ADVISOR PERSPECTIVES

The Track Record of 130/30 Funds

One of the fastest growing innovations over the last several years has been the 130/30 strategy, which are projected to grow from current levels of $50 billion to $500 billion in five years.[1] While these strategies are used mostly by institutional investors, a number of 130/30 mutual funds have appeared, and retail investors can invest through separately managed accounts. We spoke with Gordon Johnson, Lead Portfolio Manager of International Strategies at Lee Munder Captial Group, who has studied 130/30 strategies. With his colleagues Shannon Ericson and Vikram Srimurthy, Johnson has coauthored a paper (*An Empirical Analysis of 103/30 Strategies*) which is scheduled to be published in the *Journal of Alternative Investments*. In the interest of full disclosure, Lee Munder offers a 130/30 institutional fund (one of the few with an international strategy), which is available to retail investors through limited partnerships and separate accounts.

How a 130/30 Fund Works

A 130/30 fund is based on an actively managed long-only fund that is pegged to a recognized market index. The long only fund is 'levered' by shorting 30% of the assets, and the cash raised is used to purchase an additional 30% of long positions. The resulting portfolio has a 130% long position and a 30% short position, but still maintains a beta of 1.0 relative to the index against which it is managed. The fund can be managed with either a quantitative or fundamental approach. As we discuss later, Johnson's analysis focuses on the quantitative approach, which he believes account for 60-80% of the assets managed with 130/30 strategies.

130/30 funds resemble hedge funds in their use of leverage, but the similarity ends there. Hedge funds are managed to achieve an absolute return, whereas 130/30 funds are managed against specific benchmarks, and performance measurement of 130/30 funds is only meaningful when compared to its benchmark.

The underlying rationale behind 130/30 funds is to allow managers to place additional bets on securities they like (by extending their long positions) and on securities they dislike (by employing short positions). The use of short positions is critical, because long-only portfolios are constrained in their ability to underweight stocks. Johnson looked at the Russell 1000 (large cap) and MSCI EAFE indices and, in both cases, only about 80 stocks have more than .25% exposure in the index, and only 35 stocks have more than .50% exposure. If a manager dislikes a stock, there is a rigid limit on the amount it can be underweighted. Allowing short positions removes this limit.

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We asked Johnson whether the 130/30 structure represents the optimal use of leverage in a portfolio. After all, if the introduction of leverage enhances portfolio returns by allowing managers more freedom, why not go to a fully levered 200/100 structure? Johnson explained that there is no definitive answer to whether 130/30 is optimal, but studies[2] have shown that the 130/30 structure captures about 90% of the benefit of leverage.

Inside a 130/30 Fund

Johnson's analysis focuses on domestic and international 130/30 funds, managed against the Russell 1000 and MSCI EAFE indices respectively, each using a quantitative style. A quantitative style uses an alpha model with a set of parameters for stock selection in a highly analytical framework. Typically the underlying alpha model is proprietary. For his analysis, Johnson employed an open alpha model – one that uses predictive variables that have been used by other researchers - utilizing a combination of earnings estimate revisions, long-term momentum, cash-flow/price ratio, book/price ratio, sales/price ratio, and changes in outstanding shares to predict stock performance. Johnson back-tested the model using data from January 1994 to December 2006, a period which evenly brackets the Tech/Telecom meltdown, and his data shows that the alpha model is reasonably predictive of future performance at an individual security level.

Johnson's domestic alpha model selected a portfolio of approximately 110 names for the long-only strategy. The 130/30 strategy had an average of 143 long and 42 short positions, and was rebalanced at the end of each month, in order to maintain the 130/30 structure and to cover short positions as necessary. Both portfolios had betas of close to 1.0 and were sector neutral against their benchmark. A similar approach was used to construct international long-only and 130/30 portfolios for back-testing.

Measuring 130/30 Fund Performance

The key question Johnson asked is whether the 130/30 fund delivered superior risk-adjusted performance, as compared to the base case of the long-only strategy. His results were impressive. The domestic 130/30 strategy outperformed the long-only by about 1.5 times (annualized returns of 11.27% versus 7.61%) with a tracking error only 1.15 times higher (6.48 versus 5.43). The turnover is considerably higher for the 130/30 strategy (106 versus 52%), and Johnson notes that he does not incorporate trading or other transaction and market impact costs in his analysis. But other researchers[3] have shown analytically that superior returns hold up even when these costs are considered.

Johnson next turned his attention the question of performance attribution, and asked how much performance is derived from the long versus the short positions. Previous

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research had not addressed this question, so Johnson had to develop an analytical framework to express the contribution of long and short positions. For the back-tested portfolio, the 130/30 strategy had a cumulative return of 22.3%, versus an 11.0% for the benchmark, resulting in an outperformance of 11.3%. His framework shows that 9.1% of the excess returns are from the long positions and 2.1% are from the shorts. The remaining .1% is a statistical artifact which Johnson has named the long-short interaction; it offers no meaningful information about the return characteristics of the portfolio.

Lastly, Johnson looked at 130/30 portfolios that have been publicly reporting their results. There are now approximately 35 such portfolios, although Johnson restricted his analysis to large cap core funds with at least 21 months of performance history and where he could identify a corresponding long-only strategy being run by the same manager. This narrowed down the universe to nine pairs of 130/30 and long-only strategies, with performance histories of 21 to 36 months. In all nine cases, the 130/30 portfolio outperformed the long-only portfolio, in many cases by very substantial margins.

How Advisors Should Evaluate 130/30 Portfolios

Johnson's work breaks new ground in that he uses an open alpha model, and shows the benchmark weights of individual stocks, ordered by alpha. More importantly, though, is Johnson's extensive empirical back-testing, and his demonstration that 130/30 portfolios can provide superior risk-adjusted performance, as compared to their benchmarks and to the corresponding long-only strategy.

Before advisors fully embrace 130/30 strategies, they will need to get comfortable with a number of issues. First, these strategies are somewhat more volatile and are clearly for the long-term investor. Second, there are very few mutual funds with 130/30 strategies, so the primary option for retail investors will be through separately managed accounts and limited partnerships, each having minimum account size restrictions. Third, these strategies are not tax-sensitive, and the high turnover may create adverse tax consequences for non-qualified accounts. Lastly, and perhaps most importantly, the empirical data available for 130/30 strategies is still pretty scarce, and investors that like to see long historical performance track records will not find such data.

The prime brokerage business on Wall Street has thrived through the growth of hedge funds, partly because of the profitability of funding short positions. The Street is rooting for 130/30 funds to succeed, seeing a similar payoff coming from them. This reason alone may drive the growth of 130/30 funds into retail accounts.

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Notes:

1. See the article “130/30 Strategy Payday” in the May 28, 2007 issue of Pensions & Investments.
2. Clarke, Roger, Harinda de Silva, and Steen Thorley. “Portfolio Constratints and the Fundamental Law of Active Management.” *Financial Analysts Journal*, vol. 58, no.5 (September/October 2002), pp. 48-66.
3. Sorensen, Ronald Hua, and Edward Qian. “Aspects of Constrained Long-Short Equity Portfolios.” *Journal of Portfolio Management,* Winter 2006, pp. 12-20.

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