NOMURA

Russell/Nomura Japan Equity Indexes

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Index rulebook

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Russell/Nomura Japan Equity Indexes have the following characteristics

- They are share price indexes that are weighted by float-adjusted market cap and cover the top 98% of all listed stocks in terms of float-adjusted market cap, thereby offering broad market coverage.
- Stocks are chosen from the whole Japanese stock market.
- Because the indexes take into consideration the stable shareholding ratio, they reflect the stocks that are actually available for investment.
- There are style indexes for large and small companies and for value and growth stocks.
- The Prime Index consists of the top 1,000 stocks in the Total Market Index by market cap excluding stable shareholdings.
- Stocks are selected quantitatively based on clearly defined criteria.
- Each index is reconstituted once a year.

Main changes/additions to rules

• 10 August 2016: Change to periodic reconstitution date (see 3.1. Periodic reconstitution date)

• 10 August 2016: Timing of revision to effective tax rate (see 4.2.2. Unrealized gains/losses on marketable securities and 4.2.3. Unrecognized pension liabilities)

• 10 August 2016: Timing at which stocks regarded as ineligible for inclusion in the stock selection universe become eligible once again (see 6.3.3. Marked loss of eligibility for inclusion in stock selection universe)

• 1 August 2017: Addition of description of the benchmark administrator of the Russell/Nomura Japan Equity Indexes (see 1. Introduction)

• 1 August 2017: Change to the ticker codes (Reuters, Jiji) in Data publication services

• 1 August 2017: Change to Nomura Research Institute contact information in Data publication services (phone numbers)

• 26 March 2020: Addition of section regarding calculation of net, hedged, and net hedged return index values (see 7.1.5. Calculation of net, hedged, and net hedged return index values)
• 5 October 2020: Addition of description of total return indexes in foreign currencies (see 7.1.5. Calculation of net, hedged, and net hedged return index values)

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See Appendix A-1 for analyst certification, important disclosures and the status of non-US analysts.

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1. Introduction

The Russell/Nomura Japan Equity Indexes are Japanese equity indexes developed jointly by Frank Russell Company and the Global Research Division, Financial Engineering & Technology Research Center, Nomura Securities Co., Ltd..

Index Operations Dept. of Nomura Securities is the benchmark administrator. The Indexes are calculated by Nomura Research Institute, Ltd. (NRI) and distributed by NRI and by or on behalf of Frank Russell Company or its affiliate, agent, or partner[1] .

Index Operations Dept. is responsible for the daily calculation, production, and operation of the Russell/Nomura Japan Equity indexes and will:

- maintain records of the index weightings of all constituents;
- make changes to the constituents and their weightings in accordance with the index rules;
- carry out the periodic index reviews of the index series together with Frank Russell Company and apply the changes resulting from the reviews as required by the rules; and
- publish changes to the constituent weightings resulting from their ongoing maintenance and the periodic reviews

Russell/Nomura Japan Equity Indexes should be useful in:

- determining investment strategies (strategic asset allocation)
- determining manager structures
- devising asset management benchmarks
- supporting portfolio management activities
- evaluating the performance of various investment styles
- managing risk

The main characteristics of the Russell/Nomura Japan Equity Indexes are as follows:

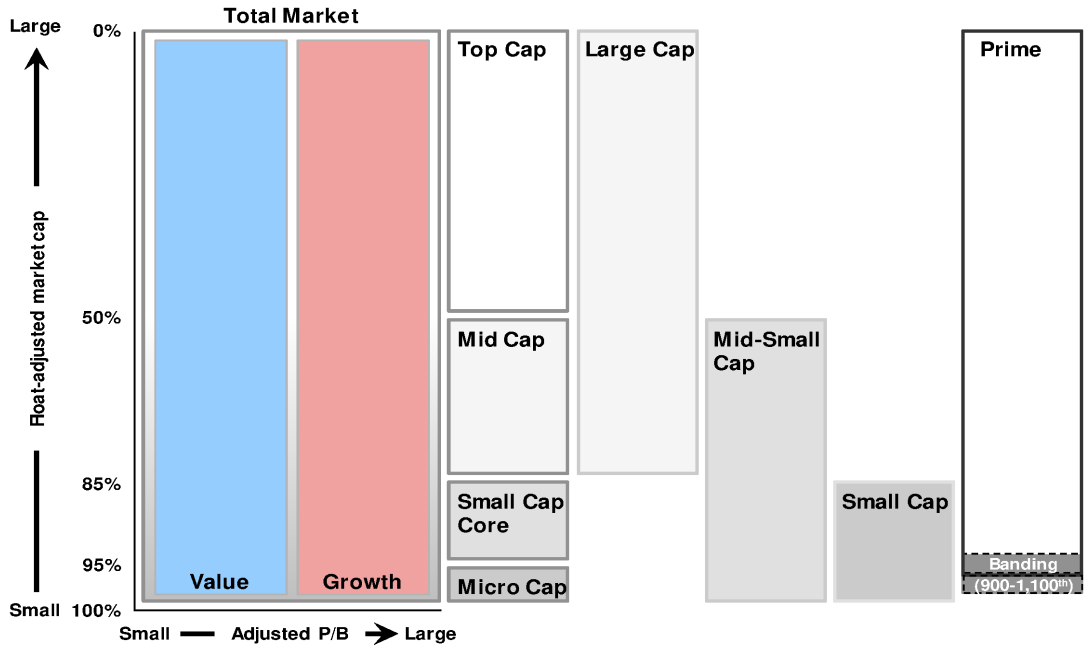
- They are share price indexes that are weighted by float-adjusted market cap and cover the top 98% of all listed stocks in terms of float-adjusted market cap, thereby offering broad market coverage
- Stocks are chosen from the whole Japanese stock market.[2]
- Because the indexes take into consideration the stable shareholding ratio, they reflect the stocks that are actually available for investment
- There are style indexes for large and small companies and for value and growth stocks
- The Prime Index consists of the top 1,000 stocks in the Total Market Index by market cap excluding stable shareholdings
- Stocks are selected quantitatively based on clearly defined criteria
- Each index is reconstituted once a year

1. Only indexes described in 7.1.5. Calculation of net, hedged, and net hedged return index values are calculated by or on behalf of Frank Russell Company or its affiliate, agent or partner.
2. Tokyo Stock Exchange (Prime Market, Standard Market, Growth Market, TOKYO PRO Market), Nagoya Stock Exchange, Sapporo Securities Exchange, and Fukuoka Stock Exchange

2. Russell/Nomura Japan Equity Indexes

The Russell/Nomura Japan Equity Indexes cover the top 98% of stocks listed on all markets in terms of float-adjusted market value. Size-based and investment style indexes are published separately as subindexes. Stocks are divided between the size-based indexes on the basis of their float-adjusted market value, and between value and growth investment style indexes on the basis of their adjusted P/B ratios.

Fig. 1: Russell/Nomura Japan Equity Indexes



Source: Nomura

· The Russell/Nomura Total Market Index contains the top 98% of all stocks listed on Japan's stock exchanges in terms of float-adjusted market cap

· The Russell/Nomura Large Cap Index contains the top 85% of the Russell/Nomura Total Market Index in terms of float-adjusted market cap

· The Russell/Nomura Small Cap Index contains the bottom 15% of the Russell/Nomura Total Market Index in terms of float-adjusted market cap

· The Russell/Nomura Top Cap Index contains the top 50% of the Russell/Nomura Total Market Index in terms of float-adjusted market cap

· The Russell/Nomura Mid Cap Index contains the middle 35% of the Russell/Nomura Total Market Index in terms of float-adjusted market cap

· The Russell/Nomura Mid-Small Cap Index contains the bottom 50% of the Russell/Nomura Total Market Index in terms of float-adjusted market cap

· The Russell/Nomura Small Cap Core Index comprises stocks in the Small Cap Index, excluding the Micro Cap Index, and represents the bottom 15% of the Russell/Nomura Total Market Index in terms of float-adjusted market cap minus the bottom 5%

·The Russell/Nomura Micro Cap Index contains the bottom 5% of the Russell/Nomura Total Market Index in terms of float-adjusted market cap

·The Russell/Nomura Prime Index contains the top 1,000 stocks in the Total Market Index in terms of float-adjusted market cap, taking into account "banding" and the "negative list[3] "

3. See 5.3. Investable index: selection of stocks for the Prime Index for details of banding and the negative list.

3. Periodic reconstitutions

3.1. Periodic reconstitution date

The periodic reconstitution date is 20 November each year (or the following business day if this is a non-business day), and the reconstitution is carried out after the close of trading on the business day preceding the periodic reconstitution date. Periodic reconstitutions were previously carried out as follows:

Up to January 2001:	First business day in January
February 2002:	First business day in February
December 2002–December 2015:	First business day in December

3.2. Periodic reconstitution base date

The periodic reconstitution base date is 15 October each year (or the preceding business day if this is a non-business day)[4]. Component stocks are determined based on data as of the reconstitution base date.

3.3. Announcement of periodic reconstitutions

As a general rule, an announcement will appear on our website on the first business day in November at around 16:00 (Japan time), except in cases of unforeseen circumstances or when information cannot be confirmed.

Website: *http://qr.nomuraholdings.com/en/frcnri/index.html*

3.4. Stock selection universe

As a general rule, all listed stocks[5] at the end of March of the year in question, plus large cap stocks that have been listed since the beginning of April or stocks that have carried out stock transfers, are eligible for inclusion in the stock selection universe, with the following exceptions at the time of the periodic reconstitution.

- 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 assigned for delisting are not included in the universe.

- Stocks under supervision (examination) and stocks under supervision (confirmation)

Stocks under supervision (examination) and stocks under supervision (confirmation) that are not part of the index composition immediately prior to regularly scheduled reconstitutions are not included in the universe.

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4. Effective from December 2007 periodic reconstitution. Up to and including the periodic reconstitution of December 2006, selections were made based on data as of the last business day of the month preceding the periodic reconstitution.
5. JASDAQ stocks have been included in periodic reconstitutions since January 1989 and stocks listed only on provincial exchanges have been included in periodic reconstitutions since January 1991. Prior to that, only stocks listed on the Tokyo Stock Exchange (TSE), Osaka Securities Exchange (OSE), or Nagoya Stock Exchange (NSE) as at the end of November were eligible for inclusion in the stock selection universe for the following year.

- TOB target companies[6]

Stocks that are the targets of tender offers may be removed from the universe of stock selection only if all of the following requirements are met:

(1) the offer close date is between 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 and 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 stock, warrants, and rights on them are excluded. The Bank of Japan is also excluded.

6. Effective from December 2010 periodic reconstitution.

4. Indicators used in the selection of stocks

Stocks for the Russell/Nomura Japan Equity Indexes are selected according to float-adjusted market cap excluding stable shareholdings. Indexes are reconstituted after determining size on the basis of float-adjusted market cap and value/growth on the basis of adjusted P/B.

4.1. Stable shareholding ratio

The indexes take into consideration the stable shareholding ratio in order to exclude stocks that are not traded in the market because they are held as cross-shareholdings or stable shareholdings.

The stable shareholding ratio, expressed as a two-year moving average[7] , is calculated by dividing stable shareholdings, as defined in the next section, by the number of shares outstanding. With the exception of adjustments outside of periodic reconstitutions, stable shareholdings are adjusted at each periodic reconstitution (for more information, see 7.3. Execution and announcement of stable shareholding ratio adjustments outside regular reconstitutions).

4.1.1. Calculation method for stable shareholdings[8]

Stable shareholdings are calculated using the latest data available as of the periodic reconstitution base date, from the following sources[9] :

(1) Toyo Keizai's major shareholder data

(2) Declarations of marketable securities holdings contained in securities filings

(if data overlaps, priority is given to Toyo Keizai's major shareholder data)

Stable shareholdings = (1) number of shares held by major shareholders
+ (2) number of shares contained in declarations of marketable securities holdings (excluding those in (1))

Stable shareholdings exclude shares thought to be held purely for investment purposes [10]. Classifications in the declarations of marketable securities holdings for liquid assets and fixed assets (holdings deemed long term) are not taken into consideration.

4.2. Adjusted P/B[11]

Adjusted P/B is used to classify stocks in value and growth indexes. In Japan, the book value (BV) recorded on the balance sheet is not necessarily the market value. In order to classify value and growth properly, the shareholders' equity figures used should ideally reflect companies' actual value. Therefore, the difference between market value and BV is reduced as much as possible by calculating an estimated market value adjusted for unrealized gains or losses on marketable securities and unrecognized retirement benefit obligations for the period between the reporting date of the earnings report and the periodic reconstitution base date[12] .

$$\text{Adjusted P/B} = \frac{(\text{price} \times \text{number of shares outstanding})}{(\text{shareholders' equity (BV)} + \text{marketable securities unrealized gains/losses} - \text{unrecognized pension liabilities})}$$

7. Fixed annual figures used, without taking moving averages, for periodic reconstitutions in January 1997 and earlier and three-year moving averages used for periodic reconstitutions from January 1998 to December 2003.
8. Revisions have been made to the calculation method for stable shareholdings in accordance with changes to accounting rules. See Appendix 2 for more on past calculation methods.
9. In some cases, public information such as company prospectuses and stock exchange releases is referenced.
10. Those held by domestic life insurers, among those held by domestic trust banks, those where the method of investment can be determined (eg, pension funds, investment trusts), as well as those held by foreign banks, venture capital companies, etc.
11. See Appendix 2 for more on past methods of calculation.
12. Unrealized gain/loss adjustments are not made to shareholders' equity when figures are reported in accordance with IFRS.

4.2.1. Shareholders' equity (BV)

Actual shareholders' equity[13] from the latest reporting period as of the periodic reconstitution base date is used. The highest priority is given to data prepared in accordance with IFRS, followed by Japanese GAAP consolidated data, US GAAP data and Japanese GAAP parent data. The shareholders' equity (BV) figure used in the calculation of adjusted P/B is the actual shareholders' equity figure adjusted for changes in capital structure that have occurred between the most recent fiscal year-end and the periodic reconstitution base date.

4.2.2. Unrealized gains/losses on marketable securities

Mark-to-market accounting has applied since FY00 financial results. Marketable securities are classified as follows:

Classification	Value on the balance sheet
Trading securities	Market value
Held-to-maturity securities	Amortized cost
Available-for-sale securities	Cost or market (but market value starting with FY01 financial results)[14]

The Russell/Nomura Japan Equity Indexes are not adjusted for unrealized gains/losses on trading securities and held-to-maturity securities, in view of the probable purpose for which they are held.

The market value of available-for-sale securities is adjusted for the return on the TOPIX between the end of the fiscal year and the periodic reconstitution base date. In addition, unrealized gains/losses on marketable securities, after excluding an amount based on the effective tax rate, are reflected in BV-based shareholders' equity[15]. The effective tax rate is revised at the time of the periodic reconstitution[16].

$$\text{Unrealized gains/losses on marketable securities} = \text{StockMV}_{FTRM} \times \left(\frac{\text{TOPIX}_{oct}}{\text{TOPIX}_{FTRM}} - 1 \right) \times (1 - \text{effective tax rate})$$

$\text{StockMV} = \text{market value of available-for-sale securities}$
$\text{TOPIX} = \text{the value of the TOPIX}$
$oct = \text{periodic reconstitution base date}$
$FTRM = \text{the latest fiscal period}$

4.2.3. Unrecognized pension liabilities[17]

New accounting standards for pension liabilities took effect starting with FY00 financial results. Provisions for the unfunded portion of the pension obligation, or the pension obligation minus pension plan assets, are recognized on the balance sheet as a general rule, but this can be done over time. This unrecognized portion is known as unrecognized pension liabilities, a potential liability that will have to be accounted for eventually. Recognition of the unfunded portion of the pension obligation varies by company, with some having recorded substantial provisions on their balance sheets and others having a large amount of unrecognized pension liabilities. To eliminate this discrepancy, P/B is adjusted for unrecognized pension liabilities.

13. Includes half-yearly and quarterly data, but excludes paid-in funds for new shares.
14. Some available-for-sale securities were valued at cost for FY01 financial results, but for the indexes they are valued at market value.
15. Since the February 2002 periodic reconstitution, after-tax unrealized gains/losses have been used.
16. Effective from the November 2016 periodic reconstitution.
17. Since new pension accounting took effect from fiscal years ending in March 2001, this adjustment was applied from the February 2002 periodic reconstitution.

Specifically, the following three unrecognized pension liability items disclosed in securities filings are deducted from BV-based shareholders' equity minus an amount based on the effective tax rate. The effective tax rate is revised at the time of the periodic reconstitution [18].

- Unrecognized benefit obligation at transition
- Actuarial assumption adjustment
- Unrecognized prior service costs

18. Effective from the November 2016 periodic reconstitution.

5. Method of selecting stocks for indexes

The selection of constituent stocks for the Russell/Nomura Japan Equity Indexes is based on float-adjusted market cap after adjustment to reflect the stable shareholding ratio[19]. Reconstitutions are carried out after determining size in terms of float-adjusted market cap and value/growth in terms of adjusted P/B.

5.1. Overall index: selection of stocks for the Total Market Index

The Russell/Nomura Total Market Index, which encompasses all the indexes, is built one stock at a time from the stock selection universe in order of float-adjusted market cap, starting with the highest, until the total float-adjusted market cap of the index exceeds 98% of that of all listed stocks and the number of stocks in the index is a multiple of 100 [20].

5.2. Selection of stocks for size-based indexes

The Russell/Nomura Japan Equity Indexes include size-based indexes that reflect the float-adjusted market cap of constituent stocks. The selection methods for the indexes are as follows:

- Large Cap Index

The Russell/Nomura Large Cap Index is built one stock at a time from stocks in the Russell/Nomura Total Market Index in order of float-adjusted market cap, starting with the highest, until the total float-adjusted market cap of the index is as close as possible to 85% of that of the Russell/Nomura Total Market Index and the number of stocks in the index is a multiple of 50[21].

- Small Cap Index

The Russell/Nomura Small Cap Index contains all stocks in the Russell/Nomura Total Market Index that are not included in the Large Cap Index. It comprises roughly the bottom 15% of the Total Market Index in terms of float-adjusted market cap.

- Top Cap Index

The Russell/Nomura Top Cap Index is built one stock at a time from stocks in the Russell/Nomura Total Market Index in order of float-adjusted market cap, starting with the highest, until the total float-adjusted market cap of the index is as close as possible to 50% of that of the Russell/Nomura Total Market Index and the number of stocks in the index is a multiple of 10[22].

- Mid Cap Index

The Russell/Nomura Mid Cap Index contains all the stocks in the Large Cap Index that are not in the Top Cap Index. It comprises the band between the top 50% or so and the top 85% or so of the Russell/Nomura Total Market Index in terms of cumulative float-adjusted market cap, and thus represents the mid-ranking 35% or so of the Total Market Index's float-adjusted market cap.

- Mid-Small Cap Index

The Russell/Nomura Mid-Small Cap Index is a combination of the Mid Cap Index and the Small Cap Index. It contains all the stocks in the Total Market Index that are not in the Top Cap Index. It represents the bottom 50% of the Total Market Index in terms of float-adjusted market cap.

19. Float-adjusted market cap adjusted to reflect the stable shareholding ratio is calculated on the basis of the number of shares outstanding used for index calculation purposes.
20. However, up to the February 2002 reconstitution, the number of stocks had to be no fewer than in the previous year and the total float-adjusted market cap of the index had to exceed 98% of that of all listed stocks.
21. However, up to the January 2001 reconstitution, the number of stocks had to be both a multiple of 100 and no fewer than in the previous year, and the index had to cover the top 85% of the total float-adjusted market cap of the Total Market Index.
22. However, up to the January 2001 reconstitution, the number of stocks had to be both a multiple of 10 and no fewer than in the previous year, and the index had to cover the top 50% of the total float-adjusted market cap of the Total Market Index.

- Small Cap Core Index

The Russell/Nomura Small Cap Core Index comprises stocks selected from the Total Market Index, excluding those in the Large Cap Index, until it reaches as close as possible to the 95% mark in terms of cumulative float-adjusted market cap. The number of stocks is a multiple of 50. In other words, it comprises the top-ranking stocks in terms of market cap within the Small Cap Index. It represents the stocks in roughly the bottom 15% to 5% range of the Total Market Index and is equivalent to roughly 10% of its total float-adjusted market cap.

- Micro Cap Index

The Russell/Nomura Micro Cap Index contains all stocks in the Small Cap Index that are not included in the Small Cap Core Index. It represents roughly the bottom 5% of stocks in the Total Market Index in terms of float-adjusted market cap.

5.3. Investable index: selection of stocks for the Prime Index

The Russell/Nomura Prime Index is made up of the top 1,000 stocks in the Total Market Index in terms of float-adjusted market cap, excluding those with low liquidity, in order to ensure investability. This involves taking into account the “negative list” and “banding,” where the “negative list” takes precedence over “banding”[23].

(1) Negative list (exclusion of low liquidity stocks)

This rule is meant to restrict the inclusion of stocks with exceptionally low liquidity. Stocks ranked 2,001st or lower in terms of average monthly trading value in the year to the periodic reconstitution base date[24] are excluded from the Prime Index.

(2) Banding (900–1,100 rule)

This rule is meant to limit the frequent replacement of stocks owing to small changes in market cap. Stocks ranked 900 or higher by float-adjusted market cap are included in the Prime Index, regardless of whether or not they were included in the index prior to the reconstitution. Stocks ranked 901 to 1,100 are included in the index only if they were included in it prior to the reconstitution, until 1,000 stocks have been selected. If 1,000 stocks are not selected after going through the 1,100 stocks in this way, stocks ranked between 901 and 1,100 that were not included in the Prime Index prior to the reconstitution are selected.

5.4. Selection of stocks for investment style indexes

The Russell/Nomura Japan Equity Indexes also include value and growth indexes that reflect value and growth investment styles.

Value indexes are indexes made up of stocks with low adjusted P/B ratios and growth indexes are those made up of stocks with high adjusted P/B ratios, after determining style probability based on adjusted P/B.

5.4.1. Style probability

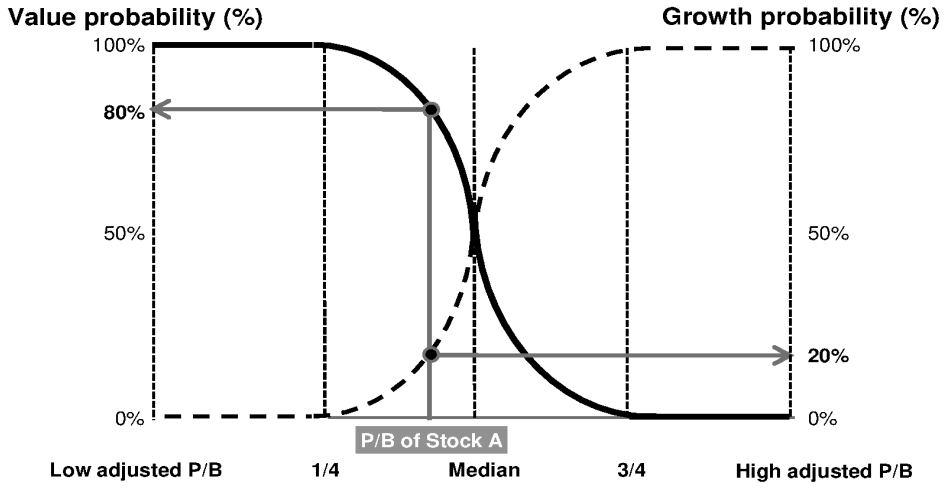
Style probability is the ratio of market cap apportioned to value and growth for each stock. Style probability is calculated with a nonlinear probability function, as shown in Figure 2, using adjusted P/B[25].

23. The negative list and banding apply only to the Prime Index.
24. Indicates ranking within stock selection universe at time of periodic reconstitution.
25. For details of adjusted P/B, see 4.2. Adjusted P/B.

The probabilities of stocks at the median are 50% value, 50% growth. The probabilities are 100% value for stocks in the first quartile and 100% growth for stocks in the fourth quartile. The probabilities of stocks falling between these (ie, the second and third quartiles) have both value and growth probabilities that depend on their P/B ratios. The sum of growth and value probabilities must always be 100%.

With the exception of adjustments outside of regular reconstitutions, style probabilities are adjusted at every periodic reconstitution. For more on adjustments to style probabilities outside of periodic reconstitutions, see 6. Unscheduled reconstitutions.

Fig. 2: Determination of style probability with a nonlinear probability function



Source: Nomura

5.4.2. The 5% rule

Stocks with probabilities of 95% or more are assigned to the corresponding style index with a weighting of 100%. Stocks with probabilities of 5% or less are assigned to the corresponding style index with a weighting of 0%. The aim of this is to keep down the number of stocks with extremely small market caps in the value and growth indexes.

5.4.3. Market cap of value/growth indexes

The market cap of value/growth indexes is weighted according to style probability.

The float-adjusted market cap of stocks with probabilities of 100% growth or 100% value is placed entirely in the growth or value indexes. In addition, in the case of a stock with an 80% value probability and a 20% growth probability, like Stock A in Figure 2, 80% of its float-adjusted market cap is assigned to the value index and the remaining 20% is assigned to the growth index.

The float-adjusted market cap of the Total Market Index is split roughly evenly between its value and growth subindexes. The float-adjusted market cap of the group of stocks between the stock with the lowest (or highest) P/B ratio and the median stock and that of the group of stocks between the first and the third quartile stocks is designed to be approximately 50% of the Total Market Index's market cap. The 5% rule described above boosts the number of stocks with 100% growth or value probabilities, as a result of which the market cap of stocks in the lowest and highest quartiles is in practice greater than 25%.

6. Unscheduled reconstitutions

Unscheduled reconstitutions are announced on Nomura Securities' website as a general rule, about two weeks prior to the event, except in cases of unforeseen circumstances or when information cannot be confirmed.

Nomura Securities website:

http://qr.nomuraholdings.com/QR/FRCNRI/constituents.html

6.1. Newly listed stocks[26]

Newly listed stocks for each quarter are determined as of the determination date. If the float-adjusted market cap ranking of a newly listed stock falls within the number of stocks in the Large Cap Index, it is included in the index as of the first business day of the second month following the determination date.

Listing date	Determination date	Inclusion date
Jan.–Mar.	End of April	First business day in June
Apr.–Jun.	End of July	First business day in September
Jul.–Sep.	Reflected at the regular reconstitution	
Oct.–Dec.	End of January	First business day in March

If the float-adjusted market cap ranking of a newly listed stock falls within the number of stocks in the Top Cap Index, it is included in the Top Cap Index; otherwise, it is included in the Mid Cap Index.

The method for determining the style probability of newly included stocks is to assign 100% value probability if adjusted P/B is in the lowest quartile of total market cap, 100% growth probability if it is in the highest quartile, and 50% value and 50% growth if it is in either of the middle quartiles. The style probabilities of other stocks are not changed.

6.2. Response to stock swaps, stock transfers, mergers, etc[27]

Changes to stocks in the indexes are made to take into consideration the situation following each cause of action on a case-by-case basis. The objective is to avoid temporary exclusions and thus maintain the consistency of the stocks included in the index.

6.2.1. Stock swaps, absorption-type mergers

When a stock is delisted because of a merger or stock swap, it is excluded on the day of the merger. Between its delisting and exclusion, the company's valuation will be based on the market value of the parent or surviving company multiplied by the merger or exchange ratio. Based on the merger ratio, the stable shareholding ratios of the surviving parent company and the merging company change. On the date of the merger (or on the following business day if the merger takes place on a holiday), the surviving parent company or merging company moves to the highest-ranked size-based index to which the companies involved in the capital movement previously belonged.

The style probability of the stock of an assuming parent company or acquirer is changed to reflect the allocation or merger ratio. However, in the case of stock swaps and mergers taking place during the period from the first business day of October through to the periodic reconstitution date, the aforementioned 5% rule (see 5.4.2. The 5% rule) does not apply in the calculation of the style probability[28].

26. Applied to stocks included in the indexes since June 2002.
27. Applied to capital changes since April 2002.
28. Effective from October 2007.

6.2.2. Stock transfers, consolidation-type mergers

When an unlisted parent company assumes the operations of another company and becomes listed after a short period of time, the stock of the wholly owned subsidiary is removed from the index on the date of the parent company's listing. The price of the delisted subsidiary used is the price on the day before its delisting. On the date of the listing, the stock of the parent company is included in the highest-ranked size-based index to which the delisted subsidiary previously belonged. However, if it has been announced that the stock of the parent company will not be included in the index following a periodic reconstitution, the stock of the subsidiary will be excluded from the index on the date of its delisting.

The style probability of newly added stock of an assuming parent company is determined in light of the allocation ratio or the merger ratio of the subsidiary. However, in the case of stock transfers, etc, taking place during the period from the first business day of October through to the periodic reconstitution date, the aforementioned 5% rule (see 5.4.2. The 5% rule) does not apply in the calculation of the style probability[29].

6.3. Removal of stocks

6.3.1. Designation as securities to be delisted[30]

Stocks designated as securities to be delisted will be removed from indexes four business days after the move (one business day later if the day for the security to be assigned falls on a holiday). However, stocks that are listed on more than one market and continue to be traded on any one of the markets will not be removed.

6.3.2. Delisting

Stocks delisted for any of the reasons other than those noted in 6.2. Response to stock swaps, stock transfers, mergers, etc are removed from indexes on the date of the delisting.

6.3.3. Marked loss of eligibility for inclusion in stock selection universe

If a stock is viewed to have become markedly at odds with the definitions of 3.4. Stock selection universe, owing to the occurrence of an event, the stock can be removed provided there is an official announcement by the company, stock exchange, government, or 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[31].

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29. Effective from October 2007.
30. Effective from 21 April 2010. Prior to 28 December 2001, stocks assigned for delisting were removed on the date of the move; between 29 December 2001 and 23 August 2009, stocks assigned for delisting were removed on the second business day following the move; between 24 August 2009 and 20 April 2010, stocks assigned for delisting were removed on the third business day following the move.
31. Effective from the periodic reconstitution in November 2016.

6.3.4. Exclusions between regular reconstitutions for Prime Index stocks[32]

This rule allows stocks to be removed early if the likelihood of removal at the next regular reconstitution is increasing owing to a sharp decline in market cap.

If, on any of the determination dates listed below, a Prime Index constituent stock's adjusted market cap falls below the minimum size criterion of 0.1% of the total adjusted market cap of the Total Market Index, it will be removed from the Prime Index (also from the Prime Value Index, Prime Growth Index, and Prime sector indexes in the same manner) on the first business day of the second subsequent month. However, it will not be removed from other Russell/Nomura Japan Equity Indexes or their subindexes.

Determination date	Removal date
End-April	First business day of June
End-July	First business day of September
End-January	First business day of March

32. Effective from 1 June 2009 (date of determination is last business day of April, final inclusion on last business day of May).

7. Index calculation

7.1. Index calculation method

Russell/Nomura Japan Equity Indexes are share price indexes weighted according to market cap, in the following manner. t is the day in question, t–1 is the preceding business day.

7.1.1. Calculation of market cap

$$\text{Value inclusion ratio (\%)} = \text{Value probability} \times (1 - \text{stable shareholding ratio (\%)})$$

$$\text{Growth inclusion ratio (\%)} = \text{Growth probability} \times (1 - \text{stable shareholding ratio (\%)})$$

$$\text{Value no. of shares included} = \text{No. of shares outstanding for index calculation purposes} \times \text{Value inclusion ratio (\%)}$$

$$\text{Growth no. of shares included} = \text{No. of shares outstanding for index calculation purposes} \times \text{Growth inclusion ratio (\%)}$$

$$\text{Total no. of shares included} = \text{Value no. of shares included} + \text{Growth no. of shares included}$$

$$\text{Value market cap} = \text{Nomura composite price} \times \text{Value no. of shares included}$$

$$\text{Growth market cap} = \text{Nomura composite price} \times \text{Growth no. of shares included}$$

$$\text{Total market cap} = \text{Value market cap} + \text{Growth market cap}$$

$$\text{Value index market cap} = \sum i \text{ each stock's Value market cap}$$

$$\text{Growth index market cap} = \sum i \text{ each stock's Growth market cap}$$

$$\text{Total index market cap} = \sum i \text{ each stock's Total market cap}$$

(Here, i indicates the ith constituent stock and $\sum i$ indicates the sum for all index constituents.)

- Nomura composite price

When a stock is listed on more than one exchange, the Nomura composite price is used to calculate the market cap. The Nomura composite price is the price on the exchange that is considered to show the most accurate price for that stock, based on the stock's percentage of days traded and total trading volume for the latest 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.

- Number of shares outstanding for index calculation purposes[33]

The number of shares is changed in line with the timing of change in capital structure in section 7.2 below (7.2. Adjusting the base market cap), based on the number of listed shares outstanding. However, in the case of stock splits, reverse stock splits, and changes in face value, the number of shares changes on the ex-rights day. Government shareholdings are included.

33. Added to August 2016 rulebook.

7.1.2. Calculation of index values

Indexes must be protected from changes in share price and market cap not influenced by market fluctuations, such as changes in capital structure and changes in component stocks. This is done by adjusting the base market cap as follows:

- Index excluding dividends

$$\text{Base market cap}_t = \text{market cap}_{t-1} + \text{adj market cap}_t$$

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

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

(Here, t is the day in question, $t-1$ is the preceding business day.)

- Index including dividends

$$\text{Base market cap}_t = \text{market cap}_{t-1} + \text{adj market cap}_t - \text{adj total dividends}_t$$

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

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

(Here, t is the day in question, $t-1$ is the preceding business day.)

- Method of reflecting dividends

For indexes including dividends, dividend data are reflected on the ex-dividend date. However, on the ex-dividend date, the amount of the dividend is not yet definite. As such, dividend forecasts announced by companies are used (if unavailable, Toyo Keizai's dividend forecasts are used)[34]. In the event of a difference between the dividend forecast and the actual dividend, the base market cap is readjusted on the last business day of the month of the earnings announcement[35], except that announcements made on the last day of the month are reflected at the end of the following month. In addition, when a dividend adjustment is necessary, the base market cap is adjusted on the last business day of the month in which this became clear (or the last business day of the following month if the day on which this became clear is the last business day of the month)[36].

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34. Ex-dividend dates prior to 26 September 2013 are based on Nomura dividend forecasts, and if not available, Toyo Keizai dividend forecasts.
35. Applied from end-June 2007. Prior to that, adjustments were made on the first business day of the month following the announcement of results.
36. Added to August 2016 rulebook.

7.1.3. Calculation of US dollar-denominated index values

The US dollar-denominated indexes are calculated based on the yen-denominated indexes and the exchange rate as of the base date for each index[37], using the following formula. Indexes are calculated for both those including and those excluding dividends. Indexes are calculated for both those including and those excluding dividends.

- US dollar-denominated index value

$$\text{Dollar} - \text{denominated index value} = \frac{\text{Yen} - \text{denominated index value} \times \text{exchange rate on base date for each index}}{\text{exchange rate}}$$

- Exchange rate

Calculations use the mid-rate announced by the Bank of Japan (at 17:00).

7.1.4. Calculation of dividend tax adjusted index values

Dividends are subject to taxation, and index values based on total dividends adjusted for the dividend tax are calculated using the following formula. Index values are calculated in accordance with tax rates applied to residents and nonresidents. For more on the method of calculating US dollar-denominated index values, see 7.1.3. Calculation of US dollar-denominated index values.

- Dividend tax adjusted index

$$\text{Tax adj base market cap}_t = \text{market cap}_{t-1} + \text{adj market cap}_t - \text{adjusted tax adj total dividends}_t$$

$$\text{Return}_t = \frac{\text{market cap}_t + \text{tax adj total dividends}_t}{\text{tax adj base market cap}_t} - 1$$

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

(Here, t is the day in question, $t-1$ is the preceding business day.)

- Tax rate

Tax adjusted total dividends[38] use tax rates as of the business day before the ex-dividend date. Reviews are conducted quarterly, at the time of periodic reconstitutions and unscheduled reconstitutions.

37. For more on index base date, see 7.1.6. Publication start date and base values for indexes.
38. Parent company dividend forecast (or Toyo Keizai dividend forecast if this is not available) used for periods ending end-December 2011 onward. Before this, actual dividend as of ex-dividend date was used.

7.1.5. Calculation of net, hedged, and net hedged return index values

The following Russell/Nomura indexes are calculated based on price return and total return indexes in JPY and the exchange rate provided by WM/Reuters Closing Spot Rates (16:00 UK time).

Note that price return and total return in this section correspond to the index values defined in section 7.1.2 (index excluding dividends and index including dividends, respectively).

- Total return indexes in foreign currencies[40] and price return index in USD

Index values are calculated in JPY and then converted to each of the currencies[39].

- Net total return indexes[40]

Net total return indexes are based on net total return index in JPY and then converted to each of the currencies[39].

Net total return index values in JPY are calculated in a simple way using the following formula:

$$\text{Return}_t = (1 - \text{tax rate}_t) \times \text{total return in JPY}_t + \text{tax rate}_t \times \text{price return in JPY}_t$$

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

(Here, t is the day in question, $t-1$ is the preceding business day.)

Tax rate is same as that applied to nonresidents noted in section 7.1.4.

- Hedged and net hedged total return indexes[40]

Hedged and net hedged total return indexes in each of the currencies are calculated respectively as a combination of the performance from the total and net total return index performance in each of the currencies and the impact of hedging. Please see "Russell Currency Hedging Methodology" published by FTSE Russell for details:

https://research.ftserussell.com/products/downloads/Currency_Hedging_Ground_Rules.pdf

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39. For more details on the currency conversion method, please see "Russell Index Calculation" published by FTSE Russell:
https://research.ftserussell.com/products/downloads/Russell_Index_Calculation_Methodology.pdf
40. The index values are available in AUD, CAD, CHF, EUR, GBP, KRW, SGD, USD, and ZAR.

7.1.6. Publication start date and base values for indexes

The base dates and publication start dates for the Russell/Nomura Japan Equity Indexes are as follows (includes value/growth indexes, indexes excluding dividends, indexes including dividends, and US dollar and yen-denominated indexes).

Index	Base date (=base value)	Publication start date
Size-based indexes, with the exception of those with*	29 Dec. 1979 (= 100)	Dec. 1995
*Mid-Small Cap	29 Dec. 1979 (= 100)	Jan. 2001
*Prime Index	30 Dec. 1996 (= 1,000)	Jul. 2004
*Small Cap Core/Micro Cap indexes	30 Dec. 1999 (= 100)	Jun. 2006
Dividend tax adjusted indexes	29 Dec. 2000 (= 100) (Prime = 1,000)	Jul. 2013
Total return index and price return index in USD	27 Sep. 2006[41]	Mar. 2008
Total return indexes in foreign currency *excluding the total return index in USD	30 Mar. 2007[41]	Oct. 2020
Net total return indexes	30 Dec. 2008 (=1.108893324462)	Apr. 2011
Hedged total return indexes, with the exception of those with*	28 Jun. 2002 (=100)	Apr. 2011
*Mid-Small Cap/Prime indexes	31 Aug. 2004 (=100)	Apr. 2011
*Small Cap Core/Micro Cap indexes	29 Sep. 2006 (=100)	Apr. 2011
Net hedged total return indexes	31 Mar. 2011 (=100)	Apr. 2011

41. Base values are calculated using the JPY index values in section 7.1.2 as the starting value and then converted to USD. The exchange rate provided by WM/Reuters Closing Spot Rates (16:00 UK time).

7.2. Adjusting the base market cap

In the case of changes in a stock's capital structure or in index component stocks, base market cap is adjusted. No adjustment to base market cap is made for capital changes not requiring payment, including stock splits, reverse stock splits, and changes in face value, as these do not affect market cap.

Fig. 3: Timing of adjustments resulting from changes in capital structure

	Change in capital structure	Date index changes	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[42]
	Stock replacement	Replacement date	Previous day's price
Capital increase	Rights offering	Ex-rights date	Issue price
	Gratis allocation of stock acquisition rights[43]	Ex-rights date	Exercise price
	Gratis allocation of treasury stock[43]	Ex-rights date	Previous day's price
	Public offering	Business day following payment date(listing date of new shares when settlement is on the issuance date)	Previous day's price
	Private placement	Five business days after the placement date	Previous day's price
	Conversion of preferred stock	Last business day of the month in which the conversion ratio becomes known	Previous day's price
	Exercise of bond with stock acquisition rights	Last business day of the month in which the number of shares per warrant or option becomes known	Previous day's price
	Exercise of stock acquisition rights		
	Corporate divestiture (new shares in surviving company)	Swap date	Previous day's price
Capital decrease	Retirement of shares	Last business day of the month following that in which the 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)	Issue price
	Capital reduction with compensation	Date effective	Previous day's price
Other	Other adjustments	Other adjustments to the base market capitalization required are made on the last business day of the month in which the announcement of the relevant report is made (on the last business day of the following month when the announcement is within five business days of the month-end)	Share price when capital change reflected or closing price on day before adjustment

Source: Nomura

42. In the case of a corporate divestiture (company/division) or spinoff, the base market cap is adjusted for the reduction in capital as follows:
• When the company does not announce the value of the divested division or of the shares of the divested company,
Capital reduction = the amount by which shareholders' equity is expected to be reduced
• When the company does announce the value of the divested division or of the shares of the divested company,
Capital reduction = the value of the division or the value of the divested company's shares times the total number of shares

43. Added to August 2016 rulebook.

7.3. Execution and announcement of stable shareholding ratio adjustments outside regular reconstitutions[44]

As a rule, stable shareholding ratio adjustments outside of periodic reconstitutions are announced on the Nomura Securities website no later than five business days before the date of adjustment, except in cases of unforeseen circumstances or when information cannot be confirmed.

Nomura Securities website:

http://qr.nomuraholdings.com/QR/FRCNRI/constituents.html

7.3.1. Adjustments to stable shareholding ratio for private placements

Because new shares issued in private placements can be regarded as stable shareholdings, the stable shareholding ratio is adjusted as follows on the day (t) in which the number of shares changes. This ensures that the number of shares included in index calculations, which is adjusted for stable shareholdings, remains the same both before and after the private placement.

$$\text{Stable shareholding ratio}_t = \frac{\text{stable shareholding ratio}_{t-1} \times \text{number of shares outstanding for index calculation purposes}_{t-1} + \text{the change in shares outstanding}}{\text{number of shares outstanding for index calculation purposes}_{t-1} + \text{the change in shares outstanding}}$$

(Here, t is the day in question, $t-1$ is the preceding business day.)

7.3.2. Adjustments to stable shareholding ratio for retirement of treasury stock

The stable shareholding ratio is adjusted as follows on day (t) in which the number of shares changes as a result of the retirement of treasury stock. This rule ensures that the number of shares adjusted for stable shareholding for index calculation purposes remains the same both before and after the retirement. However, no adjustment is made if the number of treasury shares, which falls as a result of the retirement, is greater than the immediately preceding number of shares adjusted for stable shareholdings for index calculation purposes[45].

$$\text{Stable shareholding ratio}_t = \frac{\text{stable shareholding ratio}_{t-1} \times \text{number of shares outstanding for index calculation purposes}_{t-1} - \text{the change in shares outstanding}}{\text{number of shares outstanding for index calculation purposes}_{t-1} - \text{the change in shares outstanding}}$$

(Here, t is the day in question, $t-1$ is the preceding business day.)

7.3.3. Conversion of preferred shares, merger with or acquisition of an unlisted company, tender offer, etc

The stable shareholding ratio is adjusted if a transfer of capital in such forms as the conversion of preferred shares, a merger with or acquisition of an unlisted company, or a tender offer causes a substantial change in stable shareholdings.

7.3.4. Stock swap, merger of listed companies, etc

The stable shareholding ratio is changed on the basis of the exchange ratio (merger ratio) for the surviving wholly owning parent or the merging company.

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44. Effective from 1 December 2004.
45. Added to August 2016 rulebook.

Appendix 1: Indexes at a glance

Indexes by sector, excluding and including dividends, adjusted for dividend tax, and denominated in yen and dollars are available, based on a basic index.

Basic index	Official name
Total Market	Russell/Nomura Total Market Index
Total Market Value	Russell/Nomura Total Market Value Index
Total Market Growth	Russell/Nomura Total Market Growth Index
Large	Russell/Nomura Large Cap Index
Large Value	Russell/Nomura Large Cap Value Index
Large Growth	Russell/Nomura Large Cap Growth Index
Top	Russell/Nomura Top Cap Index
Top Value	Russell/Nomura Top Cap Value Index
Top Growth	Russell/Nomura Top Cap Growth Index
Mid	Russell/Nomura Mid Cap Index
Mid Value	Russell/Nomura Mid Cap Value Index
Mid Growth	Russell/Nomura Mid Cap Growth Index
Mid-Small	Russell/Nomura Mid-Small Cap Index
Mid-Small Value	Russell/Nomura Mid-Small Cap Value Index
Mid-Small Growth	Russell/Nomura Mid-Small Cap Growth Index
Small	Russell/Nomura Small Cap Index
Small Value	Russell/Nomura Small Cap Value Index
Small Growth	Russell/Nomura Small Cap Growth Index
Small Core	Russell/Nomura Small Cap Core Index
Small Core Value	Russell/Nomura Small Cap Core Value Index
Small Core Growth	Russell/Nomura Small Cap Core Growth Index
Micro	Russell/Nomura Micro Cap Index
Micro Value	Russell/Nomura Micro Cap Value Index
Micro Growth	Russell/Nomura Micro Cap Growth Index
Prime	Russell/Nomura Prime Index
Prime Value	Russell/Nomura Prime Value Index
Prime Growth	Russell/Nomura Prime Growth Index

Appendix 2: Previous index rules

Previous calculation methods for stable shareholdings

Previous methods for calculating the stable shareholding ratio are as follows.

Periodic reconstitutions up to January 1985

(1) Toyo Keizai's major shareholder data and (2) declarations of marketable securities holdings contained in securities filings are only valid from 1985. In periodic reconstitutions through January 1985, the number of shares in major shareholder data from the *Nihon Keizai Shimbun* was used to estimate the number of stable shareholders in the following way.

- Stocks existing after 1985 for which major shareholder data are available for 1984 and earlier

Stable shareholding ratio =shareholder ratio for top n major shareholders ×individual stock adjustment multiple

n is the number of major shareholders (up to 10) at each point in time up to and including 1984.

The individual stock adjustment multiple is the 1985–87 average ratio of shareholdings of all stable shareholders to shareholdings of the top n major shareholders.

- Stocks not existing after 1985 for which major shareholder data are available for 1984 and earlier

Stable shareholding ratio = shareholder ratio for top n major shareholders x individual stock adjustment multiple

Again, n is the number of major shareholders (up to 10) at each point in time up to and including 1984.

The sector adjustment multiple is the ratio, weighted for the number of shares outstanding adjusted for lot size for 1985–87, of the shareholdings of all stable shareholders to the stable shareholdings of the sector to which the stock in question belongs.

- Stocks not existing after 1985 for which major shareholder data are not available for 1984 and earlier

The average, weighted for the number of shares outstanding adjusted for lot size for 1985–87, of the stable shareholding ratio for the sector to which the stock in question belongs is used.

Bank stocks in periodic reconstitutions from January 1986 to January 1999

Bank stocks have a large number of stable shareholders but relatively small holdings per shareholder and usable (2) declarations of marketable securities holdings contained in securities filings could only be obtained for stocks listed on the TSE, and thus more extensive adjustments were needed. After interviewing banks, we determined that the above estimated values based on (1) Toyo Keizai's major shareholder data and (2) declarations of marketable securities holdings contained in securities filings had not been sufficiently adjusted, and also took into consideration shareholdings of (3) below.

No. of stable shareholdings = no. of shareholdings of (1) major shareholders + no. of shares in (2) declarations of marketable securities holdings contained in securities filings (excluding those included in (1)) + (3) no. of shareholdings not included in marketable securities declarations

Small shareholder holdings (3) that do not appear in published data are estimated using the following method. First, the number of shares included in (2) is determined. Next, (3) is deduced from (1), (2), and the stable shareholder ratios obtained from bank interviews. The result is an average value for (3) of approximately 50% of (2). The average shareholdings in (2) are then multiplied by 1.5[46], producing a combined figure for (2) and (3). For example, the average holding ratio per stock for (2) is 1%. If (2) subsumes 40 shareholders, the shareholding ratio for (2) is 40%. Since the figure for (3) is half that of (2), 1.5 multiplied by 40 produces 60% as the combined shareholding ratio for (2) and (3). If (1) is 15%, the total stable shareholding ratio is 75%.

Since 1999, marketable securities declarations have been available for all registered stocks in all markets. Using the newly available information in a variety of ways to calculate stable shareholder ratios, and comparing these results with findings from subsequent interviews with banks, led to the conclusion that adding (3) was no longer necessary and thus it was abandoned.

Nonbanking stable shareholdings in periodic reconstitutions from January 1986 to January 2001

As for nonbanking stable shareholdings in periodic reconstitutions from January 1986 to January 2001, (1) data is based on the number of shares held by the top 10 shareholders [47].

Previous calculation methods for adjusted P/B

Through the December 2003 periodic reconstitution, unrealized gains/losses on land were calculated using available data and adjusted P/B ratios were derived via the following formula. The book and market values of land assets have differed greatly in the past, but by how much has varied from company to company.

$$\text{Adjusted P/B} = \frac{\text{price} \times \text{number of shares outstanding}}{\begin{array}{l}\text{shareholders' equity (BV)} + \text{unrealized}\dfrac{\text{gains}}{\text{losses}}\text{ on land} \\ + \text{unrealized}\dfrac{\text{gains}}{\text{losses}}\text{ on marketable securities} - \text{unrecognized pension liabilities}\end{array}}$$

Unrealized gains/losses on land were based, when possible, on data from reassessed land market values. When these were not available, they were based on land value tax data[48]. However, land value taxes have been frozen since 1998 and valuation amount calculations using land value tax data since that time may be less accurate. Mark-to-market valuation of real estate available for sale was introduced in FY00 and the early adoption of impaired asset accounting was allowed from FY03. This has meant that mark-to-market values are fully reflected in companies' financial statements. For this reason, P/B ratios were no longer adjusted for land valuation gains/losses as of the December 2004 periodic reconstitution.

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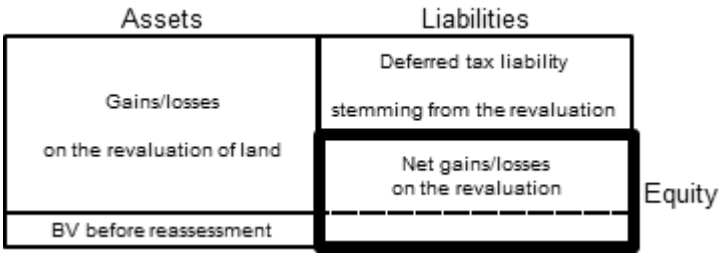
46. Adjustments were made using a multiple of 1.5 for data in company reports for TSE-1 and TSE-2 stocks after 1995 and a multiple of 1.6 for TSE-1 company reports in 1994 and earlier.
47. We count the number of shares held by all shareholders included in declarations of marketable securities holdings because the number listed in these declarations fell following changes to accounting standards in the financial year ended March 2001.
48. In the case of companies that did not revalue their landholdings and for which land value tax data were not available, unrealized gains/losses on landholdings were set to zero.

Calculation method for unrealized gains/losses on land

Periodic reconstitutions from January 1994 to December 2014

- Companies with revalued land

When land is revalued, revaluation gains/losses after tax are calculated as follows:



The BV before the revaluation plus the gains/losses on the revaluation is the BV after the revaluation. The footnotes of companies' securities filings include the difference in value the time of the revaluation and at the end of the fiscal year of the filing. Unrealized gains/losses on the land are calculated in the following manner. A uniform effective tax rate[49] of 40% is assumed.

Unrealized gains/losses on land =revaluation difference-difference between the value at the time of revaluation and the end of the fiscal year×60%

- Calculation method for companies with no revalued land but with land value tax data available

For stocks with no revalued land but with land value tax data available, values based on the latest land value tax data are used, factoring in the increases or decreases[50] during the period. A uniform effective tax rate of 40% is assumed.

The details of the calculation are as follows:

$$MV_t = (1 + R_t) \times MV_{t-1} \times \frac{BV_{t-1} - DV}{BV_{t-1}} + AV$$

$$\text{Unrealized gain/loss} = (MV_t - BV_t) \times 60\%$$

MV: value of land
BV: book value of land
AV: increase in value of land during the period
DV: decrease in value of land during the period
R: change in land price index

(Here, t is the most recent fiscal year as of the periodic reconstitution base date and $t-1$ is the most recent fiscal year as of the previous periodic reconstitution base date.)

The land price indexes used were as follows. These land price indexes are released twice a year by the Japan Real Estate Institute.

- For manufacturing, electric power, and gas companies: land price index for six major cities (industrial land)
- For nonmanufacturing companies other than electric power and gas companies: land price index for six major cities (commercial land)

49. For periodic reconstitutions in January 2001 and before, the calculation of adjusted P/B used unrealized gains/losses before taxes.
50. Increases and decreases in asset value are disclosed in the property, plant & equipment section for all industries. Using this data, we calculate unrealized gains/losses on land.

The calculation of unrealized gains/losses on land was adjusted because of changes in accounting standards. For reference, the earlier calculation method was as follows.

Up to the January 1993 periodic reconstitution (ie, before the land value tax was in force)

Russell/Nomura Japan Equity Indexes were launched in 1995. As such, for periods before the land value tax was in force, unrealized gains/losses are estimated.

- When the book value of land is rising

If the BV of the land at time t is greater than at time t–1, the market value of the land of the company in question is assumed to have grown at the same rate as the Japan Real Estate Institute's land price index.

$$MV_{t-1} = \{MV_t - (BV_t - BV_{t-1})\} \times \frac{1}{1+R_t}$$

$$MV_t = (1+R_t) \times MV_{t-1} + (BV_t - BV_{t-1})$$

MV: value of land
BV: book value of land
R: change in land price index

(Here, t is the most recent fiscal year as of the periodic reconstitution base date and $t-1$ is the most recent fiscal year as of the previous periodic reconstitution base date.)

- When the book value of land is falling

If the BV of the land at time t is less than at time t–1, the market value of the land of the company in question is assumed to have grown at the same rate as the Japan Real Estate Institute's land price index minus the decrease in BV.

$$MV_{t-1} = MV_t \times \frac{BV_{t-1}}{BV_t} \times \frac{1}{1+R_t}$$

$$MV_t = MV_{t-1} \times \frac{BV_t}{BV_{t-1}} \times (1+R_t)$$

MV: value of land
BV: book value of land
R: change in land price index

(Here, t is the most recent fiscal year as of the periodic reconstitution base date and $t-1$ is the most recent fiscal year as of the previous periodic reconstitution base date.)

From the January 1994 periodic reconstitution to the January 1999 periodic reconstitution (period when land value tax was in effect)

Land has been revalued since FY97. Land value taxes were assessed from 1993 to 1998. Unrealized gains/losses on land were estimated using land value tax data for periodic reconstitutions from January 1994 to January 1999. Land value tax was assessed on the value of land as of 1 January of each year. Land value tax was essentially calculated in the following manner:

Land value tax =total market value of land – market value of nontaxable portion – basic exemption×tax rate

The basic exemption for companies with capital of ¥100mn or greater was defined as the greater of taxable land area x ¥30,000 or ¥1bn. However, because the basic exemption complicates the estimate in question, it is set to zero. The nontaxable portion is also set to zero, except for railway companies, electric power companies, and gas companies.

(1) General businesses

Because general businesses all pay tax at the same rate, the market value of real estate held by each company can be calculated as follows[51]:

$$MV_t = \left(\frac{PT_t}{TR_t} \times (1 + R_t)\right) \div 0.8$$

MV: value of land
PT: land value tax
TR: land value tax rate
R: change in land price index

(Here, t is the most recent fiscal year as of the periodic reconstitution base date.)

We calculate R, the percentage change in the land price index between the time of land value tax assessment (January of the preceding year) and the time of data acquisition (November each year), as follows. The estimated market value is divided by 0.8 because the value of the land that the tax is assessed on is set at 80% of the published standard land value. We will now look at the method used to calculate the change, using November 1995 as an example. In this case, the time when land value tax was levied is January 1994.

$$R_{199511} = \left(\frac{PRC_{199511}}{PRC_{199401}} - 1\right) \times 100(\%)$$

PRC: value of land price index

(2) Railway companies, electric power companies, and gas companies

East Japan Railway, electric power companies, and gas companies do not pay taxes on land[52] that is used in the public interest, and thus pay little land value tax despite the large BV of their land. The market value of taxable land, deduced from the land value tax, is added to the BV of the tax-exempt land to arrive at an estimate of market value. The market value of the land not taxed is thus assumed to be the same as the BV of that land. Estimated market value is calculated using the following equation:

$$MV_t = \left(\frac{PT_t}{TR_t} \times (1 + R_t)\right) \div 0.8 + BVnotax_t$$

MV: value of land
PT: land value tax
TR: land value tax rate
R: change in land price index
BVnovax = book value (= market value)of untaxed land

(Here, t is the most recent fiscal year as of the periodic reconstitution base date.)

51. For example, the land value tax rate was 0.2% at the time of the 1993 periodic reconstitution and 0.3% at the time of the 1994 and 1995 periodic reconstitutions.
52. This includes railways, electric power stations, and gas production facilities.

(3) Large companies with real estate divisions

Land value tax was assessed at a lower rate on commercial land held as inventory assets than on fixed asset land, generally at one-fifth the rate for fixed assets. Companies with real estate divisions have land for sale in inventory and also prime housing lots taxed at exceptional rates. These two additional factors make deducing market value from the land value tax difficult. Therefore, for 23 particularly large companies[53] of this nature, consideration has also been given to the market value of housing lots. The tax rate is calculated at one-fifth the rate for the housing lot portion of inventory assets[54].

$$MV_t = \left(\frac{PTa_t}{TR_t} \times (1 + Ra_t) + \frac{PTb_t}{TR_t} \times (1 + Rb_t) \times 5\right) \div 0.8$$

MV: value of land
TR: land value tax rate
PTa = land value tax on land value taxable at normal rates
PTb = land value tax on land value taxable at extraordinary rates
Ra = rate of change in land price index (commercial land price index) for land value taxable at normal rates
Rb = rate of change in land price index (residential land price index) for land value taxable at extraordinary rates

(Here, t is the most recent fiscal year as of the periodic reconstitution base date.)

(4) Calculating land market value for stocks for which land value tax data are unavailable

When the amount of the land value tax is unknown, market value is estimated from the sector-average market value multiple for the fiscal year in question. Stocks that have no land BVs either are assumed to have little or no land and unrealized gains/losses are set at zero.

Previous calculation methods of unrealized gains/losses on marketable securities

Unrealized gains/losses on marketable securities were previously calculated as follows.

Periodic reconstitutions up to January 1991

(1) Nonfinancial stocks

Market value data for holdings of marketable securities have only existed since 1991. Unrealized gains/losses on marketable securities for 1990 and earlier are calculated only if market value data have been published since 1991 and past marketable securities are contained in the declarations of marketable securities holdings. Otherwise, unrealized gains/losses are set to zero. For points in time before market value data were published, past values are estimated from current data:

53. Railway companies are among the 23 companies mentioned. These companies have railway segments, and landholdings directly connected to railway operations are exempt from taxes on land. That said, since the ratio of the book value of land at the railway segments of these companies is comparatively small, unlike in the cases of JR companies and others, we ignore the nontaxable portion.
54. Since special tax rates do not apply to condominium land sites, the market value of the inventory portion of assets is overvalued, but since we have not taken into account basic exemptions and the nontaxable portions of tangible fixed assets, we think these assets are well undervalued. These factors largely offset each other, in our view.

- When the BV of marketable securities is increasing:

$$MV_{t-1} = (MV_t - (BV_t - BV_{t-1})) \times \frac{StockMV_t}{MV_t} \times \frac{TOPIX_{t-1}}{TOPIX_t} + (MV_t - (BV_t - BV_{t-1})) \times \frac{MV_t - StockMV_t}{MV_t}$$

MV = market value of marketable securities
BV = book value of marketable securities
StockMV = market value of marketable equities
TOPIX = the value of the TOPIX

(Here, t is the most recent fiscal year as of the periodic reconstitution base date and $t-1$ is the most recent fiscal year as of the previous periodic reconstitution base date.)

- When the BV of marketable securities is falling:

$$MV_{t-1} = MV_t \times \frac{StockMV_t}{MV_t} \times \frac{BV_{t-1}}{BV_t} \times \frac{TOPIX_{t-1}}{TOPIX_t} + MV_t \times \frac{MV_t - StockMV_t}{MV_t}$$

MV = market value of marketable securities
BV = book value of marketable securities
StockMV = market value of marketable equities
TOPIX = the value of the TOPIX

(Here, t is the most recent fiscal year as of the periodic reconstitution base date and $t-1$ is the most recent fiscal year as of the previous periodic reconstitution base date.)

(2) Financial stocks

Financial stocks generally have large unrealized gains/losses and therefore have a major impact on shareholders' equity. For stocks that have published market value data since 1991, BV is estimated even if BV data does not exist for periods before 1991. A backward-looking estimate is carried out using the oldest BV data available prior to 1991. For these estimates, the rate of increase or decrease in individual stocks is assumed to agree with the rate of increase or decrease found in Japan's National Accounts, under the entry for corporate shares (BV) of financial institutions.

Periodic reconstitutions from January 1992 to January 2001

Market value data are used for holdings of marketable securities[55]. When there is a gap between the publication of market value data (the fiscal year-end) and the time of data collection (November of each year), the market value of stocks is adjusted using the TOPIX return. Data from the time of the publication of market value figures are used for the market value of other assets, as well as the BV of all assets.

$$MV_{NOV} = StockMV_{FTRM} \times \frac{TOPIX_{NOV}}{TOPIX_{FTRM}} + OthersMV_{FTRM}$$

MV = market value of marketable securities
StockMV = market value of marketable equities
OthersMV = market value of marketable securities other than equities
TOPIX = the value of the TOPIX

(Here, NOV is the time when data were gathered (November) and $FTRM$ is the latest fiscal year that has now ended.)

55. Since only TSE, OSE, and NSE First and Second Section stock data are available for 1999 and earlier, unrealized gains/losses are assumed to be zero for stocks that trade only on a regional exchange and JASDAQ stocks.

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Index values are published in the following media:

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- Jiji (RNSI/12400,RNSIIDV/12400)
- QUICK (NRIJ500–503, 510–517)
- Reuters (FRCNRI01, FRCNRI02, FRCNRI03, FRCNRI04, .JRNP, .JRNS)
- Our website (*http://qr.nomuraholdings.com/en/frcnri/index.html*)

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- Jiji (RNP/NOMURA)
- QUICK (140)

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More detailed data[57] [58]

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For information, contact:

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Other reports

Russell/Nomura Japan Equity Indexes - Performance summary (monthly reports)

Russell/Nomura Japan Equity Indexes handbook

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56. Published data are all for reference only.
57. For more details on the “7.1.5. Calculation of net, hedged, and net hedged return index values”, see the Frank Russell Company website (https://www.ftserussell.com/). FTSE Russell is a trading name of FTSE International Limited and Frank Russell Company, among other London Stock Exchange Group plc entities (“LSE group”). Please see the Legal Disclaimer page(https://www.ftserussell.com/legal/legal-disclaimer) for more details. For further information contact info@ftserussell.com.
58. For Dividend tax adjusted index, please see "For further information on the indexes".

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Appendix A-1

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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 JI17 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 5.5% (tax included) 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 5.5% (tax included/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.
Investment trusts invest mainly in securities such as Japanese and foreign equities and bonds, whose prices fluctuate. Investment trust unit prices fluctuate owing to price fluctuations in the underlying assets and to foreign exchange rate fluctuations. As such, investment trusts carry the risk of losses. Fees and risks vary by investment trust. Maximum applicable fees are subject to change; please thoroughly read the written materials provided, such as prospectuses or documents delivered before making a contract.
In interest rate swap transactions and USD/JPY basis swap transactions (“interest rate swap transactions, etc.”), only the agreed transaction payments shall be made on the settlement dates. Some interest rate swap transactions, etc. may require pledging of margin collateral. In some of these cases, transaction payments may exceed the amount of collateral. There shall be no advance notification of required collateral value or collateral ratios as they vary depending on the transaction. Interest rate swap transactions, etc. carry the risk of losses owing to fluctuations in market prices in the interest rate, currency and other markets, as well as reference indices. Losses incurred as such may exceed the value of margin collateral, in which case margin calls may be triggered. In the event that both parties agree to enter a replacement (or termination) transaction, the interest rates received (paid) under the new arrangement may differ from those in the original arrangement, even if terms other than the interest rates are identical to those in the original transaction. Risks vary by transaction. Please thoroughly read the written materials

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In OTC transactions of credit default swaps (CDS), no sales commission will be charged. When entering into CDS transactions, the protection buyer will be required to pledge or entrust an agreed amount of margin collateral. In some of these cases, the transaction payments may exceed the amount of margin collateral. There shall be no advance notification of required collateral value or collateral ratios as they vary depending on the financial position of the protection buyer. CDS transactions carry the risk of losses owing to changes in the credit position of some or all of the referenced entities, and/or fluctuations of the interest rate market. The amount the protection buyer receives in the event that the CDS is triggered by a credit event may undercut the total amount of premiums that he/she has paid in the course of the transaction. Similarly, the amount the protection seller pays in the event of a credit event may exceed the total amount of premiums that he/she has received in the transaction. All other conditions being equal, the amount of premiums that the protection buyer pays and that received by the protection seller shall differ. In principle, CDS transactions will be limited to financial instruments business operators and qualified institutional investors.
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