

RAFI Roadmap: A guide to better investor outcomes

RAFI™ Fundamental Developed Index

BENCHMARK Dev 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	Six Regions US Japan UK Europe ex UK Other Developed Emerging Markets Large Co.: Top 86% by cumulative fundamental weight Small Co.: 86-98% by cumulative fundamental weight
3	Select securities	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>
4	Renormalize	Renormalize company weights so that sum of weights equal 100%.
5	Rebalance	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.

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?

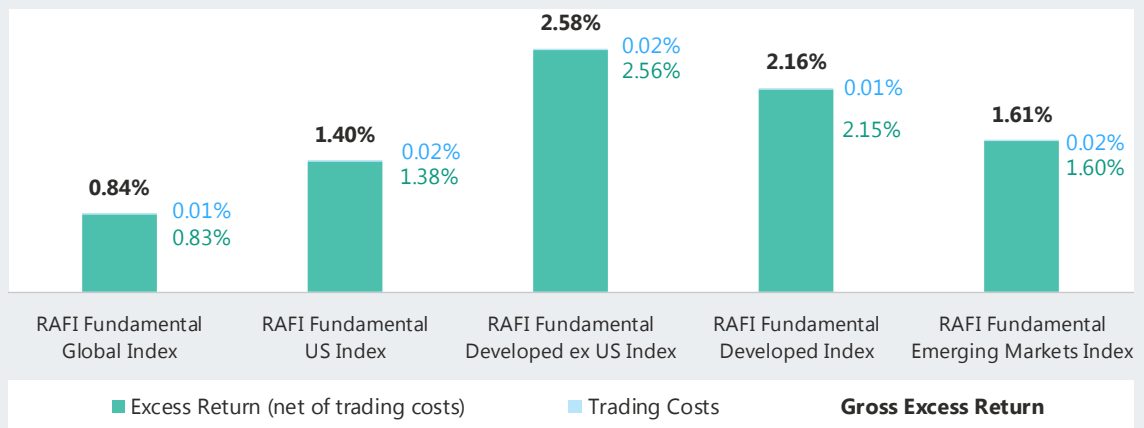
Why This Strategy Delivers

	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 Developed Index	The Performance Chaser 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.	2.16%	8 of 8	4 of 4	0.01%

SOURCE: CRSP/Compustat and Worldscope/Datastream | DATA: From 7/1/1989 to 06/30/2018 | *Gross of trading costs

**Annualized trading costs are estimated as the market impact of transactions, assuming \$10B in AUM

Historical Excess Return



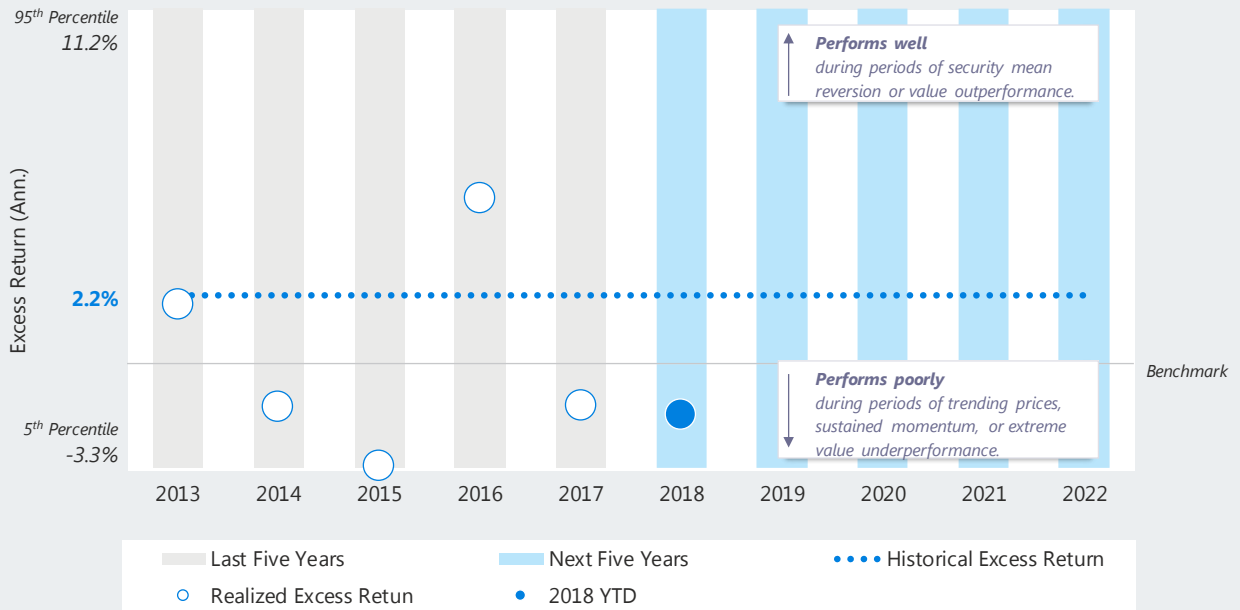
SOURCE: CRSP/Compustat and Worldscope/Datastream | DATA: From inception to 06/30/2018 | NOTE: Annualized trading costs are estimated as the market impact of transactions, assuming \$10B in AUM for US and Global portfolios and \$1B for Emerging Markets.

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 Developed Index shows 2.2% in annualized excess returns since 1989. However, those results have come with a wide range of outcomes (+/- 9% or more) in any given year.

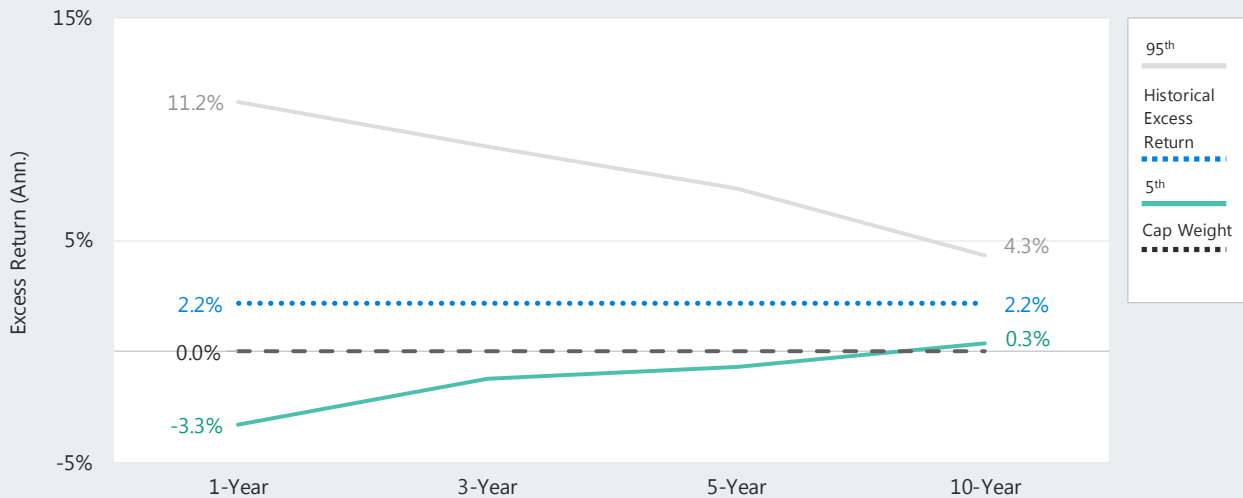
Calendar Excess Returns



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 27% (0.73x)** to the relative valuation of its cap-weighted benchmark. This is **fairly valued** relative to its **median discount of 29% (0.71x)**. Given current valuations, our **Smart Beta Interactive** website forecasts an annualized excess return of **1.0%** over the next five years (gross of costs).

Valuations & Return Expectations



SOURCE: CRSP/Compustat and Worldscope/Datastream | DATA: From 07/01/1989 to 06/30/2018

The screenshot shows the Smart Beta Interactive website interface. It features a navigation menu on the left with categories like INCOME, LOW VOLATILITY, QUALITY, MOMENTUM, and MULTI-FACTOR. The main content area displays several charts and data tables. A central white box with the Smart Beta Interactive logo is overlaid on the interface. The background shows a line chart of returns over time and a table with financial metrics.

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SEPTEMBER 2016

Will Your Factor Deliver? An Examination of Robustness and Implementation Costs

JASON HSU, VITALI KALESNIK, NOAH BECK, AND HELGE KOSTKA

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Forecasting Factor and Smart Beta Returns (Hint: History Is Worse than Useless)

ROB ARNOTT, NOAH BECK, AND VITALI KALESNIK

Past Performance & Characteristics

AS OF 09-30-2018

Quarterly Commentary

The RAFI Fundamental Developed Index underperformed its benchmark, the FTSE AW Developed, by 79 bps for the quarter driven by continued headwinds in value (5.1% for MSCI World vs. 4.2% for MSCI World Value). The consumer cyclical and health care sectors were the biggest detractors to return at -22 bps and -13 bps, respectively. The underperformance in consumer cyclicals was driven by an underweight to Amazon which detracted 19 bps. Similar to Global, underweights to Apple and Microsoft also detracted from performance (-10bps and -9bps respectively) while the underweight to Facebook proved to be the biggest contributor (19 bps).

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 Developed Index	4.1%	9.0%	14.3%	9.1%	9.3%	13.7%	16.2%	2.4%
MSCI World Index	5.1%	11.8%	14.2%	9.9%	9.2%	16.3%	15.4%	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 Developed Index	1875	14.76	1.74	1.07	2.91	117.70

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 Developed Index		Sector Weight
1	Basic Materials	6.69%
2	Consumer, Cyclical	12.91%
3	Consumer, Non-Cyclical	8.87%
4	Energy	12.15%
5	Financial	21.04%
6	Health Care	9.57%
7	Industrial	9.66%
8	Technology	10.06%
9	Telecommunications	4.77%
10	Utilities	4.27%

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

Regions

RAFI Fundamental Developed Index		Region Weight
1	Asia ex Japan	1.67%
2	Australia & New Zealand	3.02%
3	Canada	3.37%
4	Denmark, Norway, Sweden	1.77%
5	Eurobloc	13.96%
6	Japan	12.97%
7	Other	0.29%
8	Switzerland	2.57%
9	United Kingdom	8.59%
10	United States	51.79%

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

Top 10 Holdings

RAFI Fundamental Developed Index		Weights (%)
1	Apple	1.88
2	Exxon Mobil	1.70
3	Royal Dutch Shell	1.54
4	Chevron	1.14
5	Microsoft	1.09
6	BP	0.99
7	AT&T	0.91
8	Total	0.87
9	JPMorgan Chase	0.85
10	Pfizer	0.82

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

Disclosures (1/2)

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Disclosures (2/2)

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