Portfolio Insights for a Deep Value Manager | March 2010

MSCI Barra RESEARCH BULLETIN

Introduction

A typical value strategy looks for high quality stocks that are temporarily undervalued by the market. Value managers encounter two common situations. First, new portfolio positions are recent underperformers and will not necessarily outperform immediately. Second, these positions eventually may become winners and no longer considered good value, at which point they will likely be sold. Knowing where each stock falls on this spectrum is essential to the management process. In this Research Bulletin, we analyze the portfolio characteristics of a deep value manager over time and show the insights a manager can gain from monitoring his or her portfolio exposure to the Barra Momentum factor.

The Intuition Behind Exposures

Since the early studies of Fama and French, portfolio managers have been aware of the importance of style characteristics such as value, growth, and company size. Later, stock price momentum was also recognized as a characteristic that could explain commonalities across a given universe (Carhart, 1997)[1]. Exposures to such styles reflect sensitivity to a particular stock trait. In the same way the classic CAPM beta measures how much a stock price moves with every percentage change in the market, a factor exposure measures how much a stock price moves with every percentage change in a style factor. Thus, if the Momentum factor rises by 10%, a stock or portfolio with an exposure of 1.0 to a momentum factor will see a return of 10%, all else equal.[2] Exhibit 1 shows examples of the non-industry style factors in the Barra US Equity Model (USE3) and the traits they reflect. Style factors can vary across the 59 markets for which we estimate risk models.[3]

Exhibit 1: The Intuition Behind Exposures – Examples from the Barra US Equity Model

Positive Exposure to:	Comes from:	Negative Exposure to:	Comes from:
Momentum	High 12-month relative strength High historical alpha	Momentum	Low 12-month relative strength Low historical alpha
Earnings Yield	Low forward P/E ratios Low trailing P/E ratios	Earnings Yield	High forward P/E ratios High trailing P/E ratios
Value	Low Price to Book ratios	Value	High Price to Book ratios
Leverage	High Book leverage High Market leverage High Debt to Assets Lower Rated Senior Debt	Leverage	Low Book Leverage Low Market Leverage Low Debt to Assets Ratio Higher Rated Senior Debt

Note that positive exposure sometimes denotes traits that are positive from an investment standpoint (i.e., strong earnings), but can also denote less desirable traits (i.e., high leverage). Additionally, exposures in the Barra model typically reflect multiple traits. For example, positive Earnings Yield stocks have P/E ratios that are either historically low or forecasted to become low. The decision to combine traits rests on what most meaningfully explains stock price behavior. However, combined traits tend to be qualitatively similar.

[1] Carhart, Mark, 1997. "On Persistence in Mutual Fund Performance." *Journal of Finance* 52:1, 57-82.
[2] Specifically, the effects of other factors as well as specific returns remain the same,and the risk-free rate unchanged.
[3] For more details about the factors in each model, please visit http://www.barra.com/support/models/equity/model_list.asp.

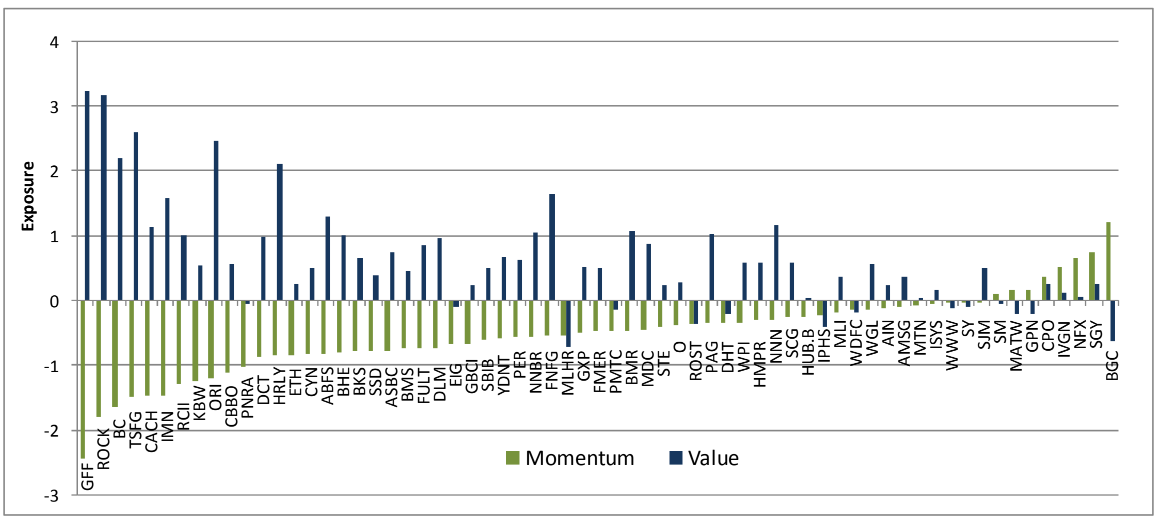
The Momentum Bets That Fall Out of a Deep Value Strategy

Consider a hypothetical deep value manager investing in turnaround companies, that is, those companies that were hit hard in recent months but have bottomed out. These companies are likely to have low P/B and P/E ratios. This means that in the Barra US Equity Model, they are likely to have positive exposure to the Value factor and the Earnings Yield factor.

Deep value strategies tend to have a distinct momentum profile. Companies that are cheap are likely to have negative exposure to momentum, representing the previous decline in the price of the stock. At any point in time, a deep value manager will likely have both negative momentum exposure names (stocks recently bought that are expected to turn around soon) and positive momentum exposure names (stocks that will soon be sold with realized gains).

Looking at form 13F data, we can view the historical holdings of deep value managers. There are more than 500 self-identified deep value funds reporting in 2007 through 2009. Exhibit 2 shows the Value and Momentum exposures of the positions for a randomly selected fund reporting as of March 31, 2008.[4] The portfolio tilts towards small cap names, with a large concentration of financials and consumer cyclicals. Before the financial crisis in the fall of 2008, deep value managers were relatively concentrated in a few key sectors, most prominently financials.

Exhibit 2: Value and Momentum Exposure for the Median Deep Value Manager (March 31, 2008)



The names with positive Value exposure are among the most undervalued stocks in the portfolios as of March 2008, such as Griffon (NYSE: GFF) and Gibraltar Industries (ROCK). Names with negative Value exposure and strong recent price performance, such as General Cable (BGC), were likely closest to their price targets. These had strong price performance through March 2008 and were no longer value stocks when measured relative to the equity universe.
A deep value manager will likely choose stocks whose momentum exposures have become more negative relative to other stocks in recent months. If a manager has timed the bottom well, the stocks' exposures will start to become less negative immediately after they are bought. Ideally,

[4] We map holdings on the reported date to the most recent Barra model exposures (i.e., if holdings are reported on March 31, 2008, we use the exposures generated March 1, 2008). This somewhat, but not completely, accounts for the lags implicit in the 13F filings. These lags (between the time the positions are actually held and the date the fund files) mean that performance analysis with 13F holdings may not be totally accurate. Thus, we show no fund names and only use these examples as illustrations.

deep value managers want to buy companies when Momentum exposures are at their most negative and sell them when Momentum exposures are at their most positive.

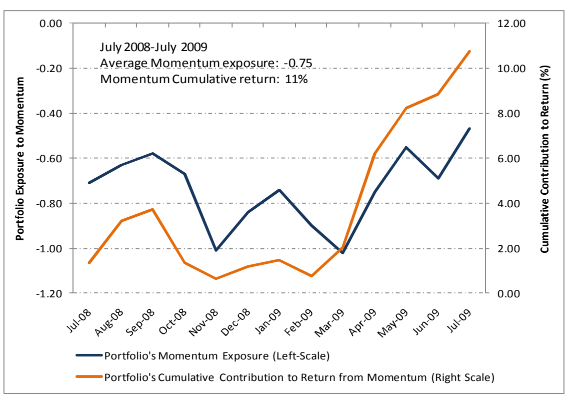
Monitoring Portfolio Momentum Over Time

Monitoring the portfolio's Momentum exposure and the distribution of momentum across the stocks in the portfolio can be a helpful way of understanding the balance between new unproven ideas and confirmed successful picks. If the portfolio Momentum exposure becomes more negative, the manager may be loading up on deep value companies whose payoffs may not materialize for some time. If there is uncertainty over the timing of the price turnaround, the manager could see underperformance relative to peers and the respective benchmark for some months. If the Momentum exposure becomes more positive, this may signal that the manager needs new ideas to generate outperformance in the future.

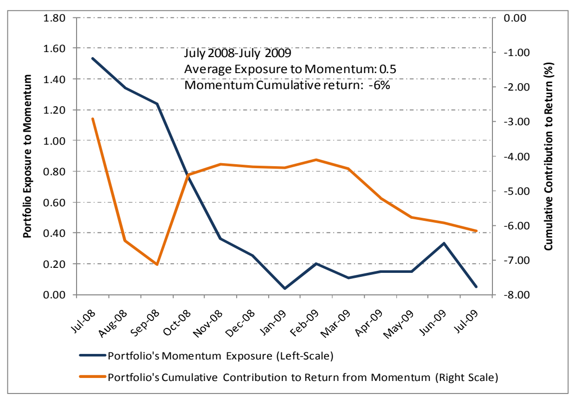
To illustrate the importance of monitoring Momentum, we show two deep value portfolios during the period July 2008 to July 2009.[5] These portfolios are selected based solely on their average Momentum exposure during this period. Exhibit 3 shows the exposure of each portfolio to Momentum and the return to the portfolio that arises from this exposure. Since momentum stocks did poorly during this period, the manager on the left benefited from his negative exposure—a contribution of 11% to his portfolio. His overall return for the period was 8%. In contrast, the manager on the right had a positive exposure during the period. The portfolio lost 6% from Momentum and 13% in total.[6]

Exhibit 3: Monitoring a Portfolio's Momentum Exposure Over Time (July 2008-July 2009)

Negative Momentum Portfolio



Positive Momentum Portfolio



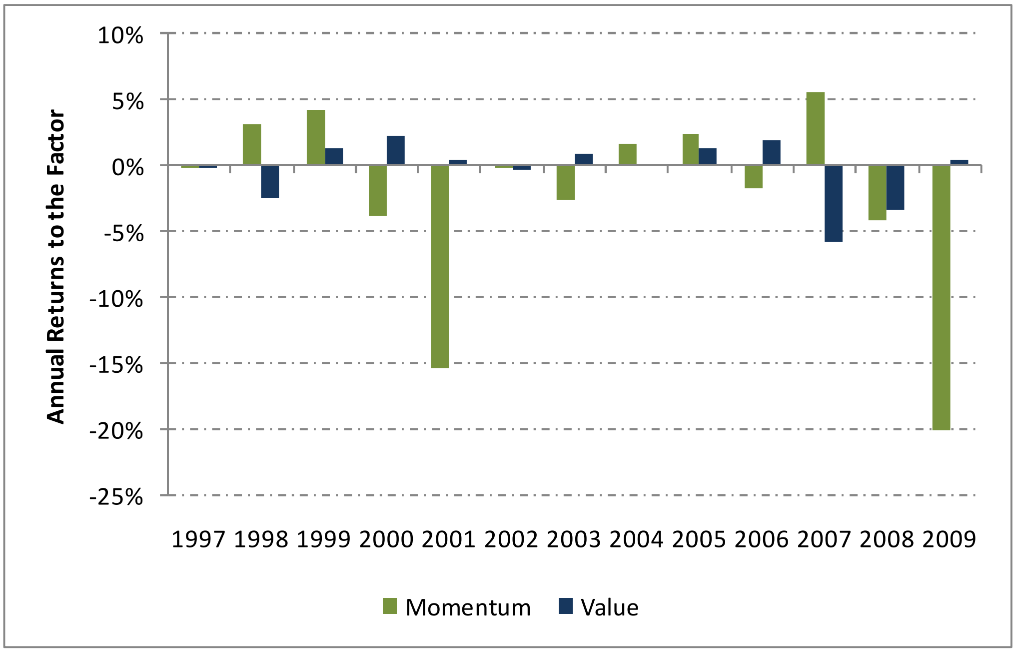
Most deep value managers are not trying to time momentum. However, unintended momentum tilts can result from a bottom-up strategy. For instance, if there is a large group of attractive undervalued companies during a market downturn, managers may load up on recent losers, and end in negative Momentum territory. Conversely, during low volatility bull markets, it may be harder to locate attractive companies, causing the manager's Momentum exposure to drift into positive territory.

As we saw with the fund on the right in Exhibit 3, even if a manager neutralizes his exposure over time, the effect on his performance will not likely cancel out. Momentum is a volatile factor, with an annual volatility of nearly 7% since 2000. In addition, Momentum periodically goes through sizable retrenchments. Exhibit 4 shows the huge losses incurred by the Momentum factor in 2001

[5] The majority of deep value managers reporting in this period had negative exposure to Momentum.
[6] The two portfolios differ in other respects besides their Momentum exposure. Thus, the difference in the portfolio's cumulative returns is not due just to the differences in Momentum exposure.

and again in 2009. Momentum lost 15% and 20%, respectively, in those years. In contrast, the Value factor has had an annual volatility of only 1.8% since 2000. Monitoring changes in exposures can be critical during such periods when factors deviate from the norm.[7]

Exhibit 4: Returns to the Barra US Equity Momentum and Value Factors



Conclusion

Deep value managers can potentially gain insight into their portfolios by examining their exposure to momentum through a factor model. We illustrated how a manager can achieve insight into his balance of new ideas, and soon-to-be-realized gains through the distribution of exposures to the Barra Momentum factor at any point in time. Knowing where each stock falls on this spectrum is essential to the management process. In addition, we illustrated the importance of monitoring the overall portfolio exposure to momentum over time.

In practice, managers may choose to have a certain level of momentum exposure over time. For example, in environments where there are many attractive companies for sale, managers may choose to have a negative exposure. However, momentum stocks can go through periods of significant gains and losses, so monitoring exposure is important to prevent eroding performance through an unintended bet.

[7] It can be challenging to predict periods in which the Momentum factor goes through retrenchments. Momentum essentially captures the return to past winners over losers excess of industry and other style effects. Thus, when it falls dramatically, past losers are outperforming past winners and this phenomenon is not limited to particular industries or limited to stocks in value segments, growth segments, etc. In the spring of 2009, there was a significant bounceback in the performance of stocks that had been hammered in the last months of 2008. These included battered financials, auto, and technology stocks.

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