

## 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 Emerging Markets Index is comprised of the largest 350 emerging markets companies by RAFI fundamental score.

## Performance

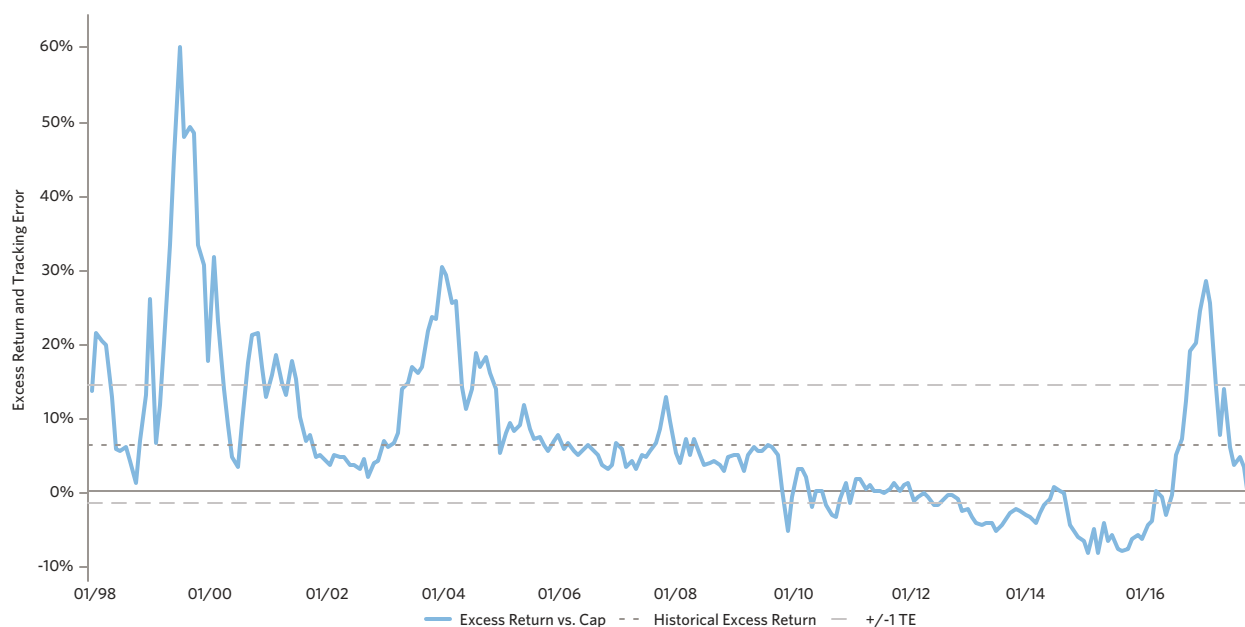
**Exhibit 1:**  
Performance Table

**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™ Emerging Markets Index	5.2%	15.9%	15.5%	7.4%	6.1%	7.4%
FTSE All Emerging Index	6.1%	21.1%	13.7%	8.5%	6.1%	7.2%
Value Added	-0.9%	-5.2%	1.8%	-1.1%	0.0%	0.2%
MSCI Emerging Markets	6.6%	25.8%	14.8%	8.6%	6.0%	7.2%
Portfolio Standard Deviation		12.9%	21.6%	19.2%	22.0%	22.1%
Benchmark Standard Deviation		10.8%	16.3%	15.0%	20.2%	20.3%
Tracking Error		4.1%	7.8%	6.5%	5.2%	5.1%

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



i. Exhibit 1.  
Performance derived from FactSet. All returns are total returns in GBP. 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 July 9, 2007.

ii. Exhibit 2.  
Performance derived from FactSet. All returns are total returns in GBP. Rolling 1-year excess returns and tracking error are calculated starting January 31, 1997. If applicable, strategy returns prior to inception are simulated. Inception date is July 9, 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.

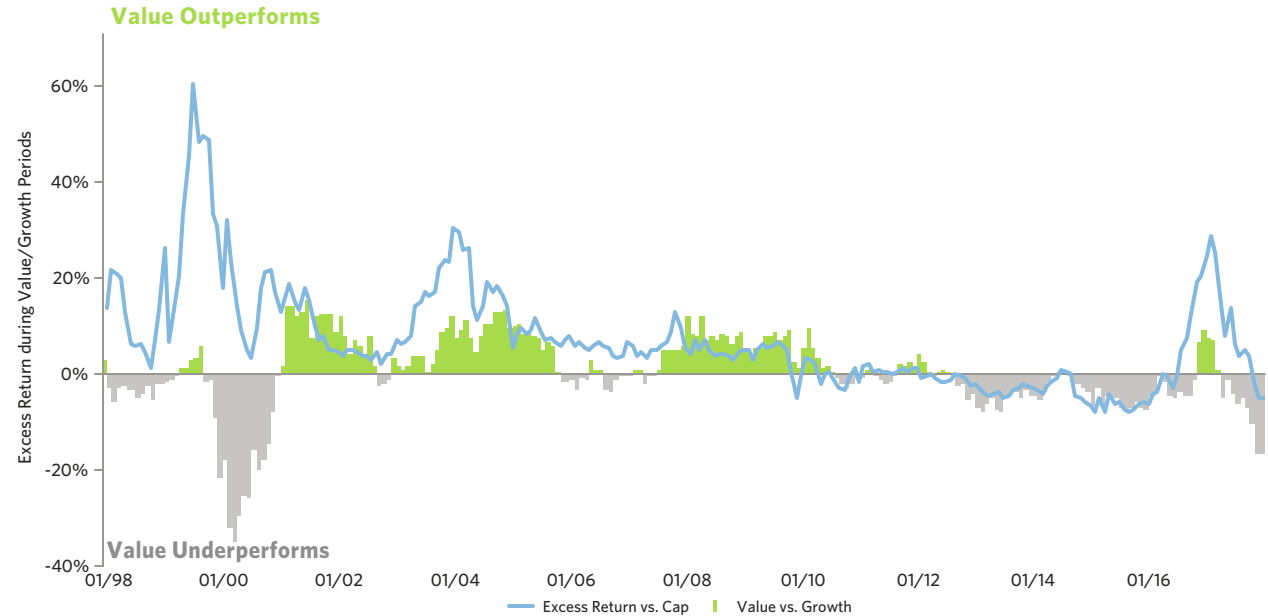
On a one-year rolling basis, the FTSE RAFI™ Emerging Markets Index outperformed 92% of the time when value won and 55% of the time when growth won.

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™ Emerging Markets Index delivered consistent outperformance over full market cycles, with positive excess returns in 73% of rolling 1-year periods, 71% of rolling 3-year periods, and 72% of rolling 5-year periods.

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

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



<sup>i</sup>. Exhibit 3.  
FTSE RAFI™ Emerging Markets Index rolling 1-year excess returns are measured against FTSE All Emerging Index. Value / Growth periods measured by rolling 1-year excess returns of MSCI EM Value vs. MSCI EM Growth. Calculation starts on January 31, 1997. Strategy returns prior to inception are simulated. Strategy inception is July 9, 2007.

## Portfolio Characteristics

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

**Exhibit 4:**  
Portfolio Characteristics

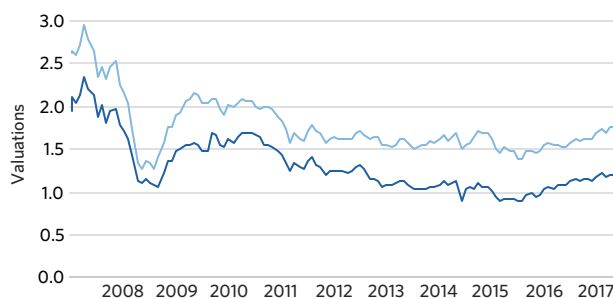
**Exhibit 5:**  
Historical Portfolio Characteristics

## Exhibit 4: Portfolio Characteristics<sup>i</sup>

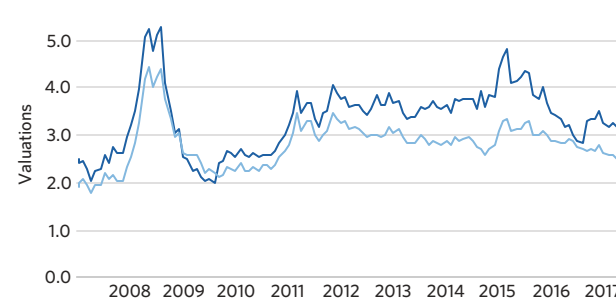
	Number of Holdings	Active Share	Price to Sales	Price to Cash Flow	Price to Book	Div. Yield	Market Cap. (Billions)	Sharpe Ratio*	Info. Ratio*	Tracking Error*
FTSE RAFI™ Emerging Markets Index	360	41.4	0.9	4.3	1.2	3.1%	63	0.13	0.03	5.1%
FTSE All-World Emerging	1030	--	1.5	6.6	1.8	2.4%	83	0.14	--	--

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

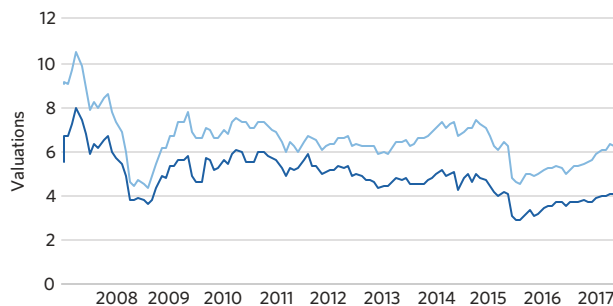
**Price to Book**



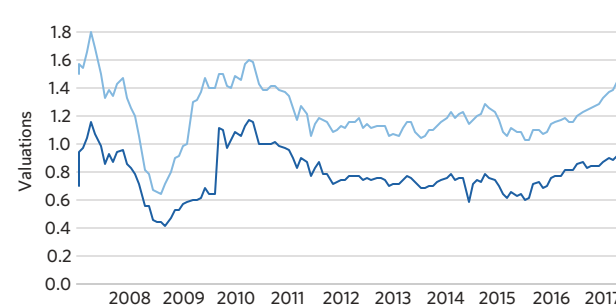
**Dividend Yield (%)**



**Price to Cash Flow**



**Price to Sales**



— FTSE RAFI™ Emerging Markets Index (Left) — FTSE All-World Emerging (Left)

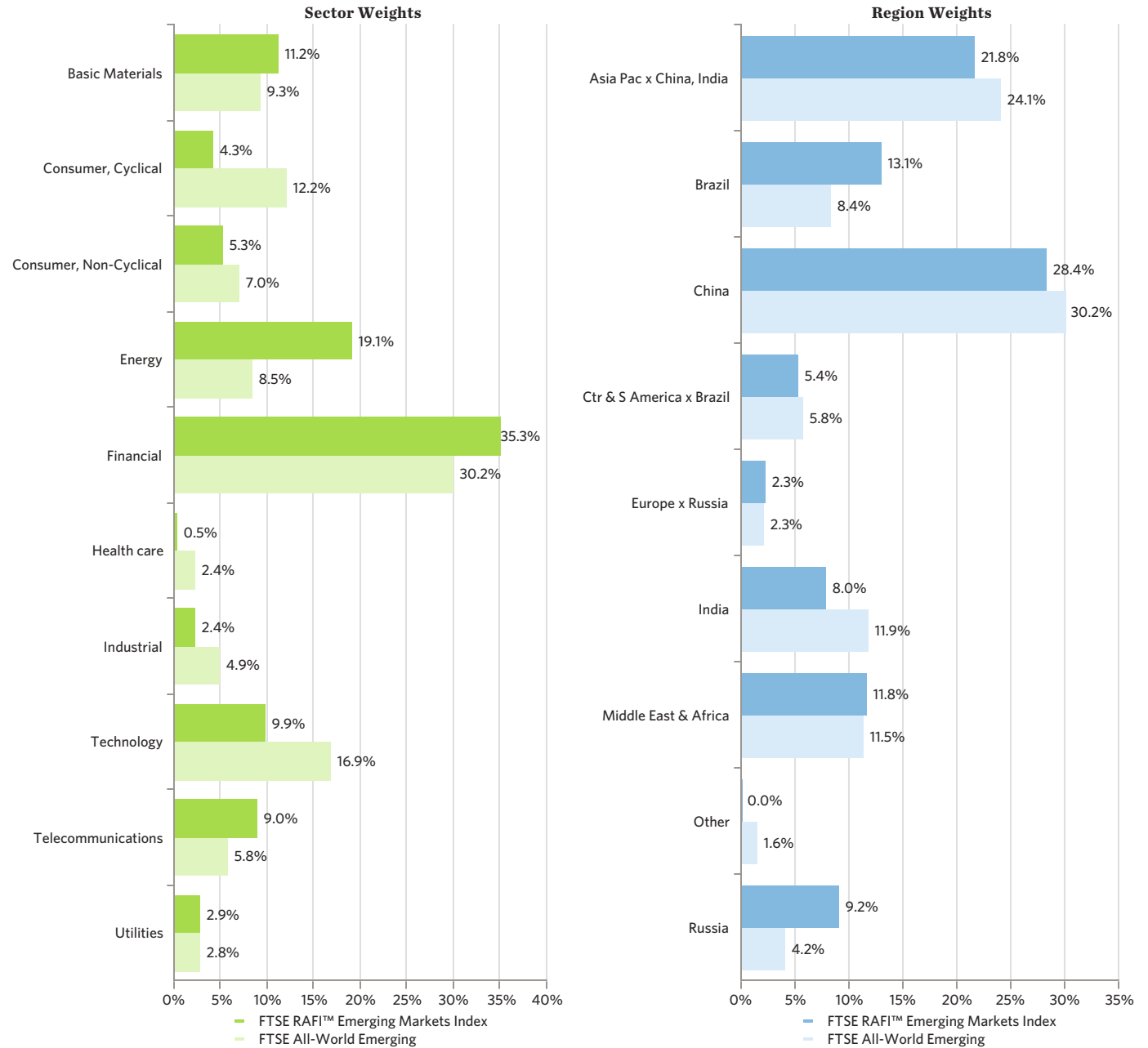
i. Exhibit 4.  
Portfolio characteristics data derived from FactSet.  
\*Sharpe Ratio, Information Ratio, and Tracking Error are calculated starting the first full month of returns following July 9, 2007. Minimum 1-year return history. The 3-mo US Treasury Bill return is used as a proxy for risk-free rate. If applicable, strategy returns prior to inception are simulated. Inception date is July 9, 2007.

ii. Exhibit 5.  
Portfolio characteristics derived from FactSet. Data prior to strategy inception is simulated. Strategy inception is July 9, 2007.

# Current Position

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

**Exhibit 6:**  
Sector and Region Weights



<sup>i</sup>. 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™ Emerging Markets Index vs. FTSE All Emerging Index					
Index	Weights	1-Yr Perf.	Benchmark	Weights	1-Yr Perf.
China Construction Bank	3.8%	15.3%	Tencent Holdings Ltd.	6.0%	94.5%
Ind. & Comm. Bank of China	2.8%	29.7%	Taiwan Semiconductor	4.0%	29.1%
Taiwan Semiconductor	2.8%	29.1%	Naspers Limited Class N	2.6%	68.2%
Petrobras	2.5%	-7.8%	Alibaba	2.0%	78.5%
PJSC Gazprom	2.5%	-13.2%	China Construction Bank	1.8%	15.3%
Oil company LUKOIL PJSC	1.9%	-1.0%	Ind. & Comm. Bank of China	1.4%	29.7%
Vale	1.9%	44.7%	China Mobile	1.2%	-6.3%
China Mobile	1.8%	-6.3%	Ping An Insurance	1.1%	92.5%
Bank of China	1.8%	6.6%	Hon Hai Precision Industry	1.0%	16.1%
Sberbank of Russia	1.6%	30.3%	Reliance Industries Limited	1.0%	68.1%

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

FTSE RAFI™ Emerging Markets Index vs. FTSE All Emerging Index					
Top Overweights	Active Weights	1-Yr Total Effect	Top Underweights	Active Weights	1-Yr Total Effect
China Construction Bank	2.0%	-0.1%	Tencent Holdings Ltd.	-5.3%	-2.2%
PJSC Gazprom	1.9%	-0.6%	Alibaba	-2.0%	0.1%
Petrobras	1.8%	-1.8%	Naspers Limited Class N	-1.7%	-0.6%
Ind. & Comm. Bank of China	1.5%	0.1%	Taiwan Semiconductor	-1.3%	-0.1%
Oil company LUKOIL PJSC	1.3%	-0.4%	Baidu	-0.7%	0.0%
Vale	1.1%	1.1%	Housing Dev Finance Corp	-0.4%	-0.1%
Bank of China	1.0%	-0.1%	JD.com, Inc. Sponsored ADR Class A	-0.3%	0.0%
CNOOC Limited	0.9%	-0.1%	Credicorp Ltd.	-0.3%	0.0%
America Movil	0.8%	0.1%	Maruti Suzuki India Limited	-0.3%	-0.1%
MTN Group	0.8%	0.0%	NetEase, Inc. Sponsored ADR	-0.3%	0.0%

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	11.24%	9.33%	3.78%	0.01%	0.31%	0.32%
Consumer, Cyclical	4.34%	12.15%	-2.12%	0.00%	-0.10%	-0.10%
Consumer, Non-Cyclical	5.27%	7.02%	-5.23%	0.04%	-0.15%	-0.11%
Energy	19.13%	8.54%	-0.53%	0.06%	-0.21%	-0.15%
Financial	35.26%	30.15%	-0.03%	0.00%	-0.01%	-0.01%
Health care	0.46%	2.39%	0.79%	-0.08%	-0.02%	-0.09%
Industrial	2.43%	4.93%	7.66%	-0.01%	0.18%	0.17%
Technology	9.92%	16.87%	-3.93%	-0.13%	-0.61%	-0.74%
Telecommunications	9.00%	5.80%	-3.61%	-0.11%	0.01%	-0.10%
Utilities	2.94%	2.83%	-9.08%	-0.01%	-0.12%	-0.13%
Excess Return						-0.94%

1-Year Ending 12/31/2017

Sector	Portfolio Weight	Bench. Weight	Sector Excess Return	Allocation Effect	Selection + Interaction Effect	Total Effect
Basic Materials	11.24%	9.33%	7.61%	-0.03%	1.11%	1.08%
Consumer, Cyclical	4.34%	12.15%	-5.45%	-0.34%	-0.54%	-0.88%
Consumer, Non-Cyclical	5.27%	7.02%	-11.86%	0.19%	-0.17%	0.02%
Energy	19.13%	8.54%	-19.59%	-1.29%	-1.71%	-3.00%
Financial	35.26%	30.15%	4.13%	0.05%	0.89%	0.94%
Health care	0.46%	2.39%	-28.41%	0.27%	-0.05%	0.22%
Industrial	2.43%	4.93%	3.77%	0.04%	0.14%	0.17%
Technology	9.92%	16.87%	-1.40%	-1.10%	-2.15%	-3.25%
Telecommunications	9.00%	5.80%	-12.27%	-0.34%	0.08%	-0.26%
Utilities	2.94%	2.83%	-16.79%	-0.01%	-0.21%	-0.22%
Excess Return						-5.16%

## 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
Asia Pac x China, India	21.75%	24.12%	-1.64%	0.03%	-0.11%	-0.08%
Brazil	13.11%	8.44%	-8.05%	-0.42%	0.13%	-0.29%
China	28.43%	30.16%	-0.65%	-0.01%	-0.64%	-0.64%
Ctr & S America x Brazil	5.44%	5.76%	-11.89%	0.04%	-0.07%	-0.03%
Europe x Russia	2.29%	2.26%	-6.14%	0.00%	-0.10%	-0.10%
India	8.01%	11.94%	7.37%	-0.22%	0.17%	-0.04%
Middle East & Africa	11.76%	11.49%	13.81%	-0.02%	0.13%	0.10%
Other	0.02%	1.62%	-97.78%	0.27%	-0.13%	0.15%
Russia	9.20%	4.21%	-1.57%	-0.15%	0.14%	-0.01%
Excess Return						-0.94%

1-Year Ending 12/31/2017

Region	Portfolio Weight	Bench. Weight	Country Excess Return	Allocation Effect	Selection + Interaction Effect	Total Effect
Asia Pac x China, India	21.75%	24.12%	-4.19%	0.20%	0.07%	0.26%
Brazil	13.11%	8.44%	-13.85%	-0.61%	-0.78%	-1.40%
China	28.43%	30.16%	-0.32%	-0.02%	-2.99%	-3.01%
Ctr & S America x Brazil	5.44%	5.76%	-8.60%	0.10%	0.09%	0.19%
Europe x Russia	2.29%	2.26%	17.88%	-0.01%	0.07%	0.06%
India	8.01%	11.94%	11.80%	-0.36%	0.34%	-0.02%
Middle East & Africa	11.76%	11.49%	1.83%	-0.03%	-0.13%	-0.16%
Other	0.02%	1.62%	-113.84%	0.32%	-0.26%	0.06%
Russia	9.20%	4.21%	-25.28%	-1.18%	0.03%	-1.15%
Excess Return						-5.16%

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 July 9, 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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