Co., Ltd.	National Tax Agency	Reviews are conducted quarterly.
<b>Change in capital structure</b>	Nomura Research Institute, Ltd.	Japan Exchange Group (The First Section of the Tokyo Stock Exchange, The Second Section of the Tokyo Stock Exchange, Mothers, JASDAQ, TOKYO PRO Market), Nagoya Stock Exchange, Sapporo Securities Exchange, Fukuoka Stock Exchange	Changes in capital structure is reflected pursuant to the index rules according to the timing of changes in the capital structure of a component stock based on reports on corporate action of listed companies.

### Fixed Income

Input data	Vendor	Source	Details
<b>Instrument characteristics</b>	Nomura Research Institute, Ltd.	Ministry of Finance, Issuers, Japan Securities Dealers Association (JSDA), EDINET, Japan Securities Depository Center, Inc. (JASDEC)	Instrument characteristics (e.g. outstanding amount, interest payment date, maturity date and coupon rate) are used for judgements related to portfolio inclusion and calculation of index values.
<b>Factors and loan information of the JHF RMBS</b>	Nomura Research Institute, Ltd.	Japan Housing Finance Agency (JHF)	Updated factors and loan information corresponding to the RMBS that the JHF publishes are used for the calculation of the monthly partial redemption amount.

Input data	Vendor	Source	Details
JS Price	Nomura Research Institute, Ltd.	Nikkei Inc., Financial Technology Research Institute Inc., Nomura Research Institute, Ltd., Nomura Securities Co., Ltd.	<p>JS Price is provided jointly on a daily basis by the four institutions; Nikkei Inc., Financial Technology Research Institute Ltd., Nomura Research Institute, Ltd. (NRI), and NSC. JS Price is used as a reference in the evaluation of the bond portfolios. JS Price has the following characteristics.</p> <ol style="list-style-type: none"> <li>1. JS Price lists more than 12,000 bonds in total (mainly publicly offered and private placement domestic bonds) and covers almost 100% of index portfolios. In addition, JS Price offers daily prices with good continuity.</li> <li>2. JS Price is calculated and published as a reference for bond portfolio mark-to-market prices in market value accounting, and is not calculated for index market price purposes. JS Price is available to the public at large and the data are sold by Nikkei Inc. or NRI.</li> <li>3. All the systems to determine, validate, and disseminate JS Price are outside the jurisdiction of the IOD. (i.e. the IOD is not involved in these systems.)</li> </ol>

Input data	Vendor	Source	Details
<b>Nomura Price</b>	Nomura Research Institute, Ltd.	Global Markets Division of Nomura Securities Co., Ltd.	<p>The Nomura price is a substitute price for bonds that are not priced based on JS Price. The Nomura price has the following characteristics.</p> <ol style="list-style-type: none"> <li>1. The determination of the Nomura price is an operational task in the Global Markets Division of NSC. They don't determine the price for the IOD.</li> <li>2. The determination and verification system of the Nomura price is outside the jurisdiction of the IOD (i.e. IOD is not involved in the system).</li> </ol>
<b>Tokyo Repo Rate</b>	Nomura Research Institute, Ltd.	Japan Securities Dealers Association	The Tokyo Repo Rate is used as a risk-free rate to calculate traded-day (T+0) price of NOMURA J-TIPS Index from the settlement price.
<b>Consumer Price Index (CPI)</b>	Nomura Research Institute, Ltd.	Ministry of Internal Affairs and Communications	The CPI is used to calculate the inflation-adjusted (nominal) price for the NOMURA J-TIPS Index. The inflation-adjusted price is used for calculating the value of total investment return index.

- When changes are implemented, the IOD is required to obtain approval from the IGB (IGB: Board that monitors IOD operation) depending on the impact on the index users. For details, please see "PROCESS - CHANGES TO METHODOLOGY" below.
- The IOD establishes systems for dealing with enquiries and/or complaints related to index calculation policies. For details, please see "COMPLAINTS HANDLING POLICY" on Nomura website.
- Nomura FI Customized Index Series information is presented via the most suitable media based on the contract with the client.

## **PROCESS – ROLES REGARDING CALCULATION AND DISTRIBUTION**

- NSC's indices (with the exception of "Nomura Japan Equity High Dividend 70, Net Total Return US Dollar Hedged Index") are calculated using the system owned by NRI, which is an external vendor for IT systems and information services.
- The IOD outsources the calculation of "Nomura Japan Equity High Dividend 70, Net Total Return US Dollar Hedged Index" to ICE Data Indices, which is another external index calculation vendor.
- Russell/Nomura Japan Equity Index Series, Nomura Japan FI Index Series, and Nomura FI Customized Index Series are automatically distributed via the system owned by NRI.
- Nomura Thematic Equity Index Series are distributed by NSC.

## **PROCESS – RESPONSES ERROR OR DISASTER**

- The IOD reserves the right to delay or stop the publication of an index, if any of the following occurs;
  - system trouble at NSC.
  - system trouble at data providers whose data are used for index calculations.
  - war, natural disasters, or other force majeure events.
  - other unavoidable circumstances.
- In cases where index publication is delayed or suspended, the IOD will announce such on the Nomura website, except in cases where an unpredictable event keeps the IOD from being able to disclose information on the Nomura website.
- Recalculations may be necessary when there are delays or suspensions of indices; please see "PROCESS – RECALCULATION" below for details.

## **PROCESS – RECALCULATION**

- The IOD reserves the right to recalculate or amend the index values, if any of the followings occurs;
  - an index calculation has been conducted improperly.
  - the IOD determines that an index recalculation is necessary for other reasons.
- In terms of the data for recalculation, the IOD uses the most suitable figures in accordance with the particular situations.
- Index figures after recalculation are required to be double-checked.
- When the IOD determines that an index recalculation is necessary, the IOD will report this to the IGB.
- Recalculation announcements are to be posted on Nomura website.



## **PROCESS – CHANGES TO METHODOLOGY**

- The IOD reserves the right to amend its calculation methodologies, if any of the followings occurs;
  - the IOD determines that a change in calculation methodology is necessary as a result of a periodic review.
  - structural changes in the market make a change necessary (such as regulation revision).
  - a user request or complaint makes a change necessary.
  - any other situation in which the IOD determines that a change in the calculation methodology is necessary.
- The IOD examines the changes in methodologies in consultation with internal and external stakeholders (e.g. business partner) and the calculation agent.
- Changes to the index methodology that impact highly to index users and affect principles of index construction or calculation are defined as “material changes”.
- The IOD investigates the impact of the change thorough the process of the consultation with the stakeholders, such as index users and calculation agents and so on. Especially the IOD implements a public comment as needed if the change corresponds to material change to methodology.
- The IOD should determine the change to methodology with the result of the investigation through the process mentioned above. The amended methodology should be approved by the IGB.
- All methodology changes (including material changes) are announced by IOD at least 30 days prior to the day of implementation.
- In order to mitigate any market impact, amendment of the rule book will be public on the Nomura website after the market close on the day of announcement.
- For material changes, the IOD publishes the details and circumstances of the change on the Nomura website.

## **PROCESS - CESSATION**

- The IOD reserves the rights to implement the cessation of an index if any of the followings occurs;
  - when the IOD determines that an index cessation is necessary as a result of a periodic review.
  - when demand for an index falls away significantly as evidenced by, for example, a dearth of users referencing the index.
  - when an index no longer provides intended value due to, for example, the redemption of a financial product referencing the index.
  - when related calculations become difficult due to, for example, a significant decrease in the number of instruments to be calculated.
  - in any other case where the IOD determines that a cessation is necessary.
- The IOD examines cessation in consultation with internal and external stakeholders (e.g. business partner) and the calculation agent.
- The IOD investigates the impact of the cessation thorough the process of the consultation with the stakeholders, such as index users and calculation agents and so on.
- The IOD should determine the cessation with the result of the investigation through the process mentioned above. The cessation should be approved by the IGB.
- In order to mitigate any market impact, announcement will be public on the Nomura website after the market close on the day of announcement.
- NSC recommends that users have a fallback option in case of NSC index cessation. The IOD seeks to inform the alternative benchmark to the relevant users as the most appropriate benchmark in respect to the objective, strategy, and universe, provided that IOD already produces such an alternative index or that one is already in existence.

## **NOTE**

In principle, the IOD reviews this policy and NSC's indices annually, with the results of the review reported to the IGB.

The IOD retains records with respect to policy actions and evidence for five years.