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Hedge Fund Transparency

What investors really need?

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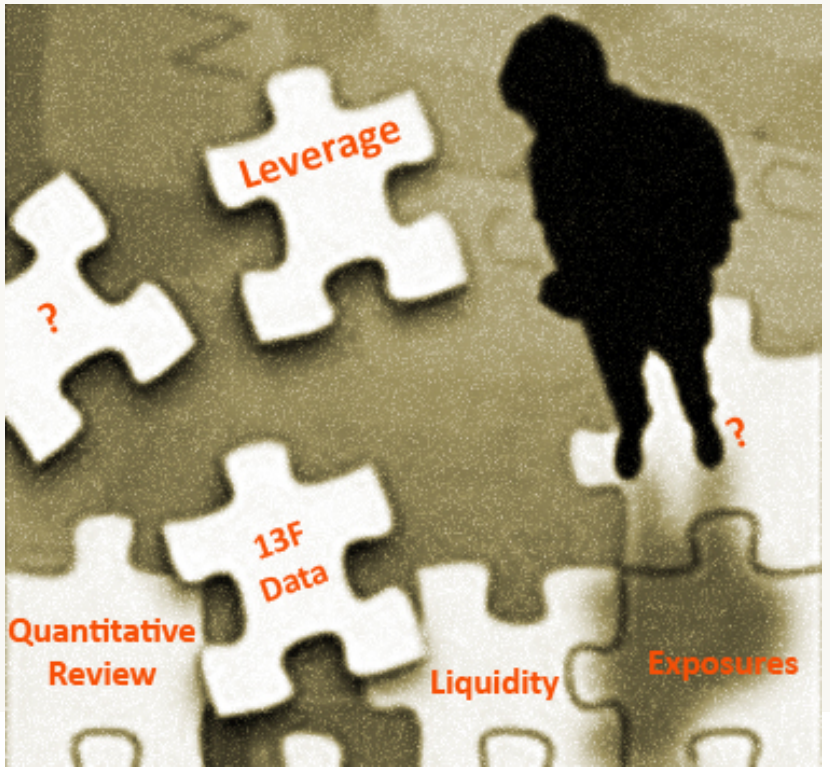
Similar to Solving Puzzles With Missing Pieces

- **Quantitative Review allows examination of historical trends, factor exposures, tail risk analysis.**
- **Transparency Analysis – complements quantitative review and allows for additional identification of potential red flags.**
- **13F Review – *Provides more detail view into fund's holdings, can be compared to reported transparency and provides additional insights into liquidity, concentration and tail risk.***



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Transparency is Popular

- ***Blow up of Hedge Funds such as Madoff, Amaranth and others prompted conversations about Transparency***

- ***Popular discussions in the media***

- ***New Fund of Funds are launching with Managed Accounts Only platform***

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Current State

Transparency Ranges

- **From: Black Box**
- **To: Full Transparency**

Not all hedge funds are secretive and opaque, many provide various levels of Transparency:

- **Equity Long/Short – Sector Exposures, Top 5 positions**
- **CTAs – Managed Accounts, Entire Portfolios, Sector Exposures**
- **Fixed Income Arbitrage – Interest Rate and Credit Sensitivities (DV01 and CDV01)**

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Full Transparency Is Bad

Divulges Trade Secrets

False Sense of Security

Investors may fall complacent after receiving full position data.

Investors are ill-equipped to analyze the data

Few Investors have skill set, budget and systems to analyze every position in every hedge fund they own.

Failure to analyze available holding level data my result in failure of fiduciary duties.

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Transparency Must Be:

Reasonable

- Frequency – depends on strategy, fund liquidity. Funds with Monthly liquidity should provide monthly transparency.
- Consistent – reports from one period to the next should be consistent in content and format
- Non Excessive – managers should not be required to disclose trade secrets. Investors must be able to analyze reported data.

Informative

- Overall Leverage (%long, %short)
- Sector Exposures, Geographic Exposures, Top 5 Positions,
- Interest Rate Duration (by currency and maturity bucket)
- Credit Duration
- Option Greeks
- Leverage
- Hedges (Index Hedges, CDS)

Useful

Transparency should not be used to just mark a check box in DDQ.

Risk Analysis

- VaR Analysis
- Draw down simulations,
- Stress Tests

Aggregately – Investors should be able to aggregate data in order to fully understand their exposures

Historical Trends

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Example: Analyzing Equity Long/Short Hedge Fund Tail Risk Analysis

- **Collect Sector Exposure Data from Hedge Fund**
- **Assign Proxy to Each Sector – (e.g. MSCI Sector Indexes)**
- **Decide whether to use Net/Gross Exposures**
- **Net** – Correlation between Long and Short positions within each sector is high. Short positions are used as hedges.
- **Gross** – Correlation between Long and Short positions within each sector is low. Short positions are used to take directional exposure.

Sector Exposures

Sector	Long	Short	Net	Gross
Consumer Discretionary	3.0%	-1.4%	1.6%	4.4%
Consumer Staples	7.0%	0.0%	7.0%	7.0%
Energy	12.0%	-1.4%	10.6%	13.4%
Financials	3.6%	-10.0%	-6.4%	13.6%
Health Care	0.00%	0.0%	0.0%	0.0%
Industrials	1.3%	-2.7%	-1.4%	4.0%
Information Technology	10.2%	-0.4%	9.8%	10.6%
Materials	4.3%	-7.9%	-3.6%	12.2%
Telecom	7.8%	-1.2%	6.6%	9.0%
Utilities	4.8%	-5.2%	-0.4%	10.0%
Total	54.1%	-30.2%	23.9%	84.3%

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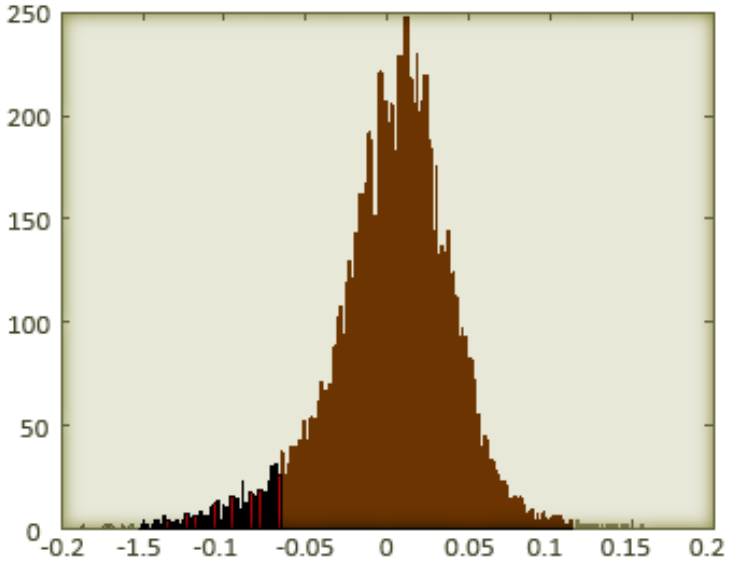
Example: Analyzing Equity Long/Short Hedge Fund | Tail Risk Analysis

Correlation Matrix

Sector	1	2	3	4	5	6	7	8	9	10
1. Consumer Discretiona	1.00									
2. Consumer Staples	0.42	1.00								
3. Energy	0.74	0.41	1.00							
4. Financials	0.74	0.53	0.81	1.00						
5. Health Care	0.44	0.36	0.36	0.48	1.00					
6. Industrials	0.52	0.75	0.55	0.76	0.38	1.00				
7. Information Technolo	0.67	0.65	0.72	0.90	0.52	0.86	1.00			
8. Materials	0.64	0.56	0.61	0.83	0.61	0.74	0.86	1.00		
9. Telecom	0.51	0.66	0.36	0.56	0.56	0.63	0.67	0.68	1.00	
10. Utilities	0.43	0.47	0.30	0.57	0.68	0.56	0.65	0.72	0.69	1.00

Simulation based on Sector Exposures - Normal Mixture Distribution



- **Construct Correlation/Covariance Matrix based on Sector Indexes**
- **Choose Distribution to Run Simulation From**
- **Decide if Copulas are necessary to preserve Correlation Structure**
- **Generate Sample Paths**
- **Calculate Risk Statistics (VaR, Max DD, ETL, etc).**

Example Output:

- **Value at Risk: -6.49%**
- **ETL: -12.71%**

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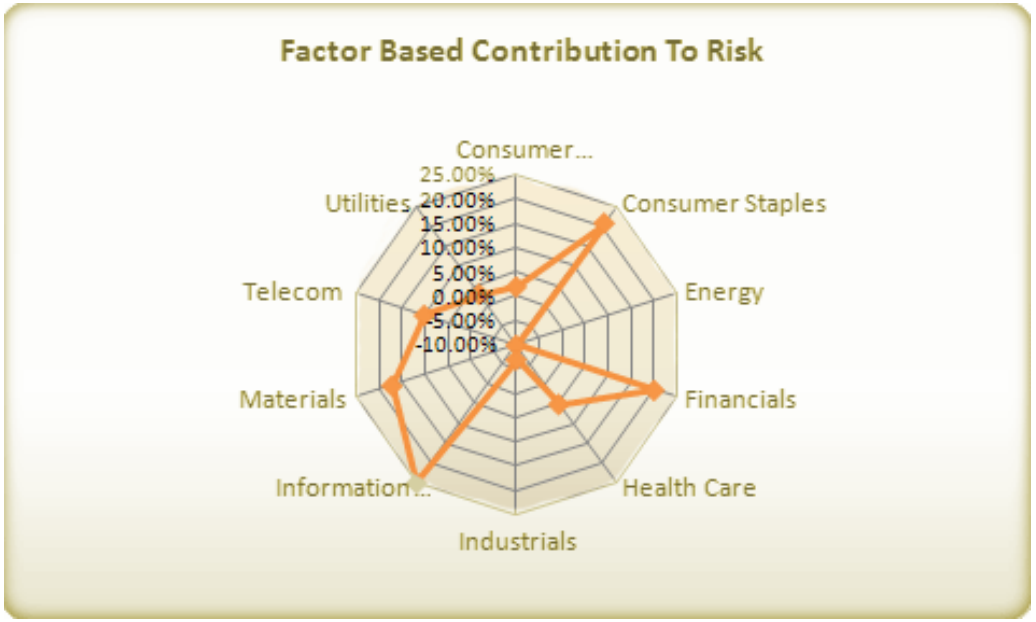
Example: Analyzing Equity Long/Short Hedge Fund | Historical Trend Analysis

Historical data can be used to compare to results of quantitative analysis.

Tracking trends in sector exposures may provide information about potential style drift.

Historical data is helpful in performance attribution analysis.

Historical data can be used to compare to results of quantitative analysis.



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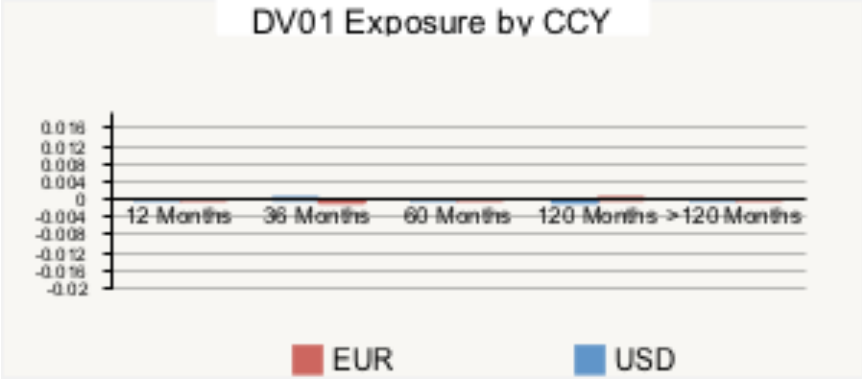
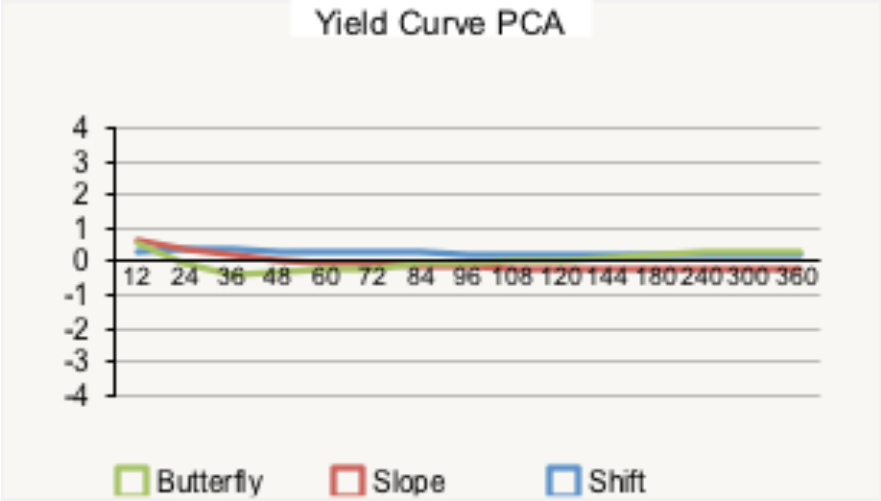
Example: Analyzing Fixed Income Arbitrage Funds





Reported information: Yield Curve Exposures by Maturity Bucket and Currency Analysis

- Obtain yield curve historical data for each currency.
- Map reported buckets to Yield Curve maturity buckets.
- Construct Principal Components (PC) from Yield Curve data
- Simulate PC data
- Transform PC data back to Yield Curve buckets
- Apply DV01 exposures to calculate P/L.
- Construct Distribution of P/L
- Calculate Risk Statistics

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