

Nomura Japan Equity High Dividend 70 Market Neutral Index

EQUITY QUANTITATIVE RESEARCH (INDEX)

Index rulebook

The Nomura Japan Equity High Dividend 70 Market Neutral Index reflects the performance of a market-neutral strategy involving a combination of long positions in the Nomura Japan Equity High Dividend 70, Total Dividend Weighted (the "underlying index") with short positions in TOPIX futures. Index values are calculated from the difference between the return on the underlying index and the beta-adjusted return on TOPIX futures.

The hedge ratio used for hedging with TOPIX futures is adjusted on a daily basis to reflect the beta of the underlying index versus the TOPIX (including dividends).

Index characteristics

- The index reflects the performance of a market-neutral strategy involving long positions in the Nomura Japan Equity High Dividend 70, Total Dividend Weighted and short positions in TOPIX futures.
- It was designed to enable investors to achieve highly stable income gains and investment efficiency (return/risk) regardless of market fluctuations via a high dividend yield strategy hedged against Japanese equity market risk.
- Daily adjustment of the TOPIX futures hedge ratio makes it possible to hedge against Japanese equity market risk with a high degree of precision.

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1. Index calculation

1.1 Market-neutral index values

This market-neutral index reflects the performance of a market-neutral strategy involving a combination of long positions in the Nomura Japan Equity High Dividend 70, Total Dividend Weighted (the "underlying index") with short positions in TOPIX futures. It is calculated from the difference between the return on the underlying index and the beta-adjusted return on TOPIX futures. The hedge ratio used for hedging with TOPIX futures is adjusted on a daily basis to reflect the beta of the underlying index versus the TOPIX (including dividends).

Returns on TOPIX futures are usually calculated using closing prices on the front-month contract, but this is rolled over to the second-month contract two business days before (after the close of trading three business days before) the settlement (SQ) date for trades in the front-month contract.

The index construction rules, including rules for the selection of stocks in the underlying index, are set out below. In addition, in calculating values for the underlying index, base market capitalization is adjusted in order to ensure that the index is not affected by fluctuations in share prices or market capitalization that do not reflect changes in market conditions¹.

1.1.1 Calculation of values for market-neutral index excluding dividends

$$\text{Return}(t) = \text{return on underlying index (ex dividends)}(t) - \beta(t-3) \times \text{return on TOPIX futures}(t)$$

$$\text{Index value}(t) = \text{index value}(t-1) \times (1 + \text{return}(t))$$

However,

$$\text{Base market cap}(t) = \text{market cap}(t-1) + \text{adjusted market cap}(t)$$

$$\text{Return on underlying index (ex dividends)}(t) = \frac{\text{market cap}(t)}{\text{base market cap}(t)} - 1$$

$\beta(t-3)$:

Calculated for the past 250 business days including three business days before (t) using the formula below:

$$\beta(t) = \frac{\text{Cov}(\text{daily return on underlying index including dividends, daily return on TOPIX including dividends})}{\text{Var}(\text{daily return on TOPIX including dividends})}$$

Cov = covariance

Var = variance

¹ Note: In Sections 1.1.1 and 1.1.2, "adjusted market cap" is calculated by adjusting market capitalization for changes in market capitalization that are due to changes in the capital structure of component stocks of the underlying index or to changes in the component stocks of the underlying index. "Adjusted total dividends" is calculated by adjusting total dividends to reflect cases where the dividend forecast differs from the actual dividend.

Return on TOPIX futures (t)

$$= \begin{cases} P_{F1}(t) / P_{F1}(t-1) - 1 & \left(\begin{array}{l} \text{periods other than those specified below: excluding period} \\ \text{from two business days before SQ date to SQ date} \end{array} \right) \\ P_{F2}(t) / P_{F2}(t-1) - 1 & \left(\begin{array}{l} \text{from two business days before SQ date to one business day before SQ date} \\ \text{(SQ date)} \end{array} \right) \\ P_{F1}(t) / P_{F2}(t-1) - 1 & \end{cases}$$

P_{F1} : closing price of front – month TOPIX futures contract, P_{F2} : closing price of second – month TOPIX futures contract

1.1.2 Calculation of values for market-neutral index including dividends

Return(t) = return on underlying index (including dividends)(t) – $\beta(t-3) \times$ return on TOPIX futures (t)

Index value (t) = Index value ($t-1$) \times (1 + return(t))

However,

Base market cap (t) = market cap($t-1$) + adjusted market cap(t) – adjusted total dividends(t)

Return on underlying index (including dividends) (t) = $\frac{\text{market cap}(t) + \text{total dividends}(t)}{\text{base market cap}(t)} - 1$

Calculation of return on TOPIX futures (t) and ($t-3$) is the same as in the case of the market-neutral index excluding dividends.

Method for reflecting dividends in calculation of returns (including dividends) on underlying index

In the calculation of returns on the underlying index (including dividends), dividend data is reflected on the ex-dividend date. However, because the value of the dividend has not yet been determined on the ex-dividend date, the dividend forecast is used on the ex-dividend date² Subsequently, in the event of a difference between the dividend forecast and the actual dividend, the base market capitalization is adjusted on the last business day of the month of the company's earnings announcement or the last business day of the following month if the company's earnings announcement falls on the last business day of the month. In addition, if dividend adjustment is required, the base market capitalization is adjusted on the last business day of the month in which this became clear (if the day on which this became clear is the last business day of the month, the base market capitalization is adjusted on the last business day of the following month).

1.2 Index announcement start date and index base date

The index base date and index announcement start date are as follows.

Index	Base date (= base value)	Index announcement start date
Underlying index	29 Dec 2000 (base value = 10,000)	30 Oct 2014
Market-neutral index	31 Jan 2002 (base value = 10,000)	15 Nov 2017

Index values prior to the index announcement start date are calculated for reference purposes using the rules at the time.

² These rules are in effect from the period ending end-December 2011 onward. For periods before this, we used actual dividends as of ex-rights day.

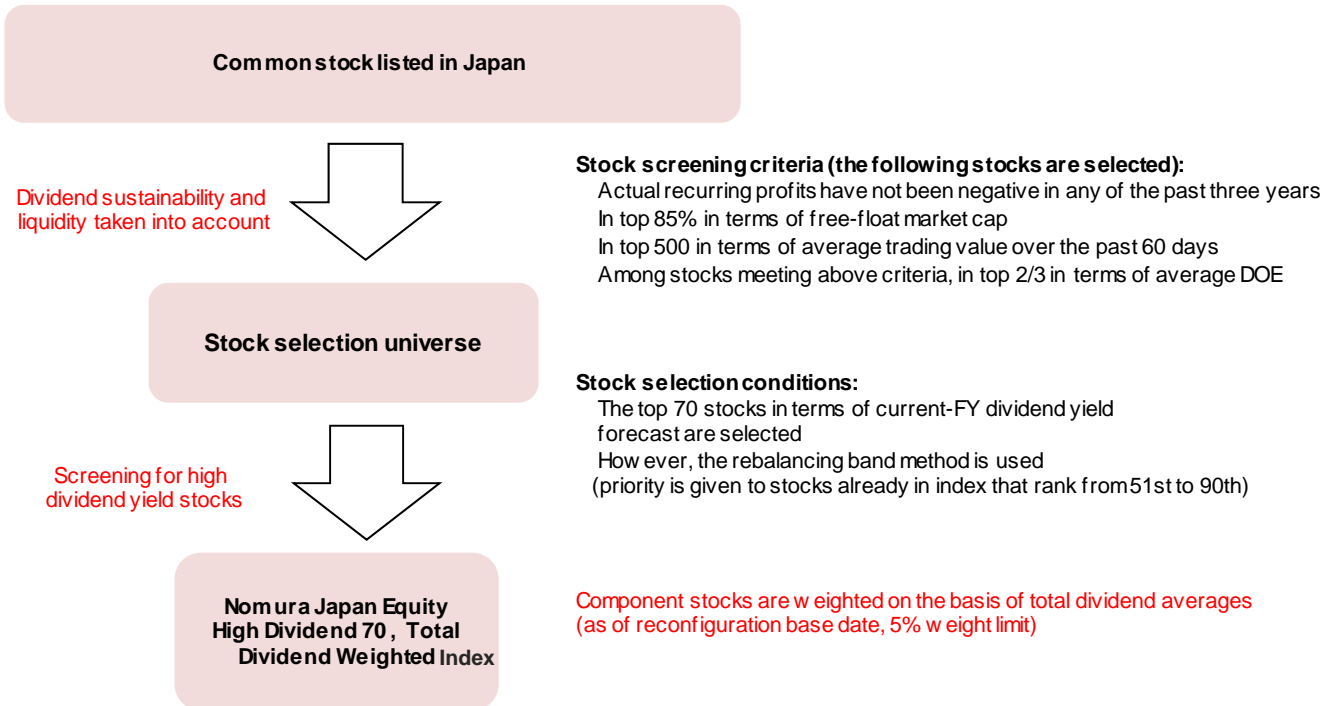
2. Overview of underlying index

The Nomura Japan Equity High Dividend 70, Total Dividend Weighted Index (the “underlying index”) is an index designed to enable investors to realize a high dividend strategy through passive investment.

Characteristics of underlying index

- Total dividends used to determine component stock weights
- Stocks are screened for DOE (total dividends/shareholders’ equity)
- Index design considers stronger focus on investability
- Focuses on total returns for long-term investors

Fig. 1: Composition of Nomura Japan Equity High Dividend 70, Total Dividend Weighted Index



Source: Nomura

3. Selection of stocks in underlying index

3.1 Stock selection universe

The universe of stocks eligible for inclusion in the index, which we refer to as the stock selection universe, includes the top 98% of all stocks listed on Japanese stock exchanges³ in terms of free-float adjusted market cap as of 15 October in the year before the periodic reconfiguration base date (or the business day before this if 15 October is a non-business day; this is called the stock selection universe fixing date), out of all stocks listed on Japanese stock exchanges as of end-March in the year before the periodic reconfiguration base date (see Section 4.2 below). However, of the stocks that were listed in or after April in the year before the periodic reconfiguration base date, those in approximately the top 85% in terms of free float-adjusted market cap and newly merged stocks are also included in the stock selection universe. Stocks that meet the following criteria as of the reconfiguration base date are excluded.

Equities other than common stock

As a general rule, only common stock is included in the stock selection universe. However, exceptions to this rule will be made if necessary.

Stocks assigned for delisting

Stocks designated as securities to be delisted are not included in the stock selection universe.

Stocks under supervision

Stocks designated as securities under supervision are not included in the stock selection universe.

TOB target companies

Stocks that are the targets of tender offers (TOB) may be excluded from the universe of stock selection if and only if all of the following requirements are met:

- the offer close date falls between the stock selection universe fixing date and the periodic reconfiguration date;
- the company conducting the tender offer plans to acquire all the outstanding shares in the target company; and
- the company conducting the tender offer is planning to acquire all of the stock of the target company in exchange either for money or its own stock and the target company agrees to the offer.

Listed investment trusts/REITs

Foreign stocks

Stocks listed on foreign sections of Japanese exchanges or stocks regarded as overseas companies are excluded, even if these stocks are traded in the Japanese market.

Other exceptions

Latent stocks, warrants, and rights on them are excluded. The Bank of Japan is also excluded.

³ Tokyo Stock Exchange (1st Section, 2nd Section, Mothers, JASDAQ, TOKYO PRO Market), Nagoya Stock Exchange, Sapporo Securities Exchange, and Fukuoka Stock Exchange.

3.2 Stock selection method⁴

Stocks are selected for the underlying index as defined in Section 3.1 above. A total of 70 stocks with a high current-FY dividend yield⁵ are selected after taking into account the stock screening criteria and rebalancing band, as set out below⁶.

Stock screening criteria

These are rules aimed at limiting inclusion in the index of stocks for which there are doubts about dividend sustainability and low-liquidity stocks such as those with a low free float-adjusted market cap. Stocks that meet all of the following criteria on the periodic reconfiguration base date (see Section 4.2 below) are eligible for inclusion in the index.

- Actual recurring profits have not been negative in any of the past three years⁷.
- In the top 85% in terms of free float-adjusted market capitalization⁸.
- In the top 500 in terms of average trading value over the past 60 days
- Stocks are chosen from those that meet the above three criteria and that also rank in the top two-thirds in terms of average DOE⁹.

⁴ The stock selection criteria may be revised at Nomura's discretion in response to changes in the economic situation, for example. In such a case, however, a revised rulebook would be published at least two weeks before the periodic reconfiguration date.

⁵ The current-FY dividend yield forecast for each stock is calculated by dividing the expected dividend per share (or the lowest expected dividend per share if a forecast range is given) for the accounting period that is furthest away within 12 months after the month following the periodic reconfiguration base date by the closing value of its Nomura composite share price on the reconfiguration base date. A stock's Nomura composite share price is its price on its primary exchange (the exchange that is judged to have the most accurate price for the stock, based on the percentage of days traded and trading volume over the previous 60 business days; as a general rule the primary exchange is selected on a daily basis). The share price is selected according to the following order of precedence.

Contract price on selected exchange (see note) > standard price on selected exchange > Nomura composite share price on previous business day

Note: Priority is given to the special quotation price or continuous confirmed quotation price on the selected exchange if these are available.

⁶ When the forecast dividend for the current fiscal year is confirmed as zero for a stock the business day before the periodic reconfiguration announcement date but after the reconfiguration base date, the stock is not included in the index and a replacement stock is used.

⁷ Actual recurring profits over the previous three years are calculated from full-year financial data up to the end of the month that is four months before the periodic reconfiguration base date. In terms of the financial data used, priority is given to the latest IFRS accounts, followed in order by the latest Japanese GAAP consolidated accounts, the latest US GAAP accounts, and the latest Japanese GAAP parent accounts. Net profits before tax are used for recurring profits in the case of accounts based on IFRS and net profits before adjustment for taxes, etc are used for recurring profits in the case of accounts based on US GAAP.

⁸ In order to reflect the number of shares that investors can actually invest in, we calculate the free float-adjusted market capitalization as follows: Nomura composite share price × (shares outstanding for index calculation purposes - stable shareholding). We estimate the stable shareholding as the number of shares considered to be held on a stable basis, based on major shareholder data, declarations of marketable securities holdings included in securities reports, and data published by stock exchanges and companies (such as stock exchange releases and company prospectuses). Changes in the number of shares are reflected in shares outstanding for index calculation purposes according to the timing of changes in the capital structure of a component stock, shown in Figure 2.

⁹ DOE (dividend on equity) is total dividends divided by shareholders' equity and, together with dividend payout ratio, is one yardstick used to assess shareholder returns. The average DOE used here is calculated as follows: (forecast total dividends for current fiscal year ÷ actual shareholders' equity for previous fiscal year + actual total dividends for previous fiscal year ÷ actual shareholders' equity for previous fiscal year + actual total dividends for two fiscal years ago ÷ actual shareholders' equity for two fiscal years ago) ÷ 3. Share buybacks, one way to boost shareholder returns, can be used to raise average DOE by lowering shareholders' equity. In terms of the financial data used, priority is given to the latest IFRS accounts, followed in order by the latest Japanese GAAP consolidated accounts, the latest US GAAP accounts, and the latest Japanese GAAP parent accounts. Where no data is available, we use a value of zero. Where shareholders' equity is zero, we treat that fiscal year as having no data available.

Rebalancing band

This rule is aimed at limiting frequent stock replacements caused by very small differences in current-FY dividend yield forecasts. Stocks that meet the stock screening criteria are selected for the index using the procedure set out below.

(1) The top 50 stocks in terms of current-FY dividend yield forecast on the periodic reconfiguration base date are selected unconditionally.

(2) Stocks that rank from 51st to 90th in terms of current-FY dividend yield forecast (the rebalancing band) and are already included in the index are then selected until a total of 70 stocks has been selected.

(3) If the total number of stocks selected in (1) and (2) above is less than 70, the shortfall is made up by selecting stocks ranked from 51st onward in terms of the current-FY dividend yield forecast that are not currently included in the index, in order of ranking¹⁰.

¹⁰ When two or more stocks have the same current-FY dividend yield forecast, priority is given to the stock with the larger free float-adjusted market cap.

4. Periodic reconfigurations of underlying index

4.1 Periodic reconfiguration date

Periodic reconfigurations take place once a year, on 10 February (ie, after the close of trading on the previous business day). When 10 February falls on a holiday, the periodic reconfiguration takes place on the next business day.

4.2 Periodic reconfiguration base date

The periodic reconfiguration base date is 15 January of each year. Component stocks and the number of shares in each component stock to be included in the index following the periodic reconfiguration are determined on the basis of calculations using data as of the periodic reconfiguration base date. When 15 January falls on a holiday, the periodic reconfiguration base date shall be the previous business day.

4.3 Number of shares included in index for each component stock

A component stock is defined as one of the 70 stocks selected in accordance with Section 3.2 as of the periodic reconfiguration base date defined in Section 4.2.

4.3.1 Total dividend weight

Total dividend weight is defined as average total dividend of a component stock as a percentage of the total. Average total dividend is calculated as follows:

Average total dividend = (this year's forecast total dividend + last year's total dividend + year before last's total dividend) / 3

In the absence of dividend data, we assume that the dividend is zero.

4.3.2 Component stock weight and weight limits

The weight of a component stock can be no greater than 5%. Component stock weight is determined by allocating the difference between 1 and the total of total dividend weights of stocks with weights greater than 5% to other stocks in proportion to total dividend weight.

4.3.3 Number of shares included in the index

The number of shares included in the index for each component stock is calculated so that the weight of each of the 70 stocks selected as component stocks as of the periodic reconfiguration base date is equal to the component stock weight defined previously. That is, the number of shares included in the index for each component stock as of the periodic reconfiguration base date is calculated by dividing the product of the component stock weight and a constant value¹¹ by the Nomura composite share price at the close of trading on the periodic reconfiguration base date.

4.4 Announcement of periodic reconfigurations

As a general rule, the announcement of a periodic reconfiguration will appear on our website around 16:00 (JST) 10 business days before the periodic reconfiguration date, except in the event of unforeseen circumstances or when information cannot be confirmed.

¹¹ The constant value in the case of this index is ¥1trn.

5. Unscheduled reconfigurations of underlying index

5.1 Response to stock swaps, stock transfers, mergers, etc

Temporary exclusions of stocks from the index are avoided and the consistency of index constituents is maintained based on the following rules.

5.1.1 Stock swaps and absorption-type mergers

When a stock is delisted because it is about to become a wholly owned subsidiary or be merged into another company, it will continue to be included in the index after its delisting but removed from the index on the listing change date (or on the following business day if this is a non-business day). Following its delisting, the merged company's valuation is based on the market value of the company that will become the parent company or the surviving company multiplied by the exchange or merger ratio. Also, the index inclusion ratio of the parent company or surviving company is changed on the listing change date (or on the following business day if this is a non-business day) based on the exchange or merger ratio.

5.1.2 Stock transfers and consolidation mergers

When an unlisted parent company or surviving company in a merger (the "surviving company") assumes the operations of another company and becomes listed after a short period of time, the merged company is removed from the index on the new listing date of the surviving company (or on the following business day if this is a non-business day). The price used for the delisted merged company is the price on the day before its delisting. Also, the surviving company is included in the index on its new listing date. However, if the surviving company will not be included in the index after periodic reconfiguration, the merged company is removed from the index on the delisting date.

5.2 Removal of stocks

5.2.1 Designation as securities to be delisted

Stocks designated as securities to be delisted are removed from the index four business days later (or on the following business day if this is a non-business day). However, stocks that are listed on more than one market and have not been designated for delisting on one or more of the markets will not be removed.

5.2.2 Delisting

Stocks delisted for reasons other than those noted in Section 5.1 above will be removed from the index on the delisting date.

5.2.3 Marked loss of eligibility for inclusion in stock selection universe

In the case of an event that is considered to damage seriously a component stock's eligibility for inclusion in the stock selection universe as defined in Section 3.1 above, the stock may be removed from the index following an official announcement by the company in question, the stock exchange, or a government/regulatory agency. However, after the stock has been removed from the index, if the reason for its exclusion has been withdrawn as of the periodic reconstitution base date, it will no longer be regarded as ineligible for inclusion in the stock selection universe.

6. Maintenance of underlying index

6.1 Adjustment of base market cap

The base market capitalization is adjusted as below in the event of a change in capital structure or in the component stocks of the index. However, no adjustment to base market capitalization is made for changes in capital structure that do not involve payment, such as stock splits, reverse stock splits, and changes to face value, as these do not affect market capitalization.

Fig. 2: Timing of adjustments resulting from changes in capital structure

	Type of change in capital structure	Adjustment date	Share price used
Stock replacement	Stock transfer, stock swap, merger	Swap date	Previous day's price
	Corporate divestiture (company/division spinoff)	Ex-rights date	(Not used) ¹²
	Stock replacement	Replacement date	Previous day's price
Capital increase	Rights offering	Ex-rights date	Issue price
	Gratis allocation of stock acquisition rights	Ex-rights date	Exercise price
	Gratis allocation of treasury stock	Ex-rights date	Previous day's price
	Public offering	Business day following payment date (listing date of new shares when settlement is on issuance date)	Previous day's price
	Capital increase via third-party placement	Five business days after date of listing change	Previous day's price
	Conversion of preferred stock into common stock	Last business day of month in which number of converted shares becomes known	Previous day's price
	Conversion of CBs	Last business day of month in which number of new shares for which rights were exercised becomes known	Previous day's price
	Exercise of stock acquisition rights	Last business day of month in which number of new shares for which rights were exercised becomes known	Previous day's price
Capital decrease	Corporate divestiture (new shares in continuing company)	Date of listing change	Previous day's price
	Retirement of treasury stock	Last business day of month following month in which shares are retired	Previous day's price
	Rights offering refusal	Last business day of month in which rights offering refusal is announced (or last business day of following month if announcement is within five business days of month-end)	Previous day's price
	Capital reduction with compensation	Effective date	Previous day's price
Other	Other adjustments	Other adjustments to the base market capitalization, if required, are made on the last business day of the month of the announcement of the relevant report (or the last business day of the following month if the announcement is within five business days of month-end)	Previous day's price

Source: Nomura

¹² In the case of a corporate divestiture (company/division spinoff), the base market capitalization is adjusted for the reduction in capital. Definitions of reductions in capital are as follows:

(1) when the company does not announce the value of the divested division or of the shares of the divested company:

capital reduction = amount by which shareholders' equity is expected to be reduced; and

(2) when the company does announce the value of the divested division or of the shares of the divested company:

capital reduction = value of divested division or value of divested company's shares × total number of shares

6.2. Index maintenance

Component stocks are replaced in periodic and unscheduled reconfigurations and when necessary for other reasons. When the following changes in capital structure result in a change in the number of shares outstanding for index calculation purposes, the index inclusion ratio is changed so that the number of shares in the stock that are included in the index does not change.

- Stock transfer, stock swap, merger¹³
- Rights issue offering
- Gratis allocation of stock acquisition rights
- Public offering
- Capital increase via third-party placement
- Conversion of preferred stock into common stock
- Exercise of CBS, exercise of stock acquisition rights
- Corporate divestiture (new shares in continuing company)
- Retirement of treasury stock
- Rights offering refusal
- Capital reduction with compensation
- Other adjustments

¹³ When a wholly owned subsidiary (merged company) is an index component, the number of shares in the parent company (merging company) is adjusted to reflect the exchange ratio (merger ratio).

7. Data publication services

Nomura Japan Equity High Dividend 70 Market Neutral Index access points¹⁴

Information on the Nomura Japan Equity High Dividend 70 Market Neutral Index is available on the following media:

Bloomberg:

NMRCMODD <index> (Index excluding dividends, yen-denominated)

NMRCMIDD <index> (Index including dividends, yen-denominated)

QUICK: NRIJ@

REUTERS:

NHYMN (Index excluding dividends, yen-denominated)

NHYMNTR (Index including dividends, yen-denominated)

Nomura website: (Index including dividends, yen-denominated)

<http://qr.nomura.co.jp/jp/nhdivdmn/index.html> (Japanese only)

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¹⁴Published data are all for reference only.

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Appendix A-1

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As at 31 December 2018.

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STOCKS

A rating of '**Buy**', indicates that the analyst expects the stock to outperform the Benchmark over the next 12 months. A rating of '**Neutral**', indicates that the analyst expects the stock to perform in line with the Benchmark over the next 12 months. A rating of '**Reduce**', indicates that the analyst expects the stock to underperform the Benchmark over the next 12 months. A rating of '**Suspended**', indicates that the rating, target price and estimates have been suspended temporarily to comply with applicable regulations and/or firm policies. Securities and/or companies that are labelled as '**Not rated**' or shown as '**No rating**' are not in regular research coverage. Investors should not expect continuing or

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When Japanese government bonds (JGBs) for individual investors are purchased via public offerings, only the purchase price shall be paid, with no sales commission charged. As a rule, JGBs for individual investors may not be sold in the first 12 months after issuance. When JGBs for individual investors are sold before maturity, an amount calculated via the following formula will be subtracted from the par value of the bond plus accrued interest: (1) for 10-year variable rate bonds, an amount equal to the two preceding coupon payments (before tax) x 0.79685 will be used, (2) for 5-year and 3-year fixed rate bonds, an amount equal to the two preceding coupon payments (before tax) x 0.79685 will be used. When inflation-indexed JGBs are purchased via public offerings, secondary distributions (uridashi deals), or other OTC transactions with Nomura Securities, only the purchase price shall be paid, with no sales commission charged. Inflation-indexed JGBs carry the risk of losses, as prices fluctuate in line with changes in market interest rates and fluctuations in the nationwide consumer price index. The notional principal of inflation-indexed JGBs changes in line with the rate of change in nationwide CPI inflation from the time of its issuance. The amount of the coupon payment is calculated by multiplying the coupon rate by the notional principal at the time of payment. The maturity value is the amount of the notional principal when the issue becomes due. For J117 and subsequent issues, the maturity value shall not undercut the face amount. Purchases of investment trusts (and sales of some investment trusts) are subject to a purchase or sales fee of up to 5.4% of the transaction amount. Also, a direct cost that may be incurred when selling investment trusts is a fee of up to 2.0% of the unit price at the time of redemption. Indirect costs that may be incurred during the course of holding investment trusts include, for domestic investment trusts, an asset management fee (trust fee) of up to 5.4% (annualized basis) of the net assets in trust, as well as fees based on investment performance. Other indirect costs may also be incurred. For foreign investment trusts, indirect fees may be incurred during the course of holding such as investment company compensation.

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