

## Revisiting Core Principles

The FTSE RAFI QSR Index series utilizes fundamental measures of company size (sales, cash flow, dividends, and book value) as a rebalancing anchor to trade against the constantly shifting expectations of the market.

This approach results in overweights to out-of-favor securities, which are often undervalued, and underweights to popular securities, which are often overvalued.

Over the short term, these exposures can cause relative performance to vary, but this simple, disciplined approach has historically outperformed the cap-weighted benchmark over the long-term.

As a rebalancing strategy that trades against recent winners, the Fundamental Index™ methodology will often face performance headwinds during periods of trending prices, sustained momentum, or extreme value underperformance - and benefit from performance tailwinds during periods of security mean reversion or value outperformance.

The FTSE RAFI Developed ex US 1000 - QSR Index is comprised of the largest 1000 non US-listed developed companies by RAFI fundamental score at the time of reconstitution. The index is reconstituted annually and rebalanced quarterly using a staggered approach.

## Performance

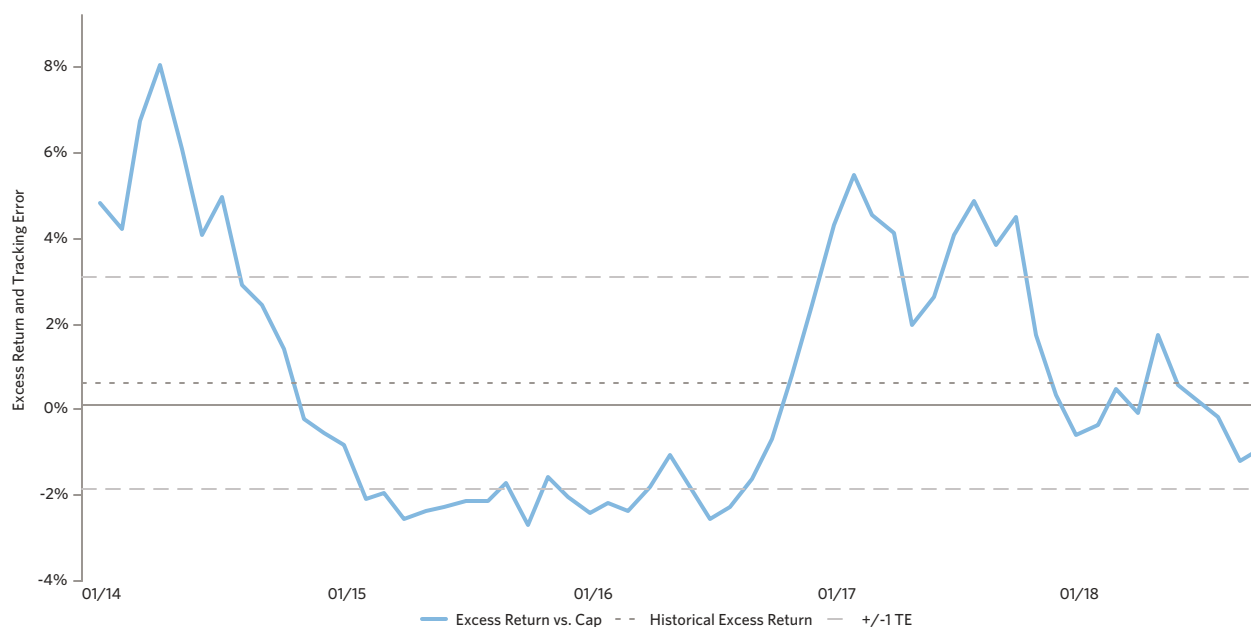
**Exhibit 1:**  
Performance Table

**Exhibit 2:**  
Rolling 1-Year Excess Returns

**Exhibit 1: Performance Table<sup>i</sup>**

	QTD	1-Yr	3-Yr	5-Yr	10-Yr	ITD*
FTSE RAFI™ Developed ex US 1000 - QSR Index	1.5%	2.4%	11.0%	5.0%	--%	7.2%
FTSE All World Series Developed Ex US	1.4%	3.4%	10.3%	5.0%	5.9%	6.3%
Value Added	0.1%	-1.0%	0.7%	0.0%	--%	0.9%
MSCI EAFE	1.4%	3.2%	9.8%	4.9%	5.9%	6.4%
Portfolio Standard Deviation		10.5%	11.7%	11.9%	--%	12.4%
Benchmark Standard Deviation		8.9%	10.6%	10.9%	17.5%	11.3%
Tracking Error		2.3%	2.6%	2.2%	--%	2.4%

**Exhibit 2: Rolling 1-Year Excess Returns<sup>ii</sup>**



i. Exhibit 1.  
Performance derived from FactSet. All returns are total returns in USD. All returns greater than one year are annualized. Standard deviation and tracking error require a minimum of 1 year return history.  
\*Inception to Date (ITD) returns are calculated starting the first full month of returns following March 18, 2013.

ii. Exhibit 2.  
Performance derived from FactSet. All returns are total returns in USD. Rolling 1-year excess returns and tracking error are calculated starting January 31, 2013. If applicable, strategy returns prior to inception are simulated. Inception date is March 18, 2013.

## Portfolio Characteristics

The FTSE RAFI™ Developed ex US 1000 - QSR Index is attractively positioned relative to the cap-weighted benchmark.

**Exhibit 3:**  
Portfolio Characteristics

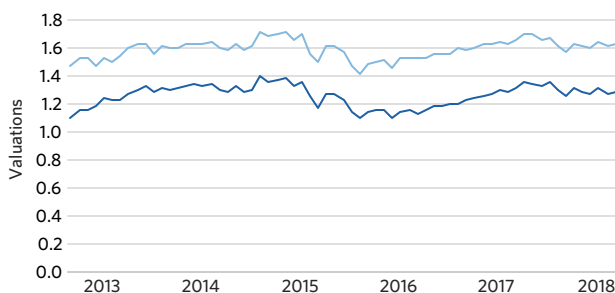
**Exhibit 4:**  
Historical Portfolio Characteristics

## Exhibit 3: Portfolio Characteristics<sup>i</sup>

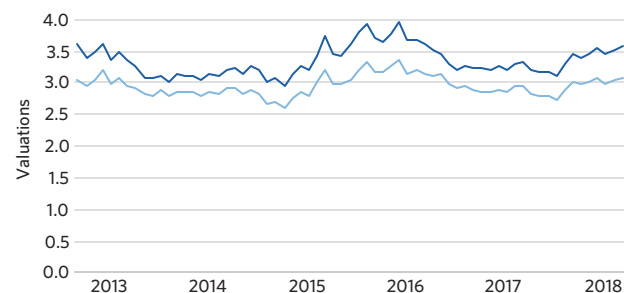
	Number of Holdings	Active Share	Price to Sales	Price to Cash Flow	Price to Book	Div. Yield	Market Cap. (Billions)	Sharpe Ratio*	Info. Ratio*	Tracking Error*
FTSE RAFI™ Developed ex US 1000 - QSR Index	1075	26.3	0.8	6.0	1.3	3.6%	60	0.54	0.38	2.4%
FTSE All-World Developed x US	1569	--	1.2	8.1	1.6	3.1%	58	0.52	--	--

## Exhibit 4: Historical Portfolio Characteristics<sup>ii</sup>

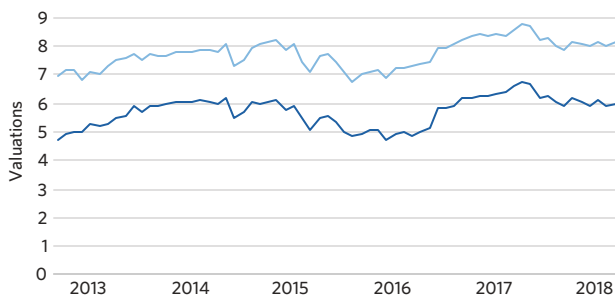
**Price to Book**



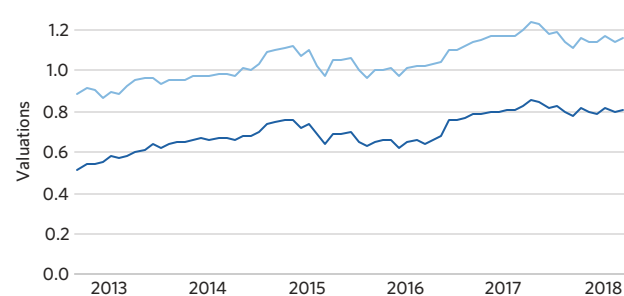
**Dividend Yield (%)**



**Price to Cash Flow**



**Price to Sales**



— FTSE RAFI™ Developed ex US 1000 - QSR Index (Left) — FTSE All-World Developed x US (Left)

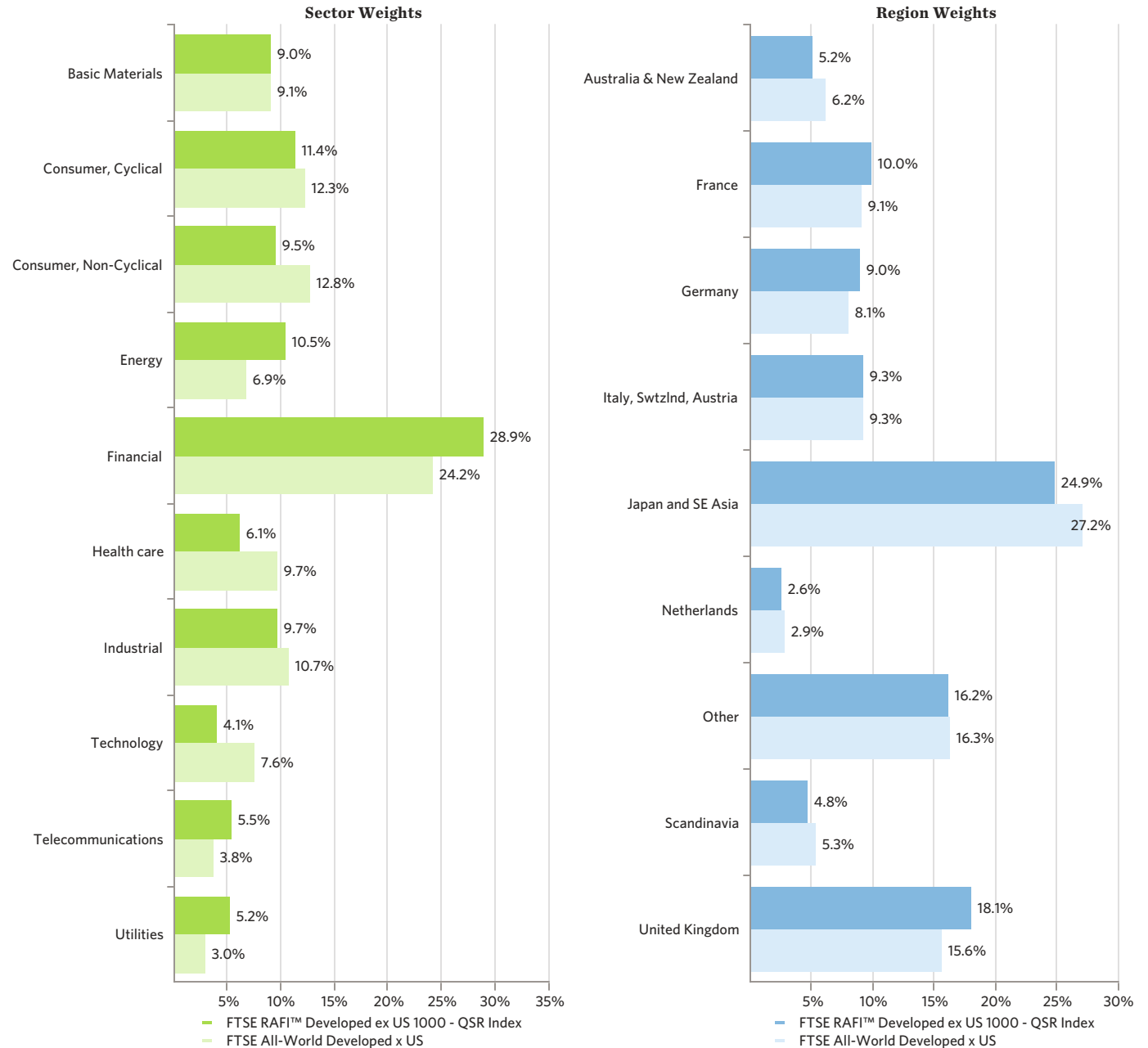
i. Exhibit 3.  
Portfolio characteristics data derived from FactSet.  
\*Sharpe Ratio, Information Ratio, and Tracking Error are calculated starting the first full month of returns following March 18, 2013. Minimum 1-year return history. The 3-mo US Treasury Bill return is used as a proxy for risk-free rate. If applicable, strategy returns prior to inception are simulated. Inception date is March 18, 2013.

ii. Exhibit 4.  
Portfolio characteristics derived from FactSet. Data prior to strategy inception is simulated. Strategy inception is March 18, 2013.

# Current Position

**Exhibit 5:**  
Sector and Region Weights

**Exhibit 5: Sector and Region Weights<sup>i</sup>**



<sup>i</sup>. Exhibit 5.  
Portfolio characteristics data derived from FactSet.



## Current Position

Exhibit 6:  
Top 10 Holdings

Exhibit 7:  
Top Over/Underweights

### Exhibit 6: Top 10 Holdings<sup>i</sup>

FTSE RAFI™ Developed ex US 1000 - QSR Index vs. FTSE All World Series Developed Ex US					
Index	Weights	1-Yr Perf.	Benchmark	Weights	1-Yr Perf.
Royal Dutch Shell	2.7%	20.8%	Royal Dutch Shell	1.7%	20.8%
BP	1.6%	27.1%	Nestle	1.5%	3.6%
Total	1.5%	27.9%	Samsung Electronics	1.3%	-2.9%
HSBC	1.4%	-6.6%	Novartis	1.1%	5.4%
Toyota	1.2%	7.3%	HSBC	1.0%	-6.6%
Samsung Electronics	1.2%	-2.9%	Roche Holding	1.0%	-0.7%
Nestle	1.1%	3.6%	Total	0.9%	27.9%
Banco Santander	1.1%	-25.0%	Toyota	0.9%	7.3%
BHP Billiton	0.9%	31.7%	BP	0.9%	27.1%
Allianz	0.9%	5.5%	Unilever	0.8%	-1.3%

### Exhibit 7: Top Over/Underweights<sup>i</sup>

FTSE RAFI™ Developed ex US 1000 - QSR Index vs. FTSE All World Series Developed Ex US					
Top Overweights	Active Weights	1-Yr Total Effect	Top Underweights	Active Weights	1-Yr Total Effect
Royal Dutch Shell	1.1%	0.2%	SAP	-0.4%	0.0%
BP	0.7%	0.2%	Nestle	-0.4%	0.0%
Banco Santander	0.6%	-0.2%	ASML Holding NV	-0.4%	0.0%
Total	0.5%	0.1%	AIA Group Limited	-0.4%	-0.1%
ENI	0.5%	0.1%	Roche Holding	-0.3%	0.0%
Daimler	0.4%	-0.1%	Unilever	-0.3%	0.0%
Telefonica	0.4%	-0.1%	CSL Limited	-0.3%	-0.1%
Vodafone	0.4%	-0.1%	LVMH	-0.3%	-0.1%
HSBC	0.3%	0.0%	Novo Nordisk	-0.3%	0.0%
Allianz	0.3%	0.0%	Keyence Corporation	-0.3%	0.0%

i. Exhibit 6, Exhibit 7.

Portfolio characteristics and securities data derived from FactSet. 1-Yr Total Effect is calculated using a holdings based attribution, and measures the impact that a security had on relative performance. It is a function of the active weight of a company as well as that company's performance versus the overall benchmark.



## Attribution

Exhibit 8:  
Sector Attribution

Exhibit 9:  
Region Attribution

### Exhibit 8: Sector Attribution<sup>i</sup>

1-Quarter Ending 09/30/2018

Sector	Portfolio Weight	Bench. Weight	Sector Excess Return	Allocation Effect	Selection + Interaction Effect	Total Effect
Basic Materials	9.04%	9.10%	-1.38%	0.00%	0.02%	0.02%
Consumer, Cyclical	11.39%	12.29%	-1.26%	0.01%	0.00%	0.01%
Consumer, Non-Cyclical	9.52%	12.76%	-1.37%	0.06%	0.02%	0.08%
Energy	10.47%	6.87%	1.67%	0.03%	0.08%	0.10%
Financial	28.94%	24.20%	0.06%	-0.01%	0.05%	0.04%
Health care	6.12%	9.71%	4.81%	-0.15%	0.06%	-0.10%
Industrial	9.73%	10.70%	1.89%	-0.01%	0.04%	0.03%
Technology	4.12%	7.55%	0.65%	0.02%	0.04%	0.06%
Telecommunications	5.45%	3.78%	0.94%	0.06%	-0.13%	-0.07%
Utilities	5.22%	3.04%	-2.71%	-0.07%	0.02%	-0.05%
Excess Return						0.13%

1-Year Ending 09/30/2018

Sector	Portfolio Weight	Bench. Weight	Sector Excess Return	Allocation Effect	Selection + Interaction Effect	Total Effect
Basic Materials	9.04%	9.10%	1.20%	0.00%	0.11%	0.11%
Consumer, Cyclical	11.39%	12.29%	-1.75%	0.00%	-0.29%	-0.30%
Consumer, Non-Cyclical	9.52%	12.76%	-1.02%	0.03%	-0.03%	-0.01%
Energy	10.47%	6.87%	18.15%	0.55%	0.43%	0.98%
Financial	28.94%	24.20%	-7.38%	-0.22%	-0.71%	-0.93%
Health care	6.12%	9.71%	3.50%	-0.18%	-0.10%	-0.28%
Industrial	9.73%	10.70%	0.29%	-0.01%	-0.04%	-0.05%
Technology	4.12%	7.55%	-0.59%	-0.11%	-0.17%	-0.27%
Telecommunications	5.45%	3.78%	-7.16%	-0.06%	-0.14%	-0.20%
Utilities	5.22%	3.04%	-3.56%	-0.09%	0.02%	-0.06%
Excess Return						-1.00%

### Exhibit 9: Region Attribution<sup>i</sup>

1-Quarter Ending 09/30/2018

Region	Portfolio Weight	Bench. Weight	Country Excess Return	Allocation Effect	Selection + Interaction Effect	Total Effect
Australia & New Zealand	5.18%	6.23%	-1.64%	0.02%	0.01%	0.03%
France	9.98%	9.08%	2.50%	0.01%	0.05%	0.06%
Germany	9.00%	8.06%	-1.12%	-0.02%	0.06%	0.04%
Italy, SwtZlnd, Austria	9.31%	9.31%	1.17%	0.00%	-0.11%	-0.11%
Japan and SE Asia	24.85%	27.19%	3.13%	-0.04%	0.28%	0.24%
Netherlands	2.62%	2.89%	-0.33%	0.01%	0.02%	0.03%
Other	16.23%	16.29%	-1.38%	0.00%	-0.05%	-0.05%
Scandinavia	4.79%	5.34%	4.74%	-0.02%	0.05%	0.03%
United Kingdom	18.06%	15.61%	-3.84%	-0.09%	-0.05%	-0.14%
Excess Return						0.13%

1-Year Ending 09/30/2018

Region	Portfolio Weight	Bench. Weight	Country Excess Return	Allocation Effect	Selection + Interaction Effect	Total Effect
Australia & New Zealand	5.18%	6.23%	-0.04%	-0.01%	-0.08%	-0.09%
France	9.98%	9.08%	-2.49%	0.02%	-0.45%	-0.43%
Germany	9.00%	8.06%	-9.78%	-0.09%	-0.19%	-0.28%
Italy, SwtZlnd, Austria	9.31%	9.31%	-5.61%	0.00%	-0.22%	-0.21%
Japan and SE Asia	24.85%	27.19%	5.90%	-0.16%	-0.04%	-0.20%
Netherlands	2.62%	2.89%	-2.15%	0.01%	0.03%	0.05%
Other	16.23%	16.29%	-5.78%	0.01%	-0.33%	-0.31%
Scandinavia	4.79%	5.34%	1.18%	0.01%	0.11%	0.11%
United Kingdom	18.06%	15.61%	1.60%	-0.01%	0.38%	0.36%
Excess Return						-1.00%

i. Exhibit 8, Exhibit 9. Portfolio characteristics and securities data derived from FactSet. The attributions have been normalized to match the return of the strategy, as presented in the performance table on page 2. Data prior to strategy inception is simulated. Strategy inception is March 18, 2013.

## Disclosures

Source: FactSet based on data from FTSE Russell.

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Prior to 11/1/2016, the 1-yr performance values reported in the Top 10 Holdings exhibit and the Top Over/Underweights exhibit were incorrect. The calculation has been modified to report the appropriate values moving forward.

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