Hedge Fund Risk Monitor | March’10

Last summer we published a paper that focused on the state and possible future of Hedge Fund Transparency. The original paper (co-authored by Gregory Dyra of New Legacy Capital) can be found here [http://www.finalternatives.com/node/8349](http://www.finalternatives.com/node/8349). Although the quality of information reported by hedge fund managers has improved slightly as the result of the Credit Crisis, the range of Transparency Spectrum® remains very wide (Figure 1).

![Figure 1 – Transparency Spectrum®](image.png)

Today we are taking the next logical step and propose a solution for improving the current state of Hedge Fund Transparency.

Our Solution - *Transparency Building Blocks®*

Analyzing hedge funds under the current state of transparency is akin to solving a jigsaw puzzle or Rubik’s cube with some of the pieces missing. To get the complete picture, we propose that Transparency Information should be broken into clearly defined unique reporting components. These components, when put together, can provide investors with a clear picture of hedge funds’ exposures. We refer to these components as Transparency Building Blocks® (TBB).

To enable comprehensive reporting, we propose the following categories of TBBs.

- Performance Building Blocks® (PBB)
- Strategy Building Blocks® (SBB)
- Asset Class Building Blocks® (ACBB)
- Universal Building Blocks® (GBB)
- Leverage and Liquidity Building Blocks® (LLBB)
- Operational Building Blocks® (OBB)
- Risk Building Blocks® (RBB)

**Performance Building Blocks**

Performance building blocks provide information about monthly performance and performance attribution by asset class, strategy, long/short etc.
Strategy Building Blocks

Strategy Building Blocks provide information about overall portfolio allocation by strategy and asset class.

Asset Class Building Blocks

Asset Class Building Blocks provide exposure information specific to each asset class. Asset Classes should not be confused with the style or classification of hedge fund managers. Each hedge fund manager may report exposure to one or more asset classes. Initially this will cover the following asset classes:

- Equity
- Credit
- Interest Rates
- Commodities/Foreign Exchange
- Real Assets
- Volatility

Examples of utilization of different ACBB are shown in Table 1.

Table 1

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Equity</th>
<th>Credit</th>
<th>Rates</th>
<th>Commodity</th>
<th>FX</th>
<th>Volatility</th>
<th>Real Assets</th>
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<tbody>
<tr>
<td>Equity Long/Short</td>
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<td></td>
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<td></td>
<td></td>
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<td>✓</td>
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<td>✓</td>
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<td></td>
</tr>
<tr>
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<tr>
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<tr>
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<tr>
<td>Fixed Income</td>
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<tr>
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<td>✓</td>
<td></td>
<td>✓</td>
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</tr>
</tbody>
</table>

1 Many Equity Long/Short managers use CDX / ITraxx contracts for hedging as alternative to out of the money S&P puts.
**Universal Business Blocks**

Universal Business Blocks capture exposure information that can apply across all asset classes. Examples of such information include Geographic Exposure, Currency Exposure and Top Positions.

**Leverage & Liquidity**

Leverage and liquidity building blocks provide information about potential asset liability mismatch in the fund’s portfolio.

- Leverage
- Portfolio Liquidity
- Investor Liquidity

**Operational**

Operational Building Blocks provide additional information about important operational risks that may be present in each fund.

- Valuation
- Key Personnel
- Systems
- Changes in AUM
- Key Personnel Changes
- Changes in Ownership
- Prime Brokers

To identify building blocks we have studied a number of risk reports currently provided by hedge fund managers. We have identified close to one hundred distinct building blocks and have classified forty seven of them as Level I building blocks – building blocks that should be reported by all funds. We encourage readers interested in learning more about Transparency Building Blocks® to contact us at transparency@risk-ai.com.
Solving the Transparency Puzzle ®

Defining the Transparency Building Blocks® is only the first step. To collect, aggregate and analyze hedge fund exposure Risk-AI is launching a new product – the Transparency Analytics® platform. The Transparency Analytics® platform is a synergy of cutting-edge technology with state-of-the-art analytical libraries developed from the ground up by Risk-AL, and ease of use with clear presentation. The platform offers both investors and asset managers the ability to combine state of the art quantitative tools that use historical track records with tools to collect, aggregate and analyze transparency data organized in Transparency Building Blocks®.

BENEFITS TO INVESTORS

α  Incorporate both exposure and return information in risk analysis.
β  Aggregate exposures across funds to get a better picture of portfolio exposures.
γ  Improve peer analysis by comparing exposures of similar funds.

BENEFITS TO INVESTMENT MANAGERS

α  Provide investors with relevant and timely information without revealing trade secrets.
β  Standardize risk report for various investors.
γ  Perform the same risk analysis on your fund as it is done by your investors.

In other words Transparency Analytics® will be the first tool to solve the Transparency Puzzle®.

Transparency Analytics® will be launched in April 2010 with several users already signed up for the platform. We encourage both hedge fund managers and hedge fund investors to contact us at transparency@risk-ai.com regarding using Transparency Analytics® for your risk analysis and reporting.
APPENDIX 1 – ANALYZING EQUITY LONG/SHORT FUND

Example:

Risk Analysis – Equity Long/Short Fund

An investor who has collected building blocks for Industry exposures data from an Equity Long/Short hedge fund may use that information to estimate Value At Risk (VaR) using the Monte Carlo techniques. To do that the investor needs to perform the following steps:

- Collect long/short exposure for each Industry.
- Make an assumption about correlation between long and short positions.
- Simulate results.
- Calculate VaR.

Collect Long/Short Exposure

Investor can use the Industry Exposure building blocks from each hedge fund. Since the building blocks are based on standard GIC scheme, they can easily be assigned traded benchmarks to represent each industry exposure. Traded industry indexes or ETFs can be used. In addition to Industry exposure, an investor needs to collect information about hedging used by the fund. For example: Investor can use the Equity Index options building blocks to get information about out of the money S&P put options used by the hedge fund.

Make an Assumption About Correlation Between Long and Short Positions.

An investor must decide whether to use Net or Gross exposure when performing simulations. The decision depends on the relationship between the long and short positions. Investor can use the Short Book Purpose building block to get that information.

For the funds that use short positions as hedges for their long portfolios, net exposure may be an appropriate metric to use since the short positions are assumed to be highly correlated to long positions. For the funds that take directional bet on either long or short side, the gross exposure may be the more appropriate measure.

A more sophisticated model may make an assumption on the actual correlation between long and short positions. In this case, the investor may use the Correlation Long/Short building block to construct a better correlation/covariance matrix.
Simulate Results

Historical track records of the proxy ETF, or indexes assigned in Step 1 may be used to estimate the covariance matrix and expected returns. The information then can be used to simulate performance on either a daily, weekly or monthly basis. Different models can be used to perform simulation. In the simplest form, the multi-variate normal distribution may be used to generate return data. Since normal distribution may not be appropriate for capturing tail behavior, different distributions (e.g. student-T, extreme value) may be used to simulate the return data. Copulas may be used to preserve the desired correlation structure.

Once the returns are simulated, Value at Risk as well as other risk statistics can be easily calculated by examining the properties of distribution of the generated returns. Sample transparency based risk report for an Equity Long/Short hedge fund is presented in Figure 2.