Invesco Perspective

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Quant's Edge in Managing 130/30

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One of the major headline-grabbing market events of the summer of 2007 was the sharp performance decline among quantitatively managed equity strategies over a few extraordinarily volatile days in August. With much less media attention, a number of these same managers ultimately avoided longer term damage by keeping their factor weightings (and their heads) intact during those tumultuous moments when margin calls and a sharp nosedive in market liquidity punished many of the highest quality U.S. stocks. Substantial anecdotal evidence shows that many of these disciplined managers who remained true to their models were rewarded in short order as the unusual and sudden factor reversal snapped back almost as quickly, and most of the August 2007 losses were recovered. The results were not nearly as benign, however, for some high profile quant hedge funds, "dynamic" quant managers, and a number of fundamental managers. They believed they saw a sea change in risk pricing from this event and altered their positions substantially at the wrong time.

Our summary view of that episode is that it was a prime example of why clients must continue to diversify both manager and style risk, including their exposure to directional long/short (e.g., "130/30") portfolios. Moreover, it was an example of how short-term events are poor predictors of long term success. Nevertheless, August 2007's 'quant crisis', which turned out to be a harbinger of more widespread turbulence to come across the global financial markets, reverberated in the institutional investment community and prompted many plans to put the brakes on their quantitative equity exposure. This pullback also included some skittishness towards 130/30 quant managers. While we are advocates of our clients diversifying their exposure across both quantitative and fundamental directional long/short approaches, we strongly believe that a model-driven quantitative approach is better equipped to generate the most efficient means of alpha production and superior portfolio construction in the long run.

Experience with longs, shorts and alpha production

Invesco has been managing long-only strategies for 24 years and long-short portfolios for 15 years.[1] Why is that relevant to our more recently developed directional long/short strategies? One big reason is that our market neutral strategy, which utilizes stock forecasts that result in long and short positions, is firmly in place with a track record of picking accurately on both counts. (See chart.) In analyzing the predictive power of our model for 130/30 strategies over the long run, it is most relevant to look at the stocks ranked by our model among the top 20% and the bottom 20%. Since we draw directly from the same quantitative stock ranking model we've used for market neutral strategies in our 130/30 portfolios, our implementation of 130/30 is a natural extension of a capability we've always had rather than something new.

The chart on the next page also illustrates the largely immaterial impact of short-term reversals of fortune such as what occurred in August 2007. If you looked solely at that brief episode, you would see nearly the opposite results from the stellar performance depicted in this chart. Yet, these anomalies are inevitable and will happen again, just as they do with any other investment style. The key is buying into a manager and process that remains durable over the long haul, while keeping an evolutionary approach to alpha recognition through changing markets. We believe that while there are a number of effective ways to manage 130/30, quantitative management is the most powerful and efficient.

[1] As of March 31, 2008

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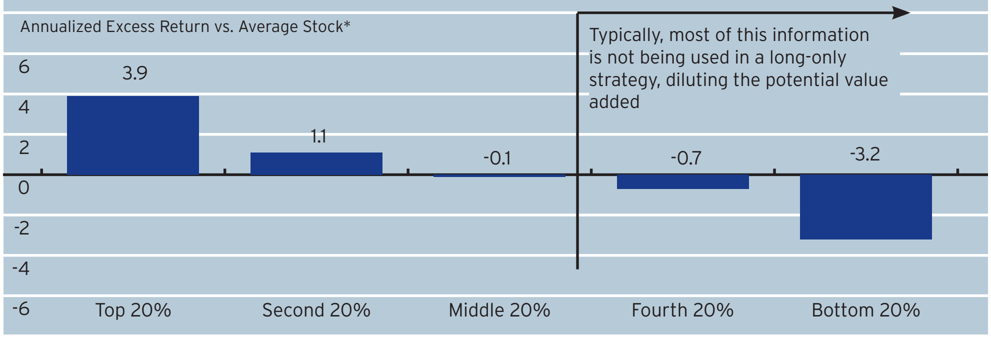
Invesco's Highly Ranked Stocks Have Historically Outperformed Poorly Ranked Stocks[2]

Real-time Performance Of Stocks Ranked By Forecasted Returns



Maximizing alpha: Forecasts for every stock
One of the key advantages that quantitative managers have is their ability to make investment decisions on all or a majority of stocks in a given benchmark. Unlike a fundamental manager, who typically screens out the majority of stocks in their investable universe, with the intent of making more significant decisions on a select group of companies, a quant model can provide a directional forecast on all stocks in a universe.

The Quant Edge
- Ability to overweight and underweight stocks with equal conviction = portfolio linearity
- Utilizes the full capability of the research, not just the longs
- Every stock has a forecasted return relative to their industry peers – this spread is what we are interested in exploiting
- Portfolio construction rules and parameters can help portfolios avoid sizable underperformance from unintended bets

Portfolio Construction: An incremental approach to efficiency and risk
Implementing a 130/30 strategy is by its construction an inherently quantitative process, involving the combination of long extension and shorts and an optimization step. Through a purely factor-driven process that includes the majority of holdings in an index, you can take many more smaller bets rather than having to take on more risk per holding as one might need to in a fundamental portfolio. The manager of a fundamental portfolio is typically unable to consistently track hundreds of stocks at a time, and thus screens out a large portion to focus on a group of expected outperformers. This strategy generally means that to produce alpha, a manager will need to make larger bets on long and short positions.

The Quant Edge
- Smaller bets, proportional to the degree of forecasted return, produce higher information ratios
- Greater transparency in process for clients – model drives all decisions
- Larger number of holdings serves as a natural diversifier against factor risk and individual security risk

Durable factor models, long term alpha
With higher information ratios and greater alpha opportunity, 130/30 strategies are likely here to stay. The managers who excel at this approach and emerge as durable market leaders will need to have a deep understanding of how to manage risk and, in particular, the risks and opportunities involved with shorting, in addition to expertise in going long. We believe that to achieve this most efficiently, an experienced quant manager is best equipped.

2 Data calculated by Invesco on a quarterly basis using real time factor scores and weights applied on an industry neutral basis. Excess returns are calculated by comparing the Model's industry neutral forecast at quarter end with the actual industry neutral returns for the following quarter and then weighting all of the returns in each quintile by the square root of market cap. Results employ the Model and the large cap universe defined during applicable time periods; the Model and the stocks change over time. Model calculations are gross and do not deduct management fees, transaction costs or other expenses which will reduce the performance of actual portfolios. Model results are not the only factor considered by IQS in constructing portfolios. Past performance is not indicative of future results. Results as of January 1, 1984 through March 31, 2008.