***HEDGE FUND TRANSPARENCY – WHAT INVESTORS REALLY NEED***

It is no secret that 2008 was one of Wall Street’s toughest years and perhaps the most challenging year ever for hedge funds. Evidence of this can be found in the dismal performance of the Barclay’s Hedge Fund and Fund of Funds indices, both down almost 21%. Many funds blew up, including Sailfish, Peloton and others. As the year closed, serious allegations of fraud were levied against one of the most famous and respected hedge fund managers, Bernard Madoff.

While it is too early to count all of the casualties, the preliminary numbers paint a rather bleak picture. Using Barclay’s Global Data Feeder database, we estimated that about 18% of hedge funds either shut down or stopped reporting performance. Experts agree that the number of funds that go out of business will continue to increase throughout 2009. Hedge funds that survive will need to adapt to the new world and to the new requirements that are likely to be imposed on them through either regulations or investors’ demands.

The three most popular demands that are likely to be imposed on surviving funds are:

1. **Lower fees**
2. **Better Liquidity**
3. **Better (Full) Transparency**

In this article we briefly touch on the first two and discuss the last one n more detail.

***Fees***

Hedge fund managers typically make money from a combination of the management and performance fees. Most funds have High Water Mark provisions that imply that the funds cannot charge performance fees after suffering losses until those losses are recouped by the investor. After suffering the worst year in 2008 most hedge funds are not likely to collect performance fees in 2009. It’s likely that the standard “2 & 20” model will change in the future, though, it’s unlikely that the fees will fall significantly as they will become even more essential for covering funds’ operating expenses.

***Liquidity***

Liquidity, or rather lack of it, can be blamed for many problems related to the current crisis. Anecdotally we have seen the trend in launches of more liquid fund of funds products. Managed accounts with weekly or daily liquidity seem to be in fashion. The liquid/managed account structure has certain advantages since it provides investors with transparency, liquidity and control of their portfolios. Not all hedge fund strategies, however, lend themselves to such structure. It seems unlikely that the hedge fund industry will shrink down to just Equity Long/Short, Equity Market Neutral and CTA strategies (the strategies that are most suitable for managed account structure).

***Transparency***

Perhaps one of the biggest complaints about hedge funds is lack of transparency. The press and the media describe hedge funds as opaque investment vehicles striving on secrecy and open to the rich. Many investors blame that alleged opaqueness for many of the financial problems that we are experiencing right now. Some demand full transparency.

While some of the criticism is valid, it would not be fair to just say that all hedge funds are secretive and opaque. In this article we touch on three main topics related to transparency:

1. **Current State of Hedge Fund Transparency**
2. **Pros and Cons (mostly) of Full Transparency**
3. **Recommended Solution**

***Current State of Hedge Fund Transparency***

Hedge Fund transparency in the current state ranges from the Black Box Model on one side to the Full Transparency model on the other side. The most secretive funds provide their investors with monthly return and general leverage information. The leverage information is typically provided in the form of percent of equity allocated to long and short positions. These funds may disclose more information in due diligence meetings and conference calls, but most often will not report this information in the printed form. The funds that report full transparency may provide investors with full position data on either real (or close to real) time basis or on a lagged basis. Most hedge funds regardless of the transparency model usually provide their investors with monthly and quarterly letters.

While the content and quality of these letters differ widely, we found that there are certain commonalities among hedge funds in different strategies. For example, the majority of Equity Long/Short hedge funds report Industry and geographic allocations. Many report concentration and maybe even the names of the top five positions. Fixed Income Arbitrage funds often report their interest rate exposure by currency and maturity buckets.

While a diligent investor may be able to collect many pieces of the available transparency data, the absence of any standards in reporting this data makes it extremely difficult to use it on a consistent basis.

***Full Transparency***

There have been many calls for requiring hedge funds to provide full transparency. The hedge funds’ rebuttal that those calls are no more legitimate than calls to require Coca Cola to disclose its secret formula is valid in its own right. There is another strong argument against full transparency. It will likely do more harm than good for the investor.

Hedge funds invest in a variety of financial instruments that range from plain vanilla stocks and bonds to complex derivative instruments. Most hedge fund investors do not have the necessary systems or budgets to be able to take every position reported by every hedge fund in their portfolio and perform a meaningful analysis. There are, of course, software solutions that are available on the market that may be able to handle many of the instruments, but the cost and complexity of these solutions in the constrained budget environment may not be justified by the value added.

Obtaining full transparency and failing to analyze it may result in two problems for the investor. After obtaining position data from the fund, the investor may experience a false sense of security and become complacent when analyzing the fund. Full transparency may justify putting a checkmark in a due diligence questionnaire, but may not result in any actionable step. The second problem may exist for the fund of funds and other professional investors in that failing to perform an adequate analysis of position data may actually imply the failure of fiduciary duties with respect to their clients or share holders.

If full transparency is not appropriate, then the natural question to ask is: What level of transparency should investors demand?

***Recommended Solution***

Transparency reported by hedge fund managers should be:

* **Reasonable**
* **Informative**
* **Useful**

**Reasonable**

To be reasonable, the required transparency should have the following qualities:

1. *Reporting frequency should coincide with the fund’s liquidity. While it may be informative to know what the fund with quarterly liquidity is holding on a daily basis, it would not provide investors with any actionable step, and would impose an undue burden on the manager.*
2. *Reports produced by the manager should be consistent. An investor should be able to obtain reports in the same format and with the same content.*
3. *Transparency should not be excessive. Managers should not be required to disclose their trade secrets. Conversely, investors should also be able to process reported information without undue burden and excessive costs.*

**Informative**

Information provided by the fund should be both relevant to the manager’s strategy and comprehensive enough to be able to analyze the fund’s exposure. For Equity Long/Short hedge funds, an investor may want to collect Industry exposures, hedging positions, and top positions. For fixed income funds, an investor needs to collect the interest rate and credit sensitivities (in the form of DV01 and CDV01). Multi strategy funds may need to report a combination of the above.

**Useful**

There is no point in requesting transparency from hedge funds if the investor makes no use of it. Four types of analysis can be performed using the information collected from hedge/fund of funds.

1. Historical Trends. While hedge fund positions may change on a daily or intra-day basis, the overall trend in exposures may provide information about the fund’s style (and potentially about any style drifts).
2. Aggregate Analysis. Being able to collect data in consistent form would allow investors to aggregate information across hedge funds in their portfolios and get a more complete picture of their investments.
3. Monitoring. Industry exposure and top position exposures may provide investors with a way to monitor and quickly identify the hedge funds which may be exposed to market news or events.
4. Risk Analysis. Exposure data may be used to perform simulation analysis and estimate such risk analyses as Value at Risk, Drawdown Simulation, and Stress Tests. In the following section we describe the steps necessary for performing such analyses for an equity long/short hedge fund.

***Building Blocks***

We propose that to satisfy the above criteria risk information reported by hedge fund managers should be divided into building blocks based on asset classes, leverage and liquidity information. We recommend the following types of building blocks:

Asset Class Building Blocks

* Equity
* Credit
* Interest Rates
* Commodities
* Options

Other

* Leverage
* Portfolio Liquidity
* Investor Liquidity

Different building blocks will be available for each asset class. When put together these building blocks would provide investors with comprehensive view into their hedge fund portfolios and allow for thorough risk analysis of the data. We realize that no set of building blocks would fit all hedge fund managers but creation of standard library of building blocks would enable for hedge fund managers and investors to exchange relevant risk information without jeopardizing trade secrets.

EQUIT**Y**

|  |  |  |  |
| --- | --- | --- | --- |
| **Building Block** | **Description** | **Fields** | **Uses for Investor** |
| Long Exposure | Information about overall allocation to long portfolio | Percent of Equity  Beta Adjusted % of Equity | Leverage information  Historical Trend Analysis  Monitoring |
| Short Exposure | Information about overall allocation to short portfolio | Percent of Equity  Beta Adjusted % of Equity | Leverage information  Historical Trend Analysis  Monitoring |
| Top 5 Long | Information about concentration in top 5 long positions. | Security Identifier,  Shares  Percent of Equity  Beta Adjusted % of Equity | Exposure to individual securities  Concentration Analysis  Overlap analysis |
| Top 5 Short | Information about concentration in top 5 short positions. | Security Identifier,  Shares  Percent of Equity  Beta Adjusted % of Equity | Exposure to individual securities  Concentration Analysis  Overlap analysis |
| Industry Exposure Long | Information about portfolio allocation by GIC Industry. | GIC Industry Identifier  % of equity allocated to long positions in the Industry  Beta Adjusted % of Equity | Exposure Aggregation  Historical Trend/Style analysis  Risk Analysis: Value at Risk, Stress Test, Monte Carlo |
| Industry Exposure Short | Information about portfolio allocation by GIC Industry. | GIC Industry Identifier  % of equity allocated to short positions in the Industry  Beta Adjusted % of Equity | Exposure Aggregation  Historical Trend/Style analysis  Risk Analysis: Value at Risk, Stress Test, Monte Carlo |
| Industry / GEO Exposure  Long | Information about portfolio allocation by GIC Industry within different geographical regions | GIC Industry Identifier  Region Identify  % of equity allocated to long position within each region/Industry combination  Beta Adjusted % of Equity | Exposure Aggregation  Historical Trend/Style analysis  Risk Analysis: Value at Risk, Stress Test, Monte Carlo |
| Industry / GEO Exposure  Short | Information about portfolio allocation by GIC Industry within different geographical regions | GIC Industry Identifier  Region Identify  % of equity allocated to short position within each region/Industry combination  Beta Adjusted % of Equity | Exposure Aggregation  Historical Trend/Style analysis  Risk Analysis: Value at Risk, Stress Test, Monte Carlo |
| Equity Index Positions - Long | Information about long positions in equity indexes | Index Identifier  % of equity allocated to long positions in the index  Beta Adjusted % of Equity | Exposure Aggregation  Historical Trend/Style analysis  Risk Analysis: Value at Risk, Stress Test, Monte Carlo |
| Equity Index Positions - Short | Information about short positions in equity indexes | Index Identifier  % of equity allocated to short positions in the index  Beta Adjusted % of Equity | Exposure Aggregation  Historical Trend/Style analysis  Risk Analysis: Value at Risk, Stress Test, Monte Carlo |
| Short Book Purpose | Identifies whether the short positions are used as hedges or outright directional bets. | Short Position Purpose.  Possible values: (“HEDGE”,”DIRECTIONAL”) | Useful in making assumption about correlation between long and short books when building stress test or simulation models. |
| Correlation Long Short | Identifies approximate average correlation between long and short portfolios. | Correlation Long/Short | Useful in making assumption about correlation between long and short books when building stress test or simulation models. |

CREDIT

|  |  |  |  |
| --- | --- | --- | --- |
| **Building Block** | **Description** | **Fields** | **Uses for Investor** |
| Asset Type Exposure – Cash, Long | Cash exposure to various types of credit instruments (Sovereign, Corporate, Asset Backed, Structured) | Asset Type Identifier  % of Equity Allocated to Long Portfolio  CDV01[[1]](#footnote-1) | Concentration  Historical Trend/Style Analysis  Overlap Analysis  Portfolio Aggregaion  Risk Analysis: Value at Risk, Stress Test, Monte Carlo |
| Asset Type Exposure – Cash, Short | Cash exposure to various types of credit instruments (Sovereign, Corporate, Asset Backed, Structured) | Asset Type Identifier  % of Equity Allocated to Short Portfolio  CDV01 | Concentration  Historical Trend/Style Analysis  Overlap Analysis  Portfolio Aggregaion  Risk Analysis: Value at Risk, Stress Test, Monte Carlo |
| Asset Type Exposure – Synthetic, Long | Synthetic exposure to various types of credit instruments (Sovereign, Corporate, Asset Backed, Structured) | Asset Type Identifier  % of Equity Allocated to Long Portfolio  CDV01 | Concentration  Historical Trend/Style Analysis  Overlap Analysis  Portfolio Aggregaion  Risk Analysis: Value at Risk, Stress Test, Monte Carlo |
| Asset Type Exposure – Synthetic, Short | Synthetic exposure to various types of credit instruments (Sovereign, Corporate, Asset Backed, Structured) | Asset Type Identifier  % of Equity Allocated to Short Portfolio  CDV01 | Concentration  Historical Trend/Style Analysis  Overlap Analysis  Portfolio Aggregation  Risk Analysis: Value at Risk, Stress Test, Monte Carlo |
| Sovereign Credit Break Down by Region - Long | Breakdown of exposure to different sovereign governments (US & Canada, Western Europe, Eastern Europe ex Russsia, Latin America ex Brazi, Asia ex Japan, China & India, Brazil,Russia, India, China | Region Identifier  % of equity allocated to long position  CDV01 | Concentration  Historical Trend/Style Analysis  Overlap Analysis  Portfolio Aggregation  Risk Analysis: Value at Risk, Stress Test, Monte Carlo |
| Sovereign Credit Break Down by Region - Short | Breakdown of exposure to different sovereign governments (US & Canada, Western Europe, Eastern Europe ex Russsia, Latin America ex Brazi, Asia ex Japan, China & India, Brazil,Russia, India, China | Region Identifier  % of equity allocated to short position  CDV01 | Concentration  Historical Trend/Style Analysis  Overlap Analysis  Portfolio Aggregation  Risk Analysis: Value at Risk, Stress Test, Monte Carlo |
| Corporate Credit Break Down by GIC Industry - Long | Breakdown of corporate exposure by 10 GIC Industrys | Industry Identifier  % of equity allocated to Long position  CDV01 | Concentration  Historical Trend/Style Analysis  Overlap Analysis  Portfolio Aggregation  Risk Analysis: Value at Risk, Stress Test, Monte Carlo |
| Corporate Credit Break Down by GIC Industry - Short | Breakdown of corporate exposure by 10 GIC Industrys | Industry Identifier  % of equity allocated to short position  CDV01 | Concentration  Historical Trend/Style Analysis  Overlap Analysis  Portfolio Aggregation  Risk Analysis: Value at Risk, Stress Test, Monte Carlo |
| ABS Break down by Type | Breakdown of ABS Exposure by Type  (Home Equity, Auto, Student Loan, CDO, TALF, Other) | Asset Type Identifier  % of equity allocated to Long position  CDV01 | Concentration  Historical Trend/Style Analysis  Overlap Analysis  Portfolio Aggregation  Risk Analysis: Value at Risk, Stress Test, Monte Carlo |
| Corporate Credit Break Down by GIC Industry - Short | Breakdown of ABS Exposure by Type  (Home Equity, Auto, Student Loan, CDO, TALF, Other) | Asset Type Identifier  % of equity allocated to short position  CDV01 | Concentration  Historical Trend/Style Analysis  Overlap Analysis  Portfolio Aggregation  Risk Analysis: Value at Risk, Stress Test, Monte Carlo |

**Rates**

|  |  |  |  |
| --- | --- | --- | --- |
| **Building Block** | **Description** | **Fields** | **Uses for Investor** |
| DV01[[2]](#footnote-2) by Currency, Maturity | Partial duration exposure by currency (USD, EUR, GBP, JPY,CAD, HKD, Other) | Currency Code  Maturity (3,6,12,24,60,120)  DV01 | Exposure Tracking,  Historical Trend/Style Analysis  Risk Analysis: Value at Risk, Stress Test, Monte Carlo |
| DV01 by Asset Type | Partial duration exposure by Asset Type (Sovereign, Swap,Swaptions, Repos, ED Futures, Other) | Asset Type  Maturity (3,6,12,24,60,120)  DV01 | Exposure Tracking,  Historical Trend/Style Analysis  Risk Analysis: Value at Risk, Stress Test, Monte Carlo |
| DV01 by Asset Type and Currency | Partial duration exposure by Currency and Asset Type | Asset Type  Currency  Maturity (3,6,12,24,60,120)  DV01 | Exposure Tracking,  Historical Trend/Style Analysis  Risk Analysis: Value at Risk, Stress Test, Monte Carlo |

**COMMODITY**

|  |  |  |  |
| --- | --- | --- | --- |
| **Building Block** | **Description** | **Fields** | **Uses for Investor** |
| Asset allocation by commodity type - Long | Allocation by commodity types (OIL, Gas, Metals – Base, Metals – Precious, Live Stock, Cotton, FX) | Asset Type  % of Equity  Margin to Equity | Exposure Tracking,  Historical Trend/Style Analysis  Risk Analysis: Value at Risk, Stress Test, Monte Carlo |
| Asset allocation by commodity type - Short | Allocation by commodity types (OIL, Gas, Metals – Base, Metals – Precious, Live Stock, Cotton, FX) | Asset Type  % of Equity  Margin to Equity | Exposure Tracking,  Historical Trend/Style Analysis  Risk Analysis: Value at Risk, Stress Test, Monte Carlo |

**OPTIONS**

|  |  |  |  |
| --- | --- | --- | --- |
| **Building Block** | **Description** | **Fields** | **Uses for Investor** |
| Equity Index Options | Exposure to index options | Index  Call/Put  Delta  Gamma | Exposure Reporting  Overlap Analysis  Historical Trend/Style Analysis  Risk Analysis: Value at Risk, Stress Test, Monte Carlo |
| Individual Equity Options | Exposure to individual equity options | Stock Identifier  Call/Put  Delta  Gamma | Exposure Reporting  Overlap Analysis  Historical Trend/Style Analysis  Risk Analysis: Value at Risk, Stress Test, Monte Carlo |
| Other Options | Exposure to other options | Asset Identifier  Call/Put  Delta  Gamma | Exposure Reporting  Overlap Analysis  Historical Trend/Style Analysis  Risk Analysis: Value at Risk, Stress Test, Monte Carlo |

LEVERAGE

|  |  |  |  |
| --- | --- | --- | --- |
| **Building Block** | **Description** | **Fields** | **Uses for Investor** |
| Total Leverage | Overall Leverage Information | % Long  % Short  % Net  % Gross | Exposure Reporting  Peer Analysis  Historical Trend Analysis  Monitoring |
| Leverage Term | Description of leverage structure  Overnight, Week, Month,3 Moths, 1 Year, Longer | Term Identifier  % Long | Asset Liability Analysis  Monitoring |

LIQUIDITY

|  |  |  |  |
| --- | --- | --- | --- |
| **Building Block** | **Description** | **Fields** | **Uses for Investor** |
| General Liquidty Breakdown - Long | Breakdown of assets by liquidity type (Tier 1, Tier2, Tier 3) | Tier Identifier  % Long Portfolio | Peer Analysis  Asset Liability Mismatch  Liquidity Stress Test  Historical Trend Analysis  Monitoring |
| General Liquidty Breakdown - Short | Breakdown of assets by liquidity type (Tier 1, Tier2, Tier 3) | Tier Identifier  % Short Portfolio | Peer Analysis  Asset Liability Mismatch  Liquidity Stress Test  Historical Trend Analysis  Monitoring |
| Days to Trade - Long | Breakdown of portfolio by liquidity (days to trade ) profile  (1 Day, 5 Days, 1 Month, More) | Period Identifier  % of Long Portfolio | Peer Analysis  Asset Liability Mismatch  Liquidity Stress Test  Historical Trend Analysis  Monitoring |
| Days to Trade - Short | Breakdown of portfolio by liquidity (days to trade ) profile  (1 Day, 5 Days, 1 Month, More) | Period Identifier  % of Short Portfolio | Peer Analysis  Asset Liability Mismatch  Liquidity Stress Test  Historical Trend Analysis  Monitoring |
| % Side Pockets | Information about percent of portfolio in side pockets | % of Equity in Side Pockets | Asset Liability Mismatch  Liquidity Stress Test  Peer Analysis  Monitoring |
| Investor Liquidity | Breakdown of assets by Investor Liquidity Terms (  Daily, Week, 1 Month, 3 Months, Annual, More) | Period Identifier  Percent of Investor Assets | Asset Liability Mismatch  Liquidity Stress Test  Monitoring |

**LANGUAGE**

Defining standard building blocks is only the first step in building efficient information exchange between asset managers and investors. For the exchange to be efficient there needs to be a standard way to send and receive this information. In the past ten years virtually every industry adopted a variation of XML[[3]](#footnote-3) to exchange information in standard way. One of the examples of XML use in financial industry is FpML, a language for exchanging trade information. SEC has recently launched an initiative to convert information stored in its EDGAR system into XML format. We, therefore, propose the development of XML based language for exchanging transparency data. The proposed name of the new language is Risk and Exposure Exchange Markup Language REXML.

***APPENDIX I – 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 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 Equity Index options building blocks to get information about out of the money S&P put options used by 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 simulation. The decision depends on the relationship between the long and short positions. Investor can use *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 as the correlation between long and short position is assumed to be high. 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 *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 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.

***Conclusion***

We have presented our views on the appropriate use of hedge fund transparency as well as what level of it should be required from hedge fund managers. While we believe that full transparency should not be required and may actually be detrimental to investors, we support the effort to improve reporting standards across the hedge fund industry.

**NEXT STEPS**

Risk-AI, along with our partners (New Legacy, et al) is launching the initiative to establish Transparency Reporting standards (using our Building Blocks methodology) and standard reporting mechanism via REXML. We encourage both institutional investors and asset managers to contact us at [transparency@risk-ai.com](mailto:transparency@risk-ai.com).

We look forward to working to discussing these issues and working with other industry professionals. Please visit our website at <http://www.HedgeFundRiskMonitor.com> to read our other published articles and feel free to contact us at [themonitor@risk-ai.com](mailto:themonitor@risk-ai.com) .

**Aleksey Matiychenko, CFA, FRM, CAIA**Senior Partner& CEO | Risk-AI, LLC

1. CDV01 is defined as P/L impact on portfolio (in basis points) due to 1 basis point increase in relevant credit spreads. [↑](#footnote-ref-1)
2. DV01 Is defined as of change in portfolio P/L (in basis points) due to 1 basis point rise in relevant interest rate. [↑](#footnote-ref-2)
3. [↑](#footnote-ref-3)