

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 Developed 1000 Index is comprised of the largest 1,000 developed country companies by RAFI fundamental score.

Performance

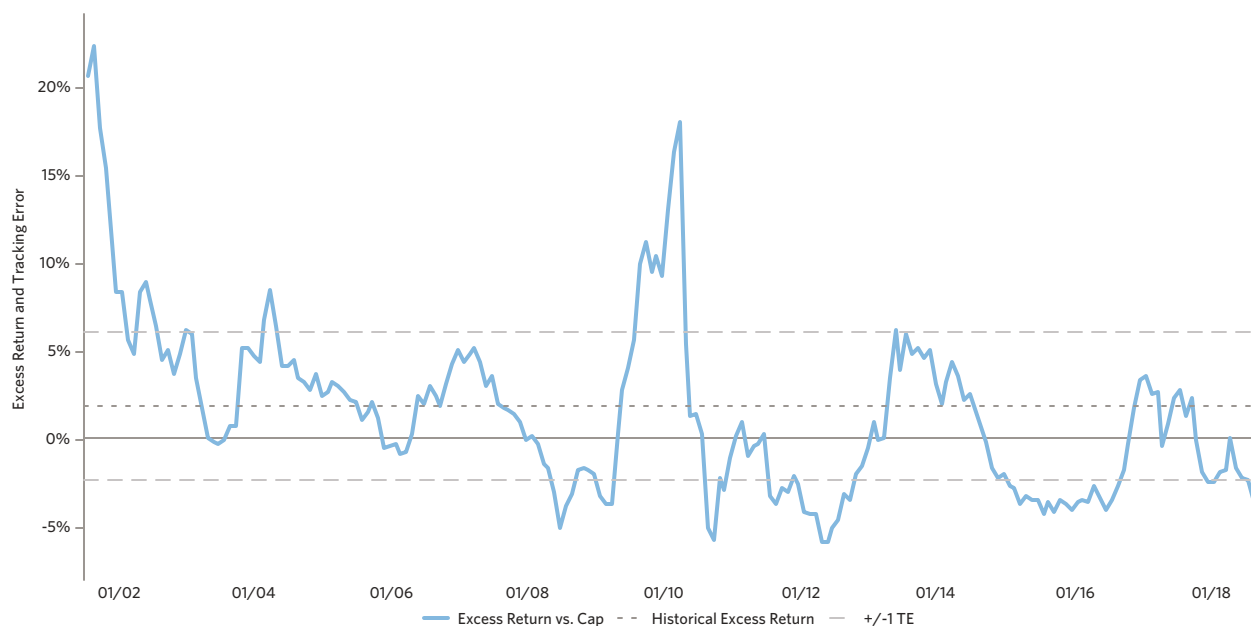
Exhibit 1:
Performance Table

Exhibit 2:
Rolling 1-Year Excess Returns

Exhibit 1: Performance Tableⁱ

	QTD	1-Yr	3-Yr	5-Yr	10-Yr	ITD*
FTSE RAFI™ Developed 1000 Index	4.0%	7.6%	13.0%	8.1%	8.7%	5.2%
FTSE All World Developed Index	4.9%	11.5%	14.3%	9.8%	9.2%	5.8%
Value Added	-0.9%	-4.0%	-1.2%	-1.7%	-0.5%	-0.7%
MSCI Daily Total Return Gross World	5.1%	11.8%	14.2%	9.9%	9.2%	5.8%
Portfolio Standard Deviation		9.0%	9.9%	10.3%	17.9%	18.0%
Benchmark Standard Deviation		8.2%	9.2%	9.6%	15.5%	15.9%
Tracking Error		2.9%	2.9%	2.5%	4.3%	4.2%

Exhibit 2: Rolling 1-Year Excess Returnsⁱⁱ



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 August 6, 2007.

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 August 31, 2000. If applicable, strategy returns prior to inception are simulated. Inception date is August 6, 2007.

The Value Premium

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

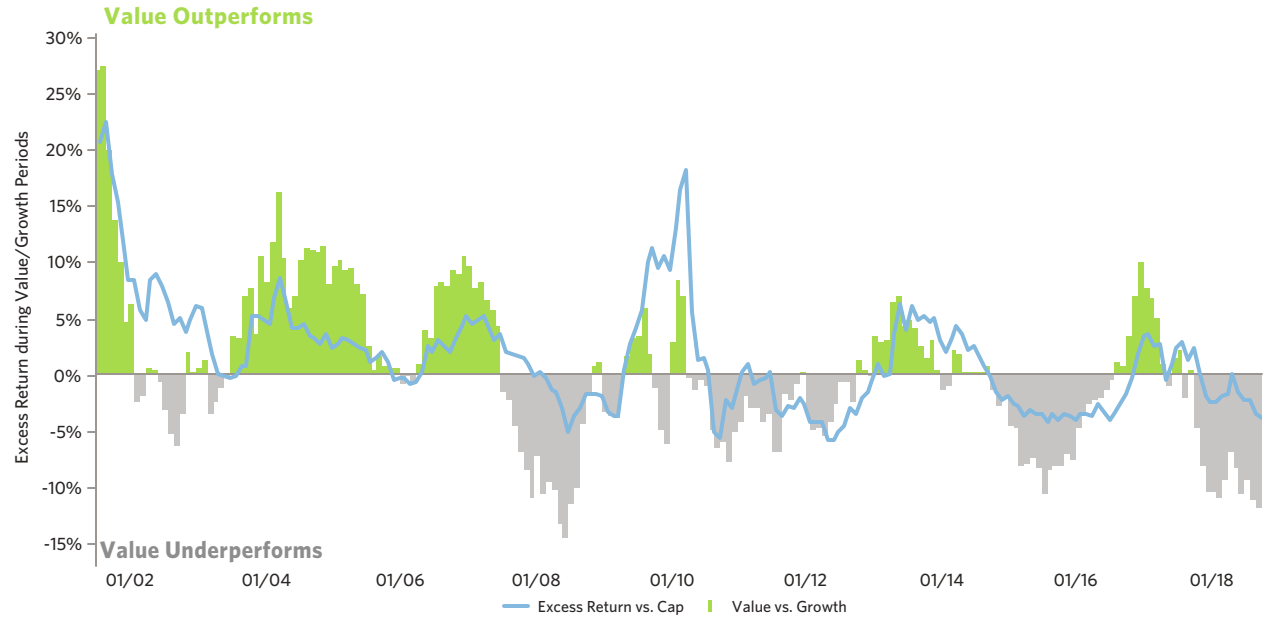
On a one-year rolling basis, the FTSE RAFI™ Developed 1000 Index outperformed 86% of the time when value won and 30% of the time when growth won.

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™ Developed 1000 Index delivered consistent outperformance over full market cycles, with positive excess returns in 57% of rolling 1-year periods, 62% of rolling 3-year periods, and 58% of rolling 5-year periods.

Exhibit 3: Rolling 1-Year Excess Returns

Exhibit 3: Rolling 1-Year Excess Returnsⁱ



ⁱ Exhibit 3.
FTSE RAFI™ Developed 1000 Index rolling 1-year excess returns are measured against FTSE All World Developed Index. Value / Growth periods measured by rolling 1-year excess returns of MSCI The World Index Value vs. MSCI The World Index Growth. Calculation starts on August 31, 2000. Strategy returns prior to inception are simulated. Strategy inception is August 6, 2007.

Portfolio Characteristics

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

[Exhibit 4:](#)
Portfolio Characteristics

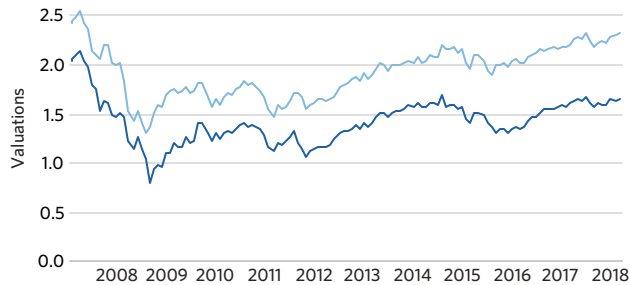
[Exhibit 5:](#)
Historical Portfolio Characteristics

Exhibit 4: Portfolio Characteristicsⁱ

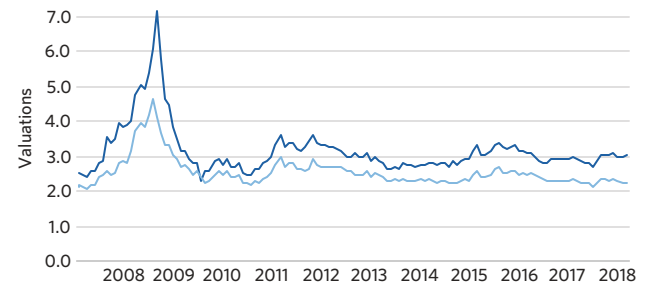
	Number of Holdings	Active Share	Price to Sales	Price to Cash Flow	Price to Book	Div. Yield	Market Cap. (Billions)	Sharpe Ratio*	Info. Ratio*	Tracking Error*
FTSE RAFI™ Developed 1000 Index	1021	31.8	1.0	7.6	1.7	3.0%	125	0.26	-0.16	4.2%
FTSE All-World Developed	2196	--	1.7	11.0	2.3	2.3%	160	0.33	--	--

Exhibit 5: Historical Portfolio Characteristicsⁱⁱ

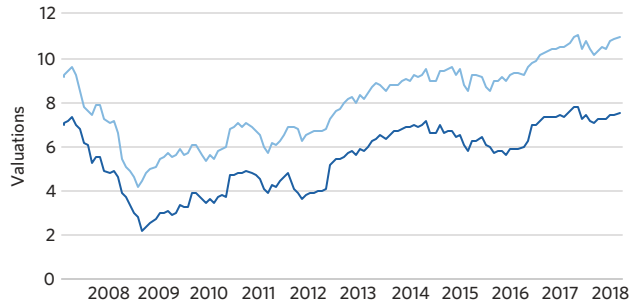
Price to Book



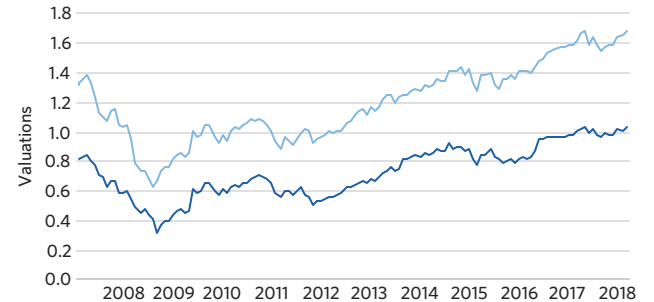
Dividend Yield (%)



Price to Cash Flow



Price to Sales



— FTSE RAFI™ Developed 1000 Index (Left) — FTSE All-World Developed (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 August 6, 2007. 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 August 6, 2007.

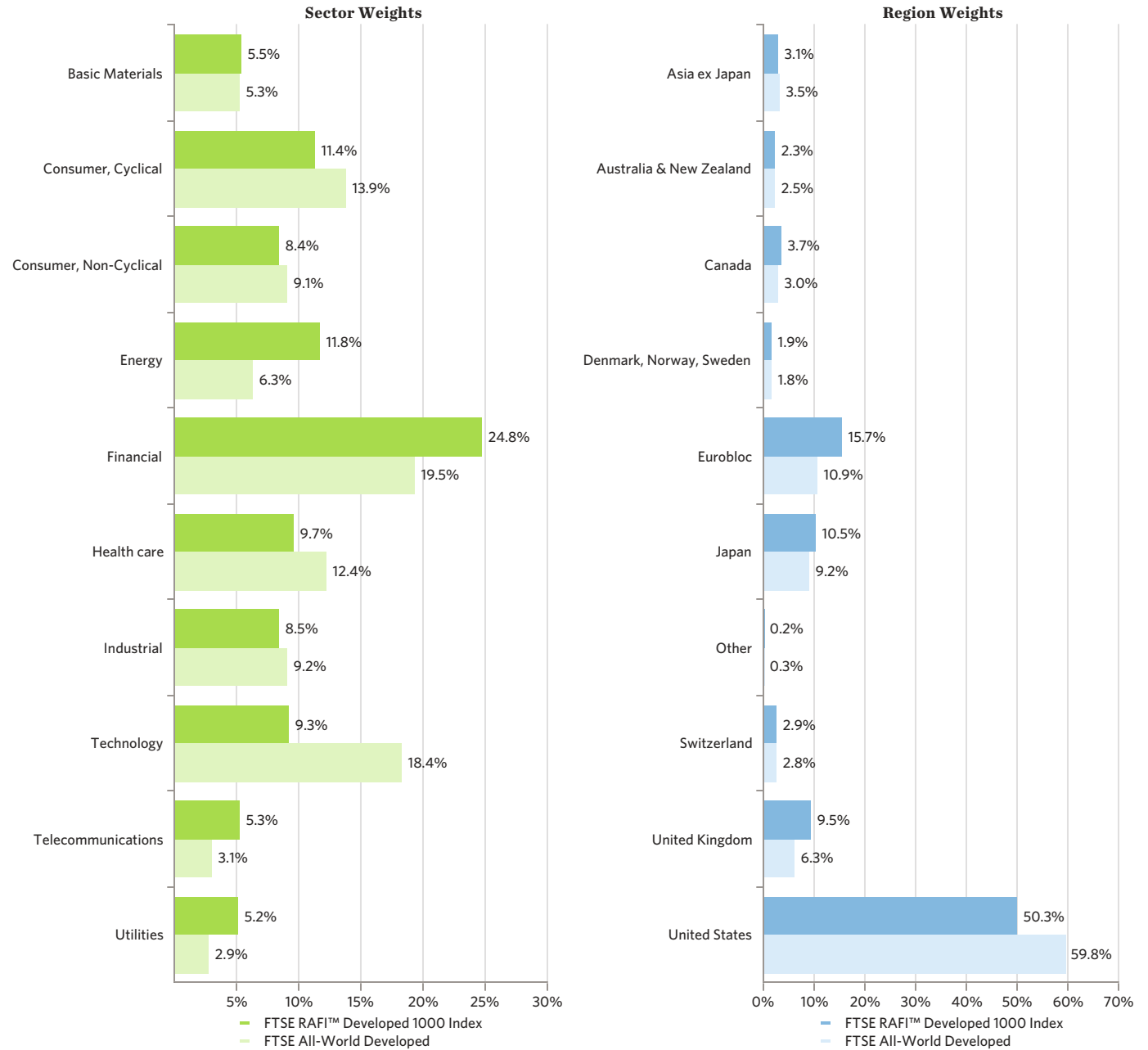
ii. Exhibit 5.
Portfolio characteristics derived from FactSet. Data prior to strategy inception is simulated. Strategy inception is August 6, 2007.



Current Position

Exhibit 6: Sector and Region Weightsⁱ

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 Holdingsⁱ

FTSE RAFI™ Developed 1000 Index vs. FTSE All World Developed Index					
Index	Weights	1-Yr Perf.	Benchmark	Weights	1-Yr Perf.
Apple	1.7%	49.5%	Apple	2.5%	49.5%
Royal Dutch Shell	1.6%	20.8%	Microsoft	2.0%	57.6%
Exxon Mobil	1.6%	7.6%	Amazon	1.9%	109.4%
Chevron	1.1%	7.9%	Alphabet	1.7%	25.4%
Berkshire Hathaway	1.1%	16.7%	Berkshire Hathaway	1.0%	16.7%
AT&T	1.1%	-9.1%	Facebook, Inc. Class A	0.9%	-2.5%
JPMorgan Chase	1.0%	20.9%	JPMorgan Chase	0.9%	20.9%
Microsoft	0.9%	57.6%	Johnson & Johnson	0.9%	9.6%
BP	0.9%	27.1%	Exxon Mobil	0.8%	7.6%
Total	0.9%	27.9%	Royal Dutch Shell	0.7%	20.8%

Exhibit 8: Top Over/Underweightsⁱ

FTSE RAFI™ Developed 1000 Index vs. FTSE All World Developed Index					
Top Overweights	Active Weights	1-Yr Total Effect	Top Underweights	Active Weights	1-Yr Total Effect
Royal Dutch Shell	1.0%	0.1%	Amazon	-1.6%	-0.7%
Exxon Mobil	0.8%	0.0%	Alphabet	-1.1%	-0.1%
BP	0.6%	0.1%	Microsoft	-1.1%	-0.3%
Chevron	0.6%	0.0%	Apple	-0.9%	-0.3%
AT&T	0.5%	-0.1%	Facebook, Inc. Class A	-0.8%	0.1%
Total	0.5%	0.1%	Visa	-0.5%	-0.1%
HSBC	0.3%	-0.1%	MasterCard	-0.4%	-0.1%
Banco Santander	0.3%	-0.2%	Netflix, Inc.	-0.4%	-0.2%
General Electric	0.3%	-0.1%	NVIDIA Corporation	-0.4%	-0.1%
Verizon	0.3%	0.0%	Adobe Systems Incorporated	-0.3%	-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 Attributionⁱ

1-Quarter Ending 09/30/2018

Sector	Portfolio Weight	Bench. Weight	Sector Excess Return	Allocation Effect	Selection + Interaction Effect	Total Effect
Basic Materials	5.46%	5.32%	-4.60%	0.00%	0.02%	0.01%
Consumer, Cyclical	11.43%	13.90%	-2.50%	0.01%	-0.22%	-0.21%
Consumer, Non-Cyclical	8.44%	9.12%	-2.38%	0.02%	0.02%	0.03%
Energy	11.83%	6.32%	-2.53%	-0.20%	0.13%	-0.06%
Financial	24.82%	19.47%	-2.18%	-0.13%	0.07%	-0.06%
Health care	9.66%	12.35%	6.42%	-0.17%	0.01%	-0.16%
Industrial	8.52%	9.16%	0.35%	-0.01%	-0.10%	-0.11%
Technology	9.26%	18.41%	3.03%	-0.24%	0.04%	-0.19%
Telecommunications	5.34%	3.08%	0.87%	0.07%	-0.13%	-0.05%
Utilities	5.24%	2.88%	-4.68%	-0.10%	-0.02%	-0.13%
Excess Return						-0.93%

1-Year Ending 09/30/2018

Sector	Portfolio Weight	Bench. Weight	Sector Excess Return	Allocation Effect	Selection + Interaction Effect	Total Effect
Basic Materials	5.46%	5.32%	-6.39%	-0.02%	0.09%	0.07%
Consumer, Cyclical	11.43%	13.90%	-2.82%	-0.14%	-1.11%	-1.25%
Consumer, Non-Cyclical	8.44%	9.12%	-10.67%	0.11%	-0.11%	0.01%
Energy	11.83%	6.32%	9.09%	0.22%	0.46%	0.69%
Financial	24.82%	19.47%	-11.40%	-0.46%	-0.68%	-1.15%
Health care	9.66%	12.35%	2.96%	-0.11%	-0.04%	-0.15%
Industrial	8.52%	9.16%	-5.36%	0.02%	-0.13%	-0.11%
Technology	9.26%	18.41%	11.08%	-1.30%	-0.27%	-1.56%
Telecommunications	5.34%	3.08%	-11.12%	-0.17%	-0.12%	-0.29%
Utilities	5.24%	2.88%	-9.46%	-0.24%	0.05%	-0.20%
Excess Return						-3.95%

Exhibit 10: Region Attributionⁱ

1-Quarter Ending 09/30/2018

Region	Portfolio Weight	Bench. Weight	Country Excess Return	Allocation Effect	Selection + Interaction Effect	Total Effect
Asia ex Japan	3.05%	3.47%	-3.96%	0.02%	0.03%	0.05%
Australia & New Zealand	2.32%	2.51%	-5.74%	0.01%	0.00%	0.01%
Canada	3.68%	2.96%	-3.49%	-0.02%	0.00%	-0.02%
Denmark, Norway, Sweden	1.86%	1.76%	2.99%	0.00%	0.05%	0.05%
Eurobloc	15.74%	10.91%	-4.31%	-0.23%	0.07%	-0.16%
Japan	10.46%	9.21%	0.50%	-0.01%	0.18%	0.16%
Other	0.19%	0.32%	-7.97%	0.00%	-0.02%	-0.02%
Switzerland	2.89%	2.81%	1.96%	0.00%	0.00%	0.00%
United Kingdom	9.53%	6.28%	-7.26%	-0.23%	-0.04%	-0.26%
United States	50.26%	59.77%	1.52%	-0.24%	-0.49%	-0.74%
Excess Return						-0.93%

1-Year Ending 09/30/2018

Region	Portfolio Weight	Bench. Weight	Country Excess Return	Allocation Effect	Selection + Interaction Effect	Total Effect
Asia ex Japan	3.05%	3.47%	-10.58%	0.04%	-0.06%	-0.02%
Australia & New Zealand	2.32%	2.51%	-8.89%	0.00%	-0.05%	-0.05%
Canada	3.68%	2.96%	-7.85%	-0.04%	0.04%	0.00%
Denmark, Norway, Sweden	1.86%	1.76%	-9.92%	-0.02%	0.02%	0.00%
Eurobloc	15.74%	10.91%	-15.59%	-0.79%	-0.43%	-1.21%
Japan	10.46%	9.21%	-1.20%	-0.01%	-0.02%	-0.04%
Other	0.19%	0.32%	15.36%	0.00%	0.01%	0.01%
Switzerland	2.89%	2.81%	-10.01%	0.00%	-0.03%	-0.03%
United Kingdom	9.53%	6.28%	-6.49%	-0.30%	0.23%	-0.08%
United States	50.26%	59.77%	1.99%	-0.68%	-1.86%	-2.54%
Excess Return						-3.95%

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 August 6, 2007.

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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