

RAFI Roadmap: A guide to better investor outcomes

RAFI™ Fundamental Emerging Markets Index

BENCHMARK EM Cap-Weight Large-Mid
ASSET CLASS Equity

What Is the Process?

Investment Process

1	Determine size of companies using fundamental measures	Fundamental size is the equally weighted average of four fundamental measures: 1) Adjusted Sales 2) Cash Flow 3) Dividends + Buybacks 4) Book Value
2	Segment companies by region and size	<p>Six Regions US Japan UK Europe ex UK Other Developed Emerging Markets</p> <p>Large Co.: Top 86% by cumulative fundamental weight Small Co.: 86-98% by cumulative fundamental weight</p>
3	Select securities	<p>Combine region and size constructs to create desired exposure. <i>For example, RAFI Developed is the top 86% of stocks by RAFI weight in the US, Japan, UK, Europe ex UK and Other Developed regions.</i></p>
4	Renormalize	Renormalize company weights so that sum of weights equal 100%.
5	Rebalance	<p>Quarterly Staggered Rebalance Portfolio is reconstituted annually on the last business day of March and is rebalanced the last business day of March, June, September, and December.</p>

Will the Strategy Deliver?

This strategy is expected to deliver excess returns in the future because it is theoretically and empirically robust. Every investor should ask five questions before investing:

1. Who is on the other side of the trade?
2. Has the strategy worked over long and varying time periods net of changes in valuation?
3. Does the strategy produce similar results across different regions?
4. Does the the strategy produce similar results across slightly different definitions (e.g., P/B vs. P/S)?
5. Is the strategy investable in the real world net of costs?

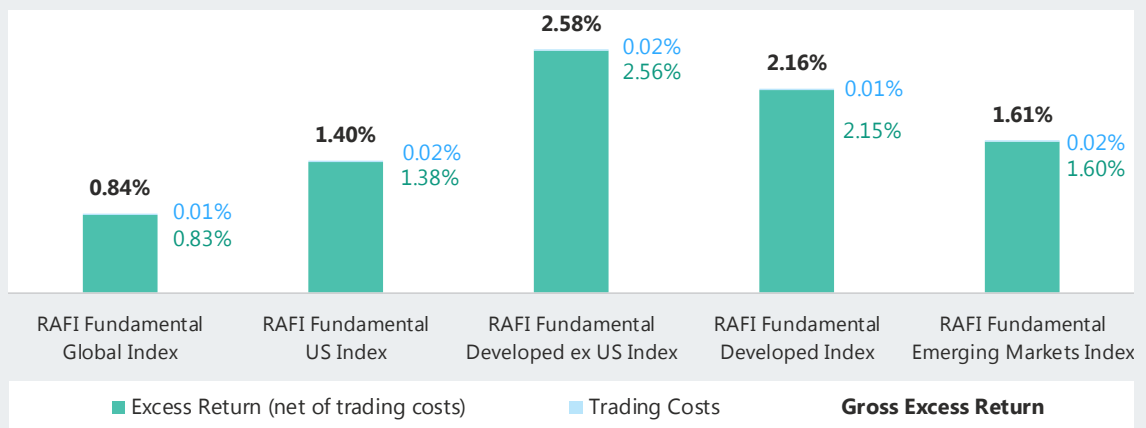
Why This Strategy Delivers

	Theory	Empirical Evidence			
Factor	1. Who's on the Other Side of the Trade?	2. Excess Return*	3. Regions That Work	4. Definitions That Work	5. Trading Costs**
RAFI Fundamental Emerging Markets Index	The Performance Chaser	1.61%	8 of 8	3 of 4	0.02%
	Rebalancing premium delivers by trading counter to performance chasers: Buys what has done poorly and become newly cheap, and sells what has done well and become newly expensive.				

SOURCE: CRSP/Compustat and Worldscope/Datastream | DATA: From 7/1/2002 to 06/30/2018 | *Gross of trading costs

**Annualized trading costs are estimated as the market impact of transactions, assuming \$1B in AUM

Historical Excess Return



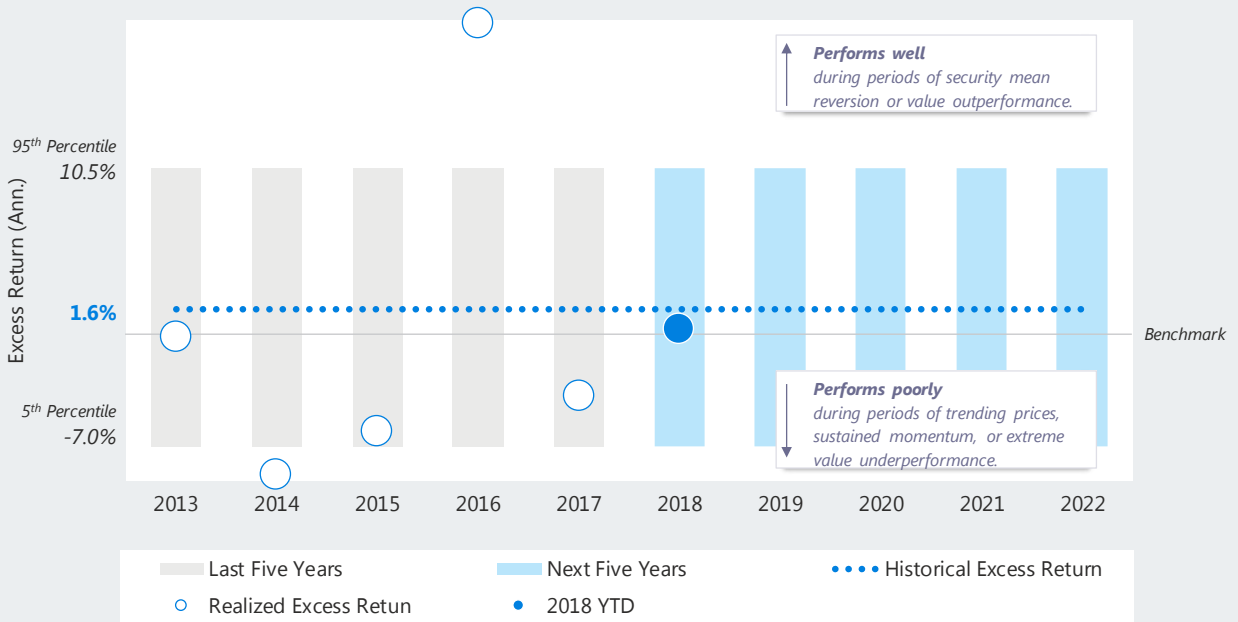
SOURCE: CRSP/Compustat and Worldscope/Datastream | DATA: From inception to 06/30/2018 | NOTE: Annualized trading costs are estimated as the market impact of transactions, assuming \$10B in AUM for US and Global portfolios and \$1B for Emerging Markets.

INCEPTION DATES: Global 07/01/2002 | US 07/01/1968 | DEV ex US 07/01/1989 | EM 07/01/2002

What to Expect?

The RAFI Fundamental Emerging Markets Index shows 1.6% in annualized excess returns since 2002. However, those results have come with a wide range of outcomes (+- 10% or more) in any given year.

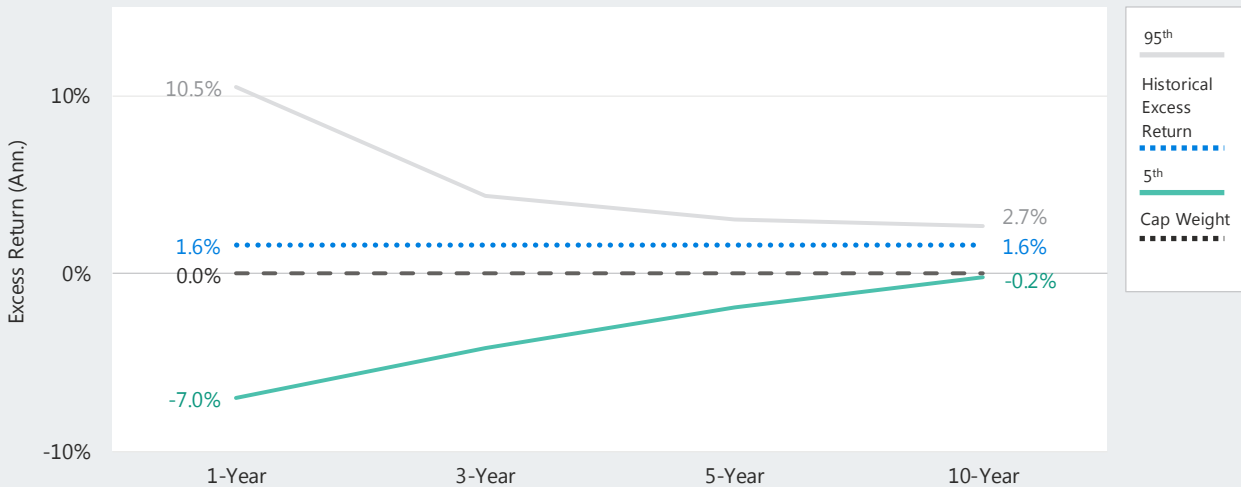
Calendar Excess Returns



NOTE: Based on rolling returns from simulated data | SOURCE: CRSP/Compustat and Worldscope/Datastream | DATA: As of 06/30/2018

Rolling Excess Returns

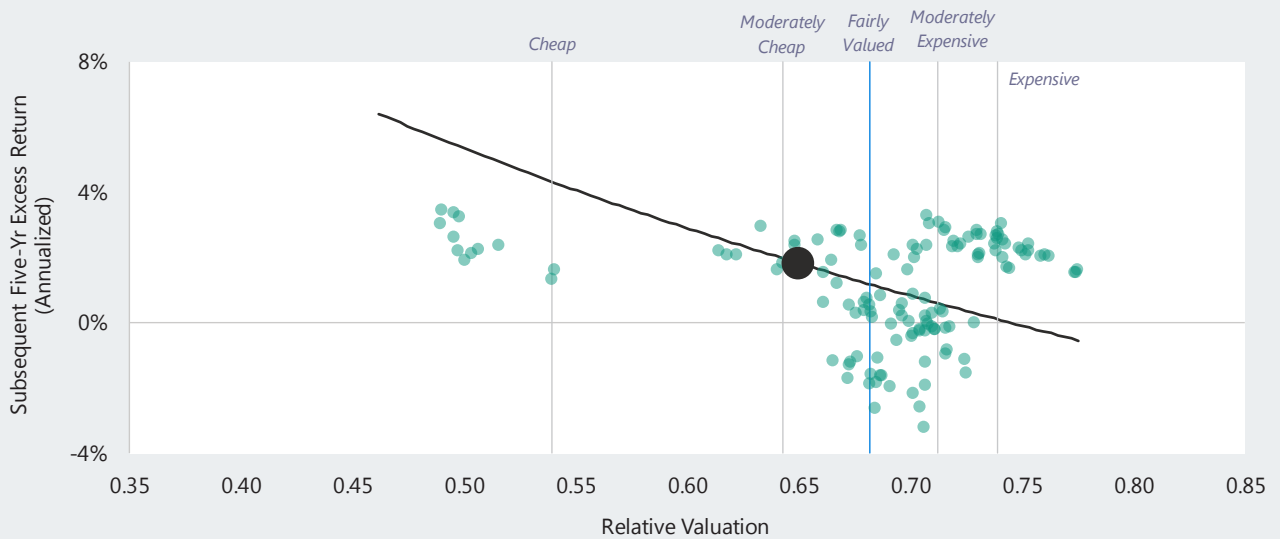
Longer investment horizons produce more predictable returns.



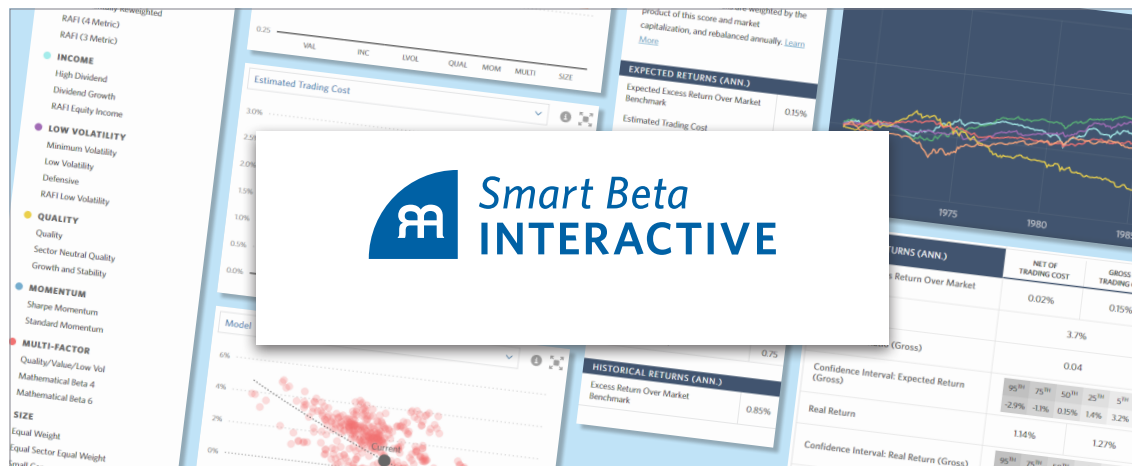
NOTE: Based on rolling returns from simulated data | SOURCE: CRSP/Compustat and Worldscope/Datastream | DATA: As of 06/30/2018

The Index trades at a **discount of 35% (0.65x)** the relative valuation of its cap-weighted benchmark. This is **fairly valued** relative to its **median discount of 32% (0.68x)**. Given current valuations, our **Smart Beta Interactive** website forecasts an annualized excess return of **1.8%** over the next five years (gross of costs).

Valuations & Return Expectations



SOURCE: CRSP/Compustat and Worldscope/Datastream | DATA: From 07/01/2002 to 06/30/2018



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Past Performance & Characteristics

AS OF 09-30-2018

Quarterly Commentary

The RAFI Fundamental Emerging Markets Index outperformed its benchmark, the FTSE AW Emerging, by 356 bps for the quarter. Value bounced back strongly after underperforming last quarter (-0.9% for MSCI Emerging Markets vs 3.7% for MSCI EM Value). The outperformance was driven by the consumer cyclical and energy sectors which contributed 122 bps and 97 bps respectively. Within consumer cyclicals, underweights to Alibaba (38 bps) and Naspers (30 bps) accounted for over half the outperformance within the sector. Performance within the energy sector was dominated by Petrobras (27 bps) and Lukoil (20 bps). Outside of the consumer cyclical and energy sectors, an underweight to technology firm Tencent accounted for almost 1/3 of the outperformance, which fell over 17% during the quarter.

Attributions and index performance commentary: <https://www.rafi.com/investor-support/resources>

Trailing Returns

Index	QTD	1 Yr	3 Yr	5 Yr	10 Yr	ITD*	10-Yr Volatility	10-Yr TE**
RAFI Fundamental Emerging Markets Index	2.9%	1.4%	17.3%	4.3%	7.1%	13.0%	22.9%	4.7%
MSCI EMF (Emerging Markets)	-0.9%	-0.4%	12.8%	4.0%	5.8%	14.9%	21.2%	N/A

SOURCE: FactSet | Data: As of 09/30/2018 in USD | INCEPTION DATE: 01/31/2017

* Inception to Date (ITD) uses the first full month of returns after inception date. All returns prior to inception are simulated. Please see disclosures for important information regarding simulated performance.

** Annualized Tracking Error calculated against each index's appropriate benchmark using the first full month of returns following index inception. Index returns prior to inception are simulated.

Characteristics

Index	Number of Holdings	P/E	P/B	P/S	Dividend Yield	Market Cap / \$B
RAFI Fundamental Emerging Markets Index	913	9.90	1.08	0.74	3.32	53.50

SOURCE: FactSet | Data: As of 09/30/2018 in USD | INCEPTION DATE: 01/31/2017

NOTE: Portfolio characteristics derived from FactSet. Data prior to launch are simulated. One-way turnover data are historical averages based on simulated history. Capacity is estimated at 50-basis-point market-impact level.

Sectors

RAFI Fundamental Emerging Markets Index		Sector Weight
1	Basic Materials	12.83%
2	Consumer, Cyclical	7.02%
3	Consumer, Non-Cyclical	6.03%
4	Energy	16.67%
5	Financial	26.37%
6	Health Care	0.81%
7	Industrial	4.55%
8	Technology	15.32%
9	Telecommunications	6.78%
10	Utilities	3.63%

SOURCE: FactSet | DATA: As of 09/30/2018 in USD

Regions

RAFI Fundamental Emerging Markets Index		Region Weight
1	Asia Pac ex China, India	18.66%
2	Brazil	10.00%
3	China	24.55%
4	Ctr & S America ex Brazil	4.57%
5	Europe ex Russia	1.50%
6	India	7.26%
7	Middle East & Africa	6.01%
8	Other	19.60%
9	Russia	7.84%

SOURCE: FactSet | DATA: As of 09/30/2018 in USD

Top 10 Holdings

RAFI Fundamental Emerging Markets Index		Weights (%)
1	Samsung Electronics	5.02
2	China Construction Bank	2.67
3	Lukoil	2.12
4	Vale S.A. Sponsored ADR	2.11
5	Taiwan Semiconductor	2.09
6	PJSC Gazprom	1.96
7	China Mobile	1.87
8	Petrobras	1.86
9	Ind. & Comm. Bank of China	1.69
10	China Petroleum & Chemical	1.58

SOURCE: FactSet | DATA: As of 09/30/2018 in USD

Disclosures (1/2)

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Disclosures (2/2)

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