Hydra Platform
by Kettera Strategies

# Proprietary Manager Evaluation Report

## "Coyote Partners"

Chicago, Illinois

(Registered CTA NFA ID 000000)

## Diversified Program

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|---|---|
| Firm | Coyote Partners |
| Program | Diversified Program |
| Strategy Category | Systematic trading combined with model-driven macro diversified markets |
| | June 2015 |

# THE PROGRAM

## Overall Philosophy

The Firm says they employ a cross-dimensional approach to trading. They tap quantitative discipline, market intuition, academic insight, and qualitative risk overlay to seek to capture the positive attributes of both the model-driven and discretionary approaches to investment management. The principals say they are foremost a "quant" firm, but one that is open to changing things based on observations in the real word. The combination, in the words of Smith, is "to see things in the markets that other people don't see." This quantitative approach is applied to all stages of the investment process – researching models, trade signals, and portfolio risk management.

We note that in reviewing other managers touting a similar "systematic plus discretionary" blend, such a combination has often either been unsuccessful or is dominated by one of these components, with the other being mere "window dressing." Our conclusion for the Firm is that the systematic / model-driven side is the dominant side at the Firm, although the discretionary element cannot be completely dismissed as incidental.

## Investment Methodology

The program invests in currencies, interest rates, precious metals, and equity indices. No commodities aside from precious metals are traded. In addition to market diversification, the firm tries to achieve style diversification through the use of multiple types of models – at this writing these include:

FX Models (applied to FX only) 40%
- Carry 15%
- Asset flows / risk premia 25%

All other Models (applies to all sectors) 60%
- Countertrend / Mean Reversion: 10%
- Relative Value / Fair Value: 10%
- Med Term Trend Following 20%
- Carry/Roll Yield: 20%

Carry (Currency Markets only):

In any forward currency position, there is exposure to volatility in the spot market as well as volatility in interest rate differentials between the two currency countries making up the pair. The firm limits its interest rate risk by limiting the duration of such trades to 2 months. They instead focus on the risk/reward relationship between interest rate exposure and the resulting spot market exposure, and have developed quant models that exploit this relationship. Their models compose "clusters" of currencies that are intended to outperform simple "pair" trades on a risk/reward basis. An example of a currency cluster is long a basket of Mexican Peso and Brazilian Real vs. short a basket of U.S. Dollar and Canadian Dollar. A substantial component in this approach is forecasting future spot market volatility.

## Markets Traded:

LTIRs: Long Gilt, Bund, 10year US, 10year Aus,

STIRs: 3M Euribor, 3M EuroD, 3M EuroSwiss, Aus Bill, 90D Sterling

G15 FX: EUR, CHF, GBP, JPY, CAD, AUD, NZD, NOK, SEK, USD

Other FX: ARS, BRL, CLP, MXN, CZK, PLN, RUB, TRY, HUF, PHP, INR, SGD, KRW, TWD, ZAR

Indices: SP500, Nasdaq, Stoxx, Nikkei, ASX200, FTSE

Commodities: Gold, Crude

## Risk Management

Pre-Trade: For managing current risks, the team builds a forecast of future portfolio-wide volatility based on the current positioning. The Firm applies a quantitative approach assessing correlations among both models and markets, volatility of markets and expected return contributions of each algorithm to the portfolio is used to allocate its capital across strategies. Although the team says they do this to ensure the performance profile of the portfolio is within their "expected boundaries" even after this they still tailor the positions to be optimal under different market conditions (e.g. different volatility regimes).

It was slightly confusing to reconcile these two steps. If the correlations among models and markets is accurate, it would seem like this discipline would be lost. They cite the example of September and October 2008, when the optimal risk model was one that considered only recent data in its estimate. Rather than try to guess what conditions are ahead, the team says it calculates risk using all of its volatility models and then use the highest (worst-case scenario) in its risk targeting.

Post-Trade: Intraday returns on all individual positions are constantly monitored as are the sub-portfolio and portfolio levels. This is calculated into Sortino ratios, accuracy ratios, deviations of rolling returns from expected returns and other performance stats. The Firm claims it keeps an "envelope" of risk-return stats to measure these by, and will act if things appear to be veering off standard expectations. Also, the Firm places a stop-loss on every trade, through an automated process. They claim such placement is developed through "machine learning" and co-integration techniques. (As co-integration has been a long time interest of our quant staff – yet often cited by so many as a mere statistical buzzword – we wanted to delve further, but did not get a great deal of information on this aspect.)

## Trade Implementation

Positions are implemented by the following process: (1) the proprietary models generate trade signals; (2) trades are verified by members of the investment committee, the size and timing of which are discussed and approved for execution. (3) trades uploaded into the appropriate execution platform – depending on whether they are futures, options or cash currency trades.

Attachment 2: Correlations

## Correlation Analysis vs Peers

| | FDO Partners | [redacted] | Quantmetri | [redacted] | Three Rock | NewEdge CTA Index |
|---|---|---|---|---|---|---|
| **FDO Partners Global Prog** | **1.00** | 0.07 | 0.13 | 0.15 | 0.04 | 0.16 |
| [redacted] | 0.07 | **1.00** | 0.08 | 0.00 | 0.12 | 0.40 |
| **Quantmetrics Dir** | 0.13 | 0.08 | **1.00** | 0.08 | 0.02 | 0.18 |
| [redacted] | 0.15 | 0.00 | 0.08 | **1.00** | 0.09 | 0.40 |
| **Three Rock** | 0.04 | 0.12 | 0.02 | 0.09 | **1.00** | 0.27 |
| **NewEdge CTA Index** | 0.16 | 0.40 | 0.18 | 0.40 | 0.27 | **1.00** |