

Russell/Nomura Japan Equity Indexes FY18 handbook

EQUITY QUANTITATIVE RESEARCH (INDEX)

Global Markets Research

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Research analysts

Japan index products

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This report constitutes the Russell/Nomura Japan Equity Indexes FY18 handbook.

Russell/Nomura Japan Equity Indexes have the following characteristics:

- They are share price indexes that are weighted by free-float adjusted market capitalization and cover the top 98% of all listed stocks in terms of float-adjusted market capitalization, thereby offering broad market coverage.
- In addition to stocks listed on the First Section of the Tokyo Stock Exchange (TSE-1), they include stocks listed on other exchanges.
- 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.
- The composition of each index is reviewed once a year.

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1. Introduction

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

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

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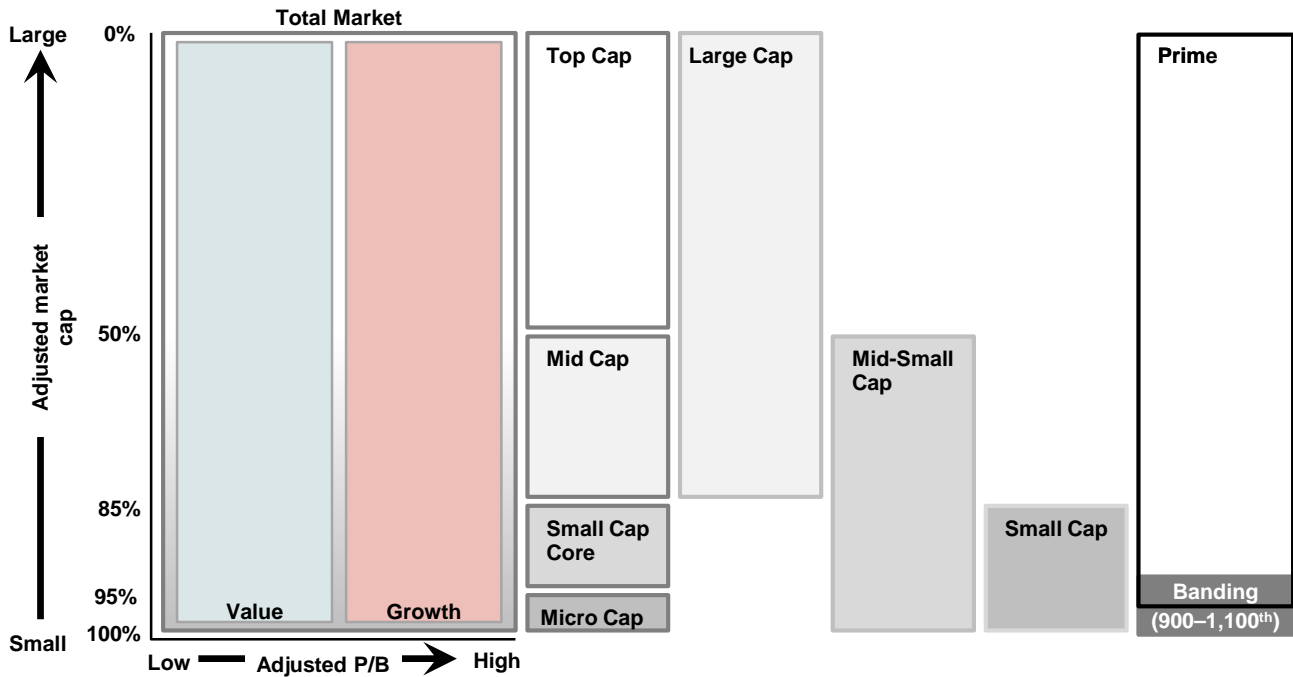
- They are share price indexes that are weighted by free-float adjusted market capitalization and cover the top 98% of all listed stocks in terms of float-adjusted market capitalization, thereby offering broad market coverage
- In addition to stocks listed on the First Section of the Tokyo Stock Exchange (TSE-1), they include stocks listed on other exchanges
- 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
- The composition of each index is reviewed once a year.

Complete details of rules for the Russell/Nomura Japan Equity Index can be found in the Russell/Nomura Japan Equity Index Rulebook.

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 capitalization
- The Russell/Nomura Large Cap Index contains the top 85% of the Russell/Nomura Total Market Index in terms of float-adjusted market capitalization
- The Russell/Nomura Small Cap Index contains the bottom 15% of the Russell/Nomura Total Market Index in terms of float-adjusted market capitalization
- The Russell/Nomura Top Cap Index contains the top 50% of the Russell/Nomura Total Market Index in terms of float-adjusted market capitalization
- The Russell/Nomura Mid Cap Index contains the middle 35% of the Russell/Nomura Total Market Index in terms of float-adjusted market capitalization
- The Russell/Nomura Mid-Small Cap Index contains the bottom 50% of the Russell/Nomura Total Market Index in terms of float-adjusted market capitalization
- 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 capitalization 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 capitalization
- The Russell/Nomura Prime Index contains the top 1,000 stocks in the Total Market Index in terms of float-adjusted market capitalization, taking into account "banding" and the "negative list"

3. Russell/Nomura Japan Equity Indexes: composition

3.1. Number of stocks and market capitalization

Figure 2 shows the number and market capitalization of the stocks in the Russell/Nomura Total Market Index and in the total market.

Fig. 2: Russell/Nomura Total Market Index and the total market

	Number of stocks		Market cap (¥trn)		
	Russell/Nomura	Total market	Russell/Nomura (adjusted for stable shareholdings)	Russell/Nomura (not adjusted for stable shareholdings)	Total market (not adjusted for stable shareholdings)
TSE-1	1,461	2,035	438	650	660
Other	139	1,654	7	14	28
Total	1,600	3,689	445	664	688

Note: Market cap data as of 17 Nov 2017. The Russell/Nomura Total Market Index (Russell/Nomura) is as of the Nov 2017 regular reconstitution. Market selection was the TSE, followed by the Nagoya Stock Exchange, the Fukuoka Stock Exchange, and the Sapporo Securities Exchange, in that order.

Source: Nomura

Figure 3 shows the number of stocks for each index as of the date of its regular reconstitution, together with the percentage of total market capitalization, and the market capitalization of the largest and smallest stocks.

Fig. 3: Number of stocks in each index and % of total market capitalization

Index	Number of stocks	% of total market cap	Market cap of largest and smallest stock (¥bn)	
			Largest	Smallest
Total Market	1,600	100.0%	12,783.7	10.1
Value	1,132	48.8%	12,783.7	0.9
Growth	919	51.2%	8,089.9	0.8
Large	350	84.7%	12,783.7	197.8
Large Value	223	39.9%	12,783.7	11.0
Large Growth	240	44.8%	8,089.9	12.1
Top	70	50.8%	12,783.7	1,415.3
Top Value	44	23.3%	12,783.7	109.0
Top Growth	48	27.5%	8,089.9	216.8
Mid	280	33.9%	1,443.3	197.8
Mid Value	179	16.6%	1,334.8	11.0
Mid Growth	192	17.3%	1,296.3	12.1
Mid-Small	1,530	49.2%	1,443.3	10.1
Mid-Small Value	1,088	25.5%	1,334.8	0.9
Mid-Small Growth	871	23.7%	1,296.3	0.8
Small	1,250	15.3%	234.9	10.1
Small Value	909	8.9%	234.9	0.9
Small Growth	679	6.4%	229.3	0.8
Small Core	450	10.6%	234.9	40.9
Small Core Value	326	6.0%	234.9	2.9
Small Core Growth	258	4.6%	229.3	3.2
Micro	800	4.7%	65.8	10.1
Micro Value	583	2.9%	65.8	0.9
Micro Growth	421	1.8%	65.7	0.8
Prime	1,000	97.2%	12,783.7	24.9
Prime Value	704	47.1%	12,783.7	2.9
Prime Growth	604	50.1%	8,089.9	2.3

Note: Based on constituent stocks as of regular reconstitutions in Nov 2017. Market cap data as of 17 Nov 2017.

Source: Nomura

3.2. Number of stocks as of date of regular reconstitution

Figure 4 shows the number of stocks in each index as of the date of past regular reconstitutions.

Fig. 4: Number of constituent stocks

(yyyy-mm)	Total		Large	Small	Prime
	Value	Growth			
198101	1,091	656	400	691	-
198201	1,091	708	400	691	-
198301	1,091	766	400	691	-
198401	1,091	738	400	691	-
198501	1,104	706	400	704	-
198601	1,142	733	400	742	-
198701	1,142	833	400	742	-
198801	1,199	860	400	799	-
198901	1,267	877	400	867	-
199001	1,381	827	500	881	-
199101	1,561	920	500	1,061	-
199201	1,585	1,017	500	1,085	-
199301	1,586	1,092	500	1,086	-
199401	1,586	1,118	500	1,086	-
199501	1,749	1,111	500	1,249	-
199601	1,754	1,191	500	1,254	-
199701	1,854	1,251	500	1,354	-
199801	1,854	1,575	500	1,354	1,000
199901	1,854	1,584	500	1,354	1,000
200001	1,854	1,551	500	1,354	1,000
200101	1,854	1,544	500	1,354	1,000
200202	1,853	1,573	300	1,553	1,000
200212	1,500	1,225	300	1,200	1,000
200312	1,600	1,233	350	1,250	1,000
200412	1,700	1,231	400	1,300	1,000
200512	1,799	1,218	400	1,399	1,000
200612	1,700	1,241	350	1,350	1,000
200712	1,500	1,164	300	1,200	1,000
200812	1,400	1,111	300	1,100	1,000
200912	1,500	1,139	350	1,150	1,000
201012	1,400	1,081	300	1,100	1,000
201112	1,400	1,044	350	1,050	1,000
201212	1,500	1,159	350	1,150	1,000
201312	1,400	1,043	300	1,100	1,000
201412	1,500	1,103	350	1,150	1,000
201512	1,400	1,000	350	1,050	1,000
201611	1,500	1,104	350	1,150	1,000
201711	1,600	1,132	350	1,250	1,000

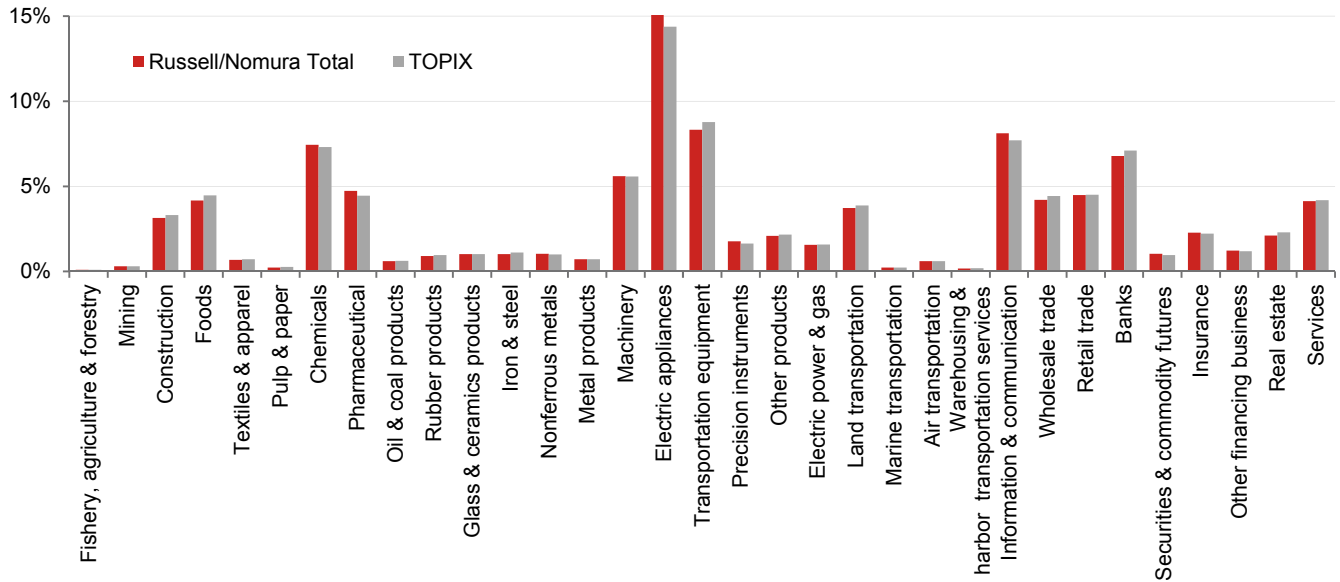
Note: As of regular reconstitution date each year.

Source: Nomura

3.3. Sector allocation

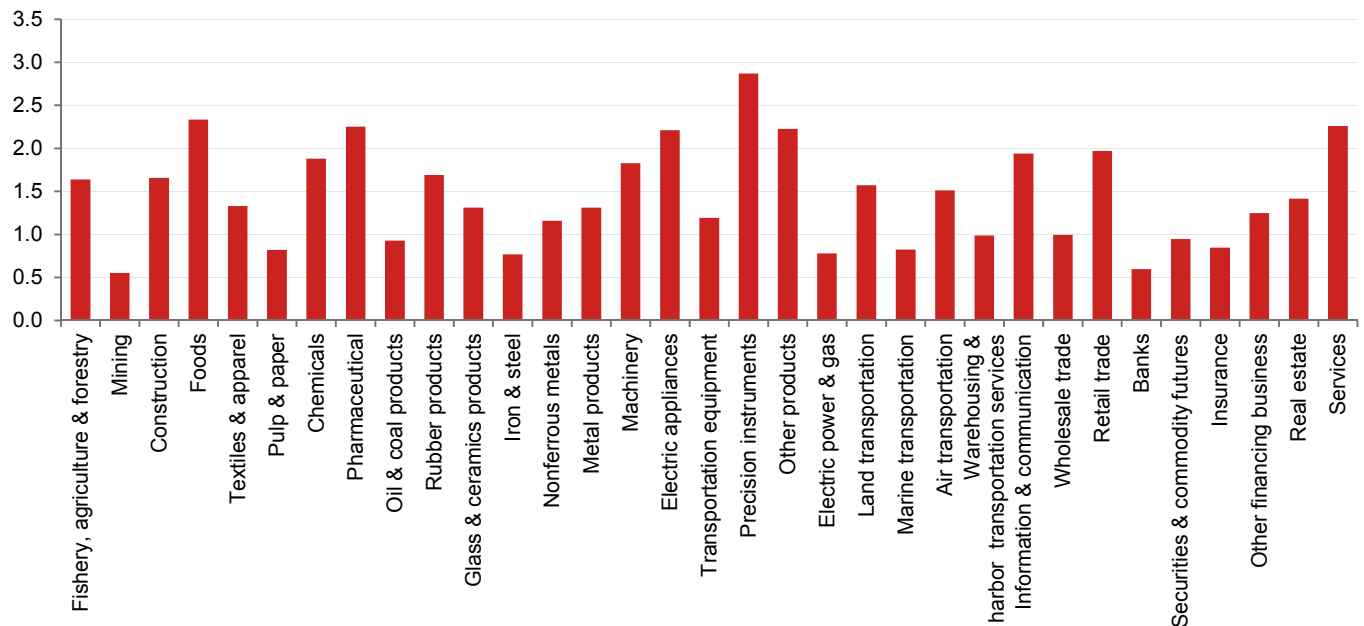
Figure 5 shows the percentage of Russell/Nomura Total Market Index market capitalization in each of 33 sectors. Compared with the TOPIX, the Russell/Nomura Total Market Index is more heavily weighted toward the electric appliances sector and less heavily weighted toward the transportation equipment sector.

Fig. 5: Sector allocation of Russell/Nomura Total Market Index and TOPIX



Note: Figures for Russell/Nomura Total Market Index are based on constituent stocks as of regular reconstitution date in Nov 2017. Market cap data as of 17 Nov 2017.
Source: Nomura

Fig. 6: Average adjusted P/B ratio by sector for the Russell/Nomura Total Market Index



Note: Figures for Russell/Nomura Total Market Index are based on constituent stocks as of the regular reconstitution date in Nov 2017. Market cap data as of 13 Oct 2017, the date of determination for the regular reconstitution. Average adjusted P/B = [sum of share prices of stocks included] / (sum of BPS adjusted for unrealized gains/losses of stocks included).

Source: Nomura

3.4. Top 10 stocks by market capitalization

Figure 7 shows the top 10 stocks by weighting in each index.

Fig. 7: Top 10 stocks by weighting in each index

Rank	Top	Top Value	Top Growth
1	7203 Toyota Motor	7203 Toyota Motor	9984 Softbank Group
2	9984 Softbank Group	8306 Mitsubishi UFJ FG	6861 Keyence
3	8306 Mitsubishi UFJ FG	9432 Nippon Telegraph and Telephone	9433 KDDI
4	9432 Nippon Telegraph and Telephone	8316 Sumitomo Mitsui FG	6954 Fanuc
5	8316 Sumitomo Mitsui FG	7267 Honda Motor	7974 Nintendo
6	6861 Keyence	8411 Mizuho FG	6758 Sony
7	7267 Honda Motor	6501 Hitachi	4502 Takeda Pharmaceutical
8	9433 KDDI	8058 Mitsubishi	2914 Japan Tobacco
9	6758 Sony	8766 Tokio Marine HD	4063 Shin-Etsu Chemical
10	6954 Fanuc	8031 Mitsui & Co	6752 Panasonic
Mid		Mid Value	Mid Growth
1	4188 Mitsubishi Chemical HD	5802 Sumitomo Electric Industries	1801 Taisei
2	9202 ANA HD	8309 Sumitomo Mitsui Trust HD	4543 Terumo
3	5802 Sumitomo Electric Industries	7011 Mitsubishi Heavy Industries	6645 Omron
4	9201 Japan Airlines	6502 Toshiba	9843 Nitori HD
5	8309 Sumitomo Mitsui Trust HD	6178 Japan Post HD	7309 Shimano
6	1801 Taisei	8308 Resona HD	4755 Rakuten
7	9021 West Japan Railway	9201 Japan Airlines	8697 Japan Exchange Group
8	7011 Mitsubishi Heavy Industries	1605 Inpex	2269 Meiji HD
9	8830 Sumitomo Realty & Development	4188 Mitsubishi Chemical HD	7733 Olympus
10	4543 Terumo	1928 Sekisui House	4519 Chugai Pharmaceutical
Small Core		Small Core Value	Small Core Growth
1	7164 Zenkoku Hosho	4114 Nippon Shokubai	7164 Zenkoku Hosho
2	2782 Seria	9076 Seino HD	2782 Seria
3	7732 Topcon	5714 Dowa HD	7732 Topcon
4	9065 Sankyu	8379 Hiroshima Bank	3349 Cosmos Pharmaceutical
5	3349 Cosmos Pharmaceutical	7240 NOK	2201 Morinaga
6	4555 Sawai Pharmaceutical	9401 Tokyo Broadcasting System HD	3197 Skylark
7	2201 Morinaga	8905 Aeon Mall	3064 MonotaRO
8	4114 Nippon Shokubai	4118 Kaneka	7649 Sugi HD
9	8905 Aeon Mall	8377 Hokuho FG	9003 Sotetsu HD
10	8439 Tokyo Century	4062 Ibiben	6005 Miura
Micro		Micro Value	Micro Growth
1	5192 Mitsuboshi Belting	8066 Mitani	2461 F@N Communications
2	2461 F@N Communications	5943 Noritz	4733 Obic Business Consultants
3	4733 Obic Business Consultants	7246 Press Kogyo	6055 Japan Material
4	8066 Mitani	6986 Futaba	6652 IDEC
5	6055 Japan Material	7862 Toppan Forms	9936 Ohsho Food Service
6	9536 Saibu Gas	4617 Chugoku Marine Paints	2160 GNI Group
7	6455 Morita HD	6741 Nippon Signal	9039 Sakai Moving Service
8	6652 IDEC	4116 Dainichiseika Color & Chemicals Mfg	3656 KLab
9	5943 Noritz	7239 Tachi-S	4290 Prestige International
10	7246 Press Kogyo	7517 Kuroda Electric	2695 Kura
Prime		Prime Value	Prime Growth
1	7203 Toyota Motor	7203 Toyota Motor	9984 Softbank Group
2	9984 Softbank Group	8306 Mitsubishi UFJ FG	6861 Keyence
3	8306 Mitsubishi UFJ FG	9432 Nippon Telegraph and Telephone	9433 KDDI
4	9432 Nippon Telegraph and Telephone	8316 Sumitomo Mitsui FG	6954 Fanuc
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9	6758 Sony	8766 Tokio Marine HD	4063 Shin-Etsu Chemical
10	6954 Fanuc	8031 Mitsui & Co	6752 Panasonic

Note: As of 13 Oct 2017, the date of determination for the regular reconstitution. FG = Financial Group, HD = Holdings.

Source: Nomura

4. Performance analysis

4.1. Annual returns

Fig. 8: Annual returns on individual indexes

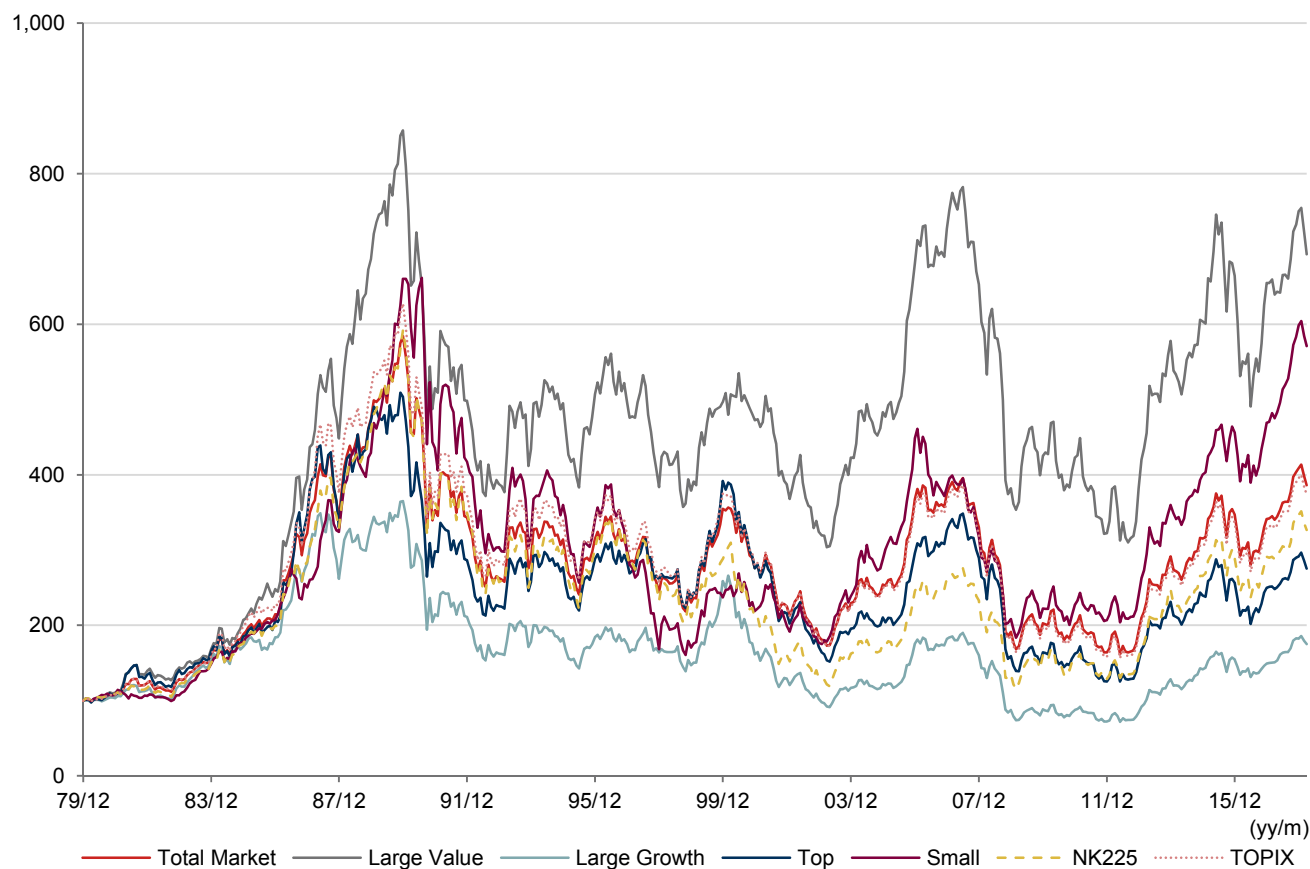
Index	Excluding dividends					Including dividends				
	1 yr	2 yrs	5 yrs	10 yrs	Jan 2001–	1 yr	2 yrs	5 yrs	10 yrs	Jan 2001–
Total Market	13.11%	12.92%	11.43%	5.34%	3.47%	15.21%	15.03%	13.46%	7.40%	5.17%
Value	9.69%	13.63%	10.68%	5.64%	4.80%	12.24%	16.16%	13.06%	7.91%	6.68%
Growth	16.67%	12.70%	12.33%	5.11%	2.19%	18.35%	14.43%	14.03%	6.98%	3.71%
Large	12.06%	12.23%	10.97%	4.71%	2.89%	14.26%	14.39%	13.05%	6.80%	4.60%
Large Value	8.54%	12.82%	10.06%	4.84%	3.99%	11.21%	15.42%	12.51%	7.14%	5.88%
Large Growth	15.42%	12.21%	11.96%	4.75%	2.05%	17.12%	13.95%	13.69%	6.64%	3.59%
Top	10.94%	12.12%	9.66%	3.69%	1.74%	13.32%	14.45%	11.96%	5.99%	3.56%
Top Value	7.89%	12.64%	8.71%	4.15%	2.75%	10.88%	15.51%	11.48%	6.67%	4.75%
Top Growth	13.76%	12.12%	10.62%	3.75%	1.21%	15.61%	14.00%	12.51%	5.85%	2.90%
Mid	13.78%	12.66%	12.92%	6.24%	4.71%	15.63%	14.51%	14.69%	8.04%	6.24%
Mid Value	9.46%	13.29%	11.90%	5.94%	5.57%	11.71%	15.54%	13.96%	7.96%	7.31%
Mid Growth	18.09%	12.65%	14.06%	6.50%	3.48%	19.55%	14.15%	15.55%	8.09%	4.81%
Mid-Small	15.38%	13.90%	13.28%	7.03%	5.37%	17.16%	15.77%	15.06%	8.87%	6.94%
Mid-Small Value	11.35%	14.70%	12.46%	7.09%	6.53%	13.50%	16.91%	14.51%	9.13%	8.28%
Mid-Small Growth	20.07%	13.60%	14.37%	6.90%	3.49%	21.49%	15.10%	15.85%	8.50%	4.82%
Small	18.89%	16.80%	14.25%	8.88%	6.98%	20.66%	18.75%	16.11%	10.82%	8.63%
Small Value	14.66%	17.33%	13.60%	9.02%	8.21%	16.68%	19.49%	15.68%	11.11%	10.01%
Small Growth	25.26%	15.96%	15.34%	8.42%	3.89%	26.65%	17.55%	16.83%	10.06%	5.22%
Small Core	17.76%	15.86%	14.19%	8.62%	6.51%	19.52%	17.79%	16.02%	10.53%	8.13%
Small Core Value	12.93%	16.28%	13.07%	8.42%	7.72%	14.97%	18.42%	15.09%	10.46%	9.49%
Small Core Growth	24.92%	15.41%	16.10%	8.91%	3.82%	26.31%	17.04%	17.64%	10.60%	5.17%
Micro	21.28%	18.83%	14.62%	9.49%	7.85%	23.03%	20.76%	16.52%	11.48%	9.56%
Micro Value	18.02%	19.46%	14.72%	10.16%	9.06%	20.04%	21.67%	16.85%	12.34%	10.94%
Micro Growth	26.28%	17.48%	14.09%	7.31%	4.12%	27.60%	18.90%	15.48%	8.84%	5.38%
Prime	12.82%	12.71%	11.34%	5.23%	3.38%	14.92%	14.84%	13.38%	7.30%	5.07%
Prime Value	9.31%	13.42%	10.58%	5.50%	4.67%	11.91%	15.97%	12.98%	7.78%	6.55%
Prime Growth	16.41%	12.54%	12.24%	5.04%	2.17%	18.10%	14.26%	13.95%	6.91%	3.70%
TOPIX	13.05%	12.86%	11.33%	5.27%	3.22%	15.16%	14.97%	13.38%	7.35%	4.92%

Note: As of end-Mar 2018. Returns are annualized and based on average monthly yen-based returns for each period.

Source: Nomura

4.2. Performance

Fig. 9: Index performance



Note: Shows monthly index values (yen basis, excluding dividends) in Dec 1979–Mar 2018, rebased so that end-Dec 1979 = 100.

Source: Nomura

Fig. 10: Average returns, standard deviation, and correlation coefficients

	Average returns	Standard deviation	Russell/Nomura	TOPIX	Nikkei 225
Russell/Nomura	5.16%	17.97%	1		
TOPIX	5.14%	18.34%	0.9948	1	
Nikkei 225	5.04%	19.61%	0.9614	0.9604	1

Note: Russell/Nomura is Russell/Nomura Total Market Index. Based on monthly returns (yen basis, excluding dividends) in Jan 1980–Mar 2018. Average return and standard deviation data are annualized.

Source: Nomura

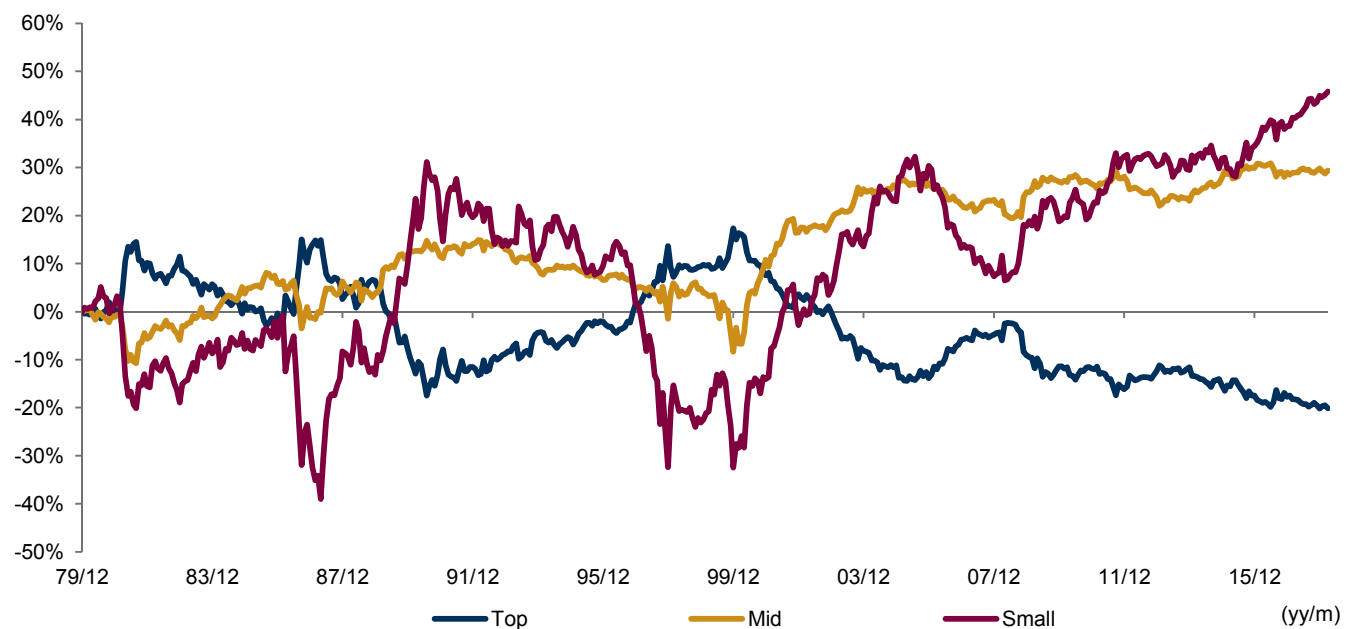
4.3. Relative performance of style indexes

Fig. 11: Cumulative excess returns on value and growth indexes



Note: Shows cumulative excess monthly returns (including dividends) on each index versus the Russell/Nomura Total Market Index, Jan 1980–Mar 2018.
Source: Nomura

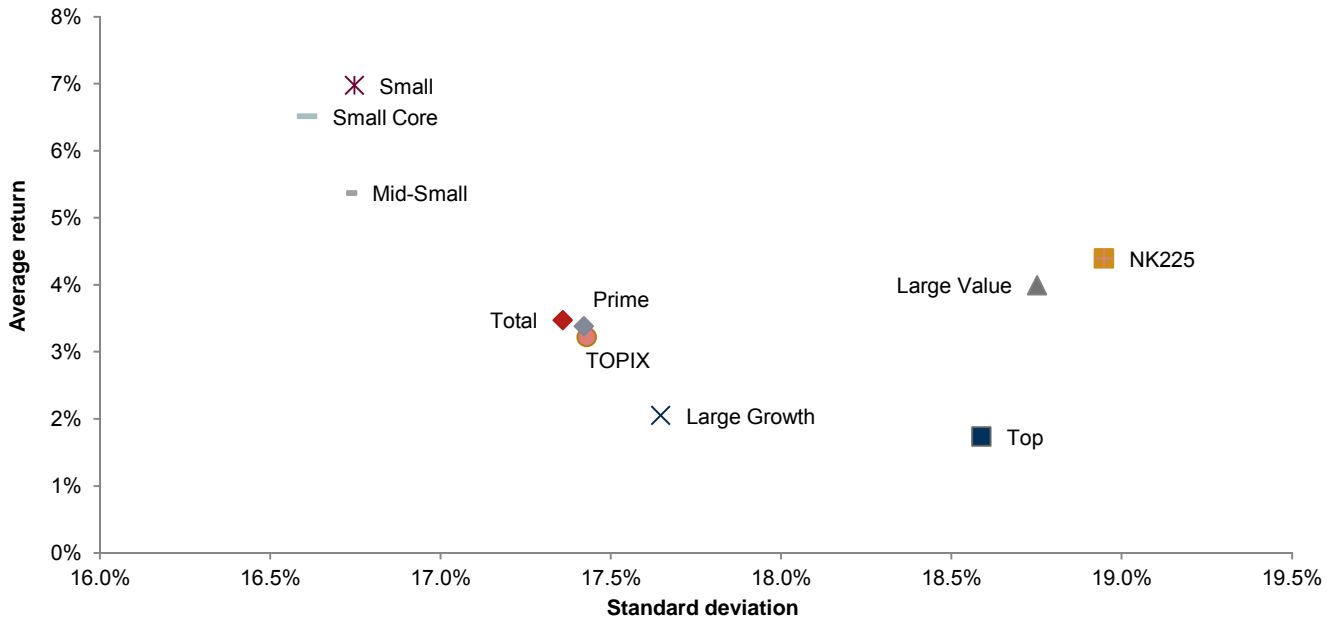
Fig. 12: Cumulative excess returns on size-based indexes



Note: Shows cumulative excess monthly returns (including dividends) on each index versus the Russell/Nomura Total Market Index, Jan 1980–Mar 2018.
Source: Nomura

4.4. Risk-return characteristics of individual indexes

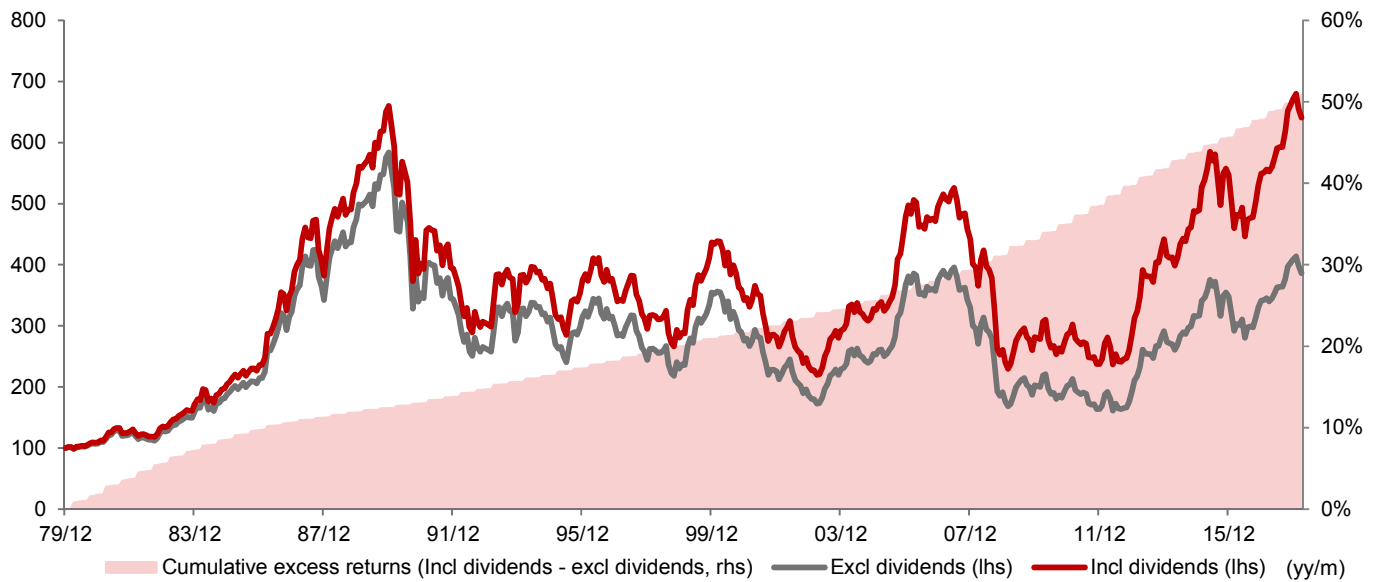
Fig. 13: Average return and standard deviation of individual indexes



Note: Shows average returns and standard deviation on annualized basis, calculated from monthly returns (excluding dividends) in Jan 2001–Mar 2018.
Source: Nomura

4.5. Impact of dividends

Fig. 14: Impact of dividends on performance of Russell/Nomura Total Market Index



Note: Shows monthly values of Russell/Nomura Total Market Index in Dec 1979–Mar 2018, rebased so that end-Dec 1979 = 100. Cumulative excess returns are the sum of index returns (including dividends) in excess of index returns (excluding dividends).
Source: Nomura

5. Index investability

5.1. Turnover ratios as of regular reconstitutions

Figure 15 shows turnover ratios as of the date of regular reconstitutions.

Fig. 15: Turnover ratios at time of regular reconstitutions

Date (yyyymm)	Total			Large	Small	Prime
		Value	Growth			
198101	2.4%	11.2%	12.9%	3.5%	13.1%	-
198201	2.1%	15.7%	17.8%	3.1%	12.1%	-
198301	2.1%	15.2%	15.1%	3.1%	13.5%	-
198401	2.6%	14.2%	15.6%	4.3%	16.2%	-
198501	2.9%	16.3%	19.1%	4.1%	17.5%	-
198601	3.7%	15.6%	16.7%	4.8%	16.2%	-
198701	2.3%	17.5%	17.7%	3.3%	18.4%	-
198801	3.5%	12.4%	16.9%	5.1%	16.8%	-
198901	3.7%	17.1%	22.1%	4.9%	15.8%	-
199001	3.0%	15.9%	18.2%	7.2%	27.3%	-
199101	3.4%	19.0%	20.8%	4.6%	20.9%	-
199201	1.9%	13.1%	13.5%	3.1%	13.6%	-
199301	1.9%	12.0%	12.8%	3.2%	13.3%	-
199401	1.5%	11.7%	12.2%	2.6%	12.0%	-
199501	3.3%	13.6%	17.0%	4.0%	15.4%	-
199601	2.2%	13.1%	13.6%	2.5%	9.8%	-
199701	2.2%	18.0%	19.2%	2.3%	10.7%	-
199801	1.4%	18.4%	14.8%	2.5%	16.6%	1.4%
199901	3.1%	12.9%	14.2%	4.1%	12.3%	3.0%
200001	3.4%	31.3%	25.5%	5.4%	31.8%	3.5%
200101	2.8%	18.6%	21.3%	3.8%	18.3%	2.7%
200202	2.5%	16.7%	16.2%	7.6%	43.0%	2.4%
200212	3.3%	15.5%	13.5%	4.7%	15.8%	2.2%
200312	2.5%	19.6%	20.7%	4.6%	20.2%	2.1%
200412	3.5%	17.5%	20.9%	4.9%	18.9%	3.4%
200512	3.2%	21.0%	22.8%	3.8%	15.8%	3.1%
200612	2.5%	18.6%	17.6%	3.1%	16.4%	2.5%
200712	1.8%	20.5%	20.8%	3.5%	18.8%	1.7%
200812	1.6%	29.3%	31.7%	3.8%	17.6%	1.7%
200912	1.6%	26.8%	26.5%	4.2%	21.6%	1.5%
201012	1.8%	14.5%	14.6%	3.1%	15.8%	1.8%
201112	1.6%	16.2%	15.7%	4.6%	20.6%	1.5%
201212	1.9%	13.2%	11.7%	2.7%	11.9%	1.7%
201312	1.6%	16.1%	16.5%	3.2%	20.1%	1.7%
201412	1.7%	11.9%	11.7%	3.9%	19.0%	1.5%
201512	1.7%	13.1%	13.3%	2.7%	12.2%	1.7%
201611	1.3%	14.6%	13.9%	2.3%	12.9%	1.1%
201711	1.6%	9.2%	9.7%	2.2%	9.9%	1.5%
Average	2.4%	16.5%	17.2%	3.9%	17.2%	2.1%

Note: Turnover ratio is $[\sum | \text{market cap weighting before reconstitution} - \text{market cap weighting after reconstitution} | / 2]$, based on share price on business day before regular reconstitution. The figures thus show one-way turnover for an index fund constructed using the full replication approach. A change in all of the constituent stocks would give a turnover ratio of 100%.

Source: Nomura

5.2. Estimated number of days' impact in the case of regular reconstitutions

Figure 16 shows the estimated number of days' impact in the case of regular reconstitutions for passive funds that track each index using the full replication approach. The higher the turnover ratio on the date of the regular reconstitution, and the greater the number of stocks with low liquidity that are added, the greater the number of days' impact.

Fig. 16: No. of days' impact in case of regular reconstitutions

Index	No. of days of impact Maximum (days)	Turnover ratio (one-way)	Index market cap (¥trn)	Number of stocks				
				Before	After	Change	Out	In
Total Market	2	1.6%	445	1,486	1,600	114	37	151
Value	3	9.2%	217	1,093	1,132	39	95	134
Growth	1	9.7%	228	796	919	123	87	210
Large	1	2.2%	377	350	350	0	17	17
Large Value	1	9.2%	177	220	223	3	20	23
Large Growth	1	9.5%	199	243	240	-3	28	25
Top	1	5.0%	226	70	70	0	6	6
Top Value	1	9.6%	104	43	44	1	4	5
Top Growth	1	11.3%	122	48	48	0	6	6
Mid	1	9.4%	151	280	280	0	23	23
Mid Value	1	15.9%	74	177	179	2	22	24
Mid Growth	1	18.8%	77	195	192	-3	30	27
Mid-Small	3	6.0%	219	1,416	1,530	114	43	157
Mid-Small Value	4	13.7%	113	1,050	1,088	38	97	135
Mid-Small Growth	2	16.6%	105	748	871	123	89	212
Small	7	9.9%	68	1,136	1,250	114	54	168
Small Value	12	16.2%	40	873	909	36	90	126
Small Growth	6	27.2%	29	553	679	126	83	209
Small Core	4	18.1%	47	395	450	55	40	95
Small Core Value	4	20.6%	27	297	326	29	41	70
Small Core Growth	9	34.0%	20	211	258	47	41	88
Micro	22	22.4%	21	741	800	59	109	168
Micro Value	36	28.2%	13	576	583	7	110	117
Micro Growth	17	35.9%	8	342	421	79	87	166
Prime	1	1.5%	432	991	1,000	9	29	38
Prime Value	1	9.2%	209	726	704	-22	71	49
Prime Growth	1	9.5%	223	559	604	45	52	97

Note: Based on constituent stocks as of regular reconstitution in Nov 2017. Market cap data as of 17 Nov 2017. We estimated the number of days' impact (maximum) for each index as the number of days required for a scheduled reconstitution of a ¥100bn passive fund that tracks the index using the full replication approach, based on $[\max(|\text{market cap before reconstitution} - \text{market cap after reconstitution}| / \text{average daily trading value})]$. Average daily trading value is the average over the year to 13 Oct 2017, the date of determination for the regular reconstitution of the Russell/Nomura indexes. Turnover ratio is $[\sum |\text{market cap weighting before reconstitution} - \text{market cap weighting after reconstitution}| / 2]$.

Source: Nomura

5.3. Estimating number of days of impact and minimum unit of investment when a fund is established

Figure 17 shows the minimum unit of investment and number of days of impact when passive funds are established that track indices using the full replication approach.

The minimum unit of investment is calculated as shown below. Our calculation assumes at least 50% of shares in a stock trading unit are included, as we round up for incomplete trading units.

$$\text{Minimum unit of investment} = \max_{i=1..n} \left\{ \frac{\text{trading unit } i * 50\% * \text{transaction price } i}{\text{index weighting } i} \right\}$$

Here the notation "n" represents the number of stocks in the index and the notation "i" indicates the i^{th} stock in the index.

As the minimum unit of investment is calculated by dividing the minimum investment amount for each constituent stock by its weighting, the smaller the minimum investment amount for the constituent stock, or the larger its weighting, the smaller the minimum unit of investment will be. The method for calculating the number of impact days is the same as in 5.2.

Fig. 17: Number of days of impact and minimum unit of investment when a fund is established

Index	No. of days of impact Maximum (days)	Minimum unit of investment (¥bn)	Index market cap (¥trn)	Number of stocks
Total Market	2	45.1	445	1,600
Value	3	34.9	217	1,132
Growth	2	172.4	228	919
Large	1	1.2	377	350
Large Value	1	2.5	177	223
Large Growth	1	4.6	199	240
Top	1	0.2	226	70
Top Value	1	0.4	104	44
Top Growth	1	0.2	122	48
Mid	1	0.5	151	280
Mid Value	1	1.0	74	179
Mid Growth	1	1.8	77	192
Mid-Small	3	22.2	219	1,530
Mid-Small Value	5	18.2	113	1,088
Mid-Small Growth	4	79.7	105	871
Small	7	6.9	68	1,250
Small Value	12	6.4	40	909
Small Growth	14	21.6	29	679
Small Core	4	0.6	47	450
Small Core Value	7	2.1	27	326
Small Core Growth	7	1.0	20	258
Micro	23	2.1	21	800
Micro Value	37	2.0	13	583
Micro Growth	47	6.2	8	421
Prime	1	6.0	432	1,000
Prime Value	1	27.5	209	704
Prime Growth	1	26.3	223	604

Note: Based on constituent stocks as of regular reconstitution in Nov 2017. Market cap data as of 17 Nov 2017. We estimated the number of days of impact (maximum) for each index as the number of days required to set up a new ¥100bn passive fund that tracks the index using the full replication approach, based on [max (market cap / average daily trading value)]. Average daily trading value is the average over the year to 13 Oct 2017, the date of determination for the regular reconstitution of the Russell/Nomura indexes.

Source: Nomura

6. Data publication services

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Index values are published in the following media:

- Bloomberg (RNJI)
- Jiji (RNSI/12400, RNSIIDV/12400)
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- Bloomberg (RNPJ <INDEX>)
- Jiji (RNP/NOMURA)
- QUICK (140)

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Appendix A-1

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Transactions involving convertible bonds are subject to a sales commission of up to 1.08% of the transaction amount (or a commission of ¥4,320 if this would be less than ¥4,320). When convertible bonds are purchased via OTC transactions (including offerings), only the purchase price shall be paid, with no sales commission charged. However, Nomura Securities may charge a separate fee for OTC transactions, as agreed with the customer. Convertible bonds carry the risk of losses owing to factors such as interest rate fluctuations and price fluctuations in the underlying stock. In addition, convertible bonds denominated in foreign currencies also carry the risk of losses owing to factors such as foreign exchange rate fluctuations.

When bonds are purchased via public offerings, secondary distributions, or other OTC transactions with Nomura Securities, only the purchase price shall be paid, with no sales commission charged. Bonds carry the risk of losses, as prices fluctuate in line with changes in market interest rates. Bond prices may also fall below the invested principal as a result of such factors as changes in the management and financial circumstances of the issuer, or changes in third-party valuations of the bond in question. In addition, foreign currency-denominated bonds also carry the risk of losses owing to factors such as foreign exchange rate fluctuations.

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

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 provided, such as documents delivered before making a contract and disclosure statements.

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. No account fee will be charged for marketable securities or monies deposited. Transfers of equities to another securities company via the Japan Securities Depository Center are subject to a transfer fee of up to ¥10,800 per issue transferred depending on volume.

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