

Nomura Japan Equity Growth Potential Index

EQUITY QUANTITATIVE RESEARCH (INDEX)

Index rulebook

Nomura Japan Equity Growth Potential Index

The Nomura Japan Equity Growth Potential Index reflects the performance of stocks of Japanese companies that have both room for growth in their current earnings and the potential to achieve growth via improvement in their future capital efficiency (growth potential). In recent years institutional investors have shown a great deal of interest in improvements in companies' capital efficiency and sustained growth, and have been aggressively working upon companies through engagement and the exercise of their voting rights. This index aims to systematically select companies that have the potential to achieve growth in response to such encouragement from investors, and to invest efficiently in these companies in order to benefit from the returns that are likely to be generated in future as a result of improvements in corporate value.

The "growth potential" in the name of the index is a concept that combines both an "abundance of capital", which enables companies to take steps aimed at achieving growth, and "room for growth", which means that there is still room for further growth in corporate value. When screening for stocks that embody these two concepts, we look for companies with abundant capital that also have room for growth in earnings. For "abundance of capital", we screen using a composite score that reflects (1) cash (the higher the cash to total assets ratio the better), (2) debt (the lower the debt ratio the better), and (3) free cash flow (the higher the free cash flow to total assets ratio the better). For "room for growth", we screen on the basis of (4) ROE (if ROE is too high this limits the scope for it to rise in future) and (5) capital investment (if the capital investment to sales ratio is too high this affects future capital investment aimed at growth).

Index characteristics

- Companies' growth potential is assessed systematically using five factors based on financial indicators.
- Index constituents are selected from the First Section of the Tokyo Stock Exchange and the index is reconstituted once a year.
- Ultra-large-cap stocks and financial stocks are excluded.
- To take investability into account, stocks are screened in terms of market cap and average daily turnover.
- The trading impact at the time of periodic index reconstitutions is reduced by lowering the weighting of newly included stocks and some existing index constituents to below the normal level.
- By capping individual stock weightings at 5%, extreme bias towards particular index constituents is avoided.

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Contents

1. Periodic reconstitutions	3
1.1 Periodic reconstitution date	3
1.2 Periodic reconstitution base date	3
1.3 Announcement of periodic reconstitutions.....	3
2. Stock selection	4
2.1 Stock selection universe	4
2.2 Stock selection method.....	5
2.3 Index composition	8
3. Unscheduled index reconstitutions	10
3.1 Response to stock swaps, stock transfers, mergers, etc	10
3.2. Removal of stocks	10
4. Calculation of index values	11
4.1. Index base date, base value, announcement date.....	11
4.2 Calculation of index market capitalization	11
4.3. Calculation of index values	11
4.4 Adjustment of base market capitalization	13
4.5 Adjustment to reflect change in index inclusion ratio	14
5. Data publication services	15
Policies with regard to NSC's indices	16
Appendix A-1	17

1. Periodic reconstitutions

1.1 Periodic reconstitution date

The periodic reconstitution date for the Nomura Japan Equity Growth Potential Index is the first business day of September each year, and index reconstitution is carried out after the close of trading on the business day preceding the periodic reconstitution date.

1.2 Periodic reconstitution base date

The periodic reconstitution base date is the last business day in July. Constituent stocks and the number of shares in each constituent stock to be included in the index following its periodic reconstitution are determined on the basis of calculations using data as of the reconstitution base date.

1.3 Announcement of periodic reconstitutions

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

2. Stock selection

2.1 Stock selection universe

The stock selection universe is all stocks listed on the First Section of the Tokyo Stock Exchange (TSE-1) as of the periodic reconstitution base date.

However, stocks that meet the following criteria as of the periodic reconstitution base date are excluded from the stock selection universe.

- 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 deemed necessary.

- Stocks assigned for delisting

Stocks assigned for delisting are not included in the stock selection universe.

- Stocks under supervision¹

Stocks under supervision (examination) and stocks under supervision (confirmation) that are not included in the index immediately before the periodic reconstitution are not included in the stock selection universe.

- TOB target companies²

Stocks that are the target of tender offers (ie, TOBs) may be excluded from the stock selection universe only if all of the following requirements are met:

- (1) the tender offer closing date falls between the stock selection universe determination date (the periodic reconstitution base date) and the periodic reconstitution date;
- (2) the company conducting the tender offer plans to acquire all the outstanding shares in the target company; and
- (3) 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 deemed to be overseas companies are excluded, even if these stocks are traded in the Japanese market.

- Others

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

¹ This rule will apply from the September 2019 periodic reconstitution.

² This rule will apply from the September 2019 periodic reconstitution.

2.2 Stock selection method

2.2.1 Screening based on stock selection criteria

Using data as of the periodic reconstitution base date, stocks are selected from the stock selection universe (see 2.1 Stock selection universe) using stock selection criteria I to V, in that order, as set out below.

I: Market capitalization

Stocks in the stock selection universe are ranked in order of free-float-adjusted market capitalization³ (highest first), and stocks ranking 51st to 1,000th are selected.

II: Sector

From the stocks selected under stock selection criterion I, stocks that come under the "banks", "securities and commodity futures", "insurance", and "other financing business" sectors (based on the Tokyo Stock Exchange's 33 sector classifications) are excluded⁴.

III: Liquidity

From the stocks that meet stock selection criterion II, stocks that rank in the top 500 in terms of average daily trading value over the most recent 60 business days are selected.

IV: Abundance of capital (composite score)

From the stocks that meet stock selection criterion III, stocks that rank in the top 250 in terms of their composite score, which is based on equal weightings of standardized scores for (1) cash to total assets ratio (most recent fiscal year), (2) debt ratio (most recent fiscal year), and (3) free cash flow to total assets ratio (reflecting the previous three fiscal years' data), are then selected.

To calculate the composite score for each stock, the standardized score for each of the following indicators is first calculated: (1) cash to total assets ratio (most recent fiscal year), (2) debt ratio (most recent fiscal year), and (3) free cash flow to total assets ratio (reflecting the previous three fiscal years' data). These three standardized scores are then combined on an equally weighted basis and standardized again to generate the composite score. Stocks are screened on the basis of this composite score.

The standardized score for (1) cash to total assets ratio (most recent fiscal year) is calculated according to the following definition⁵:

Standardized score for (1) cash to total assets ratio (most recent fiscal year) =

$$\frac{((1)\text{for the stock in question} - \text{average (1)for all TSE} - 1 \text{ stocks})}{\text{standard deviation of (1)for all TSE} - 1 \text{ stocks}}$$

In the case of stocks for which the data required for standardization are not available, the standardized score is zero. In calculating the average and standard deviation for all TSE-1 stocks, stocks for which the required data are not available are excluded.

³ In order to reflect the number of shares that are likely to be available on the market and that investors regard as targets for actual investment, we use the free-float-adjusted market capitalization, which we estimate using [Nomura composite share price × (no. of shares outstanding for index calculation purposes - stable shareholding)]. We estimate the stable shareholding on the basis of the following data available on 15 October each year (or the preceding business day if this is a non-business day): major shareholder data, declarations of marketable securities holdings in companies' securities filings, and data published by stock exchanges and companies (such as bulletins and prospectuses). The number of shares outstanding for index calculation purposes is the number of shares outstanding after taking into account changes in the number of shares, in accordance with the timing of adjustments resulting from changes in capital structure in 4.4 Adjustment of base market capitalization.

⁴ Stocks may also be excluded with reference to the bank holding companies licensed lists and insurance holding companies registered lists published by the FSA.

⁵ Scores are standardized by adjusting values so that they are in the range of -3 to +3. This is done by reducing values higher than +3 to +3 (the maximum value) and raising values lower than -3 to -3 (the minimum value).

Standardized scores for (2) debt ratio (most recent fiscal year) and (3) free cash flow to total assets ratio (reflecting the previous three fiscal years' data) are calculated in the same way.

When the three standardized scores are combined, on an equally weighted basis, the sign (ie, positive or negative) of the standardized score for (2) debt ratio (most recent fiscal year) is reversed in order to assign higher rankings to lower values.

Composite score (before standardization)

- = standardized score of (1) cash to total assets ratio (most recent fiscal year)
- standardized score of (2) debt ratio (most recent fiscal year)
- + standardized score of (3) free cash flow to total assets ratio (reflecting previous three fiscal years' data).

V. Room for growth

From the stocks that meet stock selection criterion IV, those that are in the top 1/2 in terms of (4) ROE (reflecting the previous three fiscal years' data) or the top 1/3 in terms of (5) capital investment to sales ratio (reflecting the previous three fiscal years' data) are excluded.

The five indicators used in stock selection criteria IV and V—(1) cash to total assets ratio (most recent fiscal year), (2) debt ratio (most recent fiscal year), (3) free cash flow to total assets ratio (reflecting previous three fiscal years' data), (4) ROE (reflecting previous three fiscal years' data) and (5) capital investment to sales ratio (reflecting previous three fiscal years' data)—are calculated using actual financial data available as of the periodic reconstitution base date.

- Most recent fiscal year (A): most recently ended fiscal year for which financial data are available as of the periodic reconstitution base date
- Fiscal year before most recent fiscal year (B): fiscal year for which the fiscal year-end falls one year before the end of (A)
- Fiscal year two years before most recent fiscal year (C): fiscal year for which the fiscal year-end falls one year before the end of (B)

However, if financial data for the most recent fiscal year are not available, no financial data for the previous three fiscal years are used in the calculations. Also, if financial data for the fiscal year before the most recent fiscal year are not available, financial data for the most recent fiscal year alone are used. If financial data for the fiscal year two years before the most recent fiscal year are not available, financial data for the most recent fiscal year and the fiscal year before the most recent fiscal year are used.

Financial data are used according to the following order of preference: IFRS, US GAAP (SEC), Japanese GAAP (consolidated), Japanese GAAP (non-consolidated).

The definitions of the five indicators—(1) cash to total assets ratio (most recent fiscal year), (2) debt ratio (most recent fiscal year), (3) free cash flow to total assets ratio (reflecting previous three fiscal years' data), (4) ROE (reflecting previous three fiscal years' data) and (5) capital investment to sales ratio (reflecting previous three fiscal years' data)—are as follows.

(1) Cash to total assets ratio (most recent fiscal year)

Cash and deposits divided by total assets. Stocks with a higher cash to total assets ratio are ranked higher.

(2) Debt ratio (most recent fiscal year)

Outstanding interest-bearing debt divided by total shareholders' equity. Stocks with a lower debt ratio are ranked higher.

(3) Free cash flow to total assets ratio (reflecting previous three fiscal years' data)

Total of cash flow from operating activities plus cash flow from investment activities⁶ divided by total assets. Stocks with a higher free cash flow to total assets ratio are ranked higher.

To reflect data for the previous three fiscal years, we take the average of the data for the most recent fiscal year, the fiscal year before the most recent fiscal year, and the fiscal year two years before the most recent fiscal year, weighted in a ratio of 3:2:1.

(4) ROE (reflecting previous three fiscal years' data)

ROE (net profit ÷ total shareholders' equity). Stocks with a higher ROE are ranked higher. To reflect data for the previous three fiscal years, we take the average of the data for the most recent fiscal year, the fiscal year before the most recent fiscal year, and the fiscal year two years before the most recent fiscal year, weighted in a ratio of 3:2:1.

(5) Capital investment to sales ratio (reflecting previous three fiscal years' data)

Capital investment⁷ divided by sales. Stocks with a higher capital investment to sales ratio are ranked higher. To reflect data for the previous three fiscal years, we take the average of the data for the most recent fiscal year, the fiscal year before the most recent fiscal year, and the fiscal year two years before the most recent fiscal year, weighted in a ratio of 3:2:1.

2.2.2 Determining which stocks to include in/remove from the index

When determining which stocks to include in/exclude from the index, the following three points are taken into account: (1) the results of the latest screening, (2) the results of the previous screening, and (3) whether or not the stock was already included in the index as of the periodic reconstitution base date. Figure 1 shows how stocks are categorized and what the final decision is.

Stocks that are newly added to the index

Stocks that are not included in the index as of the periodic reconstitution base date and that meet stock selection criterion V in the latest screening are added to the index.

Stocks that are kept in the index

Stocks that are included in the index as of the periodic reconstitution base date and that meet one of the conditions below are kept in the index.

- Stocks that met stock selection criterion V in the latest screening
- Stocks that met stock selection criterion IV in the latest screening and also met stock selection criterion V in the previous screening.

⁶ For fiscal years ending before March 2000, we use net profit + depreciation - capital investment.

⁷ For periods up to and including the fiscal year that ended in September 2011, we use total tangible fixed assets (current fiscal year) - total tangible fixed assets (previous fiscal year) + depreciation (current fiscal year).

Stocks that are removed from the index

Stocks that are included in the index as of the periodic reconstitution base date that do not meet the conditions for being kept in the index are removed from the index.

Fig. 1: Determining which stocks to include in/exclude from the index

		Results of previous screening			
		Stock meets criterion V	Stock meets criterion IV (stock is already included in index)	Stock meets criterion IV (stock is not included in index)	Stock does not meet criterion IV
Result of latest screening	Stock meets criterion V	○ (Stock is kept in index)	○ (Stock is newly added to index)		
	Stock meets criterion IV	× (Stock is not included in index)			
	Stock does not meet criterion IV	× (Stock is not included in index)			

Note: ○ indicates that stock is included in index, × indicates that it is not included in the index. Stocks for which there was no result in the previous screening are treated as being the same as stocks that did not meet stock selection criterion IV in the previous screening.

Source: Nomura

2.3 Index composition

2.3.1 Determining basic weightings

A stock's "basic weighting" is calculated as its weighting relative to the total free-float-adjusted market cap of all index constituents selected in accordance with 2.2 Stock selection method as of the periodic reconstitution base date.

2.3.2 Determining index weightings

Index weightings are calculated in accordance with steps (1) to (4) set out below.

(1) Index constituents are assigned a weighting based on their basic weighting in accordance with the rules set out in Figure 2 (either 50% or 100%).

Stocks that are newly added to the index

For stocks that are newly added to the index, 50% of their basic weighting is used.

Stocks that are kept in the index

For stocks that are kept in the index and met stock selection criterion V in both the latest screening and the previous screening, 100% of their basic weighting is used.

For stocks that are kept in the index and met stock selection criterion V in either the latest screening or the previous screening, 50% of their basic weighting is used.

(2) Weightings of individual stocks are adjusted so that the total of their allocated weightings comes to 100%.

(3) Individual stock weightings are capped at 5%, and if a stock has a weighting higher than 5%, the surplus weighting, ie, the weighting over 5%, is allocated to stocks whose weightings do not exceed 5%, in proportion to their weightings.

(4) Once weightings have been adjusted using the mechanism set out in (3) above so that they are all 5% or lower, these are the index weightings.

Fig. 2: Weighting allocated versus basic weighting

		Results of previous screening			
		Stock meets criterion V	Stock meets criterion IV (stock is already included in index)	Stock meets criterion IV (stock is not included in index)	Stock does not meet criterion IV
Result of latest screening	Stock meets criterion V	100% (stock is kept in index)	50% (stock is kept in index)	50% (stock is newly added to index)	
	Stock meets criterion IV	50% (stock is kept in index)	× (Stock is not included in index)		
	Stock does not meet criterion IV				

Note: × indicates that stock is not included in the index. Stocks for which there was no result in the previous screening are treated as being the same as stocks that did not meet stock selection criterion IV in the previous screening.

Source: Nomura

2.3.3 Number of shares included in index and index inclusion ratio for each constituent stock

The number of shares included in the index and the index inclusion ratio for each constituent stock are calculated using data as of the periodic reconstitution base date to ensure that their index weightings are the same as those determined using the method set out above.

Market capitalization of shares in stock_{*i*} included in index = index weighting_{*i*} × index market cap

No. of shares in stock_{*i*} included in index
= market capitalization of shares in stock_{*i*} included in index ÷ Nomura composite share price for stock_{*i*}

Index inclusion ratio for stock_{*i*}
= no. of shares in stock_{*i*} included in index ÷ no. of shares outstanding in stock_{*i*} for index calculation purposes

Here, *i* indicates the *i*th constituent stock.

Nomura composite share price

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:

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..

3. Unscheduled index reconstitutions

3.1 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.

3.1.1 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 (hereafter, merged company), it is included in the index after 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, and until its removal from the index, 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.

3.1.2 Stock transfers and consolidation mergers

When an unlisted parent company or surviving company in a merger (hereinafter, 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 price used for the surviving company is the price on its new listing date. However, if the surviving company will not be included in the index after periodic reconstitution, the merged company is removed from the index on the delisting date.

3.2. Removal of stocks

3.2.1 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 listed on more than one market and have not been designated for delisting on one or more of the markets will not be removed.

3.2.2 Delisting

Stocks delisted for reasons other than those cited in 3.1 Response to stock swaps, stock transfers, mergers, etc are removed from the index on the delisting date.

3.2.3 Marked loss of eligibility for inclusion in stock selection universe

In the case of an event that is regarded as having seriously damaged a constituent stock's eligibility for inclusion in the stock selection universe as defined in 2.1 Stock selection universe 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 grounds for the stock's removal from the index no longer apply as of the periodic reconstitution base date, it will stop being regarded as ineligible for inclusion in the stock selection universe.

4. Calculation of index values

4.1. Index base date, base value, announcement date

The base date for the Nomura Japan Equity Growth Potential Index is 31 August 2001 and the value of the index on the base date (base value) is 10,000.

Publication of index values starts on 21 January 2019.

4.2 Calculation of index market capitalization

Market capitalization of shares in stock_{*i*} included in index

$$= \text{Nomura composite share price for stock}_i \times \text{no. of shares in stock}_i \text{ included in index}$$

$$\text{Index market cap} = \sum_i (\text{market cap of shares in stock}_i \text{ included in index})$$

Here, *i* indicates the *i*th constituent stock and Σ indicates the sum for all index constituents.

4.3. Calculation of index values

To prevent index values from being affected by changes in market capitalization not related to market fluctuations, eg, changes in capital structure and index constituents, the index is calculated as follows⁸ using base market capitalization. Here, *t* represents the day in question, and *t* – 1 represents the previous business day.

Calculation of yen-denominated index values

- Index excluding dividends

$$\text{Base market capitalization}_t = \text{index market capitalization}_{t-1} + \text{adjusted market capitalization}_t$$

$$\text{Return}_t = \frac{\text{index market capitalization}_t}{\text{base market capitalization}_t} - 1$$

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

- Index including dividends

$$\text{Base market capitalization}_t = \text{index market capitalization}_{t-1} + \text{adjusted market capitalization}_t - \text{adjusted total dividends}_t$$

$$\text{Return}_t = \frac{\text{index market capitalization}_t + \text{total dividends}_t}{\text{base market capitalization}_t} - 1$$

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

⁸ Adjusted market capitalization is calculated as the change in market capitalization resulting from a change in capital structure at an index constituent or a change in market capitalization resulting from a change in index constituent stocks. Adjusted total dividends is calculated as the difference between forecast dividends and actual dividends if there is a difference between these two values.

Method for reflecting dividends

For the index including dividends, dividend data are reflected on the ex-dividend date. However, as the value of the dividend has not yet been determined on the ex-dividend date, the company's announced dividend forecast is used (or Toyo Keizai's dividend forecast if the company has not announced its own dividend forecast)⁹ 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. However, if the company announces its earnings on the last business day of the month, the adjustment is made on the last business day of the following 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 in 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).

⁹ This rule applies starting from accounting periods ending on 31 December 2011. For accounting periods before this, the actual dividend on the ex-dividend date is used.

4.4 Adjustment of base market capitalization

The base market capitalization is adjusted as shown below in the event of a change in capital structure or in index constituent stocks (Figure 3). However, base market capitalization is not adjusted to reflect changes in capital structure that do not involve payment, such as stock splits and reverse stock splits, as these do not affect market capitalization.

Fig. 3: 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) ¹⁰
	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
Other	Capital reduction with compensation	Effective date	Previous day's price
	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

¹⁰ 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

4.5 Adjustment to reflect change in index inclusion ratio

Constituent stocks are replaced in periodic and unscheduled reconstitutions and also when necessary for other reasons. In addition, 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, merger¹¹
- 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

¹¹ If a wholly owned subsidiary (merged company) is an index constituent, the number of shares in the parent company (merging company) will be adjusted to reflect the exchange ratio (merger ratio).

5. Data publication services

Nomura Japan Equity Growth Potential Index access points¹²

Information on the Nomura Japan Equity Growth Potential Index is available on the following media:

Bloomberg:

NMRIJOGP<INDEX> (index excluding dividends, yen-denominated)

NMRIJIGP<INDEX> (index including dividends, yen-denominated)

QUICK:

NRIJ@

Reuters:

.NGRW01 (index excluding dividends, yen-denominated)

.NGRW01TR (index including dividends, yen-denominated)

Website:

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

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A license agreement with Nomura Securities is required to use the index and access detailed data.

In the case of an unavoidable event such as computer breakdown or natural disaster, calculation of the index may be delayed or suspended.

While every effort is made to ensure that the information used in this report and all published information is based on reliable data, it should be noted that data may be changed or amended when necessary.

¹² Published data are all for reference only.

Policies with regard to NSC's indices

The below index-related policies are published on our website.

See the following link for details:

<http://qr.nomura.co.jp/en/guides/index.html>

- Index Calculation Policy
- Complaints Handling Policy
- Glossary (Equity)
- Index Governance Framework
- Conflicts of Interest Policy

Appendix A-1

Analyst Certification

I, Index Operations Dept., hereby certify (1) that the views expressed in this Research report accurately reflect my personal views about any or all of the subject securities or issuers referred to in this Research report, (2) no part of my compensation was, is or will be directly or indirectly related to the specific recommendations or views expressed in this Research report and (3) no part of my compensation is tied to any specific investment banking transactions performed by Nomura Securities International, Inc., Nomura International plc or any other Nomura Group company.

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As at 31 December 2018.

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