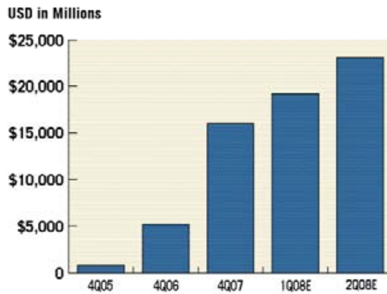
Fundamental Index® Newsletter · July 2008

# rafi® fundamentals

## RAFI® Managed Assets*




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

# WHAT'S GOING ON? A REVIEW OF THE RECENT FUNDAMENTAL INDEX® STRATEGY PERFORMANCE

The current credit shake-up began one year ago, with Bear Stearns revealing large losses incurred in its two subprime-heavy hedge funds. Since that time, RAFI® equity applications have delivered mixed results with generally sound performance overseas—especially relative to the conventional capitalization-weighted value indexes—and shortfalls in the United States. In light of these mixed results, we examine the Fundamental Index approach in previous difficult credit and liquidity periods and explore some attribution of the recent shortfall in the United States. While recent times have been disappointing for some cases, this exploration suggests the Fundamental Index concept remains as valid as ever. Indeed, in most markets outside of the United States, RAFI has performed admirably in the face of a hurricane-force headwind—that is, growth sharply outpacing value.

Since the credit crunch started, growth stocks have ripped market leadership away from value in a startling fashion all over the world. **Figure 1** displays the excess returns of value over growth across five major equity categories. Only emerging markets witnessed value outperformance. Growth dominated by 700–1,200 bps in the remaining asset classes. It was an historic and global run—the past 12 months were the third worst year of performance (using rolling quarterly observations) for EAFE Value versus EAFE Growth since 1970. Given that these 131 rolling one-year periods cover 38 years, this implies a 40-year storm for international value investors!

Amidst this environment, RAFI applications have witnessed a range of excess returns versus their cap-weighted counterparts. As **Table 1** shows, the results in the less efficient markets (emerging markets and non-U.S. small company) added value while those in the most efficient markets (developed large—both U.S. and developed ex-U.S.—and U.S. small-mid) trailed their respective benchmarks for the 12 months ending June 30, 2008.

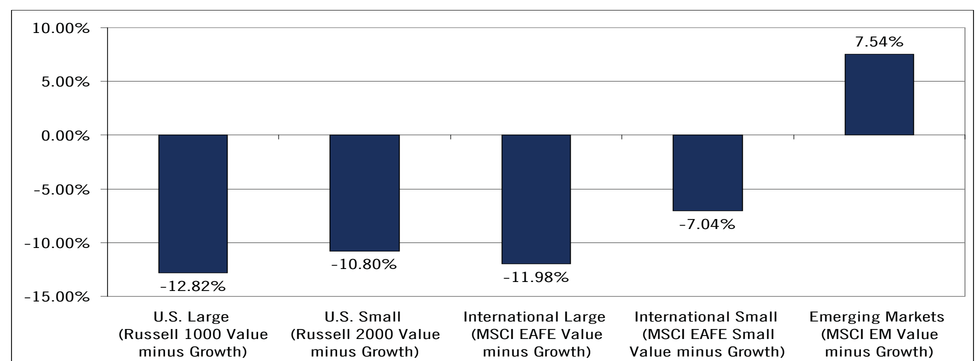
**Table 1. RAFI vs. Representative Cap-Weighted Indexes**

| | 12 Months Ended 6-30-08 | RAFI Excess |
|---|---|---|
| FTSE RAFI 1000 | -19.6% | -6.5% |
| S&P 500 | -13.1% | |
| FTSE RAFI US 1500 | -18.4% | -2.2% |
| Russell 2000 | -16.2% | |
| FTSE RAFI Developed ex US | -11.2% | -1.0% |
| MSCI EAFE | -10.2% | |
| FTSE RAFI Dev ex-US Mid Small 1500 | -16.2% | 2.1% |
| MSCI EAFE Small Cap | -18.3% | |
| FTSE RAFI Emerging | 8.5% | 3.6% |
| MSCI EM | 4.9% | |

*Note*: The index version of the RAFI methodology, or the FTSE RAFI indexes, is licensed globally by our partner the FTSE Group.

*Source*: Research Affiliates.

**Figure 1. Style Performance, June 30, 2007, through June 30, 2008**




*Source*: Research Affiliates.

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The modest shortfall in U.S. small companies and developed ex-U.S. large companies is well within the projected range of relative performance compared to cap-weighted indexes, particularly given the vast underperformance of value in these domains. In fact, our research suggests that we would expect to incur these types of results once every six or seven years.[1]

The recent underperformance in U.S. large companies, however, is somewhat larger than our research suggests is normal, even given the magnitude of the underperformance by the cap-weighted value indexes. **Figure 2** plots the RAFI U.S. Large Company rolling one-year excess returns. The past 12 months' relative return is pretty far to the left of the distribution, suggesting something on the order of a 1-in-15-years event. Let's explore why.

**RAFI in Down Markets**

The recent relative underperformance has come during a period of negative returns in the equity market—a time when our research has shown that the Fundamental Index methodology tends to excel. Part of the explanation is that over the past 12 months, low-multiple companies and value sectors have significantly underperformed, which is quite rare in bear markets.

Recall, capitalization weighting places a greater emphasis on the perceived future growth of a company, thus expected future growers will have a higher allocation. Meanwhile, slower growers, weighted by current economic scale, will have a higher relative weight in the Fundamental Index portfolio. For this reason, on average, the RAFI strategy has an inherent value tilt relative to cap-weighted indexes, exactly mirroring the market's growth bias relative to the broad economy.

In most down economic periods and bear markets, it is well documented that value outperforms growth, especially in the late stages of a bear market! Liquidity is still available and financing costs for leveraged borrowers typically stay the same on a nominal basis—spreads rise but this is typically because government bond yields fall. Likewise, commodity prices tend to drop as slowing aggregate demand leads to reduced raw goods consumption. Thus, the slower growers, capital intensive and financially leveraged companies often typical of RAFI overweights, can weather these more conventional storms in relatively good shape. However, higher expected growers that are "priced to perfection" get routinely punished as the Nifty Fifty of the early 1970s and the Tech Bubble of the late 1990s clearly demonstrate. And so, the reason that the RAFI approach wins, on average, in down markets is that the high-multiple companies get severely punished as the rosy economic outlook that justifies their elevated P/E ratios fails to materialize.

The past 12 months has been an exception to this rule: low-multiple companies and value sectors underperformed significantly. Many of these firms suffered against the headwinds of rising yield spreads and commodity prices, whereas many of the growth companies have been able to withstand these strong headwinds. . . so far.

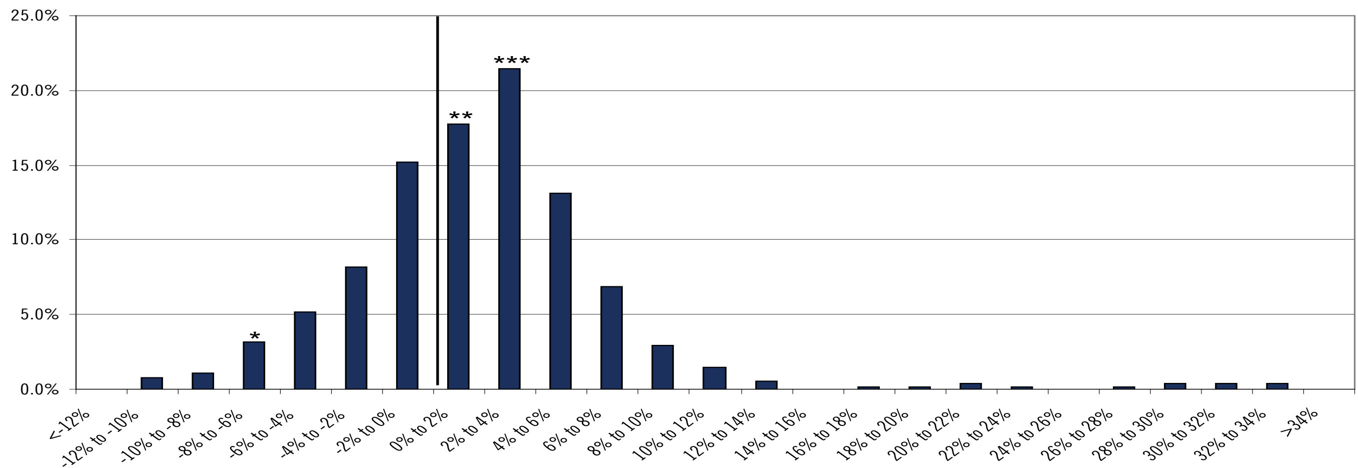
**The Impact of Rebalancing**

A significant contributor to recent FTSE RAFI US 1000 underperformance is that the index was reconstituted in March 2008. In hindsight, second quarter returns would have been better by 2.3 percentage points (pps) without the rebalance. In fact, the most recent rebalance finally moved the RAFI portfolio to a moderate overweight stance in financials (before the March 2008 rebalance, we were only 1% above the cap weight, despite our inherent value tilt!). We have long advocated that one of the chief benefits of the Fundamental Index approach is the manner in which it contratrades against recent market trends by rebalancing company prices back to fundamentals. In so doing, a Fundamental Index portfolio will contratrade against style fads and crashes, sector fads and crashes, and even individual company fads and crashes.

Just as most practitioners believe that rebalancing our asset allocation is a powerful tool in our investing toolkit, a Fundamental Index portfolio rebalances within our equity holdings. However, rebalancing can sometimes be a shorter term detractor from portfolio performance when market trends—positive or negative—persist. For example, rebalancing away from technology and other high-flying growth stocks—especially those with negligible sales and no profits—in the late 1990s left relative gains on the table for a period

[1]Both RAFI Global ex-U.S. and RAFI U.S. Small Company have approximate historical, backtested excess returns of 3.4% with tracking errors of 4% through 2007. This covers 1979 for RAFI U.S. Small Company and 1984 for RAFI Global ex-US.

**Figure 2. Histogram of Rolling One-Year RAFI U.S. Large Company vs. S&P 500 Excess Returns**




*Indicates 12 months ended June 30, 2008 fell in this range.
** Indicates 12 months ended June 30, 2007 fell in this range.
*** Indicates 12 months ended June 30, 2006 fell in this range.

*Source*: Research Affiliates.

of time. Rebalancing did pay off, however, once gravity finally took over and the emerging growth shares crashed back to earth.

On the opposite end, rebalancing into stocks (or asset classes) that continue to underperform will also cause short term disappointment. This is exactly what occurred with the FTSE RAFI US 1000 and other valuation-indifferent indexes in March 2008. As an example, the FTSE RAFI US 1000 held 18.8% in financials prior to the March rebalance and 25.2% subsequently. Given that financials declined 18.3% from the end of March through June 30, this cost us over 100 bps in returns versus a portfolio that bypassed reconstitution. Similarly, rebalancing away from energy cost nearly 50 bps during the quarter. In our minds, this is more of a rebalancing timeliness issue than an indictment of the Fundamental Index strategy. Indeed, it's hard to find an investment professional that doesn't advocate rebalancing as a fundamental (pardon the pun) investment activity.

## Changes at the Top

With all the movement in the market, it is fascinating to note the changes in the top 10 companies—both in terms of names and weights. As **Table 2** shows, there is a compression in the fundamental size measures as of June 30, 2008. Note also that the overlap on these two lists is now down to only six companies (it was eight at March 2007 rebalance), and financials occupy zero spots in the S&P top 10 (indeed not a single one of the top 15!) at this stage. Citigroup, JPMorgan Chase, Wal-Mart, and Verizon are all huge, but the market doesn't think their future prospects deserve a top 10 ranking. Reciprocally, the market believes that Procter & Gamble, Johnson & Johnson, IBM, and Apple will all be a more important part of our future economy than the four out-of-favor names, even though none of these four ranks in the top 10 based on the current scale of their enterprises. Even if the market is right about most of these, it still means that the RAFI strategy can add value in the one or two whose prospects are underestimated and the corresponding one or two on the list whose prospects are overstated.

**Table 2. Weights for the Top 10 Companies, June 30, 2008**

| | S&P 500 | | FTSE RAFI US 1000 | |
|---|---|---|---|---|
| Rank | Name | Weight | Name | Weight |
| 1 | Exxon Mobil Corporation | 4.17% | Exxon Mobil Corporation | 3.09% |
| 2 | General Electric | 2.38% | General Electric | 2.15% |
| 3 | Microsoft Corp | 1.97% | Citigroup | 1.93% |
| 4 | Chevron | 1.84% | Chevron | 1.86% |
| 5 | AT&T | 1.79% | Microsoft Corp | 1.82% |
| 6 | Procter & Gamble | 1.66% | Wal-Mart Stores | 1.54% |
| 7 | Johnson & Johnson | 1.62% | AT&T | 1.52% |
| 8 | International Bus Machns. | 1.46% | Verizon Communications | 1.46% |
| 9 | Apple Inc. | 1.32% | ConocoPhillips | 1.44% |
| 10 | ConocoPhillips | 1.30% | JPMorgan Chase & Co | 1.39% |

*Source*: Research Affiliates.

Will some financials fall much further? Probably. Could the sector, collectively, fall more? Of course. Does it make sense that none of them—not one—ranks in the top 15 by market cap? We're not so sure about that! This rout in the financial services sector—the largest sector of the U.S. economy—bears all the trappings of an "anti-bubble," a runaway speculative avoidance of anything in the sector. We think this is a terrific opportunity to shift from the "active bets" of capitalization weighting to the economic bets of the Fundamental Index concept!

## Lessons from the Past

It is worth noting that the past 12 months is atypical—but not without historical precedent. Let's review a few facts related to 1990—a similar environment to the past 12 months.

In 1990, the S&P 500 suffered a 3.1% decline with the FTSE RAFI US 1000 posting an 8.9% loss, a deficit similar to the past 12 months. Additional comparisons between the two years are presented in **Table 3.**

**Table 3. Then and Now: 1990 vs. 12 Months Ended June 30, 2008**

| | 2008 | | 1990 | |
|---|---|---|---|---|
| | Return | Rank | Return | Rank |
| **Sectors** | | | | |
| S&P 500 Energy | 24.8% | 1 | 2.9% | 4 |
| S&P 500 Utilities | 6.6% | 2 | -0.6% | 5 |
| S&P 500 Materials | 6.3% | 3 | -10.7% | 7 |
| S&P 500 Cons Staples | 0.7% | 4 | 15.3% | 2 |
| S&P 500 Info Tech | -7.5% | 5 | 3.0% | 3 |
| S&P 500 Health Care | -11.7% | 6 | 17.3% | 1 |
| S&P 500 Industrials | -12.8% | 7 | -7.6% | 6 |
| S&P 500 Telecom Svc | -19.8% | 8 | -13.9% | 9 |
| S&P 500 Cons Discretion | -26.8% | 9 | -12.2% | 8 |
| S&P 500 Financials | -42.4% | 10 | -20.8% | 10 |
| **Commodities** | | | | |
| GSCI Commodity Index | 76.0% | | 29.1% | |
| **High-Yield Spreads** | | | | |
| Trailing 12-Month Change LB High Yield Spread over LB Government | 4.4% | | 5.1% | |
| **Growth/Value** | | | | |
| Russell 1000 Value | -18.8% | | -8.1% | |
| Russell 1000 Growth | -6.0% | | -0.3% | |
| Spread | -12.8% | | -7.8% | |

*Source*: Research Affiliates.

Several trends from 1990 are worth noting as it relates to today.

- Not surprisingly, financials suffered badly in 1990 as bad loans and deleveraging impacted bank balance sheets. In 1990, financials trailed the S&P 500 by 17.7 pps as compared to a similar deficit of 29 pps in the trailing 12 months ended June 30, 2008. Both periods saw financials finish dead last among the major economic sectors.
- As they have in the past year, commodities rallied strongly in 1990 with the Goldman Sachs Commodity Index surging 29.1% after Saddam Hussein and Iraq invaded Kuwait causing a significant spike in oil prices. However, this run-up in raw inputs paled in comparison to the 76% rise in the GSCI over the past 12 months.
- Credit was a major issue in 1990 as conditions rapidly deteriorated on the heels of the American savings & loan crisis. High yield (corporate bonds rated below investment grade) spreads above government bonds spiked by 510 bps in 1990, indicating rising risk aversion on the part of lenders. Similarly, we have witnessed high yield spreads jump from 440 bps from June 2007 through June 2008.
- Growth trounced value by roughly 800 bps as measured by the Russell 1000 Growth' versus the Russell 1000 Value in 1990. Over the latest 12 months, growth outperformed value by nearly 1,300 bps.

Perhaps most important to investors and for the historically inclined, after the poor performance of 1990 the FTSE RAFI US 1000 Index went on to produce a five-year annualized return of 19.2%

versus 16.6% for the S&P 500—an excess return of 2.6% pps per annum—bettering the 2.1% experienced over our originally tested 1962–2004 time horizon.[2] As seen in **Table 4**, this also doubled the incremental return of value during this period. Of course, it wasn't a linear ride each and every year above the S&P 500. Growth again surged in 1991 actually outpacing value by 1,600 bps—its third best year ever since the inception of the Russell indices exceeded only by the bubble-induced 1998 and 1999. Despite this massive growth headwind, the Fundamental Index portfolio finished relatively flat in 1991 but then went on to produce reasonable excess returns in the ensuing four years.

**Table 4. FTSE RAFI Performance Five Years Post 1990**

| | Annualized Returns | Excess Returns |
|---|---|---|
| FTSE RAFI US 1000 | 19.17 | 2.58 |
| Russell 1000 Value | 17.83 | 1.24 |
| S&P 500 | 16.59 | — |

*Source*: Research Affiliates.

[2] Arnott, Robert D., Jason Hsu, and Philip Moore. 2005. "Fundamental Indexation." *Financial Analysts Journal*, vol. 61, no. 2. (March/April):83–99.

## Conclusion

Mark Twain once quipped, "History doesn't repeat itself, but it does rhyme." We don't expect history to repeat exactly, but we do believe the Fundamental Index approach will weather the storm of 2007–2008 much as it has in the past. The return drag from capitalization weighting—overweighting overpriced securities and underweighting underpriced securities—is a structural long-term return inhibitor. Over shorter intervals, any Fundamental Index application may underperform by placing proportionately more in underperforming stocks than it's cap-weighted counterpart. The same can be said for equal weighting or, for that matter, any other price indifferent strategy. After all, the goal of price indifferent indexing is to randomize portfolio weights to approximately allocate half of our money to overvalued shares and half to the undervalued.

We know that capitalization weighting will structurally place more in securities whose stocks are priced above fair value and less in those that are priced below fair value. Why? Because the weights relative to fair value are not random; they are linked to price and the errors embedded within that price! For this reason, Fundamental Index supporters—if they had existed in December 1990—would have been confident about the future prospects of the RAFI methodology, just as we are today.

## Performance Update*

| TOTAL RETURN AS OF 6/30/08 | BLOOMBERG TICKER | YTD | 12 MONTH | ANNUALIZED 3 YEAR | ANNUALIZED 5 YEAR | ANNUALIZED 10 YEAR | ANNUALIZED 10 YEAR VOLATILITY |
|---|---|---|---|---|---|---|---|
| FTSE RAFI® 1000 Index[A] | FR10XTR | -15.62% | -19.61% | 3.00% | 8.49% | 6.20% | 14.47% |
| S&P 500[B] | SPTR | -11.91% | -13.12% | 4.41% | 7.58% | 2.88% | 14.96% |
| Russell 1000[C] | RU10INTR | -11.20% | -12.36% | 4.81% | 8.22% | 3.38% | 15.12% |
| FTSE RAFI® US 1500 Index[D] | FR15USTR | -10.93% | -18.43% | 4.45% | 12.77% | 10.20% | 18.41% |
| Russell 2000[E] | RU20INTR | -9.37% | -16.19% | 3.79% | 10.29% | 5.53% | 20.03% |
| FTSE RAFI® Developed ex US 1000 Index[F] | FRX1XTR | -12.36% | -11.15% | 14.27% | 18.63% | 10.29% | 15.11% |
| MSCI EAFE[G] | GDDUEAFE | -10.58% | -10.15% | 13.34% | 17.16% | 6.23% | 15.04% |
| FTSE All World Series Developed ex US[H] | FTS5DXUS | -9.81% | -8.18% | 14.56% | 18.05% | 7.21% | 15.17% |

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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