

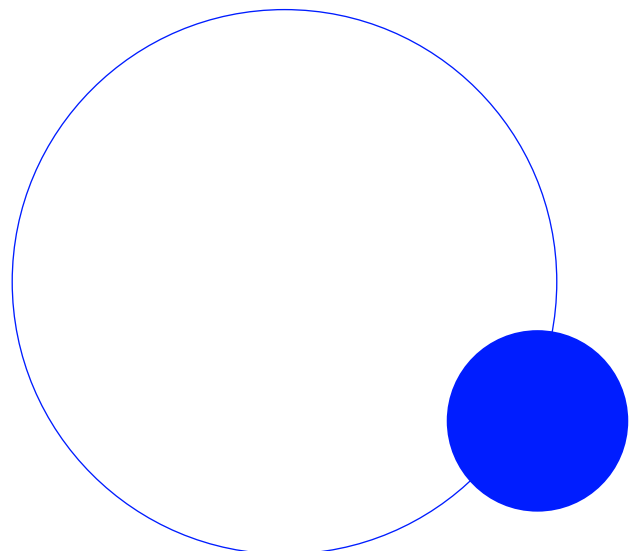
# Russell US Indexes Consultation on Moving to a Semi-Annual Index Reconstitution Frequency

October 2023



## Executive Summary

- Russell Indexes were launched in 1984, with wide adoption of \$9.2 trillion in total assets benchmarked as of December 2022.
- Since their inception, regular reconstitutions have been a critical part of maintaining the Russell Indexes and accurately representing the ever-changing US equity markets.
- As assets tracking the Russell Indexes have grown, so has the size of the trade at the annual Russell reconstitution in June.
- FTSE Russell has received feedback from market participants to investigate moving to a semi-annual reconstitution frequency to potentially reduce the size of the reconstitution trade and market trading pressure at the June annual reconstitution.
- This document summarizes the analysis completed by FTSE Russell in order to solicit market feedback on moving Russell US Indexes to a semi-annual reconstitution frequency and implementation considerations. [here](#).



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### Responding to the consultation

The proposals set out in this consultation document are included in order to gather feedback and may or may not result in changes to our indexes or data solutions.

Index users and other stakeholders are invited to respond by **17 November 2023**. The responses will be reviewed by the FTSE Russell Product Governance Board and an update on FTSE Russell's proposed approach will be communicated by via a client notice.

Please submit your response to the questions included in this consultation online at <https://www.surveymonkey.co.uk/r/HMWMQ2W>

All responses will be treated as confidential. FTSE Russell may publish a summary of the consultation results, but no individual responses will be published and no respondents will be named.

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

# Market Consultation

## Russell US Indexes

### Background

In accordance with the [FTSE Russell Policy for Benchmark Methodology Changes.pdf \(ftserussell.com\)](#), FTSE Russell regularly evaluates potential methodology enhancements based on client and market feedback.<sup>1</sup>

As one of FTSE Russell's flagship index series launched in 1984, with wide adoption of \$9.2 trillion total assets benchmarked as of December 2022,<sup>2</sup> market feedback is evaluated regularly for the Russell US Indexes. Nearly 70% of the total Russell US AUM is benchmarked to a Russell Growth or Value Style Index.<sup>3</sup>

This consultation should be read in conjunction with the current index [ground rules](#) for the Russell US Indexes.

### Evolution of US equity markets and increase in dollar amount traded at the close of Russell reconstitution annually in June

Russell Indexes and its modular framework of US equity benchmarks were launched in 1984, initially with the large cap Russell 1000<sup>®</sup> and small cap Russell 2000<sup>®</sup> Indexes adding up to the broad market Russell 3000<sup>®</sup> Index. Russell Style Indexes were launched in 1987, the first modular US equity benchmarks tracking growth and value styles, developed based on observations of manager behavior. Over time, the Russell Indexes continued to expand, adding additional segments such as the SMID cap Russell 2500<sup>™</sup> Index, Russell Midcap<sup>®</sup> and Russell Top 200<sup>®</sup> Index segments in the 1990s, followed by extension into the Russell Microcap<sup>®</sup> Index in 2005.<sup>4</sup>

In September 2004, Russell Indexes began adding eligible IPOs quarterly in order to reduce the impact at the annual reconstitution in June. In 2007, Russell Indexes introduced banding to reduce smaller changes between the size indexes (e.g., between the Russell 1000 and Russell 2000 indexes), and in 2011 incorporated banding into the Russell Style Indexes with the enhancement of the growth metrics from a single long-term growth forecast to a combination of medium-term growth forecast and historical growth metrics. In 2017, a minimum 5% company voting rights hurdle was also introduced in consideration of investability of the Russell Indexes.

As of 2023, derived indexes available based on the Russell Indexes have diversified to include a broad range of sector, capped, equally-weighted, dividend-screened, sustainable, and thematic indexes.

Since their inception, regular reconstitutions have been a critical part of maintaining the Russell Indexes and accurately representing the ever-changing US equity markets. At launch, the Russell Indexes were reconstituted quarterly, then semi-annually from 1987, and then annually in June from 1989 onwards. Balancing representation and turnover have always been key considerations in determining the appropriate frequency of Russell Indexes reconstitution.

As adoption of the Russell Indexes has spread, especially among institutional investors, and as assets tracking passive index-based funds have grown, the size of the trade at the annual Russell reconstitution has also increased. In June 2019, the dollar traded amount across Nasdaq and NYSE exchanges at the close of US equity markets on Russell US Indexes annual reconstitution effective day exceeded \$100 billion for the first time, and over subsequent reconstitution dates, the dollar traded amount at the close of the June annual Russell reconstitution has remained above \$100 billion.

<sup>1</sup> Recent [public minutes](#) from the external advisory committees as well as a history of [Ground Rule Updates](#) to the Russell US Indexes can be found on [ftserussell.com](#).

<sup>2</sup> Data as of December 31, 2022 as reported on April 1, 2023 by eVestment for active institutional funds, Morningstar for active retail mutual funds, insurance products, and ETFs, and passive assets directly collected by FTSE Russell. AUM includes blended benchmarks and excludes futures and options. AUM data does not include active and passive assets not reported to a 3<sup>rd</sup> party source or FTSE Russell. For funds where the AUM was not reported as of December 31, 2022, the previous period AUM was used as an estimate. No assurances are given by FTSE Russell as to the accuracy of the data.

<sup>3</sup> All references to "style indexes" throughout this consultation refer to the Russell Style Indexes.

<sup>4</sup> [Four decades of Russell Indexes Reconstitution | FTSE Russell](#)

**Table 1. US market trading at the close of Russell reconstitution effective day in June**

US\$ billions	2017	2018	2019	2020	2021	2022
\$ traded across Nasdaq and NYSE	76.0	97.7	107.5	126.6	186.0	143.1

Source: FTSE Russell, NYSE, and Nasdaq, as of June 24, 2022.

FTSE Russell has received feedback from market participants to investigate the feasibility of reducing the trade size on the June annual reconstitution effective day, to reduce potential market trading pressure.

FTSE Russell has identified three possible ways to reduce the June trade size, by targeting three potential contributors to index turnover: 1) reconstitution changes are currently implemented on a single date once a year, 2) size of the band between the Russell 1000 and Russell 2000 at reconstitution, and 3) size of the Russell Style Index reconstitution weight changes.

#### What is not in scope of this consultation

The current reconstitution date of 4<sup>th</sup> Friday of June will continue, and therefore is not the subject of this consultation. In recognition of the broad market adoption, market participants, clients and distributors are anchored to the June annual reconstitution date and have provided feedback that proposed methodology enhancements should focus on other options.

Market participants continue to support a June reconstitution citing two primary reasons: 1) a large portion of US companies file annual reports ahead of the Q2 cut-off, therefore maintaining a June reconstitution allows critical information to be considered for inclusion 2) calendar and resource management around the June reconstitution have long been established across the market. Moving away from a June reconstitution would be disruptive to the market. In recognition of the broad market adoption, market participants, clients and distributors are anchored to the June annual reconstitution date and have provided feedback that proposed methodology enhancements should focus on other options.

Additionally, impact to rebalance schedules of indexes derived from the core Russell US Indexes will be evaluated by FTSE Russell and communicated following the results of this consultation.

FTSE Russell will also consult the market separately regarding potential impact to the December quarterly review implementation for FTSE Equity Indices based on the results of this consultation, including impact to FTSE GEIS and the FTSE UK Index Series.

FTSE Russell is separately evaluating the addition of a +/-5 bps band at the bottom of the Russell 3000 Index (currently none). Evaluation of banding at the bottom of the Russell 3000 Index is taking place independent of this consultation, and any decision regarding this enhancement will be announced separately.

### Consultation Purpose

FTSE Russell is seeking the market's views on the following potential methodology enhancements to reduce the current trade size on the Russell reconstitution effective day:

1. Whether FTSE Russell should add a second Russell reconstitution on the 3<sup>rd</sup> Friday of November of each year, in addition to the current 4<sup>th</sup> Friday in June.<sup>5</sup> **[See section 1.2 for questions.]**
2. Whether to widen the band between the Russell 1000 and Russell 2000 Indexes, from the current  $-/+2.5\%$  (5% total) based on cumulative percentile ranking to asymmetric  $-5\%/+2.5\%$  (7.5% total), retaining more of the larger companies in the Russell 2000 at each reconstitution, with the trade-off of the Russell 1000 membership count declining toward 900 companies at reconstitution, post-banding (breakpoint will still be based on the 1000<sup>th</sup> ranked stock). **[See section 2.6 for questions.]**
3. FTSE Russell is of the view that running two full reconstitutions of the Russell Style Indexes generates unpalatable turnover. In recognition of this, FTSE Russell is proposing two alternative approaches to implement Russell Style changes at the semi-annual reconstitution **[See section 3.4 for questions.]**:
  - A. The full reconstitution of the Russell Style Indexes occurs in June, and at the next semi-annual reconstitution only additions to the indices incorporate updated value and growth weights (i.e., no Russell Style changes to existing index constituents).
  - B. Tranche the implementation of June Russell Style Indexes weight changes across June and November reconstitution periods.

**Key to abbreviations used throughout this consultation:**

- **AR** = Annual reconstitution (4<sup>th</sup> Friday in June)
- **SAR** = Semi-annual reconstitution
  - **SAR1** = 1<sup>st</sup> semi-annual reconstitution (4<sup>th</sup> Friday in June)
  - **SAR2** = 2<sup>nd</sup> semi-annual reconstitution (proposed 3<sup>rd</sup> Friday in November, however simulated SAR2 reconstitution test scenarios are based on live December quarterly index review data; see Appendix for more information on the research process and assumptions)

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<sup>5</sup> Due to liquidity concerns in December, the 3<sup>rd</sup> Friday in November (the Friday prior to the US Thanksgiving holiday on the 4<sup>th</sup> Thursday of November) has been selected as a potential candidate for a second reconstitution date, approximately half a year after the June reconstitution.

## 1. Adding a second Russell reconstitution later in the calendar year, i.e., moving to a semi-annual reconstitution from the current annual reconstitution

Market participants have provided feedback that adding a second reconstitution may reduce the trade size at the June reconstitution.

Due to liquidity concerns in December, the 3rd Friday in November (the Friday prior to the US Thanksgiving holiday on the 4th Thursday of November) has been selected as a potential candidate for a second reconstitution date, approximately half a year after the June reconstitution.

### 1.1. Simulation Results – Additions/Deletions/Percentage Turnover

Russell 1000 and Russell 2000 simulations were run from the period of 2016 to 2022. The results below show additions, deletions and percentage two-way turnover of the current +/-2.5% band methodology ("AR 2.5% band"), and changes of additions, deletions and two-way turnover of a semi-annual reconstitution with a +/-2.5% band ("SAR 2.5% band").

In the semi-annual reconstitution scenario, total annual reconstitution additions, deletions and percentage turnover were mixed for the Russell 1000, but for the Russell 2000 they would generally increase, particularly the percentage turnover in 2020 and 2022 where they increase by over 25% relative to the existing annual reconstitution (e.g., Russell 2000 two-way turnover in 2020 would increase from 32.74% to 41.73%; see Table 3). However, the addition of a second reconstitution may lower turnover an average of 4.14%, due to almost 20% reduction in turnover at each June SAR1 period compared to the AR scenario (see Appendix Table 5).

For the Russell 1000 Index, the addition of a second reconstitution may lower turnover an average of 0.4%, due to nearly 11% reduction in turnover at each June SAR1 period relative to the AR scenario (see Appendix Table 4).

**Table 2: Annual Reconstitution Additions/Deletions/Turnover (%) of Russell 1000**

Russell 1000	AR 2.5% band			SAR 2.5% band		
	Adds	Deletes	Turnover (%)	+/- Adds relative to AR	+/- Deletes relative to AR	+/- Turnover (%) relative to AR <sup>6</sup>
2017	62	36	5.54	-	-	-0.19
2018	71	29	5.47	3	-1	-0.21
2019	53	31	5.58	5	1	-0.02
2020	92	38	6.07	18	10	0.66
2021	93	50	6.61	-7	7	-0.41
2022	48	43	5.47	9	5	0.03

**Table 3: Annual Reconstitution Additions/Deletions/Turnover (%) of Russell 2000**

Russell 2000	AR 2.5% band			SAR 2.5% band		
	Adds	Deletes	Turnover (%)	+/- Adds relative to AR	+/- Deletes relative to AR	+/- Turnover (%) relative to AR
2017	290	148	24.00	22	19	1.76
2018	305	166	29.21	19	53	0.06
2019	269	167	21.33	44	38	3.11
2020	304	177	32.74	19	101	8.99
2021	405	331	33.90	59	35	1.84
2022	320	328	24.12	109	-21	6.35

<sup>6</sup> Throughout this paper, adding values in the "Turnover (%)" column with values in "+/- Turnover (%) relative to ..." will provide total turnover for each scenario. For example, total turnover for the "SAR 2.5% band" scenario in 2022 was 5.5 (5.47+0.03).

1.2. Questions

**Q1. Are you supportive of adding a second Russell reconstitution in addition to the current annual June reconstitution?**

- Yes
- No

Please enter your comments here:

**Q2. In the simulation data presented in Tables 2 & 3 above the estimated turnover impact for the Russell 1000 would range from -0.41 to +0.66% and for the Russell 2000 the turnover impact would range from 0.06 to 8.99% increase. Do you feel this level of turnover is acceptable (and you support a second Russell index reconstitution)?**

- Yes
- No

Please enter your comments here:



**Q3. Are you supportive of the proposed second, semi-annual Russell reconstitution to be implemented on the 3rd Friday of November, in addition to the current 4th Friday in June?**

- Yes
- No

Please enter your comments here:

**Q4. If FTSE Russell proceeds with the semi-annual Russell reconstitution to be implemented on the 3rd Friday of November, do you also support moving forward the December quarterly IPO, free float and share changes to 3rd Friday of November implementation based on a September month-end rank date?**

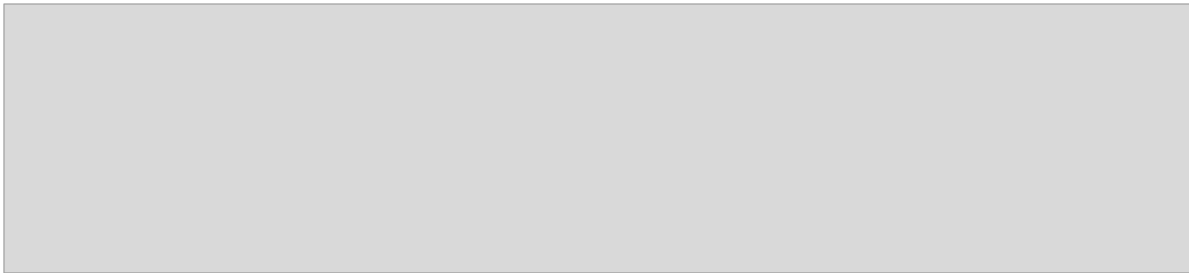
Index Review Effective Date (after market close)	Announce Date	Rank Date	Months since prior Rank or Effective Date
March – 3 <sup>rd</sup> Friday	February – 3 <sup>rd</sup> Friday	End of January	4 months
June – 4 <sup>th</sup> Friday (SAR1)	May – 3 <sup>rd</sup> Friday	End of April	3 months
September – 3 <sup>rd</sup> Friday	August – 3 <sup>rd</sup> Friday	End of July	3 months
November – 3 <sup>rd</sup> Friday (SAR2)	October – 3 <sup>rd</sup> Friday	End of September	2 months

- Yes
- No

Please enter your comments here:

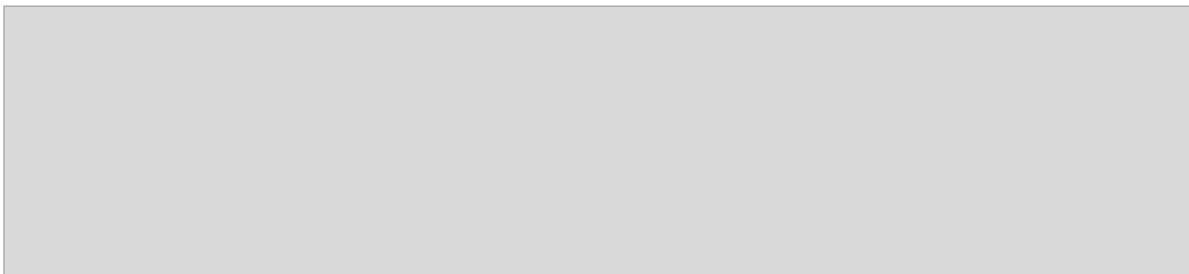
**Q5. What is the notice period you require prior to the addition of a semi-annual Russell reconstitution in November? For example, FTSE Russell should announce the addition of the semi-annual reconstitution date 6 months, 9 months, 12 months, etc. in advance of the second reconstitution?**

Please enter your comments here:



**Q6. Do you have any other comments/concerns about the reconstitution frequency or proposed implementation date?**

Please enter your comments here:



## 2. Widening the band between the Russell 1000 and Russell 2000 Indexes to an asymmetric -5%/+2.5%

Since 2007, the Russell Indexes have applied a 5% band based on cumulative percentile ranking around the size index breakpoints to reduce turnover between the index segments at reconstitution (symmetrical  $-/+2.5\%$  around the breakpoint). Note, because of the small size of microcap companies, the band at the top of the Russell Microcap index is only 1%, and currently there is no band at the bottom of the Russell 2000 Index.

Maintaining representative indexes must be weighed against the cons associated with making frequent changes to index constituents. In other words, an index must balance the precision of representation with practical and acceptable levels of turnover. If market participants feel that the addition of a second reconstitution creates too much unnecessary turnover, a potential solution is to also evaluate widening existing bands.

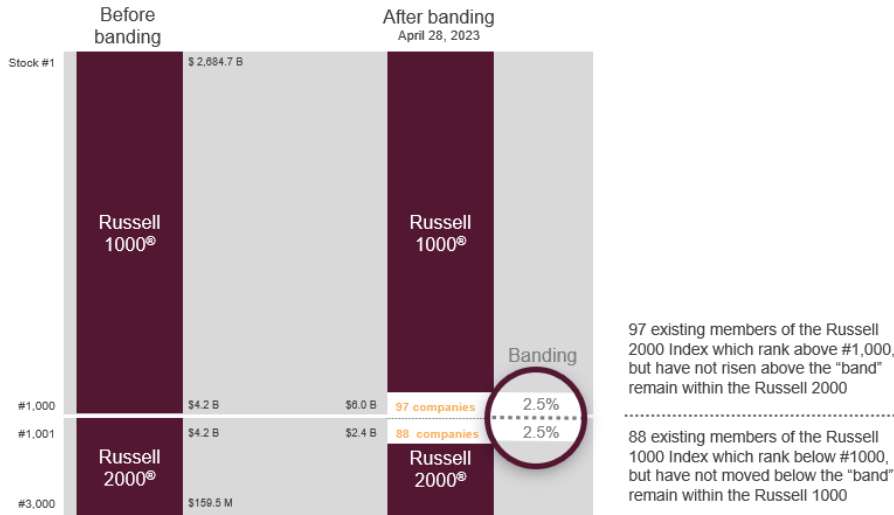
FTSE Russell has evaluated the impact of doubling the band at the top of the Russell 2000 Index to 5%, widening the band to a total 7.5% (asymmetric  $-5%/+2.5\%$ ), from 5% (symmetric  $-/+2.5\%$ ) based on cumulative percentile ranking, resulting in an asymmetric band that reduces movement of companies from the Russell 2000 to the Russell 1000 at reconstitution.

2.1 Comparison of current banding methodology to proposed methodology

Exhibit 1: Current banding approach, between the Russell 1000 and Russell 2000 Indexes

### 2023 Russell US Indexes market capitalization ranges

Large and small cap with turnover-reducing percentile bands

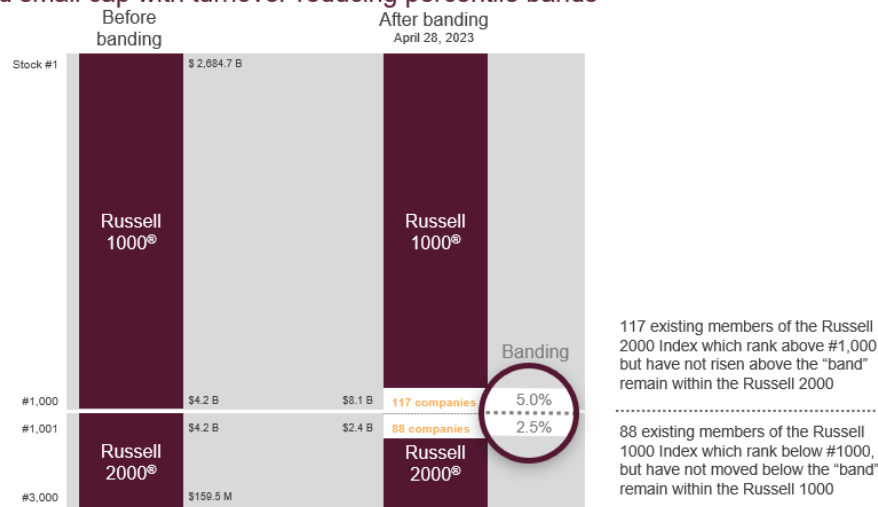


Source: FTSE Russell. Data as of April 28, 2023.

Exhibit 2: Proposed update to reconstitution band between the Russell 1000 and Russell 2000 Indexes

### Proposed -5%/+2.5% banding based on 2023 data

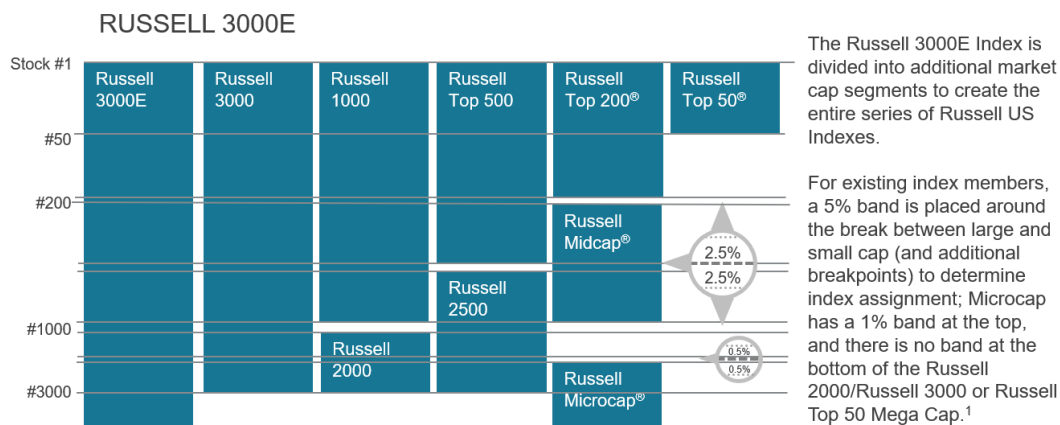
Large and small cap with turnover-reducing percentile bands



Source: FTSE Russell. Data as of April 28, 2023.

Other existing bands would remain intact (5% total and 1% at the top of Russell Microcap).

**Exhibit 3: Current Russell Indexes band overview**



<sup>1</sup> Capitalization banding to reduce turnover at reconstitution implemented in June 2007.

**2.2 Determination of Band Size**

The current +/-2.5% band size covers up to 215 (top) and 343 (bottom) companies with market caps ranging from \$7.37 billion (top) to \$1.75 billion (bottom) in the simulation period, respectively. Changing the top band to 5% would cover up to 363 companies with a maximum band size of \$10.1 billion.

**Table 4: Number of Companies Covered and Market Cap of Company at Band (in billions)**

Russell 1000 (+) / Russell 2000 (-)	-2.5%	2.5%	-5%
6/26/2017	179 (4.41)	246 (2.30)	315 (5.74)
6/25/2018	175 (5.06)	246 (2.64)	313 (6.33)
7/1/2019	190 (4.97)	280 (2.31)	328 (6.78)
6/29/2020	215 (4.56)	343 (1.75)	363 (6.54)
6/28/2021	195 (7.37)	272 (3.70)	335 (10.10)
6/27/2022	210 (6.01)	312 (2.75)	359 (8.26)

While a further increase in the band may reduce annual additions, deletions and turnover, index characteristics will be impacted with regard to the size of companies included in the indexes. Therefore, the maximum increase in band proposed is an additional 2.5% by doubling the band at the top of the Russell 2000 Index.

**2.3 Index Characteristics – Size Integrity**

For the Russell 2000, increasing the top band to 5% would increase the number of companies with market caps greater than \$5 billion. As a result, the composition of the largest companies in the Russell 2000 may change. In terms of stock weights, increasing the top band to 5% would also increase the concentration of the largest companies in Russell 2000.

**Table 5: Number of Companies with Market Caps > \$5 billion in Russell 2000**

Russell 2000	AR 2.5% band	SAR 5%/2.5% band	SAR 2.5% band
6/26/2017		7	
6/25/2018	4	54	4
7/1/2019		36	
6/29/2020		25	
6/28/2021	89	143	78
6/27/2022	36	76	28

**Table 6: Top 10 Stock Weights in Russell 2000**

Russell 2000	AR 2.5% band	SAR 5%/2.5% band	SAR 2.5% band
6/26/2017	2.03	2.17	2.01
6/25/2018	1.92	1.95	1.99
7/1/2019	2.11	2.69	2.11
6/29/2020	2.47	2.77	2.50
6/28/2021	2.27	2.47	2.25
6/27/2022	2.30	2.66	2.33

## 2.4 Index Characteristics – Company Count

Having asymmetric bands tends to reduce the number of companies in the Russell 1000 as the larger Russell 2000 upper band limits the number of companies entering the index.

**Table 7: Number of Companies in Russell 1000**

Russell 1000	AR 2.5% band	SAR 5%/2.5% band	SAR 2.5% band
6/26/2017	985	951	982
6/25/2018	989	924	988
7/1/2019	979	917	983
6/29/2020	986	920	997
6/28/2021	1017	946	1029
6/27/2022	1003	932	1009

For the Russell 2000, having asymmetric bands tends to increase the number of companies in the index as it is harder for the larger companies in the Russell 2000 to move into the Russell 1000.

**Table 8: Number of Companies in Russell 2000**

Russell 2000	AR 2.5% band	SAR 5%/2.5% band	SAR 2.5% band
6/26/2017	2015	2049	2018
6/25/2018	2011	2076	2012
7/1/2019	2021	2083	2017
6/29/2020	2014	2080	2003
6/28/2021	1983	2054	1971
6/27/2022	1997	2068	1991

## 2.5 Simulation Results – Additions/Deletions/Percentage Turnover

Russell 1000 and 2000 simulations were run from the period of 2016 to 2022. The results below show additions, deletions and percentage two-way turnover of the current +/-2.5% band methodology, and changes of additions, deletions and two-way turnover of a semi-annual reconstitution with a -5%/+2.5% asymmetric band as well as a -2.5%/+2.5% band.

For example, in Table 9 for the semi-annual reconstitution of the Russell 1000 index using a -5%/+2.5% band, there were 29 fewer additions and 3 fewer deletions for the index in 2018 compared to the existing annually reconstituted index (Russell 1000 Annual 2.5% band) or a total of 42 and 26, respectively. The annual two-way turnover was 78 basis points less than the existing annually reconstituted index or 4.69 percent.

On an annual basis increasing the reconstitution frequency and applying a -5%/+2.5% band would generally decrease the reconstitution additions, deletions and percentage turnover for the Russell 1000, while generally increase the number of reconstitution additions/deletions for the Russell 2000 and decrease the overall percentage turnover, with the exception of 2020.

For the semi-annual reconstitution with a -2.5%/+2.5% band, annual reconstitution additions, deletions and percentage turnover were mixed for the Russell 1000 but for the Russell 2000 they would generally increase, particularly the percentage turnover in 2020 and 2022 where they increase by over 25% relative to the existing annual reconstitution.

While a further increase in banding may reduce annual additions, deletions and turnover, index characteristics will be impacted with regard to the size of companies included in the indexes.

**Table 9: Annual Reconstitution Additions/Deletions/Turnover (%) of Russell 1000**

Russell 1000	AR 2.5% band			SAR 5%/2.5% band			SAR 2.5% band		
	Adds	Deletes	Turnover	+/- Adds relative to AR	+/- Deletes relative to AR	+/- Turnover relative to AR	+/- Adds relative to AR	+/- Deletes relative to AR	+/- Turnover relative to AR
2017	62	36	5.54	-22	-	-0.57	-	-	-0.19
2018	71	29	5.47	-29	-3	-0.78	3	-1	-0.21
2019	53	31	5.58	-13	-2	-0.18	5	1	-0.02
2020	92	38	6.07	-2	5	0.48	18	10	0.66
2021	93	50	6.61	-18	-8	-0.63	-7	7	-0.41
2022	48	43	5.47	-11	-5	-0.25	9	5	0.03

**Table 10: Annual Reconstitution Additions/Deletions/Turnover (%) of Russell 2000**

Russell 2000	AR 2.5% band			SAR 5%/2.5% band			SAR 2.5% band		
	Adds	Deletes	Turnover	+/- Adds relative to AR	+/- Deletes relative to AR	+/- Turnover relative to AR	+/- Adds relative to AR	+/- Deletes relative to AR	+/- Turnover relative to AR
2017	290	148	24.00	22	-3	-2.55	22	19	1.76
2018	305	166	29.21	17	21	-6.22	19	53	0.06
2019	269	167	21.33	41	20	-1.91	44	38	3.11
2020	304	177	32.74	14	81	0.84	19	101	8.99
2021	405	331	33.90	44	24	-5.38	59	35	1.84
2022	320	328	24.12	100	-40	-1.97	109	-21	6.35

**2.6 Questions**

**Q7. Are you supportive of widening the band from 5% to 7.5%, with an asymmetric -5%/+2.5% retaining more companies at the top of the Russell 2000 Index, instead of the current symmetric +/-2.5%? This means that the constituent count in the Russell 1000 may drop closer to 900 than 1000 (see Table 7).**

- Yes
- No

Please enter your comments here:

**Q8. Do you feel that the turnover benefit of the asymmetric band has significant value when considering the impact to size integrity and membership totals?**

**Q9. Do you have concerns with the company count consistently remaining below 1000 with the widened band (917 within the 2019 simulation)?**

**Q10. Do you have concern with size integrity impact as a result of asymmetric banding simulation? (Russell 2000 upper threshold drawn at \$10.1B within the 2021 simulation or 143 companies >\$5B in the Russell 2000 also within the 2021 simulation)?**

Yes

No

Please enter your comments here:

**Q11. Are you supportive of moving to a semi-annual Russell reconstitution (June and November), plus widening the band to 7.5% even with the potential decline in constituent counts in the Russell 1000?**

Yes

No

Please enter your comments here:

**Q12. Do you have any other comments/concerns about widening the band?**

Please enter your comments here:

**Q13. What additional measures to manage turnover should be considered?**

Please enter your comments here:

### 3. Implementation of Russell Style Index Weight Updates

#### 3.1. Research approach

The following Russell Style index reconstitution analysis focuses on the semi-annual reconstitution scenario with a 2.5% band between the Russell 1000 and Russell 2000 Indexes. Analysis for 3 scenarios is as follows:

1. **Scenario 1: Full Russell Style reconstitution in SAR1 and SAR2** – apply a reconstitution of Russell Style to all index constituents in SAR1 and SAR2 each year.
2. **Scenario 2: Annual reconstitution in SAR1 and the Value and Growth weights updated for new additions only in SAR2** – rerun the Russell Style reconstitution in SAR2 but only assign updated value and growth weights for new additions rather than the entire index universe.
3. **Scenario 3: Tranche the Annual reconstitution in SAR1 and SAR2** – apply the same scenario in 2 as of June, but implement the value and growth reconstitutions in 50% tranches in SAR1 and SAR2 each year.

#### 3.2 Simulation Results – Turnover

Over the simulation period, a full Russell Style update at each semi-annual reconstitution would increase reconstitution turnover on an annual basis by up to a maximum of 29%. The Russell 1000 Growth index has the largest annual relative increase in turnover of 64% compared to the current methodology, with the Russell 1000 Value index the next largest with 59%, both in 2022.

Were we to only update Russell Style weights for new additions in SAR2 (Scenario 2) would result in a small/negligible impact to current turnover relative to the existing annual reconstitution.

Tranche-ing the Russell Style changes would further distribute the Russell Style weight updates between SAR1 and SAR2 resulting in a more even distribution across the two rebalances. Some clients have voiced a desire to expedite Russell Style changes over a shorter time period. However, SAR2 has been chosen for the second tranche in this analysis (rather than the next quarterly reconstitution) as the underlying universe would be applying membership changes and the appropriate time to consider Russell Style attributes would be to align them with membership change events.<sup>7</sup>

Table 11 provides the annual reconstitution turnover for the Russell 1000 Growth index where in 2018 the annual reconstituted Russell 1000 Growth index had a two-way turnover of 25.12%. Increasing the frequency of the reconstitution to semi-annual and applying a full Russell Style reconstitution “Full Russell Style Recon in SAR2” (Scenario 1) would increase the annual turnover by 11.82% or a total of 36.94%. If we only update Russell Style weights for new additions in SAR2 “Russell Style Weight Change for New Adds Only in SAR2” (Scenario 2) the annual turnover would remain the same. Tranche-ing Scenario 2 would increase annual turnover by 0.24% or a total of 25.36%.

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<sup>7</sup> If a comprehensive quarterly membership reconstitution was applied to the underlying Russell 1000 and 2000 indexes, then we would agree that an expedited Russell Style tranche could be considered in September.



For the Russell 2000 Growth index in Table 13, turnover for 2020 is higher for all scenarios given the underlying Russell 2000 index has higher turnover (see Table 3). This was due to the higher market volatility in 2020 following the onset of the COVID-19 pandemic.

**Table 11: Annual Reconstitution Turnover (%) of Russell 1000 Growth**

AR 2.5% band		SAR 2.5% band Turnover Increase/Decrease		
Russell 1000 Growth	Turnover	Full Russell Style Recon in SAR2	Russell Style Weight Change for New Adds Only in SAR2	Tranche
2017	23.97	1.87	-0.15	
2018	25.12	11.82	0.00	0.24
2019	28.25	5.61	-0.08	-0.80
2020	31.02	9.76	1.64	-0.04
2021	26.31	2.96	0.35	0.24
2022	28.17	17.88	0.12	1.00

**Table 12: Annual Reconstitution Turnover (%) of Russell 1000 Value**

AR 2.5% band		SAR 2.5% band Turnover Increase/Decrease		
Russell 1000 Value	Turnover	Full Russell Style Recon in SAR2	Russell Style Weight Change for New Adds Only in SAR2	Tranche
2017	25.53	2.11	-0.12	
2018	26.56	11.42	-0.01	-0.11
2019	30.19	6.30	0.10	-0.42
2020	38.26	7.92	0.49	0.51
2021	27.41	1.48	-0.03	0.38
2022	28.08	16.30	0.35	0.00

**Table 13: Annual Reconstitution Turnover (%) of Russell 2000 Growth**

AR 2.5% band		SAR 2.5% band Turnover Increase/Decrease		
Russell 2000 Growth	Turnover	Full Russell Style Recon in SAR2	Russell Style Weight Change for New Adds Only in SAR2	Tranche
2017	48.68	14.11	4.88	
2018	63.68	5.82	0.70	0.09
2019	52.75	12.07	3.41	3.55
2020	69.47	29.41	19.60	16.80
2021	69.66	14.80	7.03	5.94
2022	63.26	21.33	8.69	4.08

**Table 14: Annual Reconstitution Turnover (%) of Russell 2000 Value**

AR 2.5% band		SAR 2.5% band Turnover Increase/Decrease		
Russell 2000 Value	Turnover	Full Russell Style Recon in SAR2	Russell Style Weight Change for New Adds Only in SAR2	Tranche
2017	44.83	11.90	0.97	
2018	46.21	8.07	2.23	1.67
2019	43.08	12.06	3.15	1.79
2020	53.50	19.29	2.58	3.08
2021	60.41	11.62	-0.46	-2.65
2022	53.87	19.22	2.56	3.03

### 3.3 Index Characteristics – Valuations and Growth

To assess Russell Style integrity of each reconstitution scenario, sales-growth and forecast earnings growth for the Russell Growth indexes, and book-to-price for the Russell Value indexes were compared.

Index level book-to-price, sales-growth and forecast earnings growth do not show any significant differences for the periods tested.

### 3.4 Questions

**Q14. FTSE Russell has concluded that a full Russell Style reconstitution at semi-annual reconstitution (Scenario 1) generates unpalatable Russell Style turnover, and we are thus recommending that only Scenario 2 or 3 be considered for implementation. Do you agree with this finding?**

Yes

No

If no, please explain:

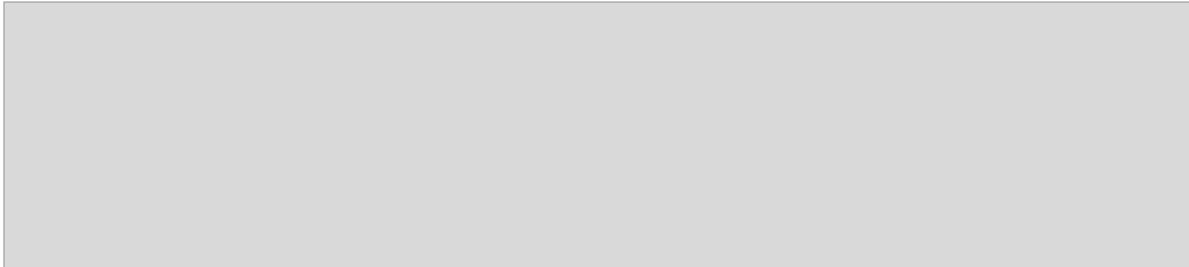
**Q15. If you answered yes to Q14, please select only one of the below options for consideration, in the event of a second, Russell reconstitution, i.e., for a semi-annual reconstitution in November:**

- A. I am supportive of implementing Russell Style weight changes for New Adds only at the second/semi-annual reconstitution (proposed November)
- B. I am supportive of trancheing Russell Style weight changes from June reconstitution with the next reconstitution (November), i.e. implement half of the weight changes in June, and the 2<sup>nd</sup> half in November

Please enter your comments here:

**Q16. Do you have any other comments/concerns about implementation approaches to updating Russell Style Index weight changes at reconstitution, with focus on reducing index turnover without sacrificing representativeness?**

Please enter your comments here:



## 4. Appendix

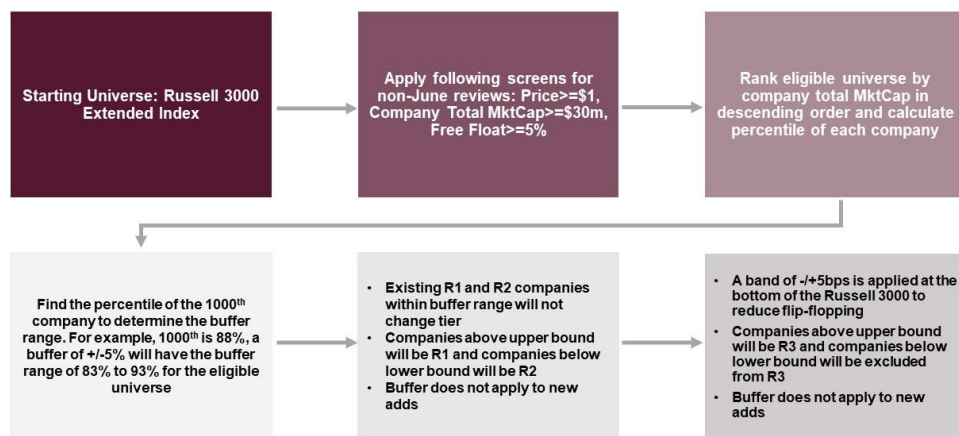
### Research approach details

The starting point for the analysis is the Russell 3000 Extended Index (Russell 3000E). The Russell 3000E which is reconstituted annually in June includes the Russell 3000 and the complete Russell Microcap Index and was used as the reconstitution universe for the simulated Russell 3000 Index in the hypothetical scenarios.

Six years of analysis with two semi-annual reconstitutions in each year were created, from 2016 to 2022.

To support the analysis and provide a fair comparison, FTSE Russell used simulated Russell 1000 and 2000 indexes with a band of +/-2.5% using the Russell 3000 Extended index at each reconstitution in June (simulated base case).

### Appendix Exhibit 1: Reconstitution Overview Using Russell 3000 Extended<sup>8</sup>



<sup>8</sup> FTSE Russell is separately evaluating the addition of a +/-5 bps band at the bottom of the Russell 3000 Index (currently none). Evaluation of banding at the bottom of the Russell 3000 Index is taking place independent of this consultation, and any decision regarding this enhancement will be announced separately.

Using the Russell 3000 Extended Index as the starting universe for this analysis requires that certain assumptions are made, these are included in the table below to support the analysis.

**Appendix Table 1: Research assumptions and potential implications**

Assumptions	Potential Implications
Use Russell 3000E for our analysis to highlight the turnover implications of different frequency of reconstitutions	The universe of companies would be updated more frequently in the official Russell US reconstitution leading to potentially lower turnover in our analysis although the universe is still sufficient in size to see the implications of different reconstitution frequencies and banding
Russell 3000E is reconstituted annually in June (current methodology)	Even though there are shares and IPOs included on a quarterly basis the Russell 3000E composition is reconstituted annually leading to an expected higher turnover in June compared to other quarters
Use of reconstitution effective date for ranking purposes	Price drift between the cut-off date and effective date will potentially change the composition of the scenarios compared to the official R1 & R2, although it still follows the reconstitution ranking process so will provide a sufficient guide to the impact of different reconstitution cycles
There are no bandings applied to shares and free float changes in June compared to other quarters (current methodology)	This would lead to an expected larger turnover of free float/shares changes in June compared to other quarters
The turnover analysis in this paper is comparing against a simulated R1 & R2 annual reconstitution with a +/-2.5% band	Comparing to a simulated R1 & R2 reduces calculation biases in the analysis we have created
IPOs and share changes are applied to the Russell 3000E in December rather than the proposed additional reconstitution in November	Even though IPOs and share changes are applied in December rather than November it still provides a good indication of the impact of doing semi-annual reconstitutions on the Russell 1000 and 2000

**Test Scenarios and Summary of Observations**

**Appendix Table 2: Testing the impact of semi-annual reconstitution and widening the band between the Russell 1000 and Russell 2000 Indexes**

1. Russell 1000/2000	Recon frequency	R1/R2 Band	Purpose	Summary of Observations
1a. AR with -/+2.5% band (simulated base case)	Annual	-/+2.5%	Serve as benchmark to all simulations for a fair comparison	The simulated Russell 1000 and Russell 2000 indexes have comparable turnover numbers to the live indexes, with average absolute weight differences of 20bps and 111bps for the June reconstitution turnovers respectively.
1b. SAR1 and SAR2 with -/+2.5% band	Semi-Annual	-/+2.5%	To test impact of adding a second reconstitution with the existing band	Annual Additions/Deletions increase, and annual turnover has mixed results given the increase in reconstitution frequency.
1c. SAR1 and SAR2 with -5%/+2.5% (asymmetric band)	Semi-Annual	-5%/+2.5%	To test the impact of doubling the band at the top of the Russell 2000 and adding a	A -5%/+2.5% band reduces turnover with moderate cost of size integrity. Annual Additions/Deletions and turnover decrease. The asymmetric band causes the Russell 1000 constituent count to drop below 1000 throughout the testing period

			second reconstitution	
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**Appendix Table 3: Testing the impact of semi-annual reconstitution on the Russell Style Indexes**

2. Russell 1000/2000 Growth/Value	Recon frequency	R1/R2 Band	Purpose	Summary of Observations
2a. AR (simulated base case)	Annual	-/+2.5%	Serve as benchmark to all simulations for a fair comparison	The simulated Russell 1000 Growth and Value, and Russell 2000 Growth and Value indexes have comparable turnover numbers to the live indexes, with average absolute turnover differences at the annual reconstitution of 93bps, 93bps, 209bps and 179bps, respectively.
2b. Full Russell Style recon at each SAR1 and SAR2	Semi-Annual	1) -/+ 2.5% 2) - 5%/+2.5%	To test impact to R1/R2 Growth/Value indices using full Russell Style reconstitution SAR1 and SAR2	Applying SAR1 and SAR2 reconstitutions on average increases for the Russell Style indexes on a relative basis the annual turnover for the -2.5%/+2.5% and -5%/+2.5% band scenarios up to 30% and 29%, respectively. The Russell 1000 Growth index had the largest annual relative increase in turnover for the two scenarios in 2022 with 63% and 64%, respectively.
2c. Full Russell Style recon in SAR1 and update the latest style weights for new adds only at SAR2	Semi-Annual	1) -/+2.5% 2) - 5%/+2.5%	To test impact to R1/R2 Growth/Value indexes using latest Russell Style weights for new adds only at SAR2	-2.5%/+2.5% band: Annual turnover increases marginally for the Russell 1000 Growth and Value indexes with an average increase difference of 31bps and 13bps, respectively. The Russell 2000 Growth and Value indexes have a relatively larger annual turnover increase with an average increase difference of 7.38% and 1.84%, respectively.  -5%/+2.5% band: Annual turnover decreases marginally for the Russell 1000 Growth and Value indexes with an average decrease difference of 20bps and 26bps, respectively. The Russell 2000 Growth and Value indexes have a relatively larger annual turnover decrease with an average decrease difference of 3.76% and 1.54%, respectively.
2d. Tranche Russell Style implementation across two index reconstitution periods	Semi-Annual	1) -/+2.5% 2) - 5%/+2.5%	To test impact of tranche-ing reconstitution Russell Style changes for stocks staying in the R1 or R2, across SAR1 and SAR2 reconstitutions (50% of share changes) implemented at each reconstitution).	Annual turnover is similar to 2c, with reconstitution turnover more evenly spread in SAR1 and SAR2. SAR1 reconstitutions on average decrease by over 35% and over 40% for all Russell Style indexes in the two scenarios respectively.

**Appendix Table 4: Additions/Deletions/Turnover (%) of Russell 1000 at each Index Reconstitution**

Reconstitution	Russell 1000 AR 2.5% band				Russell 1000 SAR 5%/2.5% band			Russell 1000 SAR 2.5% band		
	Adds	Deletes	Turnover		+/- Adds relative to AR	+/- Deletes relative to AR	+/- Turnover relative to AR	+/- Adds relative to AR	+/- Deletes relative to AR	+/- Turnover relative to AR
SAR2 2016	11	-	0.35		3	22	0.27	20	22	0.80
SAR1 2017	54	36	4.20		-28	-15	-0.77	-13	-15	-0.44
SAR2 2017	2	-	0.86		8	15	0.24	15	15	0.29
SAR1 2018	60	28	3.10		-42	-14	-1.02	-13	-13	-0.46
SAR2 2018	4	1	1.03		13	11	0.24	16	12	0.25
SAR1 2019	45	30	3.17		-15	-12	-0.30	-9	-10	-0.26
SAR2 2019	2	1	0.99		2	10	0.12	14	11	0.23
SAR1 2020	58	37	3.83		-13	-15	-0.25	-9	-14	-0.39
SAR2 2020	14	1	0.71		11	20	0.74	27	24	1.05
SAR1 2021	63	49	4.48		-21	-24	-0.74	-17	-17	-0.64
SAR2 2021	6	-	0.80		6	16	0.13	13	24	0.24
SAR1 2022	45	43	3.37		-16	-18	-0.37	-8	-9	-0.21
SAR2 2022	2	-	0.84		5	13	0.13	17	14	0.24

**Appendix Table 5: Additions/Deletions/Turnover (%) of Russell 2000 at each Index Reconstitution**

Reconstitution	Russell 2000 AR 2.5% band				Russell 2000 SAR 5%/2.5% band			Russell 2000 SAR 2.5% band		
	Adds	Deletes	Turnover		+/- Adds relative to AR	+/- Deletes relative to AR	+/- Turnover relative to AR	+/- Adds relative to AR	+/- Deletes relative to AR	+/- Turnover relative to AR
SAR2 2016	52	3	2.27		109	43	4.55	109	60	7.78
SAR1 2017	246	130	19.66		-78	-43	-6.4	-78	-28	-4.57
SAR2 2017	22	8	2.14		98	43	3.42	98	50	5.76
SAR1 2018	202	146	22		-68	-50	-10.44	-67	-21	-5.81
SAR2 2018	25	14	2.22		85	72	4.55	86	75	5.78
SAR1 2019	207	141	15.49		-48	-24	-3.69	-46	-18	-2.59
SAR2 2019	29	9	2.22		82	47	2.02	83	59	5.57
SAR1 2020	222	137	23.76		-51	-15	-6.68	-50	-11	-6.16
SAR2 2020	42	-	2.59		64	106	8.11	68	122	15.04
SAR1 2021	268	320	23.61		-46	-98	-7.5	-39	-94	-4.28
SAR2 2021	44	5	3.08		90	122	2.41	98	129	5.57
SAR1 2022	297	272	18.49		-54	-86	-4.73	-46	-79	-1.43
SAR2 2022	9	33	1.77		154	56	3.01	155	68	7.6

**Appendix Table 6: Turnover (%) of Russell 1000 Growth at each Index Reconstitution**

Reconstitution	Russell 1000 Growth Annual 2.5% band	Russell 1000 Growth Semi-Annual 5%/2.5% band 5bps bottom Russell 3000 band			Russell 1000 Growth Semi-Annual 2.5% band 5bps bottom Russell 3000 band		
		Full Style Recon in SAR2	Style Weight Change for New Adds Only in SAR2	Tranche	Full Style Recon in SAR2	Style Weight Change for New Adds Only in SAR2	Tranche
SAR2 2016	0.46	12.75	0.45		13.43	0.80	
SAR1 2017	22.66	-4.67	-0.48		-3.76	-0.35	
SAR2 2017	0.79	6.67	0.21	9.35	5.71	0.27	9.34
SAR1 2018	23.02	-1.44	-0.55	-11.60	-0.99	-0.21	-11.24
SAR2 2018	0.80	12.15	0.40	11.41	12.82	0.22	11.48
SAR1 2019	26.08	-5.40	0.06	-11.82	-5.61	-0.25	-11.95
SAR2 2019	0.90	11.82	0.07	11.23	11.25	0.17	11.17
SAR1 2020	28.54	-5.18	-1.16	-14.87	-3.98	0.17	-14.27
SAR2 2020	0.59	13.57	1.02	13.44	13.67	1.47	14.22
SAR1 2021	24.00	-7.45	-0.26	-10.86	-7.52	0.09	-10.38
SAR2 2021	0.73	10.49	0.13	10.73	10.49	0.26	10.66
SAR1 2022	26.28	1.05	-0.74	-12.12	0.37	-0.07	-11.72
SAR2 2022	0.80	17.11	0.16	12.46	17.52	0.19	12.72

**Appendix Table 7: Turnover (%) of Russell 1000 Value at each Index Reconstitution**

Reconstitution	Russell 1000 Value Annual 2.5% band	Russell 1000 Value Semi-Annual 5%/2.5% band 5bps bottom Russell 3000 band			Russell 1000 Value Semi-Annual 2.5% band 5bps bottom Russell 3000 band		
		Full Style Recon in SAR2	Style Weight Change for New Adds Only in SAR2	Tranche	Full Style Recon in SAR2	Style Weight Change for New Adds Only in SAR2	Tranche
SAR2 2016	0.36	12.27	0.40		12.75	0.89	
SAR1 2017	24.11	-5.43	-0.84		-4.08	-0.44	
SAR2 2017	0.93	6.89	0.29	9.35	6.20	0.33	9.45
SAR1 2018	23.96	-1.05	-0.58	-11.28	-0.80	-0.31	-11.07
SAR2 2018	1.23	11.41	0.17	10.62	12.22	0.30	10.97
SAR1 2019	27.54	-5.96	0.11	-12.40	-6.03	-0.22	-12.52
SAR2 2019	1.08	12.58	0.19	12.02	12.32	0.33	12.08
SAR1 2020	36.34	-6.73	-0.78	-16.57	-5.89	-0.27	-16.35
SAR2 2020	0.83	14.13	0.51	16.39	13.89	0.76	16.88
SAR1 2021	25.26	-9.45	-0.24	-11.34	-9.55	-0.28	-11.22
SAR2 2021	0.88	10.99	0.18	11.71	11.05	0.27	11.59
SAR1 2022	25.79	-0.93	-0.64	-12.00	-1.43	0.07	-11.66
SAR2 2022	0.87	17.43	0.11	11.20	17.72	0.29	11.68



**Appendix Table 8: Turnover (%) of Russell 2000 Growth at each Index Reconstitution**

Reconstitution	Russell 2000 Growth Annual 2.5% band	Russell 2000 Growth Semi-Annual 5%/2.5% band 5bps bottom Russell 3000 band			Russell 2000 Growth Semi-Annual 2.5% band 5bps bottom Russell 3000 band		
		Full Style Recon in SAR2	Style Weight Change for New Adds Only in SAR2	Tranche	Full Style Recon in SAR2	Style Weight Change for New Adds Only in SAR2	Tranche
SAR2 2016	2.41	24.33	4.22		24.06	6.48	
SAR1 2017	43.68	-15.14	-7.48		-10.24	-4.15	
SAR2 2017	2.22	20.14	4.67	15.27	23.79	8.40	18.55
SAR1 2018	55.48	-25.79	-17.69	-30.44	-15.84	-7.10	-19.34
SAR2 2018	2.64	21.06	8.32	21.13	21.37	7.53	19.19
SAR1 2019	45.30	-12.55	-7.25	-18.61	-10.88	-3.96	-16.97
SAR2 2019	2.86	16.71	1.00	12.48	22.76	7.15	20.30
SAR1 2020	58.02	-10.44	-5.91	-20.68	-9.50	-6.99	-21.34
SAR2 2020	3.22	27.52	13.25	26.56	38.75	26.23	37.91
SAR1 2021	57.25	-13.86	-7.10	-23.66	-14.36	-2.87	-19.35
SAR2 2021	3.71	19.62	1.67	18.67	28.31	8.70	24.02
SAR1 2022	57.45	-12.41	-9.62	-26.33	-8.19	-2.01	-19.39
SAR2 2022	1.81	24.65	5.04	20.23	29.29	10.67	23.35

**Appendix Table 9: Turnover (%) of Russell 2000 Value at each Index Reconstitution**

Reconstitution	Russell 2000 Value Annual 2.5% band	Russell 2000 Value Semi-Annual 5%/2.5% band 5bps bottom Russell 3000 band			Russell 2000 Value Semi-Annual 2.5% band 5bps bottom Russell 3000 band		
		Full Style Recon in SAR2	Style Weight Change for New Adds Only in SAR2	Tranche	Full Style Recon in SAR2	Style Weight Change for New Adds Only in SAR2	Tranche
SAR2 2016	2.14	20.61	4.45		27.09	8.65	
SAR1 2017	41.15	-10.29	-6.13		-10.06	-4.24	
SAR2 2017	2.04	19.64	4.20	14.69	21.44	4.74	15.58
SAR1 2018	40.12	-11.32	-3.51	-16.65	-11.61	-1.84	-15.67
SAR2 2018	1.74	16.94	2.77	15.82	19.83	4.18	17.39
SAR1 2019	39.06	-10.81	-5.89	-17.58	-8.69	-1.26	-14.39
SAR2 2019	1.53	18.48	3.09	14.54	20.68	4.36	16.12
SAR1 2020	47.41	-10.10	-4.95	-19.90	-7.59	-3.82	-18.38
SAR2 2020	1.82	21.98	5.41	20.34	26.78	6.52	21.50
SAR1 2021	52.28	-13.91	-6.80	-23.55	-13.01	-3.77	-20.94
SAR2 2021	2.48	22.54	4.23	19.28	24.39	3.25	18.26
SAR1 2022	48.43	-8.10	-4.25	-21.26	-6.99	-2.49	-19.63
SAR2 2022	1.72	23.67	3.48	18.16	26.10	4.75	22.45

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