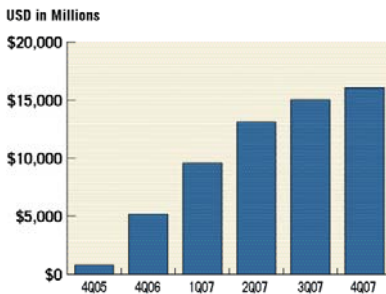


rafi® fundamentals

RAFI® Managed Assets*



*Includes RAFI assets managed or sub-advised by Research Affiliates® or RAFI licensees.

2007—A PROOF STATEMENT!

The RAFI® strategy performed brilliantly in 2005 and 2006. So what? Value beat growth in those years, so we had a tailwind. As Gus Sauter suggested in 2005, the real test is how it does when growth beats value. By all measures, 2007 was a strong growth-dominated market. So, how did the RAFI approach perform in what should be a hostile environment for a value-oriented strategy? Actually, quite well. Indeed, startlingly better than classic value strategies and even far better than most quantitative enhanced index strategies.

Despite the well-known RAFI value tilt relative to the cap-weighted market, we find surprisingly strong performance—even some positive excess returns—for Fundamental Index® strategies. We also find an asymmetry in RAFI returns that should cause those who dismiss the concept as nothing more than a simple value-biased approach to give the concept a second look. In this special edition of *RAFI Fundamentals*, we mark the three-year anniversary of the very first live portfolio based upon the Research Affiliates Fundamental Index (RAFI) by revisiting Fundamental Index performance in light of the stark value and growth markets of 2006 and 2007, respectively.

From the outset, we have always acknowledged that a Fundamental Index construct would typically have more exposure to value-oriented stocks than similar cap-weighted indexes. To understand this dynamic, imagine two stocks with identical sales, book values, cash flow, and dividends. The first stock, Growthy Shares Inc., trades at twice the market multiple because of high *future* growth expectations. Meanwhile, Distressed Co., with its comparatively bleak outlook, sells at half the market multiple. Cap weighting doubles the weight of Growthy and halves the weight in Distressed, thus ensuring a growth bias relative to today's economy. Because the market prices companies to reflect expectations for the future economy, it prepays

for Growthy's *anticipated* future success (and pre-discounts for Distressed's expected weakness), so that 80% of our portfolio is invested in Growthy. Meanwhile, the Fundamental Index strategy, ignoring future expectations and reflecting today's economy, gives the same weight to each company. When viewed through the lens of cap weighting, this gives the Fundamental Index methodology a value orientation.

The outperformance of value stocks over long stretches is well documented. Widely used market proxies confirm this value premium—the Russell 1000 Value Index has exceeded the S&P 500 Index by 90 basis points since 1979. However, this annual premium is not linear; growth stocks have experienced tremendous bursts of outperformance during the period. 2007 proved to be just such a year. In fact, it was the fifth best calendar year of growth performance in large-cap U.S. stocks since the inception of the Russell 1000 Growth and Value Indexes in 1979. As **Figure 1** shows, growth stocks trounced their value counterparts by at least 1,000 basis points in U.S. Large Company, U.S. Small Company, and International equities.

Any portfolio with even a moderate value tilt would be expected to post disappointing, perhaps disastrous, relative results in such an environment. Indeed, many enhanced indexers, relying heavily on stock selection factors favoring value, small-cap, and momentum, experienced severe underperformance in 2007. However, as Figure 1 also displays, two of the three FTSE RAFI indexes managed to post positive excess returns over their respective cap-weighted counterparts in this huge growth market.

Despite international growth outperforming international value by 1,000 basis points, the FTSE RAFI Global ex U.S. Index managed to beat the cap-weighted MSCI Index by nearly 300 basis points. Such performance would likely be



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impossible with a naively value tilted portfolio. The best domain for growth stock outperformance was in small companies where the Russell 2000 Growth Index performed like it was 1999 with a 17 percentage point differential over the Russell 2000 Value Index. In the wake of this overwhelming growth advantage, the FTSE RAFI 1500 was still able to eke out an excess return of nearly 100 basis points.¹ Only in U.S. large company equities did the Fundamental Index portfolio experience a moderate shortfall.

The 2007 RAFI experience is not unexpected to those familiar with its historical performance. **Figure 2** shows rolling two-year returns for a RAFI Large Company portfolio in growth and value markets since 1979. On the vertical axis, the excess return of the RAFI 1000 Index over the Russell 1000 is plotted while the horizontal axis displays the premium of value over growth. There is little doubt that the Fundamental Index strategy receives a tailwind in value-led

markets while encountering a headwind in growth dominated periods. However, the Fundamental Index advantage is powerful enough that excess returns can be had in roughly 50% of marginal growth markets (0–5 percentage point advantage of growth over value). For the massively disparate style markets, the shaded areas indicate that when value is beating growth by 10–20 percentage points, the Fundamental Index portfolio wins by 400–1,500 basis points. But when growth is beating value by 10–20 percentage points, the Fundamental Index portfolio loses by between 100–700 basis points. This surprising asymmetry is something that would be lacking in a simple, static, value tilted strategy.

The first “live” portfolio linked to the Fundamental Index concept was launched in December 2004. **Table 1** illustrates the returns of the FTSE RAFI 1000 Index since from 2005 through 2007.² In 2005, value beat growth by less than 200 basis points in a relatively

¹This small company advantage is hardly surprising in a massive growth year as a small company Fundamental Index portfolio, on average, has no value tilt whatsoever. For a full discussion, please reference the April 2007 *RAFI Fundamentals* (<http://ralic.com/ideas/pdf/Fundamentals0407.pdf>).

²The data shown is for the FTSE RAFI 1000 Index and does not incorporate trading costs, management expenses and other portfolio management issues that arise in live accounts. It is not possible to invest directly in the index. For more information on managed RAFI portfolios please contact David Hennessy, US Marketing contact at hennessy@ralic.com.

Figure 1. 2007 Performance

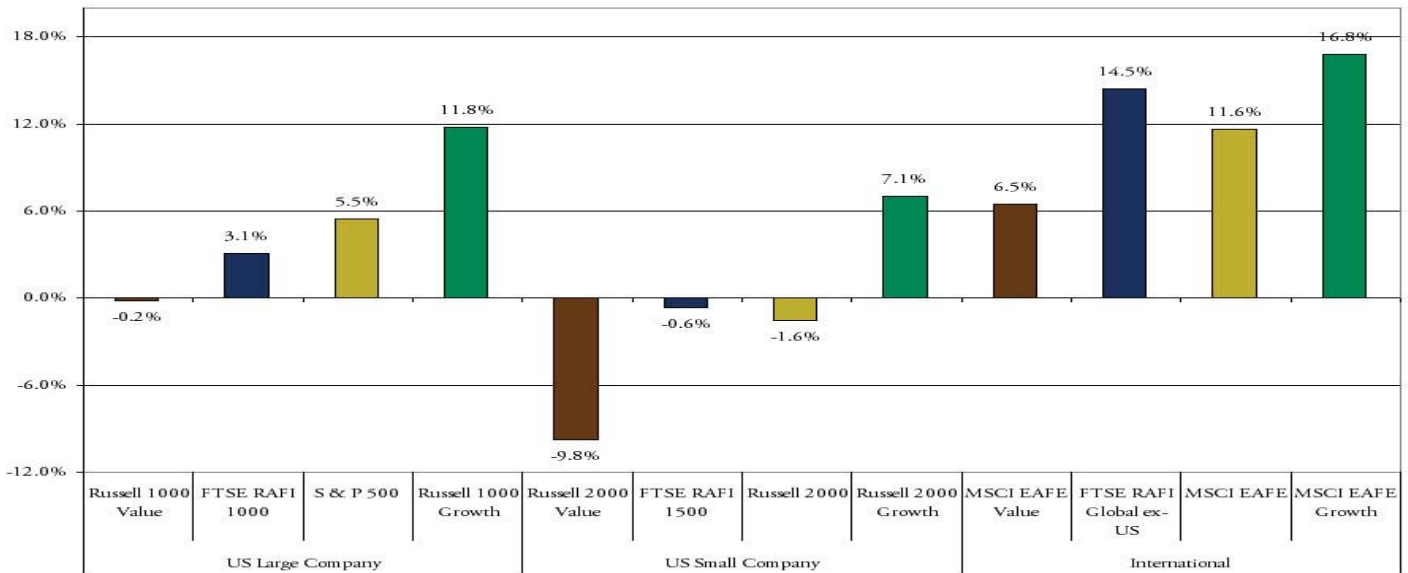
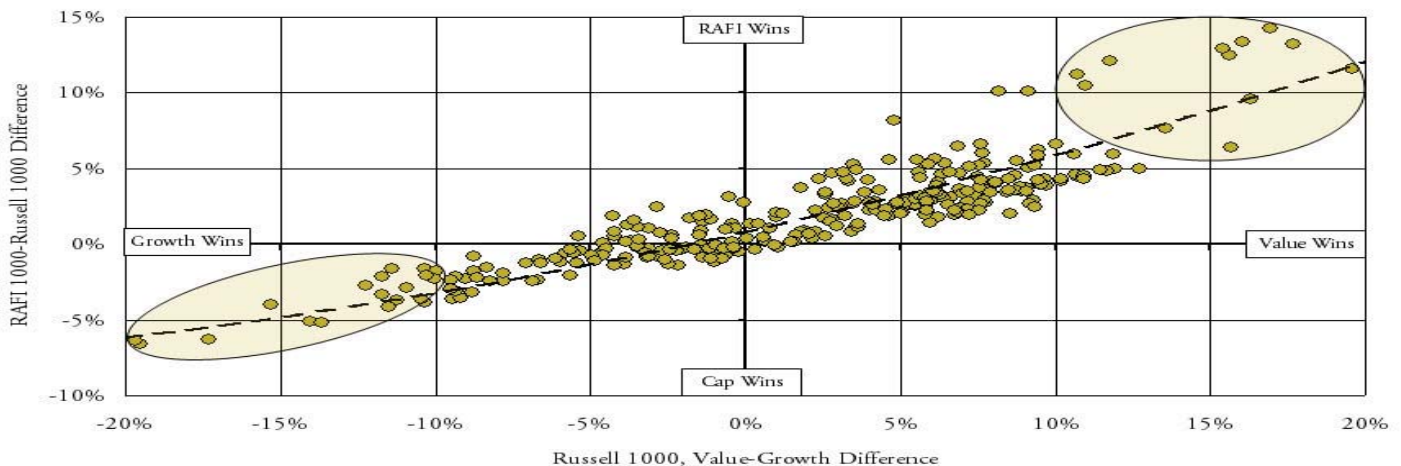


Figure 2. RAFI Value Added vs. the Value-Growth Differential on Annualized Two-Year Returns, 1980-2006



benign style market, while the FTSE RAFI 1000 achieved a small excess return. The following year saw huge value outperformance with the FTSE RAFI 1000 adding almost 400 basis points of value. Of course, 2007 was the exact opposite with growth trading its 13 percentage point disadvantage for a 12 percentage point premium over value. Just like the original research predicted, the RAFI strategy preserved the asymmetric payoff profile, earning larger excess returns in a monster value year and only giving back a portion of these relative profits when growth came roaring back. If we combine the three calendar years—a roughly flat 2005, a massive value 2006, and a monster growth 2007—the FTSE RAFI 1000 achieves an annualized excess return of 80 basis points per year.

Table 1. Annual Results

	2005	2006	2007	2005-2007
Russell 1000 Growth	5.3%	9.1%	11.8%	8.7%
Russell 1000 Value	7.0%	22.2%	-0.2%	9.3%
S&P 500	4.9%	15.8%	5.5%	8.6%
FTSE RAFI 1000	6.2%	19.7%	3.1%	9.4%
Value-Growth	1.8%	13.1%	-12.0%	0.6%
RAFI-S&P 500	1.3%	3.9%	-2.4%	0.8%

We contend the last three-year performance—in a variety of market environments—is quite a proof statement for the RAFI concept. When value beats growth, the RAFI strategy captures

30–70% of the differential; when growth beats value, the shortfall in the RAFI strategy is a modest 20% of the differential. And the live experience in small companies and international is even better. The asymmetric performance observed is predominately the result of the dynamic nature of the Fundamental Index value bias. Because the RAFI methodology anchors weights on more stable measures of firm size than price, the value exposure increases when the forward-looking premium on the factor is high and vice versa.

In other words, the RAFI methodology tends to ramp up its value exposure when value offers a large premium and reduces it when the relative attractiveness of value diminishes after long runs of value performance.³ Unlike cap-weighting, the RAFI methodology doesn't automatically allocate more to growth stocks after huge run-ups nor does it shift larger weights to value after large price gains from value stocks.

With due respect to Aristotle, who once said that “the chief forms of beauty are order and symmetry and definiteness, which the mathematical sciences demonstrate in a special degree,” we find the asymmetry associated with RAFI excess returns to be a thing of beauty for those inclined to gain a bit more out of their passively managed equities.⁴

³For more on the dynamic nature of RAFI's value exposure, see the August 2007 edition of *RAFI Fundamentals* (<http://ralic.com/ideas/pdf/Fundamentals0807.pdf>).

⁴Aristotle quotes (Ancient Greek Philosopher, Scientist and Physician, 384 BC-322 BC), *Metaphysica*, 3-1078b.

Performance Update*

TOTAL RETURN AS OF 12/31/07	BLOOMBERG TICKER	YTD	12 MONTH	ANNUALIZED 3 YEAR	ANNUALIZED 5 YEAR	ANNUALIZED 10 YEAR	ANNUALIZED 10 YEAR VOLATILITY
FTSE RAFI® 1000 Index ^a	FR10XTR	3.05%	3.05%	9.39%	15.03%	9.56%	14.00%
S&P 500 ^b	SPTR	5.49%	5.49%	8.62%	12.83%	5.91%	14.72%
Russell 1000 ^c	RU10INTR	5.77%	5.77%	9.08%	13.43%	6.20%	14.88%
FTSE RAFI® US 1500 Index ^d	FR15USTR	-0.64%	-0.64%	8.48%	19.77%	12.32%	18.15%
Russell 2000 ^e	RU20INTR	-1.57%	-1.57%	6.80%	16.25%	7.08%	19.84%
FTSE RAFI® Developed ex US 1000 Index ^f	FRX1XTR	14.46%	14.46%	19.60%	24.88%	13.36%	14.60%
MSCI EAFE ^g	GDDUEAFE	11.63%	11.63%	17.32%	22.08%	9.04%	14.53%
FTSE All World Series Developed ex US ^h	FTS5DXUS	13.94%	13.94%	18.48%	23.05%	9.86%	14.64%

Definition of Indices: (A) The FTSE RAFI® 1000 comprises the 1000 largest companies selected and weighted using our Fundamental Index methodology; (B) The S&P 500 Index is an unmanaged market index that focuses on the large-cap segment of the U.S. equities market; (C) The Russell 1000 Index is a market-capitalization-weighted benchmark index made up of the 1,000 highest-ranking U.S. stocks in the Russell 3000; (D) The FTSE RAFI® 1500 comprises the 1001st to 1500th largest companies selected and weighted using our Fundamental Index methodology; (E) The Russell 2000 is a market-capitalization weighted benchmark index made up of the 2,000 smallest U.S. companies in the Russell 3000; (F) The FTSE RAFI® Developed ex US 1000 Index comprises the largest 1000 non US-listed companies by fundamental value, selected from the constituents of the FTSE Developed ex US Index; (G) MSCI EAFE (Morgan Stanley Capital International Europe, Australasia, Far East) is an unmanaged index of issuers in countries of Europe, Australia, and the Far East represented in U.S. dollars; and (H) The FTSE All World ex-US Index comprises Large and Mid-Cap stocks providing coverage of Developed and Emerging Markets excluding the United States. It is not possible to invest directly in any of the indexes above.

*In November 2008 performance returns for all prior periods were restated to reflect a change in calculation methodology from using a 365 day period to annualize returns to a return calculation based on using monthly returns as of the last business day of each month to create a geometric return for each period.

Source: Based on price data from Bloomberg.

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