

The Morningstar style box methodology, which has dominated the mutual fund industry



Tom Howard

since its introduction in 1992, is about to be challenged by a new commercial venture. AthenaInvest is the brainchild of Tom Howard, a professor of finance at the University of Denver, and Craig Callahan, the founder and President of ICON Advisers. We spoke with Howard and AthenaInvest's President, Wes Schrader, about their firm's methodology and why they believe that style boxes are forcing investors to accept inferior returns.



Wes Schrader

### The Unintended Consequences of Style Boxes

When Morningstar introduced style boxes 15 years ago, they probably did not anticipate the wide-spread industry acceptance they would generate, and ultimately the stampede that now forces active fund managers to adhere to a box within the three-by-three grid of style and market capitalization. Style boxes permit an orderly classification of mutual funds, and many advisors use them because they facilitate asset allocation and diversification of client portfolios. But, precisely because of this reason, there is an inherent pressure for funds to stay within their designated box. Approximately 85% of mutual funds are sold through wirehouses and other platforms, and these platforms facilitate the asset allocation for advisors. If a fund drifts from its designated style and falls off a platform, the consequences are severe, and this marketing pressure insures style box adherence.

Since 2002, there have been six academic studies, that have looked at the effect of style boxes on manager returns. These studies have asked the same underlying question: "Does confining a manager to a style box reduce risk-adjusted returns and, if so, by how much?" These studies, which incorporate approximately 25 years of historical data, all reached similar conclusions. Funds that are allowed to drift achieve superior returns; index huggers underperform. As Howard puts it "style boxes wipe out alpha." [Ed. Note: one [study](#) was described in a previous issue of this newsletter, and a second [study](#) was referenced in another article.]

In fact, in the pre-style box era (before 1992), studies have shown that money regularly flowed into alpha generating funds. [see Cremers and Petajisto (2007)] In the subsequent 13 years, the percentage of flows to alpha generating funds dropped in half, with about 29% (or about \$500 billion) going to closet indexers, and about 14% going to true index funds. "The style grid has rerouted flows to closet indexers, who deliver the index but charge a fee," adds Howard. Howard notes that, overall, non-index funds



generated an average return of -.33% from 1990-2003, which index fund advocates such as John Bogle cite as a compelling reason to avoid active funds. But Howard warns that this is the average return, and not all funds are average.

### **Finding the Alpha Generators**

Howard believes that, because of the distortions created by style boxes, there is an opportunity to “shine a light” on those funds that generate alpha – specifically those funds that don’t fit in a style box or are allowed to drift around.

AthenaInvest’s innovation is to look at the mutual fund universe with a new paradigm, what Howard calls Strategy Based Investing (SBI). SBI begins with the identification of ten core equity strategies that a fund can employ:

- **Competitive Position:** Business principles, including quality of management, market power, product reputation, and competitive advantage. Consider the sustainability of the business model and history of adapting to market changes.
- **Economic Conditions:** Top down approach based on economic fundamentals; can include employment, productivity, inflation, and industrial output. Gages where overall health of economy is in business cycle, resulting supply and demand situations in various industries, and best stocks to purchase.
- **Future Growth:** Companies poised to grow rapidly relative to others. The Future Growth and Valuation strategies are not mutually exclusive and can both be deemed important in investment process.
- **Market Conditions:** Consideration of stock's recent price and volume history relative to the market and similar stocks as well as the overall stock market conditions.
- **Opportunity:** Unique opportunities that may exist for a small number of stocks or at different points in time. May involve combining stocks and derivatives and may involve use of considerable leverage. Many hedge fund managers follow this strategy, but a mutual fund manager may also be so classified.
- **Profitability:** Company profitability, such as gross margin, operating margin, net margin and return on equity.
- **Quantitative:** Mathematical and statistical inefficiencies in market and individual stock pricing. Involves mathematical and statistical modeling with little or no regard to company and market fundamentals.
- **Risk:** Control overall risk, with increasing returns a secondary consideration. Risk measures considered may include beta, volatility, company financials, industry and sector exposures, country exposures, and economic and market risk factors.



- **Social Considerations:** Company's ethical, environmental, and business practices as well as an evaluation of the company's business lines in light of the current social and political climate.
- **Valuation:** Stocks selling cheaply compared to peer stocks based on accounting ratios and valuation techniques. The Valuation and Future Growth strategies are not mutually exclusive and can both be deemed an opportunity strategy, but a mutual fund manager may also be so classified.

Each strategy represents an investment discipline followed by a fund. A fund will have a primary and secondary strategy. To categorize funds based on strategies, AthenaInvest collected nearly 30,000 pieces of strategy information for 2,400 open ended actively managed US equity funds, leading to a 98% strategy identification using prospectuses and feedback from the managers themselves. In fact, Howard encourages funds to provide feedback about their strategy, to insure accurate strategy identification. Howard's data shows that funds in a given style boxes employ virtually all of these strategies, to varying degrees.

Howard calculated risk-adjusted returns for each combination of primary and secondary strategies. The difference between the best and worst strategies is approximately 300 basis points. To insure that this difference was not attributable to other effects, Howard adjusted for both P/E ratios and market capitalization, as would be expected in the Fama-French three factor model, and obtained similar results. Howard cautions that these results do not imply that P/E and market capitalization are unimportant, only that strategy and the consistency of strategy offer a new dimension to explain superior performance, which is being missed by the current methodology.

The top performing strategies include various combinations of valuation, competitive position, risk, and profitability. Interestingly, only 91 funds employ these strategies in combinations that provide superior risk-adjusted returns. At the other end of the spectrum, future growth and social consideration strategies provide the worst returns. One interesting data point is that a primary strategy of future growth and a secondary strategy of competitive position is used by 282 funds (one of the highest totals for any combination of primary and secondary strategies), yet funds with this strategy combination are among the worst performing in the universe. If SBI gains acceptance, data such as this will be closely watched by mutual fund companies seeking to gain shelf space and differentiate themselves from competitors.

## Diamond Ratings

An assault on style boxes would not be complete without a new system for rating mutual funds, and Howard's system is based on a rating from one (worst) to five (best) diamonds. The innovative aspect of diamond ratings is that they are independent of



individual fund performance, in contrast to Morningstar's ratings, which are highly dependent on past performance. Ratings are assigned based on the consistency with which a fund adheres to its strategy. Diamond ratings have a negative correlation (-.11) with Morningstar's ratings, reinforcing the independence of Howard's methodology. About 12% of funds carry a five diamond rating, and about 3% are rated one diamond.

Advisors that embrace the SBI methodology will need to consider a fund's diamond rating, its primary and secondary strategies, and the risk/return profiles of those strategies. The best funds will have high diamond ratings and employ strategies with superior risk/return characteristics.

Howard's data shows the relative risk-return performance improvement that advisors can expect, based on their choice of diamond rating and strategy. Back-testing over a ten year time period, Howard shows that, on average, five diamond funds outperform one diamond funds by 240 basis points. The best five diamond fund outperforms that worst one diamond fund by 497 basis points. There is a 306 basis point difference between the best and worst performing strategies.

We spoke with Bill Dix, CEO of Fortune Management of Raleigh, N.C., who manages \$65 million and has been evaluating the AthenaInvest service. Dix likes the concept of "eclectic managers" who have the flexibility to adapt to changing marketing conditions. A manager such as Dan Fuss of the Loomis Sales Bond Fund appeals to Dix, because of Fuss' ability to react opportunistically to changing maturity and quality based environments. Dix also likes the Wasatch Core Growth Fund, which is ranked more highly by AthenaInvest, but has a poor Morningstar percentile peer rating, seemingly because it has changed from small to mid cap, and its historical returns are not being compared to an appropriate peer group. "Athena, because of its anti-style box approach, seems to be a worthwhile adjunct to the Morningstar rating system," notes Dix.

"We have created a nice pond for advisors to fish in," Howard says, referring to the apparent ease with which superior performing funds can be identified. We asked Howard whether SBI will ultimately replace style boxes, and whether he foresees a time where investors will have to worry about funds that hug their SBI indices. "We are building indices around our strategies," Howard says. "And this could be one of the unintended consequences of SBI. But it is likely to be benign because, unlike style boxes, we are allowing managers to do what they do best."

### **Strategies and Diamond Ratings in the AP Universe**

We thought our readers would like to see how the [most popular mutual funds](#) in the Advisor Perspectives universe fare under SBI. Howard was kind enough to provide the



data below for the top 10 most popular open-ended US equity funds, other than index funds and ETFs:

Ticker	Name	Primary	Secondary	Diamond
AGR BX	Growth Fund of America, Inc	Competitive Position	Economic Conditions	3
FCNTX	Fidelity Contrafund	Competitive Position	Economic Conditions	3
DODGX	Dodge & Cox Stock Fund	Valuation	Competitive Position	3
DFEOX	US Core Equity 1 Portfolio	Valuation	Future Growth	4
GRINX	Diversified Stock Fund	Future Growth	Valuation	3
FMCSX	Fidelity Mid-Cap Stock Fund	Competitive Position	Economic Conditions	3
FDGRX	Fidelity Growth Company Fund	Future Growth	Competitive Position	3
MXXIX	Marsico 21st Century Fund	Competitive Position	Economic Conditions	1
TAVFX	Third Avenue Value Fund	Valuation	Profitability	3
JENIX	Jensen Portfolio, Inc	Valuation	Competitive Position	3

Below is a table of the returns for the various primary strategies in the SBI model:

Primary Strategy	5 Year Return	Risk, PE, MC Adjusted Return	Rank
Valuation	12.64	13.46	1
Risk	12.56	11.58	7
Competitive Position	12.36	11.91	6
Opportunity	12.35	13.42	2
Market Conditions	12.20	12.38	4
Economic Conditions	11.41	12.39	3
Quantitative	11.35	12.10	5
Profitability	11.31	10.89	8
Future Growth	11.05	10.40	10
Social Considerations	10.38	10.70	9
Overall Average	11.99	11.98	

Valuation and Competitive Position are the primary strategies for eight of the ten funds, and these two strategies have provided high historical returns for the last five years. Valuation is also the top strategy on a risk-PE-MC adjusted basis, although Competitive Position slips to sixth on that basis. Future Growth, which is the primary strategy for the other two funds, has been one of the poorest faring strategies.

Note 1: Wermers, Russ. 2002. "A Matter of Style: The Causes and Consequences of Style Drift in Institutional Portfolios" (July) Working Paper, University of Maryland. Teo & Woo, "Style effects in the cross-section of stock returns", November 2004, Journal of Financial Economics. Kacperczyk et. al. "On the Industry Concentration of Actively Managed Equity Mutual Funds", August 2005, Journal of Finance.



Howard and Callahan, "The Problematic 'Style' Grid" Journal of Investment Consulting, Winter 2005-06.  
Cremers and Petajisto, January 2007. "How active is Your Fund Manager? A New Measure That Predicts Performance" Yale School of Management Working Paper. Research conducted by Tom Howard based on the April 2007 Zephyr data base.

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