

Market consultation

The logo consists of a light blue circle containing the text "FTSE" on the top line and "Russell" on the bottom line, both in white, sans-serif font.

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# FTSE Global Equity Index Series and Russell Global Indexes Alignment

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## Responding to the Consultation

Please submit your response to the questions included in this consultation online at <https://www.surveymonkey.co.uk/r/QSDPTNT>

The consultation will close on **15 September 2017**.

Unfortunately, FTSE Russell will not be able to consider responses with incomplete contact details. You will be asked to provide your details at the end of the survey. All responses will be treated as confidential. FTSE Russell may publish a summary of the consultation responses, but no individual response will be published and no respondent will be named.

If you have any questions about this survey, or if you encounter any technical issues, please contact [info@FTSERussell.com](mailto:info@FTSERussell.com).

## Introduction

Over the last two years, FTSE Russell has been working to align the methodologies of the FTSE Global Equity Index Series (FTSE GEIS) and the Russell Global Indexes (RGI) to create a single global family that reflects best investment practices globally. Several index construction aspects have already been aligned, such as corporate action treatment, shares and free float. This consultation outlines the complete alignment proposal and implementation timeline. FTSE Russell's objective is to conclude this project by 30 June 2018.

FTSE Russell considered several key principles when aligning the two index series, including:

1. Indexes that reflect the current global investment opportunity set, balancing more frequent index reviews whilst avoiding unnecessary turnover;
2. A consistent approach to constituting and maintaining the FTSE and Russell index series;
3. Limited disruption to the majority of clients benchmarked to FTSE Russell global indexes as defined by assets benchmarked<sup>1</sup>;

<sup>1</sup> 2016 FTSE Russell Benchmarked AUM: FTSE Global Equity Index Series \$1.5T; Russell Global Indexes \$43B). Data as of December 31, 2016 as reported on March 31, 2017 by eVestment for institutional assets, Morningstar for retail mutual funds, insurance products, and ETFs, and additional passive assets directly collected by FTSE Russell. AUM data includes blended benchmarks and excludes futures and options. Passive assets directly collected by FTSE Russell have been removed from third party sources to prevent double counting. No assurances are given by FTSE Russell as to the accuracy of the data.

4. Maintenance of RGI as a global index appropriate for US investors benchmarked to the Russell US Indexes including the Russell 3000 (R3);
5. A high level of client support throughout the transition process such as transition indexes, development of new standard indexes, and limited name changes.

The proposed end-state comprises FTSE GEIS as FTSE Russell's flagship global index series with RGI becoming a variant of FTSE GEIS and renamed FTSE Russell Global Indexes (FTSE RGI). Index construction parameters will be consistent across FTSE GEIS and FTSE RGI, including the application of the FTSE GEIS regional relative approach across FTSE RGI. While Global ex-R3 constituents will be the same for FTSE GEIS and FTSE RGI, US representation will differ: FTSE GEIS will continue to use FTSE USA whilst FTSE RGI will include all R3 constituents along with those stocks with a US nationality assignment in FTSE GEIS that are not eligible for membership of the R3.

## Summary of Proposed Methodology Changes

Below is a summary of the proposed methodology changes to be implemented by June 2018:

1. FTSE GEIS will be extended to include micro-cap companies;
2. RGI will be integrated into the FTSE GEIS index family and renamed FTSE RGI:
  - a. FTSE RGI will move to the FTSE GEIS regional index construction methodology, including the entry/exit thresholds and size bandings;
  - b. R3 will remain a distinct subset of FTSE RGI;
  - c. The non-R3 constituents of FTSE RGI will be replaced by the non-R3 constituents of the extended FTSE GEIS index:
    - i. Shares outstanding and free-floats for constituents will be identical; the current rounding of shares outstanding in Russell US indexes will cease;
    - ii. Foreign ownership restrictions implemented in FTSE RGI will be those that apply to a US investor.
3. The non-R3 constituents of both FTSE RGI and FTSE GEIS will be reconstituted/reviewed identically:
  - a. One annual reconstitution in June, effective following the close on the fourth Friday of the month:
    - i. The eligible universe of companies will be re-ranked into size bands in the presence of buffers and their eligible securities tested for liquidity;
    - ii. Updates to free floats and shares outstanding will be applied without the use of buffers.
  - b. Three enhanced quarterly reviews in March, September and December, effective as of the close of the third Friday of the month:
    - i. All constituents (not just those arising from spin-offs) will be re-ranked into size bands in the presence of buffers;
    - ii. Existing constituents will be tested for liquidity and those that fail will be deleted;
    - iii. Potential new constituents that failed the fast-entry test intra-quarter but which meet the entry size thresholds and the liquidity criterion will be added;
    - iv. Updates to free floats and shares outstanding will be applied in the presence of buffers.

4. The query periods and effective dates for the FTSE GEIS and RGI index series will be aligned.
5. Differences in nationality between FTSE GEIS and R3 will be addressed in two ways:
  - a. Securities that are constituents of the R3 but have non-US nationality assignments in FTSE GEIS will be removed from the non-R3 component of FTSE RGI;
  - b. Securities that have an assigned nationality of US in FTSE GEIS that are ineligible for membership of the R3000 will be included amongst the non-R3 constituents of FTSE RGI with a US nationality assignment.
6. FTSE RGI will assume the FTSE country classification scheme:
  - a. Egypt, Latvia, Pakistan, Palestine, Qatar and South Korea will take their FTSE country classifications in FTSE RGI;
7. To assist clients, two sets of transition indexes will be made available:
  - a. The FTSE RGI Transition Index will show the intended final state and will include South Korea as a developed market;
  - b. The RGI Transition Index will incorporate the same methodology changes but will include South Korea as an emerging market.

For information purposes, the indicative turnover that might be incurred in moving from various Russell indexes to the transition index equivalents is provided in Appendix A.

The rest of this document summarises the current construction methodologies of the two index series and sets out the path FTSE Russell proposes to bring the two global index series into alignment. The consultation questions invite feedback on the alignment path. Responses should be provided by 15 September 2017. These responses will be reviewed at the September meetings of the FTSE Russell advisory committees and FTSE Russell will announce its intended course of action at the end of September 2017.

## Current FTSE GEIS and RGI methodologies

This section summarises the current methodologies underlying the FTSE GEIS and RGI index families. Historically, Russell indexes have been subject to an annual “reconstitution” whereas FTSE indexes have been subject to semi-annual, or in some cases quarterly, “reviews”. Those FTSE indexes that have semi-annual reviews may in addition undergo “updates” in the non-review quarters.

To provide some consistency in the use of terminology in this consultation, FTSE Russell intends to use the terms as follows:

“Reconstitution” refers to the process by which all index constituents are re-selected based on the application of a ranking process (by company size) and eligibility tests (by security) of the universe of potential constituents. The ranking process may include allocation of companies to large, mid, small and micro size bands. The eligibility tests may include tests for liquidity, free float and foreign ownership restrictions, as well as testing both the type of company and its securities for eligibility.

“Review” refers to the process by which shares outstanding and free floats for existing constituents are updated. Reviews may also undertake re-ranking of some, or all, securities into large, mid, small and micro size. They may also test potential constituents that were not eligible for fast entry, and existing constituents for liquidity. Unlike a full reconstitution, reviews would not test or re-rank the entire eligible universe, only existing constituents and potential additions.

### FTSE GEIS

Under its current methodology, and consistent with the above terminology, FTSE GEIS is “reconstituted” semi-annually in March and September. The reconstitutions take effect on the Monday following the third

Friday. At reconstitutions, companies in each region are ranked by full capitalisation and the memberships of the large, mid and small capitalisation size bands are determined by reference to the region's total capitalisation. To avoid unnecessary turnover between the various size bands, existing and new constituents are subject to different entry and exit thresholds.

Once the eligible companies for the regional index have been determined, the securities of the companies are tested individually to ensure that they meet the required hurdles for free float, liquidity and foreign ownership headroom.

In addition to the semi-annual reconstitutions, new securities can be added at other times. New securities that meet the thresholds for full and investable market capitalisation for fast entry are included five days after the date of issue. Securities of companies that meet the standard entry criteria, but not those for fast entrants, are eligible for inclusion at the June and December quarterly reviews.

There is no re-ranking of existing constituents in between the semi-annual index reconstitutions other than the re-ranking of securities, both parents and children, which have been created as a result of spin-offs.

## **Russell Global Index**

As with the Russell US indexes, the Russell Global Index is reconstituted annually in June. The reconstitution takes effect on the Monday following the fourth Friday, unless the last Friday falls on 29th or 30th in which case the reconstitution takes effect on the preceding Friday. At reconstitution, companies of the Russell 3000 are combined with large, mid and small cap constituents selected from a global ex-R3 universe which has been ranked by full market capitalisation.

Historically, shares outstanding were updated on a monthly basis in the presence of buffers. There were no updates to company free floats between reconstitutions except in the presence of corporate events. However, following the consultation issued in June 2016, the results of which took effect from June 2017, share and free float updates will be conducted on a quarterly basis. IPOs will continue to be added quarterly.

## **Current Situation**

In June 2017, the numbers, definitions and update rules for shares outstanding and free floats for all FTSE Russell indexes including the R3000, RGI and FTSE GEIS index series were brought into alignment. Going forward, all index series, including FTSE index series such as FTSE UK Index Series, will have their constituents' shares outstanding and free floats updated in June; no buffers will be applied for this update. From September 2017, the shares and floats of constituents of the R3000, RGI and FTSE GEIS index series will be updated in the presence of buffers at the quarterly reviews. This update process will ensure that the shares outstanding and free floats remain consistent across all FTSE Russell indexes.

## **Proposed Alignment Path**

This section sets out the proposed path to align FTSE GEIS and the ex-R3 constituents of RGI. The consultation questions that follow solicit feedback on these proposals. A summary of the proposed timetable is provided in Appendix B.

## **Reconstitution/Review Frequency**

The FTSE GEIS indexes were originally reconstituted on a regional basis. Each region was reconstituted annually, for example Developed Europe was reconstituted in September, North America in December, and Developed Asia-Pacific in March. In recognition of the growing demand for global products, and the expressed desire of index users for the index memberships to be updated more frequently, FTSE GEIS moved to two semi-annual reconstitutions at which all regions were reconstituted simultaneously in March and September.

As these trends remain apparent, FTSE Russell intends to move the FTSE GEIS and RGI ex-R3 indexes to an annual reconstitution which will be supplemented by three enhanced quarterly reviews. The proposed changes to the reconstitution/review methodology are summarised below. These proposals will have the added benefit that the procedures used to maintain the FTSE Russell global indexes will be more closely aligned with those used in the FTSE UK Index Series.

## **Reconstitution/Review Methodology**

Given the significantly larger quantity of passive assets that track the FTSE GEIS indexes, it is intended that the regional index construction methodology, including the entry/exit thresholds and size bandings, employed by FTSE GEIS will also be employed in FTSE RGI. At a later date, refinements to this construction methodology might be adopted, for example to review certain countries in isolation and not as part of a region.

At the annual reconstitution, the eligible universe of companies will be re-ranked and their eligible securities tested for liquidity; updates to free floats and shares outstanding will be applied without the use of buffers.

As with the current FTSE GEIS quarterly updates, the enhanced quarterly reviews will incorporate updates to free floats and shares outstanding in the presence of buffers, and potential new constituents that failed the fast-entry test intra-quarter but which meet the entry size thresholds and the liquidity criterion will be added. In addition it is proposed that existing constituents will be tested for liquidity and those that fail will be deleted.

Further, it is proposed that all constituents (not just those arising from spin-offs) will be re-ranked into large, mid, small and micro segments at each of the enhanced quarterly reviews as well as at the annual reconstitution. The procedure to be followed will be the same as that used in the current FTSE GEIS semi-annual reconstitutions where, to minimise any undesired turnover that might arise from flip-flopping across size boundaries, the re-ranking is undertaken using buffers.

Because the re-ranking under this proposal would take place four times a year, rather than the current twice, it could be argued that the buffers used for the re-ranking should be wider than those currently employed. Appendix C summarises the turnover that would have taken place for various buffer sizes had this process been in place at previous quarterly updates. On the basis of this analysis, FTSE Russell proposes to use inclusion thresholds that are 1.25 times the current FTSE GEIS inclusion thresholds (as set out in Rule 7.5.1 of the FTSE GEIS Ground Rules), and exclusion thresholds that are the current FTSE GEIS exclusion thresholds divided by 1.25.

## **Reconstitution/Review Timing**

In order to ensure that both FTSE and Russell index series benefit from updates to shares and free floats made as a result of queries received over the same query period, FTSE Russell proposes to align the timetables used for the index reviews and reconstitutions.

For reviews that take place in March, September and December, an effective date of the close of the third Friday of the month will continue to be used. This is the current practice for FTSE index series and coincides with the roll date of index futures contracts. However, for the June reconstitution, FTSE Russell proposes that all FTSE and Russell indexes should adopt the practice of the Russell US indexes and become effective following the close on the fourth Friday of the month (unless the last Friday falls on the 29th or 30th in which case it will take effect on the previous Friday). This will allow all FTSE Russell index series to adhere to the same timetable for queries and lock-down periods and ensure that shares outstanding and free floats can be updated consistently.

## **Nationality Assignments in FTSE RGI**

In constructing FTSE RGI as the union of the R3000 and the non-R3 constituents of FTSE GEIS, a small number of securities that are constituents of the R3 but have non-US nationality assignments in FTSE GEIS

will be double-counted. See Appendix D for an indicative list of such securities based on the June 2017 reconstitution. FTSE Russell proposes to remove these securities from the non-R3 component of FTSE RGI.

In addition to the above, there will be some securities that have an assigned nationality of US in FTSE GEIS that are ineligible for membership of the R3000. Please see Appendix E for an indicative list of such securities based on the June 2017 reconstitution. FTSE Russell proposes to include these securities amongst the non-R3 constituents of FTSE RGI with a US nationality assignment.

## **Country Classification in FTSE RGI**

FTSE Russell proposes to bring the FTSE and Russell country classification schemes into alignment in June 2018. At this reconstitution, Egypt, Pakistan, Qatar, Latvia, Palestine, South Korea will take their FTSE country classifications in FTSE RGI. To provide sufficient time for those RGI users that have mandates in which South Korea is classified as an emerging market to change their fund documentation, FTSE Russell will, for an additional six month period, also offer an RGI continuation index that incorporates all of the proposed methodology and country classification changes with the exception that South Korea will remain classified as an emerging index.

## **Transition Indexes**

To help index users to prepare for the move from RGI to FTSE RGI, two sets of transition indexes will be made available from December 2017. The FTSE RGI Transition Indexes will incorporate all of the proposed methodology changes and, as with FTSE GEIS, will include South Korea as a developed market. These will be the standard transition indexes that will represent the end state of the alignment exercise. However, to help users that have mandates that classify South Korea as an emerging market, a set of RGI Transition Indexes will also be made available. These will be identical to the FTSE RGI Transition Indexes save for the classification of South Korea as an emerging market.

In June 2018, the FTSE RGI Transition Indexes will be terminated and the FTSE RGI series will go live; FTSE RGI variants such as “Developed - South Korea” and “Emerging + South Korea” will be made available. At the same time, the existing RGI indexes will be reconstituted to become identical to the RGI Transition Indexes and the RGI Transition Indexes will be terminated. At this point, the FTSE RGI and RGI index series will be identical apart from their name and the classification of South Korea. For example, “RGI Emerging” will be identical to “FTSE RGI Emerging + South Korea”.

The RGI index series will itself be terminated in December 2018 at which point users will be able to switch to the equivalent FTSE RGI indexes including the “Developed - South Korea” and “Emerging + South Korea” variants. This proposal is intended to maintain the history and naming of the RGI index for a further six month period so that managers of mandates benchmarked to RGI indexes will have additional time to forewarn investors and make any necessary changes to fund documentation.

The table below shows an example of how the transition indexes will work for managers currently benchmarked to the Russell Emerging Index.

Index Series	Dec 2017	June 2018	Dec 2018
<b>FTSE RGI</b>	<b>FTSE RGI Emerging Transition Index launched</b> (South Korea excluded)	<b>FTSE RGI Emerging Index goes live</b> (South Korea excluded) <b>FTSE RGI Emerging Index + South Korea variant available</b> <b>Transition index decommissioned</b>	<b>RGI Emerging clients switch to FTSE RGI Emerging Index + South Korea</b> (identical constituents)
<b>RGI</b>	<b>RGI Emerging Transition Index launched</b> (South Korea included)	<b>Russell Emerging Index reconstituted to be identical to FTSE RGI Emerging Transition Index</b> (South Korea included) <b>Transition Index terminated</b>	<b>Russell Emerging Index terminated</b>





# Consultation Questions

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## Reconstitution/Review Extent

FTSE Russell proposes that for the March, September and December enhanced quarterly reviews, existing constituent securities will be re-ranked and re-tested against the liquidity thresholds. These steps would be in addition to the current FTSE GEIS quarterly updates at which shares outstanding and free float updates are implemented in the presence of buffers, and potential additions that didn't meet the fast-entry criteria are tested against the entry size and liquidity thresholds.

### 1. Do you agree with FTSE Russell's proposals with respect to the enhanced quarterly reviews?

- A. Yes, the quarterly reviews should include re-ranking and liquidity testing of constituents
- B. No, the quarterly reviews should include liquidity testing of constituents but not re-rank securities (other than those created by spin-offs intra-quarter)
- C. No, the quarterly reviews should re-rank all constituents but not test the liquidity of existing constituents
- D. No, the quarterly reviews should only update shares outstanding and free-floats, and re-rank securities formed during spin-offs (as in the current FTSE GEIS quarterly updates)

Please provide any comments in the box below.

## Buffer Sizes

### 2. Do you agree that the entry and exit buffers that should be applied at the March, September and December reviews should be set to 1.25 times the existing entry buffer, and the existing exit buffer divided by 1.25 respectively? Please see Appendix C for some sample analysis.

- A. Yes, a multiplier/divisor of 1.25 is appropriate
- B. No, the same buffer rules currently used in the FTSE GEIS semi-annual reviews should be used
- C. No, a multiplier/divisor of 1.5 should be used

Please provide any comments in the box below.

## Intra-Review Events

The proposed quarterly reviews include the re-ranking of all securities whereas in the current quarterly updates, only securities formed through spin-offs are re-ranked. As an alternative, securities formed by corporate events such as spin-offs and mergers could be ranked at the time of the event.

### 3. When do you think securities formed as the result of spin-offs should be re-ranked?

- A. At the next quarterly review
- B. At the time of the event

### 4. When do you think securities formed as the result of mergers and acquisitions should be re-ranked?

- A. At the next quarterly review
- B. At the time of the event

Please provide any comments in the box below.

## Alignment of Effective Dates, Query Periods and Lock-Down Periods

### 5. Do you agree with FTSE Russell's proposal to align the effective date of the June FTSE index reconstitutions/reviews with that used for Russell indexes (the fourth Friday, unless the last Friday falls on the 29th or 30th in which case the previous Friday is used)?

- A. Yes, FTSE GEIS, FTSE RGI and Russell US should reconstitute on the fourth Friday in June
- B. No (please explain why not)

Please provide any comments in the box below.

## Nationality Assignments in FTSE RGI

### 6. Do you agree with FTSE Russell's proposal to include in FTSE RGI those securities that have a US nationality assigned in FTSE GEIS but which are not eligible constituents of the R3000? Please see Appendix D for an indicative list of securities.

- A. Yes, include securities that have a US nationality assigned in FTSE GEIS but are not in the R3 and assign them US nationality
- B. No, it would be better to exclude these securities from FTSE RGI
- C. No, some other method of resolution would be preferred (please say what)

Please provide any comments in the box below.

## Transition Indexes (for RGI users only)

7. To allow current RGI users who have mandates that include South Korea as an emerging market to change any necessary documentation, FTSE Russell will provide a set of RGI Transition Indexes that classify South Korea as an emerging market. The existing RGI indexes will be reconstituted in June 2018 to become identical to the Transition Indexes and will run for a further six months thereafter before being terminated. Do you agree with FTSE Russell's proposed approach?

- A. Yes, the index transition period ending December 2018 is sufficient
- B. No, a longer timetable would be preferred (please say what)

Please provide any comments in the box below.

## Alignment Timetable

8. FTSE Russell's proposed timeline for the creation of FTSE RGI is attached in Appendix B. Please provide any comments in the box below.

## General Queries

9. Are there any other points that you would like FTSE Russell to consider to ensure that FTSE GEIS and FTSE RGI methodologies remain at the forefront of best practice? Please provide any comments in the box below.

## Appendix A

### Indicative Two-way Turnover between RGI and FTSE GEIS

The figures in the tables show the indicative two-way turnover that would be incurred by an investment mandate moved from tracking an RGI index to tracking either the FTSE RGI (South Korea as developed) or RGI (South Korea as emerging) Transition Index equivalent. The turnover figures were calculated as of 26 June 2017 (after the June reconstitution) but with the following assumptions for the Transition Indexes:

- the N-share changes planned for FTSE GEIS in September had already taken place;
- stocks assigned a US nationality in FTSE GEIS that are not eligible for membership of R3 are included;
- stocks that are constituents of FTSE GEIS ex-US that have been duplicated because they are also members of R3 are removed from the non-R3 components;
- the planned micro-cap extension of FTSE GEIS is not included.

The last assumption was made because the precise definition of the micro-cap extension has yet to be determined. In practice, the Transition Indexes will launch in December 2017 including micro-caps and the differences in number of constituents and the turnover incurred will therefore be smaller than show in these tables.

**Table A.1: Current Russell Index Statistics**

Index	Number of Constituents	Investible Market Cap (USD Millions)
Russell Global Index	10,106	61,614,002.38
Russell Global ex-R3 Index	7,103	34,403,098.35
Russell Developed ex- R3 Index	4,181	23,364,934.04
Russell Developed Index	7,184	50,575,838.07
Russell Emerging Index	2,922	11,038,164.31
Russell South Korea Index	476	1,281,717.61
Russell Developed Large Cap ex United States Index	1,480	20,617,240.66
Russell United States Index	3,003	27,210,904.03

**Table A.2: FTSE RGI Transition Index Statistics**

<b>FTSE RGI Transition Index (South Korea as Developed)</b>				
<b>Index</b>	<b>Number of Constituents</b>	<b>Investible Market Cap (USD Millions)</b>	<b>Two Way Turnover (USD Millions)</b>	<b>Turnover from RGI Equivalent as a % of Current Index</b>
Russell Global Index	8,934	60,377,442.22	2,020,904.69	3.279944%
Russell Global ex-R3 Index	5,931	33,166,538.20	2,020,904.69	5.874194%
Russell Developed ex- R3 Index	3,808	23,913,815.48	2,421,049.75	10.361894%
Russell Developed Index	6,811	51,124,719.51	2,421,049.75	4.786969%
Russell Emerging Index	2,123	9,252,722.71	2,211,185.72	20.032187%
Russell South Korea Index	391	1,249,424.43	61,277.35	4.780877%
Russell Developed Large Cap ex United States Index	1,482	20,916,804.77	2,933,506.91	14.228417%
Russell United States Index	3,042	27,443,679.07	217,979.00	0.801072%

**Table A.3: RGI Transition Index Statistics**

<b>RGI Transition Index (South Korea as Emerging)</b>				
<b>Index</b>	<b>Number of Constituents</b>	<b>Investible Market Cap (USD Millions)</b>	<b>Two Way Turnover (USD Millions)</b>	<b>Turnover from RGI Equivalent as a % of Current Index</b>
Russell Global Index	8,934	60,377,442.22	2,020,904.69	3.279944%
Russell Global ex-R3 Index	5,931	33,166,538.20	2,020,904.69	5.874194%
Russell Developed ex- R3 Index	3,417	22,664,391.05	1,171,625.31	5.014460%
Russell Developed Index	6,420	49,875,295.08	1,171,625.31	2.316571%
Russell Emerging Index	2,514	10,502,147.14	976,253.37	8.844345%
Russell South Korea Index	391	1,249,424.43	61,277.35	4.780877%
Russell Developed Large Cap ex United States Index	1,356	19,847,987.84	1,864,689.98	9.044324%
Russell United States Index	3,042	27,443,679.07	217,979.00	0.801072%

# Appendix B

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## FTSE GEIS and RGI Proposed Alignment Timetable

### September 2017

- FTSE GEIS semi-annual reconstitution occurs as normal using end June cut-off date but with new shares outstanding and free float buffer rules
  - Implement new China nationality rule
  - Deliver files for Asia Pacific indexes that include China at global close
- RGI is not reconstituted except:
  - Shares outstanding and free floats are updated according to new buffer rules to maintain alignment with R3 and FTSE GEIS
  - IPOs are included based on 2016 breakpoints adjusted for performance and effective after close on third Friday

### December 2017

- Extend FTSE GEIS to cover global microcap securities and launch FTSE Global Microcap Index Series (Global Microcap)
- Launch “FTSE RGI Transition Index”
  - R3 + FTSE GEIS ex-R3 + microcaps
    - Size banding and constituent selection as per FTSE GEIS methodology
  - FTSE country classification scheme used including for Egypt, Pakistan, Qatar, Latvia, Palestine and South Korea
  - FTSE RGI Style Indexes will be based on the current Russell methodology
- Launch “RGI Transition Index”
  - As per FTSE RGI Transition Index with the exception that South Korea will be classified as an emerging market
- R3, FTSE GEIS, and RGI shares outstanding and free floats are updated with buffers applied as usual
- R3 IPO additions

### March 2018

- FTSE GEIS semi-annual review replaced by quarterly update
- FTSE GEIS, Global Microcap, R3, RGI, RGI Transition Index and FTSE RGI Transition index constituent shares outstanding and free floats updated with buffers applied
- R3 IPO additions

### June 2018

- FTSE GEIS, Global Microcap, RGI Transition Index ex-R3 and FTSE RGI Transition Index ex-R3 reconstituted according to enhanced FTSE GEIS regional methodology
  - Existing and potential constituents tested for liquidity

- All companies re-ranked with size buffers
- Shares outstanding and free floats updated with no buffers applied
- FTSE RGI goes live constituted identically to FTSE RGI Transition Index
- RGI reconstituted to be identical to RGI Transition Index
- FTSE RGI Transition Index and RGI Transition Index series terminated
- R3 reconstitution as usual

### **July 2018**

- Non-R3 constituents, shares and free floats are identical in RGI, FTSE GEIS, FTSE RGI and global microcap indexes
- R3 shares and free floats are identical in R3, RGI, FTSE RGI, FTSE GEIS and Global Microcap

### **September 2018**

- Enhanced quarterly review for global indexes
  - FTSE GEIS, Global Microcap, RGI and FTSE RGI constituent shares outstanding and free floats updated with buffers applied
  - Companies re-ranked with buffers and liquidity tested
- R3 constituent shares outstanding and free floats updated with buffers applied
- R3 IPO additions

### **December 2018**

- Enhanced quarterly review for global indexes
  - FTSE GEIS, Global Microcap, and FTSE RGI constituent shares outstanding and free floats updated with buffers applied
  - Companies re-ranked with buffers and liquidity tested
- RGI index terminated
  - Users who wish to do so switch to FTSE RGI equivalents, e.g. FTSE RGI Emerging + South Korea Index, and FTSE RGI Developed - South Korea Index
- R3 constituent shares outstanding and free floats updated with buffers applied
- R3 IPO additions

# Appendix C

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## Indicative Turnover at Quarterly Reviews for Various Buffer Sizes

The tables in this appendix show the indicative number of existing constituents that would have moved between large, mid and small size bands, and the associated turnover that would have been incurred, had the re-ranking procedure used in the current FTSE GEIS semi-annual reconstitution in March and September also been used in the non-reconstitution quarters of June and December. The turnover numbers in the tables do not include the turnover arising from the usual free float and share updates, nor do they include the turnover arising from quarterly adds of new (non-fast entrant) constituents under the current FTSE GEIS Ground Rules (Rule 8.1.3B). For investment mandates that track large, mid or small caps, the indicative turnover between large and mid, and between mid and small in the June and December quarters would therefore be incurred in addition to the turnover arising from the current FTSE GEIS quarterly update methodology.

Table C.1 shows the movements and turnover that would have occurred using the current FTSE GEIS inclusion and exclusion bands set out in Rule 7.5.1 in the FTSE GEIS Ground Rules. Table C.2 shows the figures if the inclusion thresholds are raised to 1.25 times the figured in table in Rule 7.5.1, and the exclusion thresholds are divided by 1.25. Table C.3 repeats the exercise with a multiplier/divisor of 1.5. The “flip-flopping between caps” figures show the number of constituents which would have moved size band in the previous quarter and then moved back in the next quarter. The figures for flip-flopping between eligible and ineligible reflect the constituents that would have dropped out of the index in the previous quarter but which were sufficiently large to be re-included in the next quarter.



**Table C.1**

Inclusion threshold = 1.0 x FTSE GEIS inclusion threshold

Exclusion threshold = FTSE GEIS exclusion threshold/1.0

June 2016	Leaving	Joining	MC Leaving	MC Joining	Net Turnover	% Net Turnover	Two-way Turnover	% Two-way Turnover
Large Cap	45	39	210,735.30	271,440.82	60,705.52	0.208206%	482,176.11	1.653750%
Mid Cap	60	64	289,490.96	272,458.88	- 17,032.08	0.269730%	561,949.84	8.899367%
Small Cap	63	30	77,631.21	27,623.96	- 50,007.25	1.061271%	105,255.16	2.233762%
All Cap	35	N/A	6,333.81	-	- 6,333.81	0.015762%	6,333.81	0.015762%
<b>Flip Flopping</b>			<b>Between Caps</b>	<b>3</b>			<b>Eligible/Ineligible</b>	<b>12</b>
Sept 2016	Leaving	Joining	MC Leaving	MC Joining	Net Turnover	% Net Turnover	Two-way Turnover	% Two-way Turnover
Large Cap	15	51	75,186.88	289,439.47	214,252.59	0.707138%	364,626.35	1.203445%
Mid Cap	65	55	299,637.35	233,977.89	- 65,659.46	1.007346%	533,615.25	8.186713%
Small Cap	53	17	162,155.13	12,234.08	- 149,921.05	3.073084%	174,389.21	3.574633%
All Cap	10	N/A	1,327.93	-	- 1,327.93	0.003185%	1,327.93	0.003185%
<b>Flip Flopping</b>			<b>Between Caps</b>	<b>3</b>			<b>Eligible/Ineligible</b>	<b>12</b>
Dec 2016	Leaving	Joining	MC Leaving	MC Joining	Net Turnover	% Net Turnover	Two-way Turnover	% Two-way Turnover
Large Cap	38	16	188,600.75	121,491.42	- 67,109.33	0.214108%	310,092.17	0.989329%
Mid Cap	29	42	139,397.05	209,822.23	70,425.18	1.067618%	349,219.28	5.294025%
Small Cap	40	23	44,941.23	36,690.77	- 8,250.45	0.165134%	81,632.00	1.633876%
All Cap	26	N/A	4,934.61	-	- 4,934.61	0.011493%	4,934.61	0.011493%
<b>Flip Flopping</b>			<b>Between Caps</b>	<b>9</b>			<b>Eligible/Ineligible</b>	<b>1</b>
March 2017	Leaving	Joining	MC Leaving	MC Joining	Net Turnover	% Net Turnover	Two-way Turnover	% Two-way Turnover
Large Cap	15	36	51,807.24	282,729.53	230,922.30	0.690787%	334,536.77	1.000743%
Mid Cap	42	47	290,011.82	177,526.03	- 112,485.79	1.582436%	467,537.85	6.577262%
Small Cap	51	13	142,255.51	21,368.41	- 120,887.10	2.283793%	163,623.91	3.091175%
All Cap	12	N/A	2,450.60	-	- 2,450.60	0.005347%	2,450.60	0.005347%
<b>Flip Flopping</b>			<b>Between Caps</b>	<b>2</b>			<b>Eligible/Ineligible</b>	<b>9</b>
June 2017	Leaving	Joining	MC Leaving	MC Joining	Net Turnover	% Net Turnover	Two-way Turnover	% Two-way Turnover
Large Cap	24	22	92,331.58	190,755.29	98,423.71	0.284319%	283,086.88	0.817759%
Mid Cap	30	32	197,556.47	153,636.54	- 43,919.93	0.605343%	351,193.01	4.840449%
Small Cap	36	17	75,858.54	17,173.51	- 58,685.03	1.090464%	93,032.05	1.728689%
All Cap	19	N/A	4,181.25	-	- 4,181.25	0.008848%	4,181.25	0.008848%
<b>Flip Flopping</b>			<b>Between Caps</b>	<b>3</b>			<b>Eligible/Ineligible</b>	<b>2</b>

**Table C.2**

Inclusion threshold = 1.25 x FTSE GEIS inclusion threshold

Exclusion threshold = FTSE GEIS exclusion threshold/1.25

June 2016	Leaving	Joining	MC Leaving	MC Joining	Net Turnover	% Net Turnover	Two-way Turnover	% Two-way Turnover
Large Cap	8	1	18,650.13	2,174.36	- 16,475.77	0.056508%	20,824.49	0.071423%
Mid Cap	12	8	11,311.18	29,237.75	17,926.57	0.283896%	40,548.92	0.642157%
Small Cap	23	18	25,685.83	22,233.83	- 3,452.00	0.073260%	47,919.66	1.016968%
All Cap	16	N/A	2,001.19	-	- 2,001.19	0.004980%	2,001.19	0.004980%
Sept 2016	Leaving	Joining	MC Leaving	MC Joining	Net Turnover	% Net Turnover	Two-way Turnover	% Two-way Turnover
Large Cap	7	16	22,395.48	127,503.61	105,108.13	0.347771%	149,899.08	0.495971%
Mid Cap	22	19	131,951.97	71,453.88	- 60,498.09	0.923969%	203,405.85	3.106557%
Small Cap	19	7	50,185.79	4,497.96	- 45,687.83	0.926971%	54,683.75	1.109491%
All Cap	6	N/A	1,077.79	-	- 1,077.79	0.002585%	1,077.79	0.002585%
Flip Flopping	Between Caps		0	Eligible/Ineligible		5		
Dec 2016	Leaving	Joining	MC Leaving	MC Joining	Net Turnover	% Net Turnover	Two-way Turnover	% Two-way Turnover
Large Cap	15	7	60,008.28	77,970.23	17,961.95	0.057566%	137,978.50	0.442209%
Mid Cap	14	11	87,781.67	37,207.11	- 50,574.57	0.765843%	124,988.78	1.892686%
Small Cap	13	16	15,964.06	47,619.18	31,655.12	0.616873%	63,583.25	1.239066%
All Cap	8	N/A	957.49	-	- 957.49	0.002230%	957.49	0.002230%
Flip Flopping	Between Caps		0	Eligible/Ineligible		0		
March 2017	Leaving	Joining	MC Leaving	MC Joining	Net Turnover	% Net Turnover	Two-way Turnover	% Two-way Turnover
Large Cap	8	11	21,196.20	96,334.57	75,138.37	0.225184%	117,530.78	0.352231%
Mid Cap	13	11	97,742.53	61,535.77	- 36,206.76	0.518534%	159,278.30	2.281101%
Small Cap	14	7	52,341.52	12,799.53	- 39,541.99	0.720892%	65,141.04	1.187590%
All Cap	6	N/A	610.38	-	- 610.38	0.001332%	610.38	0.001332%
Flip Flopping	Between Caps		0	Eligible/Ineligible		6		
June 2017	Leaving	Joining	MC Leaving	MC Joining	Net Turnover	% Net Turnover	Two-way Turnover	% Two-way Turnover
Large Cap	8	7	8,140.55	35,883.01	27,742.46	0.080683%	44,023.55	0.128034%
Mid Cap	13	15	41,582.17	68,023.14	26,440.97	0.366558%	109,605.30	1.519487%
Small Cap	22	12	64,750.90	9,376.58	- 55,374.32	0.978687%	74,127.48	1.310131%
All Cap	9	N/A	1,190.89	-	- 1,190.89	0.002520%	1,190.89	0.002520%
Flip Flopping	Between Caps		0	Eligible/Ineligible		0		

**Table C.3**

Inclusion threshold = 1.5 x FTSE GEIS inclusion threshold

Exclusion threshold = FTSE GEIS exclusion threshold/1.5

June 2016	Leaving	Joining	MC Leaving	MC Joining	Net Turnover	% Net Turnover	Two-way Turnover	% Two-way Turnover
Large Cap	5	0	11,786.96	-	- 11,786.96	0.040426%	11,786.96	0.040426%
Mid Cap	3	2	2,508.57	6,002.47	3,493.90	0.055331%	8,511.05	0.134786%
Small Cap	11	8	6,821.24	14,295.54	7,474.29	0.158622%	21,116.78	0.448148%
All Cap	9	N/A	818.77	-	- 818.77	0.002038%	818.77	0.002038%
Sept 2016	Leaving	Joining	MC Leaving	MC Joining	Net Turnover	% Net Turnover	Two-way Turnover	% Two-way Turnover
Large Cap	3	4	2,050.47	42,538.37	40,487.91	0.133942%	44,588.84	0.147508%
Mid Cap	10	8	47,432.25	40,395.07	- 7,037.19	0.107745%	87,827.32	1.344711%
Small Cap	13	8	39,898.44	5,804.80	- 34,093.64	0.689915%	45,703.24	0.924846%
All Cap	6	N/A	642.92	-	- 642.92	0.001542%	642.92	0.001542%
Flip Flopping	Between Caps		0	Eligible/Ineligible		2		
Dec 2016	Leaving	Joining	MC Leaving	MC Joining	Net Turnover	% Net Turnover	Two-way Turnover	% Two-way Turnover
Large Cap	11	3	41,226.53	72,239.60	31,013.07	0.099573%	113,466.12	0.364303%
Mid Cap	4	6	73,659.84	19,190.80	- 54,469.04	0.820362%	92,850.63	1.398430%
Small Cap	6	10	15,224.17	38,570.25	23,346.08	0.453170%	53,794.42	1.044203%
All Cap	2	N/A	109.89	-	- 109.89	0.000256%	109.89	0.000256%
Flip Flopping	Between Caps		0	Eligible/Ineligible		0		
March 2017	Leaving	Joining	MC Leaving	MC Joining	Net Turnover	% Net Turnover	Two-way Turnover	% Two-way Turnover
Large Cap	5	4	11,665.37	18,333.84	6,668.47	0.020018%	29,999.21	0.090052%
Mid Cap	8	4	21,685.25	16,800.03	- 4,885.22	0.069554%	38,485.28	0.547939%
Small Cap	8	8	16,577.09	14,351.03	- 2,226.06	0.040478%	30,928.12	0.562388%
All Cap	5	N/A	442.81	-	- 442.81	0.000966%	442.81	0.000966%
Flip Flopping	Between Caps		1	Eligible/Ineligible		1		
June 2017	Leaving	Joining	MC Leaving	MC Joining	Net Turnover	% Net Turnover	Two-way Turnover	% Two-way Turnover
Large Cap	7	3	12,866.01	20,466.70	7,600.69	0.022188%	33,332.70	0.097305%
Mid Cap	6	3	22,355.99	17,346.14	- 5,009.85	0.068740%	39,702.13	0.544756%
Small Cap	8	10	17,778.11	14,755.30	- 3,022.81	0.052922%	32,533.41	0.569584%
All Cap	5	N/A	431.97	-	- 431.97	0.000914%	431.97	0.000914%
Flip Flopping	Between Caps		0	Eligible/Ineligible		0		

# Appendix D

**Table D.1**

Indicative list of securities which are constituents of the R3000 but have non-US nationality in FTSE indexes.

Description	SEDOL	ISIN	Ticker	In FTSE GEIS?	FTSE GEIS Size Marker	FTSE Assignment	Dev/Em
Tahoe Resources Inc.	B4WHL92	CA8738681037	TAHO UN	Y	S	Canada	D
Qiagen N.V.	BYXS688	NL0012169213	QGEN UW	Y	M	Germany	D
SeaDrill Ltd.	B0HWHV8	BMG7945E1057	SDRL UN	Y	S	Norway	D
MDC Partners Inc. CI A	2574495	CA5526971042	MDCA UW	N	N/A	Canada	D
Mirati Therapeutics Inc	BBPK0J0	US60468T1051	MRTX UR	N	N/A	Canada	D
Nobilis Health Corp	BTF30Y0	CA65500B1031	HLTH UA	N	N/A	Canada	D
Xbiotech	BWD1LM2	CA98400H1029	XBIT UW	N	N/A	Canada	D

# Appendix E

**Table E.1**

Indicative list of FTSE GEIS Constituents with an assigned FTSE nationality of US that are either current RGI ex-R3 constituents with a non-US Russell assigned nationality, or which are not current Constituents of RGI.<sup>2</sup>

Description	SEDOL	RGI Family Flag	Russell Assignment	Dev/Em	FTSE RGI Family Flag
Adecoagro SA	B65BNQ6	S	LU	Developed	S
AerCap Holdings N.V.	B1HHKD3	M	IE	Developed	M
Arcos Dorados Holdings	B529PQ0	N/A	N/A	N/A	S
Atlantica Yield plc	BLP5YB5	S	GB	Developed	S
Autoliv	2064253	M	SE	Developed	M
Avon Products	2066721	S	GB	Developed	S
Blackstone Mortgage Trust	B94QH20	N/A	N/A	N/A	S
Canadian Solar	B1GKCH1	S	CA	Developed	S
Check Point Software	2181334	L	IL	Developed	M
China Biologic Products Inc.	B188VY3	M	CN	Emerging	S
Cobalt International Energy	BDT5NJ6	N/A	N/A	N/A	S
Coca-Cola European Partners	BYQQ3P5	L	GB	Developed	M
Constellium Holdco BV	B9B3DX4	S	NL	Developed	S
Core Laboratories	2182531	M	NL	Developed	M
Cosan Ltd. CI A	B23Z3F1	S	BR	Emerging	S
CyberArk Software	BQT3XY6	S	IL	Developed	S
Ferroglobe PLC	BYW6GV6	S	GB	Developed	S
Flex	2353058	M	SG	Developed	M
Globant SA	BP40HF4	S	LU	Developed	S
Hollysys Automation Technologies Ltd.	B0JCH50	S	CN	Emerging	S
Icon PLC	B94G471	M	IE	Developed	S
Interxion Holding	B66QLT9	M	NL	Developed	S
Janus Henderson Group	BYPZJQ6	M	GB	Developed	M
Jazz Pharmaceuticals	B4Q5ZN4	M	IE	Developed	M
Kulicke Soffa	2498001	S	SG	Developed	S
Liberty Global plc CI A	B8W6766	L	GB	Developed	L
Liberty Global plc CI C	B8W67B1	L	GB	Developed	L
Liberty LiLAC Group CI A	BTC0M71	M	GB	Developed	S
Liberty LiLAC Group CI C	BTC0MD7	M	GB	Developed	S
Luxoft Holding Inc	BBMT8Y1	S	CH	Developed	S
MellanoX Technologies Ltd	B1R96S6	S	IL	Developed	S
MercadoLibre Inc.	B23X1H3	N/A	N/A	N/A	S
Mobileye N.V.	BPBFT01	M	IL	Developed	M
Orbotech Ltd	2661784	S	IL	Developed	S
Seagate Technology	B58JVZ5	M	IE	Developed	M
Seaspan	B0GNP30	S	HK	Developed	S
SHOPIFY INC	BX865C7	M	CA	Developed	S
SINA	2579230	M	CN	Emerging	S
Sohu.com	2608123	S	CN	Emerging	S
Taro Pharm Inds	2872423	M	IL	Developed	S
TE Connectivity	B62B7C3	L	CH	Developed	L
Weibo ADS (STOCK OPTION)	BD8F290	M	CN	Emerging	S
Wix.com	BFZCHN7	S	IL	Developed	S
Yandex N.V. CI A	B5BSZB3	M	NL	Developed	M

<sup>2</sup> Berkshire Hathaway Class A shares are not included in the table as they are catered for by the primary vehicle rule in the R3

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