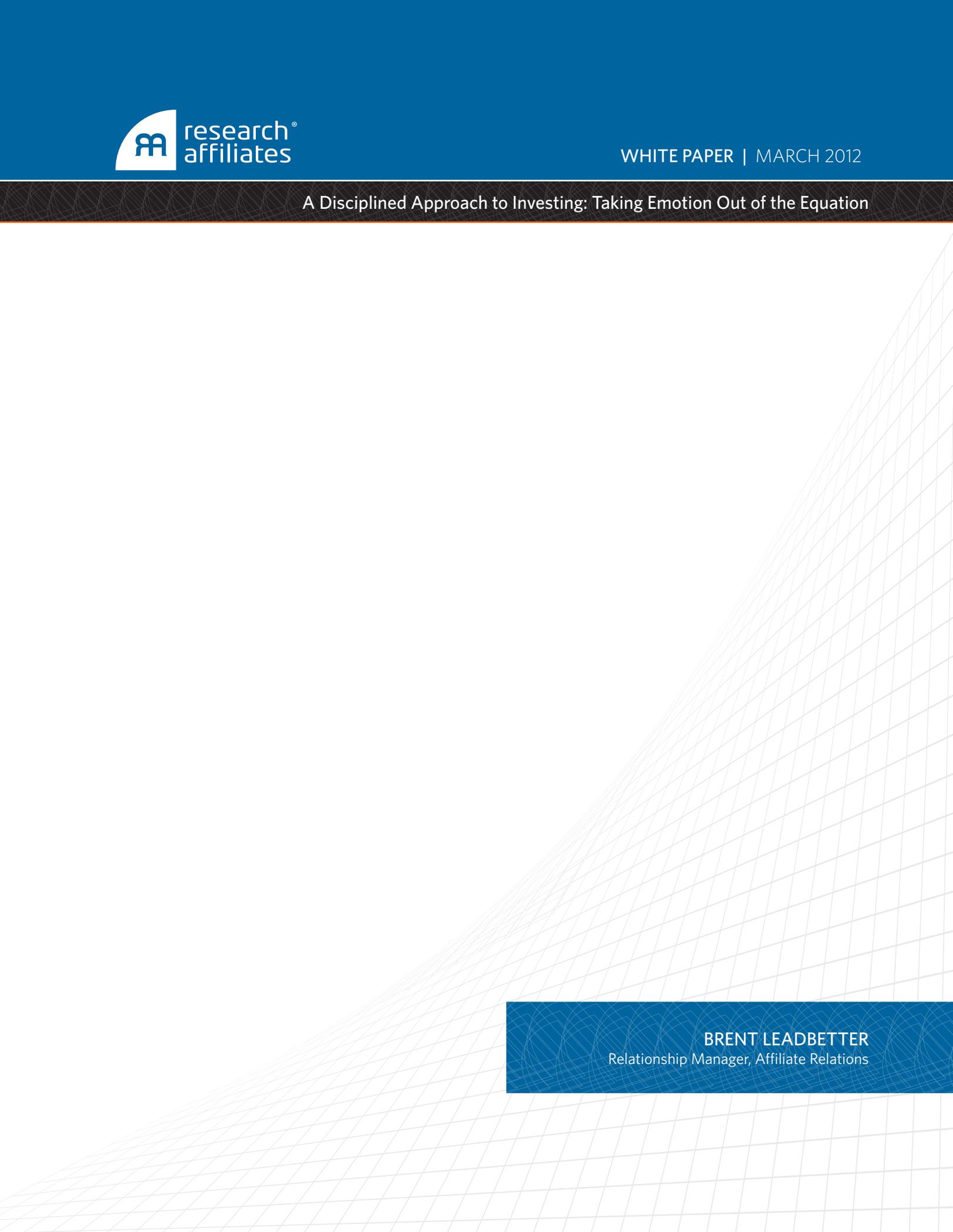


A Disciplined Approach to Investing: Taking Emotion Out of the Equation



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Prior to joining Research Affiliates, Brent worked as a private client manager at Alliance Bernstein. He also has served as an institutional sales associate at A.G. Edwards and a retirement specialist at Merrill Lynch.

Brent earned an MBA from the UCLA Anderson School of Management and a BA in history from the University of Michigan.

“I can calculate the movement of the stars, but not the madness of men”

—Sir Isaac Newton

Summary

Professional investors have emotions too, ones that prevent them making the best decisions for their clients. This lack of discipline affects not only traditional active managers, but also black box quantitative managers and the market as a whole.

Research Affiliates Fundamental Index® (RAFI®) strategies represent a low-cost, rules-based, transparent, and disciplined approach to investing. With a live track record starting in 2005, RAFI equity strategies have generated excess returns in each of the primary regions with which U.S. investors are most concerned—the United States, international, and emerging markets.

NEWTON AND THE SOUTH SEA COMPANY

Sir Isaac Newton was a genius, laying the foundations for physics in his *Principia Mathematica*. Despite his intellectual prowess, Newton was still human and subject to the same emotions as the rest of us. This human frailty was fully displayed in his disastrous investment in the now infamous South Sea Company.

Founded in the early 18th century, the South Sea Company was granted exclusive trade rights to Spain's South American colonies in exchange for assuming England's sovereign debt. The monopoly rights to export to emerging economies quickly led to rampant speculation in the firm's shares. Newton was not immune to this speculation. He timed his initial transaction well, selling the first lot he purchased for a substantial gain in just a matter of months. He then proceeded to watch his friends' paper gains mount as the share price continued to skyrocket. Newton capitulated and purchased a new lot of shares very near the all-time high. By the time he sold, he lost roughly £20,000, a sizeable amount in the 1720s.¹

It is entirely possible that Newton performed a thorough analysis to determine an appropriate valuation for shares of the South Sea Company before he traded. After all, as the inventor of calculus, he probably could have built a discounted cash flow model without Excel. However, his losses likely were not caused by a lack of

information; rather, it was a lack of discipline that did him in. Of course, the more things change the more they stay the same. Discipline remains just as important in investing today as it was in Newton's time.

EMOTIONS STILL TRUMP OUR BEST INTENTIONS

All traditional asset management approaches contain some element of manager emotion. Even the most ardent stock picker making choices based on carefully constructed valuations is subject to his or her emotions. No one is perfectly immune to the thrill of picking a winning stock (and failing to sell it and take gains) or regret from picking a loser (and failing to sell it quickly and take the loss).

Theoretically, quantitative investment approaches should remove emotion from the equation. However, many use secretive and complex black box approaches. There is no way to definitively know that a quant strategy is indeed a disciplined, rules-based approach unless it is also transparent. How do we know the rules are being followed if we do not know what the rules are? How do we know if the rules themselves do not reflect a belief or opinion? Quant managers often tweak their assumptions or models to adjust for their own biases.

Even a typical market capitalization-weighted index can be subjective because it reflects the biases of all

¹See <http://harvardmagazine.com/1999/05/damnd.html>

market participants. An index that selects and weights constituents according to their market price is inherently momentum driven, assigning the largest weights to companies whose stocks have performed best. As shown in **Figure 1**, the technology sector achieved its highest weight in a U.S. cap-weighted index in March 2000, precisely when it was most expensive. Similarly, the financial sector's weight bottomed in March 2009, precisely when it was cheapest. By overweighting overvalued stocks and underweighting undervalued ones, the cap-weighted index is subject to an inherent drag on returns, worth roughly 2% a year in developed markets—and more in less efficient markets.

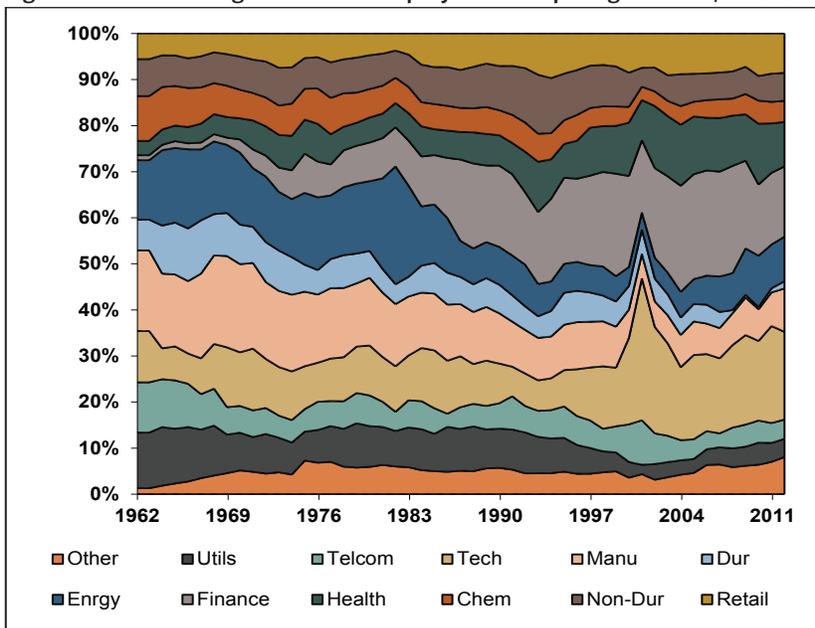
Numerous behavioral finance studies teach us that our feelings can lead to suboptimal decision-making. While it may be a bit of stretch, one could argue the use of discipline should be a law of investing, not unlike Newton's laws of physics. However, if emotions serve as a component of qualitative approaches, quantitative strategies, and cap-weighted indices, how can we avoid these biases and still manage to invest? What alternative is there?

A SIMPLE, TRANSPARENT, DISCIPLINED APPROACH

Research Affiliates has created a transparent approach to investing that takes emotion out of the equation. By selecting and weighting constituents according to fundamental metrics of company size and rebalancing back to these weights annually, Research Affiliates Fundamental Index (RAFI) strategies have outperformed benchmark cap-weighted indices over full market cycles. Weights in RAFI strategies are based on the sales, cash flow, dividends, and book value of the underlying firms. There is no emotion involved. The methodology underlying the indices is completely transparent and not at all tied to sentiment-driven prices at which companies trade in the broader market. Further, because of their simplicity, RAFI strategies represent a low-cost investment solution.

The indices are rebalanced annually to newly calculated weights. These fundamental weights are relatively stable over time, especially when compared to company weights in a cap-weighted index. Each rebalance essentially reverses the preceding year's price drift, bringing

Figure 1. U.S. Sector Weights in a 1000 Company Market-Cap-Weighted Index, 1962-2011



Source: Research Affiliates based on data from CRSP and Compustat.

sector, country, and individual companies back to their anchor weights.

Since the launch of the index series in 2005, the effect of this rebalancing has been particularly pronounced in the U.S. financial sector. As shown in **Figure 2**, the weight of financials in a cap-weighted index decreased substantially in 2009 during the depths of the Global Financial Crisis. The 2009 FTSE RAFI US 1000 Index rebalance restored the financial sector virtually to its 2008 post-rebalance weight, meaning the RAFI strategy's largest relative overweight to financials occurred after the sector had sold off. This simple, disciplined approach worked precisely as designed. By tightly adhering to a "buy-low, sell-high" dictum, the RAFI strategy took advantage of the rebound in financial stock prices that followed the market bottom that occurred in March 2009.

This annual contra-trade against market movement, adding to the prior year's losers and trimming the prior year's winners, does not require any analysis or com-

pany visits to determine appropriate holding size. There are also no regular tweaks made to a painstakingly optimized quantitative approach. This simple, disciplined approach takes place each year like clockwork. Because the methodology is straightforward, the fees for RAFI strategies are considerably less than those of the average active strategy.

While the process is naïve, the resultant performance achieved via the removal of emotion from the investment process is impressive. As can be seen in **Table 1**, each of the five headline FTSE RAFI indices for U.S. investors have achieved higher returns than their cap-weighted counterparts since their inception.

FTSE RAFI indices have outperformed in the U.S. large, U.S. small, developed ex U.S. large, developed ex U.S. small, and emerging market categories. This outperformance is not achieved through the use of superior company research by a qualitative analyst or an opaque quantitative strategy. The increase in returns is reached solely by selecting and weighting index constituents,

Figure 2. Annual FTSE RAFI® Rebalance Keeps U.S. Financial Weights Stable



Source: Research Affiliates based on data from FactSet.

Table 1: Annualized Performance for Headline FTSE RAFI Indices as of December 31, 2011

INDEX	RETURNS				VOLATILITY SINCE LAUNCH	LAUNCH DATE
	1-YEAR	3-YEAR	5-YEAR	SINCE LAUNCH		
FTSE RAFI® 1000	0.1%	19.5%	1.1%	3.8%	20.5%	11/28/2005
S&P 500	2.1%	14.1%	-0.2%	2.1%	17.3%	
Russell 1000	1.5%	14.8%	0.0%	2.3%	17.6%	
FTSE RAFI® US 1500	-5.9%	23.7%	3.1%	3.5%	26.5%	5/4/2006
Russell 2000	-4.2%	15.6%	0.2%	0.6%	23.3%	
FTSE RAFI® Developed Ex US 1000	-14.3%	9.9%	-3.2%	2.2%	23.6%	11/28/2005
MSCI EAFE	-11.7%	8.2%	-4.3%	1.0%	21.1%	
FTSE RAFI® Developed ex US Mid Small	-12.1%	18.1%		-1.2%	25.2%	8/6/2007
MSCI EAFE Small	-15.7%	15.0%		-6.1%	26.1%	
FTSE RAFI® Emerging Markets	-17.9%	20.9%		0.5%	30.7%	7/9/2007
MSCI Emerging Markets	-18.2%	20.4%		-1.9%	30.6%	

Source: Research Affiliates LLC, based on data from Bloomberg.

and then rebalancing them back to weights that are representative of company size—not their market price. This annual exercise enables the strategies to take advantage of the mean reversion in prices—a move away from inflated or deflated market expectations and toward their intrinsic value—that has been observed in the returns of investment securities since the beginning of markets.

CONCLUSION

Newton’s laws of motion describe the relationship between objects and forces acting on them. While mean reversion may not act with the same degree of precision,

it nevertheless drives security prices back toward their intrinsic value. Using a simple, low-cost, disciplined strategy that both eliminates emotion from the equation and takes advantage of mean reversion through a methodical rebalancing technique can generate superior returns. Given the results, it may not be a stretch to refer to the use of discipline as a law of investing after all.

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