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FinAnalytica Gives Fund of Hedge Funds a Grip on Risk

LONDON — Tarchon Capital Management, a London-based fund of hedge funds with about \$3 billion in assets under management, needed a better grasp on its market risk as it confronted volatile markets in the wake of a developing sub-prime lending crisis.

In July 2007, the firm turned to Cognity, a portfolio analytics solution offered by FinAnalytica Inc., a Seattle-based financial industry software company founded in 2003. The Cognity solution includes modules for market risk, portfolio construction and funds of funds. Users can buy specific modules or the overall Cognity suite. Tarchon Capital found value in Cognity because it can do all its analysis on the same platform rather than using three or four different proprietary, Excel-based systems.

"Cognity has helped us identify some patterns in the returns and in the credit space more than others," says Sergio Margetides, Senior Quantitative and Research Analyst at Tarchon Capital. The firm couples Cognity with risk information systems for its underlying hedge funds to get full transparency on its risk. "Cognity has allowed us to put the current turmoil in perspective from a risk point of view," adds Margetides.

Tarchon Capital learns from hedge funds what they are investing in, what their positions are, and how they manage their portfolios. Using Cognity, Tarchon can go back and see how this information relates to what those underlying asset classes have done, according to Margetides.

"We can also do stress testing, using the current environment as a good example of what stresses we could potentially encounter," he says.

Before Tarchon Capital began using Cognity, it had used another software package that was less flexible, and did not communicate its calculations clearly, according to Margetides. "It was a real black box," he says. Tarchon chose Cognity after three months of researching providers.

"First, we like the software and capabilities to do things we want to do," says Margetides. "Second, the software itself was still under development but it already provided a lot of the things we wanted. We also have the opportunity to help shape the analysis going forward. FinAnalytica is good at listening to what we want. They do major releases every six to nine months. A lot of the things that we discuss, they seriously consider for the next release if not in the current routine. They have a helpful and prompt support desk."

Cognity covers the entire investment process from asset screening to portfolio construction to portfolio optimization, observes Margetides. "We do peer group analysis with hedge funds in similar strategies over specific periods of time we decide to analyze," he says. "We can change the window of history that we want to look at. Then we can compare funds that are supposed to be doing similar things to see how they fare against each other. Finally, we place them in the

Tarchon Capital can use Cognity and hedge fund-supplied data to see how their strategies relate to what underlying asset classes have done.

Cognity helped
Tarchon develop a
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market liquidity.

HEDGE FUNDS

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Cognity users can deploy downside risk measures and proprietary performance measures to better identify funds with higher upsides and lower risk.

realm of portfolios, which are portfolios that we already have to see. It is one thing to see them in a peer group analysis on their own. It is a different thing to see them in a portfolio of 40 hedge funds when you see how they interact with the remaining funds that are in different strategies."

Tarchon's funds of funds have risk guidelines and return targets; the analysis Tarchon does aims to keep its portfolio of funds within those guidelines. "For example, Cognity has helped us develop a liquidity index, which is different from a market index," says Margetides. "It is a proprietary index that allows us to track what is happening in liquidity in the market and that helps us see who has more leverage and what is most susceptible to changes in liquidity in the market. It is not 100 percent bulletproof, but indicates where to look."

Tarchon uses downside risk measures at the portfolio level. The firm's research identifies potential downsides to specific strategies so the firm can decide how to act under its liquidity constraints and within the investment processes of those funds.

"We can do value-at-risk (VAR) analysis at the underlying hedge fund level," says Margetides. "The next progression is working with factors affecting the returns of the underlying hedge funds. Then we stress the factors rather than the underlying funds."

A majority of FinAnalytica's Cognity users are funds of funds, specifically funds of hedge funds, notes R. Douglas Martin, Chairman and Chief Executive Officer of FinAnalytica. The provider has recently improved Cognity by adding ways for users to determine how asset returns behave in unusual markets, adds Martin. The Cognity solution delivers risk analysis, risk decomposition and risk breakdowns.

"We built the application initially for market risk purposes," says Boryana

Racheva-Iotova, Executive Managing Director of Research and Development at FinAnalytica. Cognity can model extreme market situations like market crashes and extreme switches in the market, she explains. The solution covers the entire investment process from asset screening to portfolio construction and portfolio optimization.

"The system supports both returnsbased analysis and positions-based analysis," says Racheva-Iotova. "It is the combination of both that makes us very flexible and is something that most of our clients like a lot."

Cognity users can deploy downside risk measures and proprietary performance measures to better identify funds with higher upsides and lower risk. Users can then build an optimal portfolio based on such funds, selecting the funds that have performed better at the same level of risk. Users can analyze one portfolio for risk, or all the portfolios in their institution, deconstructing the risks from various factors throughout those portfolios.

Competing solutions directly or indirectly assume normal distributions of risk, but extreme changes in returns happen more frequently, according to Martin.

This means such solutions cannot reflect whether funds have more extreme changes in returns, he adds. Standard risk measures rely on volatility to optimize portfolios and account for risk, notes Racheva-Iotova.

"The problem with volatility as a risk measure is that it is symmetric," she says. "When you have strong upside movement, it shows up as risk rather than as exceptional returns. That is a limitation of volatility, so we use downside risk measures, which are much more informative and much more intuitive. Our risk analysis can get inside the extreme risk of a given portfolio. Our optimizer concentrates on the downside risk. And our modules are integrated, making the work flow very smooth."