

## Revisiting Core Principles

The FTSE RAFI 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 Europe Index is comprised of the European stocks represented amongst the constituents of the FTSE RAFI Developed ex US 1000 Index. The constituents within the FTSE RAFI Europe Index are derived from the following countries: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

## Performance

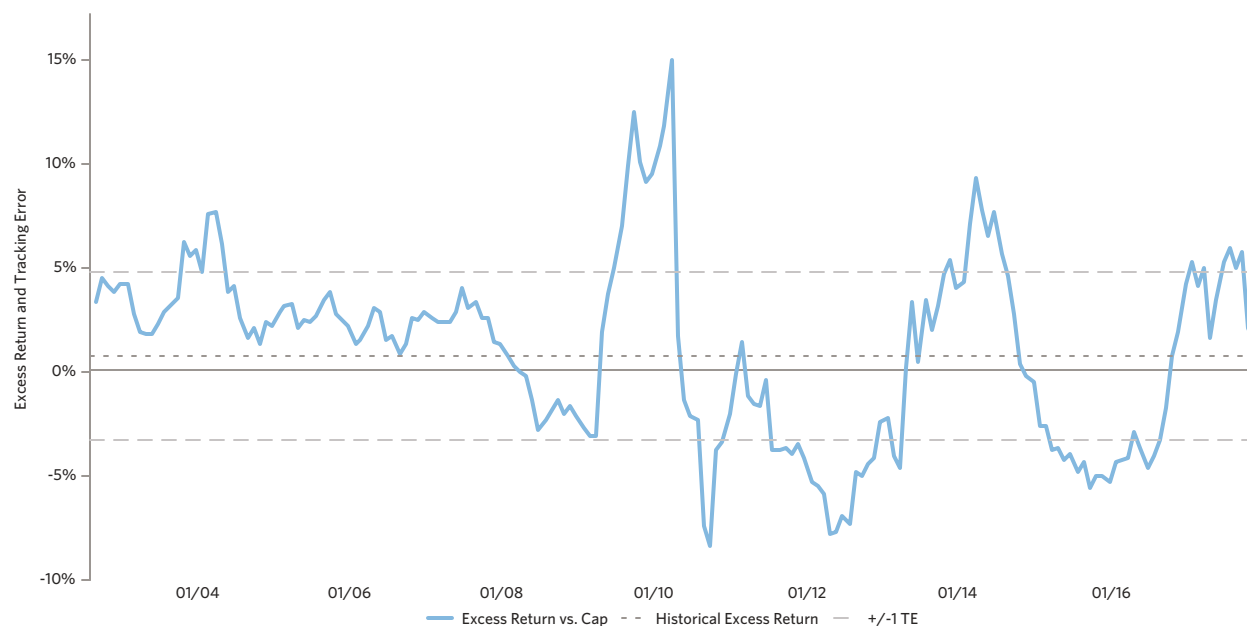
**Exhibit 1:**  
Performance Table

**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™ Europe Index	1.0%	11.2%	7.5%	10.6%	3.7%	5.0%
FTSE All World Series Europe Index	0.8%	11.1%	7.8%	10.2%	4.1%	5.1%
Value Added	0.2%	0.1%	-0.3%	0.4%	-0.4%	-0.1%
MSCI Europe	0.7%	10.9%	7.6%	10.0%	4.0%	5.0%
Portfolio Standard Deviation		7.0%	13.9%	12.5%	18.3%	17.4%
Benchmark Standard Deviation		7.3%	13.1%	11.4%	15.5%	14.7%
Tracking Error		1.9%	3.2%	3.1%	4.9%	4.5%

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



i. Exhibit 1.  
Performance derived from FactSet. All returns are total returns in EUR. 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 May 4, 2006.

ii. Exhibit 2.  
Performance derived from FactSet. All returns are total returns in EUR. Rolling 1-year excess returns and tracking error are calculated starting September 30, 2001.  
If applicable, strategy returns prior to inception are simulated. Inception date is May 4, 2006.

## The Value Premium

The strategy invests broadly across the entire economy; however a byproduct of the strategy's rebalancing process is a value tilt.

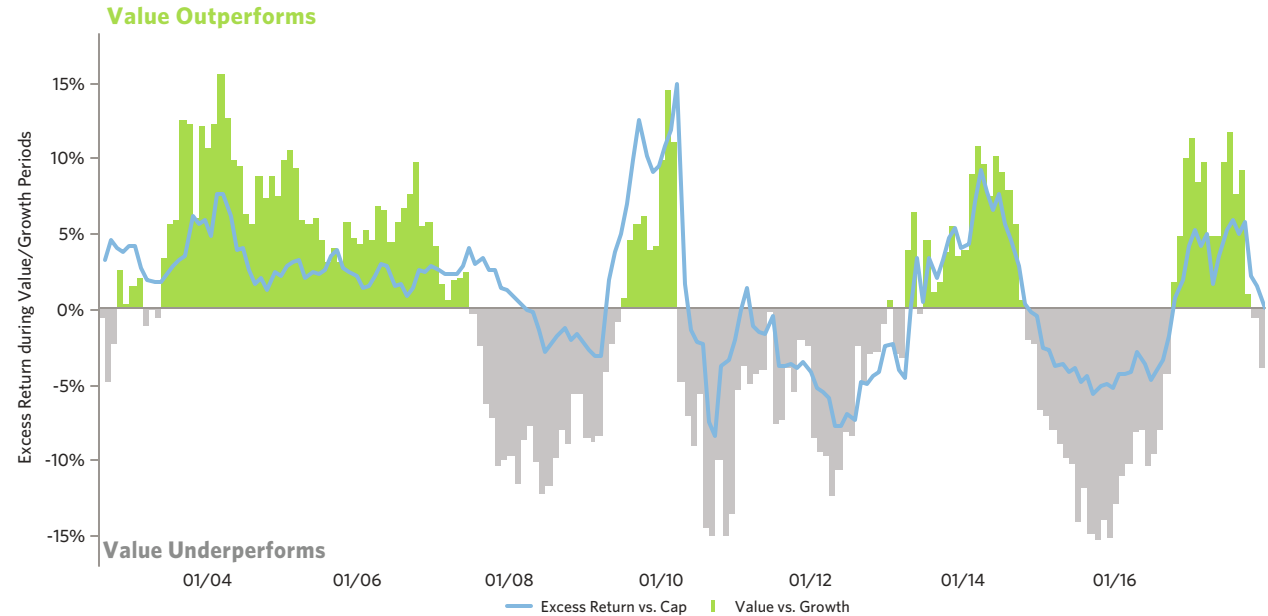
On a one-year rolling basis, the FTSE RAFI™ Europe Index outperformed 99% of the time when value won and 24% of the time when growth won.

Generally, excess returns were achieved by taking advantage of mean reversion in stock prices which can sometimes take several years to run its course.

The FTSE RAFI™ Europe Index delivered consistent outperformance over full market cycles, with positive excess returns in 62% of rolling 1-year periods, 61% of rolling 3-year periods, and 55% of rolling 5-year periods.

### Exhibit 3: Rolling 1-Year Excess Returns

Exhibit 3: Rolling 1-Year Excess Returns<sup>i</sup>



i. Exhibit 3.  
FTSE RAFI™ Europe Index rolling 1-year excess returns are measured against FTSE All World Series Europe Index. Value / Growth periods measured by rolling 1-year excess returns of MSCI Europe Value vs. MSCI Europe Growth. Calculation starts on September 30, 2001. Strategy returns prior to inception are simulated. Strategy inception is May 4, 2006.

## Portfolio Characteristics

The FTSE RAFI™ Europe Index is attractively positioned relative to the cap-weighted benchmark.

**Exhibit 4:**  
Portfolio Characteristics

**Exhibit 5:**  
Historical Portfolio Characteristics

## Exhibit 4: 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™ Europe Index	478	26.1	0.9	6.6	1.5	3.5%	73	0.20	-0.03	4.5%
FTSE All-World Developed Europe	554	--	1.3	8.8	1.9	3.1%	75	0.24	--	--

## Exhibit 5: Historical Portfolio Characteristics<sup>ii</sup>

**Price to Book**



**Dividend Yield (%)**



**Price to Cash Flow**



**Price to Sales**



— FTSE RAFI™ Europe Index (Left) — FTSE All-World Developed Europe (Left)

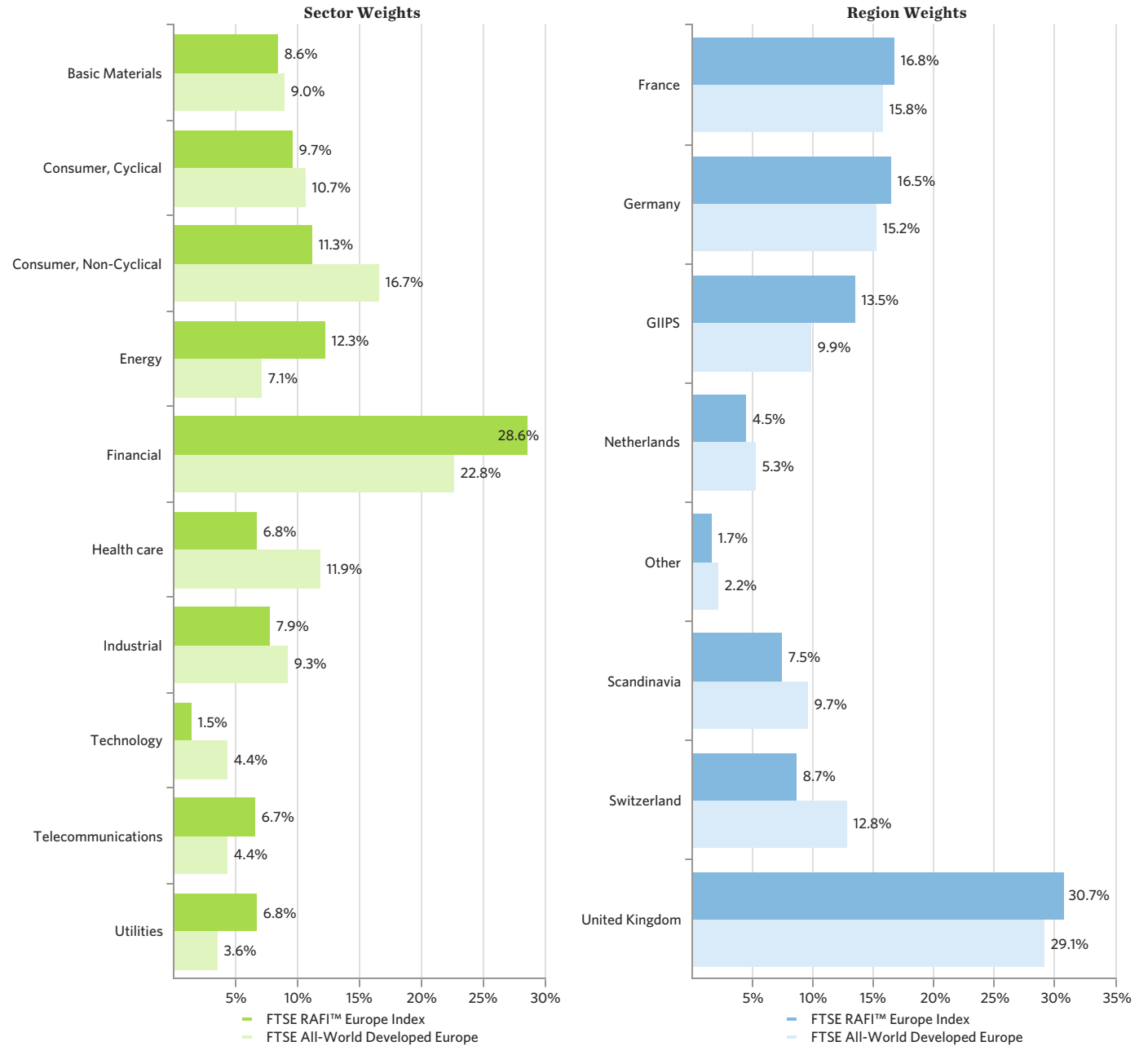
i. Exhibit 4.  
Portfolio characteristics data derived from FactSet.  
\*Sharpe Ratio, Information Ratio, and Tracking Error are calculated starting the first full month of returns following May 4, 2006. Minimum 1-year return history. The 3-mo US Treasury Bill return is used as a proxy for risk-free rate. If applicable, strategy returns prior to inception are simulated. Inception date is May 4, 2006.

ii. Exhibit 5.  
Portfolio characteristics derived from FactSet. Data prior to strategy inception is simulated. Strategy inception is May 4, 2006.

# Current Position

## Exhibit 6: Sector and Region Weights<sup>i</sup>

**Exhibit 6:**  
Sector and Region Weights



i. Exhibit 6.  
Portfolio characteristics data derived from FactSet.



## Current Position

Exhibit 7:  
Top 10 Holdings

Exhibit 8:  
Top Over/Underweights

### Exhibit 7: Top 10 Holdings<sup>i</sup>

FTSE RAFI™ Europe Index vs. FTSE All World Series Europe Index					
Index	Weights	1-Yr Perf.	Benchmark	Weights	1-Yr Perf.
Royal Dutch Shell	4.5%	12.0%	Royal Dutch Shell	2.9%	12.0%
BP	2.9%	5.5%	Nestle	2.8%	8.2%
HSBC	2.6%	20.7%	HSBC	2.2%	20.7%
Banco Santander	2.2%	17.1%	Novartis	1.9%	5.2%
Total	2.1%	-0.1%	Roche Holding	1.9%	-0.3%
Nestle	1.7%	8.2%	British American Tobacco	1.6%	10.2%
Vodafone	1.6%	20.1%	Unilever	1.6%	24.4%
Allianz	1.5%	28.2%	BP	1.4%	5.5%
Daimler	1.4%	5.3%	Total	1.3%	-0.1%
Novartis	1.4%	5.2%	Siemens	1.1%	3.0%

### Exhibit 8: Top Over/Underweights<sup>i</sup>

FTSE RAFI™ Europe Index vs. FTSE All World Series Europe Index					
Top Overweights	Active Weights	1-Yr Total Effect	Top Underweights	Active Weights	1-Yr Total Effect
Royal Dutch Shell	1.6%	0.0%	Nestle	-1.1%	0.0%
BP	1.5%	-0.1%	British American Tobacco	-0.9%	0.0%
Banco Santander	1.1%	0.1%	Roche Holding	-0.9%	0.1%
Total	0.8%	-0.1%	SAP	-0.7%	0.0%
Vodafone	0.7%	0.1%	Unilever	-0.6%	-0.1%
E.ON	0.7%	0.2%	Novartis	-0.6%	0.0%
ENI	0.6%	-0.1%	Novo Nordisk	-0.6%	-0.1%
Daimler	0.6%	0.0%	Anheuser-Busch InBev SA/NV	-0.5%	0.1%
ENGIE	0.6%	0.1%	Diageo	-0.5%	-0.1%
Volkswagen AG Pref	0.5%	0.1%	ASML Holding NV	-0.4%	-0.1%

i. Exhibit 7, Exhibit 8.  
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 9: Sector Attribution

### Exhibit 10: Region Attribution

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

1-Quarter Ending 12/31/2017

Sector	Portfolio Weight	Bench. Weight	Sector Excess Return	Allocation Effect	Selection + Interaction Effect	Total Effect
Basic Materials	8.55%	9.03%	4.78%	-0.02%	0.10%	0.08%
Consumer, Cyclical	9.66%	10.68%	2.20%	0.00%	0.17%	0.17%
Consumer, Non-Cyclical	11.27%	16.71%	1.68%	-0.08%	0.02%	-0.07%
Energy	12.25%	7.13%	6.18%	0.33%	-0.06%	0.27%
Financial	28.56%	22.76%	-2.02%	-0.08%	-0.18%	-0.26%
Health care	6.84%	11.93%	-5.37%	0.21%	-0.10%	0.11%
Industrial	7.87%	9.25%	-0.26%	0.01%	0.05%	0.07%
Technology	1.54%	4.43%	-0.62%	-0.07%	-0.05%	-0.12%
Telecommunications	6.68%	4.44%	-0.59%	-0.06%	0.13%	0.07%
Utilities	6.79%	3.64%	-3.66%	-0.12%	-0.01%	-0.13%
Excess Return						0.20%

1-Year Ending 12/31/2017

Sector	Portfolio Weight	Bench. Weight	Sector Excess Return	Allocation Effect	Selection + Interaction Effect	Total Effect
Basic Materials	8.55%	9.03%	8.75%	-0.01%	0.09%	0.08%
Consumer, Cyclical	9.66%	10.68%	2.45%	0.01%	0.09%	0.10%
Consumer, Non-Cyclical	11.27%	16.71%	-2.01%	0.02%	-0.07%	-0.05%
Energy	12.25%	7.13%	-6.67%	-0.28%	0.14%	-0.14%
Financial	28.56%	22.76%	1.39%	0.10%	-0.10%	0.01%
Health care	6.84%	11.93%	-7.94%	0.39%	-0.29%	0.10%
Industrial	7.87%	9.25%	7.84%	-0.08%	0.10%	0.03%
Technology	1.54%	4.43%	12.91%	-0.42%	0.26%	-0.15%
Telecommunications	6.68%	4.44%	-6.89%	-0.20%	0.20%	0.00%
Utilities	6.79%	3.64%	5.81%	-0.04%	0.19%	0.14%
Excess Return						0.10%

### Exhibit 10: Region Attribution<sup>i</sup>

1-Quarter Ending 12/31/2017

Region	Portfolio Weight	Bench. Weight	Country Excess Return	Allocation Effect	Selection + Interaction Effect	Total Effect
France	16.81%	15.77%	-1.97%	-0.01%	-0.17%	-0.18%
Germany	16.54%	15.23%	1.26%	0.01%	0.10%	0.11%
GIIPS	13.51%	9.87%	-5.10%	-0.15%	-0.15%	-0.29%
Netherlands	4.45%	5.34%	1.27%	0.01%	0.08%	0.09%
Other	1.71%	2.21%	-0.51%	0.01%	0.03%	0.04%
Scandinavia	7.53%	9.68%	-3.33%	0.08%	0.01%	0.08%
Switzerland	8.73%	12.81%	-0.23%	0.01%	0.01%	0.02%
United Kingdom	30.72%	29.09%	4.40%	0.05%	0.29%	0.33%
Excess Return						0.20%

1-Year Ending 12/31/2017

Region	Portfolio Weight	Bench. Weight	Country Excess Return	Allocation Effect	Selection + Interaction Effect	Total Effect
France	16.81%	15.77%	1.11%	0.04%	-0.24%	-0.20%
Germany	16.54%	15.23%	5.75%	0.03%	0.27%	0.30%
GIIPS	13.51%	9.87%	1.04%	0.08%	-0.12%	-0.03%
Netherlands	4.45%	5.34%	6.38%	-0.04%	0.05%	0.01%
Other	1.71%	2.21%	7.25%	0.01%	0.09%	0.10%
Scandinavia	7.53%	9.68%	-4.43%	0.00%	-0.21%	-0.21%
Switzerland	8.73%	12.81%	-3.86%	0.10%	-0.13%	-0.04%
United Kingdom	30.72%	29.09%	-2.44%	-0.05%	0.22%	0.17%
Excess Return						0.10%

i. Exhibit 9, Exhibit 10. 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 May 4, 2006.

## 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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