Practical Application for Reporting

FOURTH QUARTER 2015

BNY Mellon Risk View℠

BNY Mellon recently published a new practical application paper, *"Considering the Alternatives: a Practical Look at Enterprise Risk Analysis and Alternative Investments."* The analysis within the paper was developed using BNY Mellon Risk View℠ to demonstrate how different approaches to data management can lead to different risk analysis results.

Enterprise Risk Analysis is increasingly popular among institutional investors across different segments and sizes, and we have had numerous discussions and demonstrations with our clients to share practical approaches for using this type of analysis within an investment program.

As investors have increased their allocations to alternative investments over the past several years, there is a growing need for help with the data management challenges that arise in the process of modeling illiquid or non-transparent investments within Enterprise Risk Analysis.

Within the paper, we illustrated different data management choices using sample portfolios and total fund allocations as examples. We compared the same group of portfolios using:

1) Position level detail

2) Exposures based on information from manager letters

3) Line item proxies

For private equity and real estate, we analyzed portfolios using underlying position detail (mapped to proxy indexes aligned with the country and economic sector of the positions, since private equity investments are not priced daily) as well as line item proxies. We also constructed hypothetical total plan allocations to demonstrate a sample aggressive allocation (including relatively higher weights to alternatives) and a sample conservative allocation (with relatively lower weights to alternatives). We ran these different sample portfolios and sample total plans through various risk analysis, including Value-at-Risk, stress testing, scenario analysis and exposure reporting.

If you have any questions about this analysis or the paper, please contact your Global Risk Solutions Consultant.

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Different Risk Results with Different Data Approaches

- Position level detail enables the risk engine to capture the non-linear impact of options
- Exposure level detail leads to the effect of linear risk results

Positions vs. Exposures
Figure 13:
Manager 16 – Positions, Equity Sensitivity

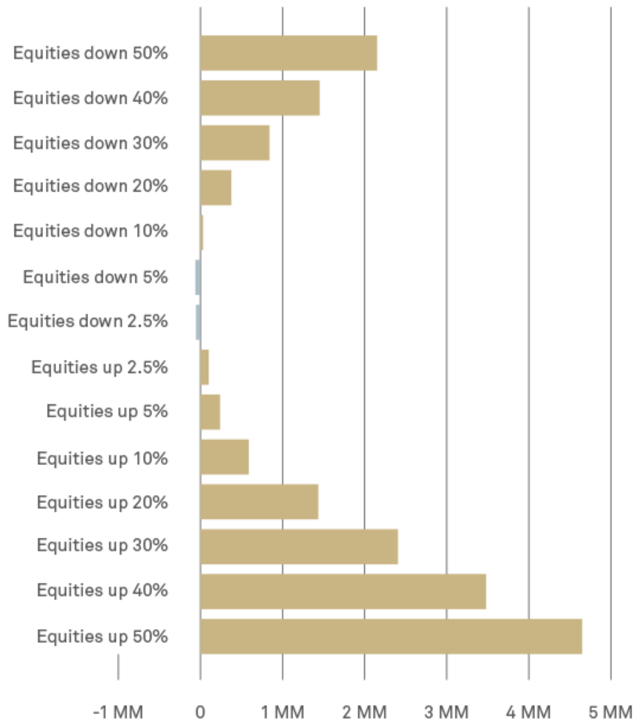
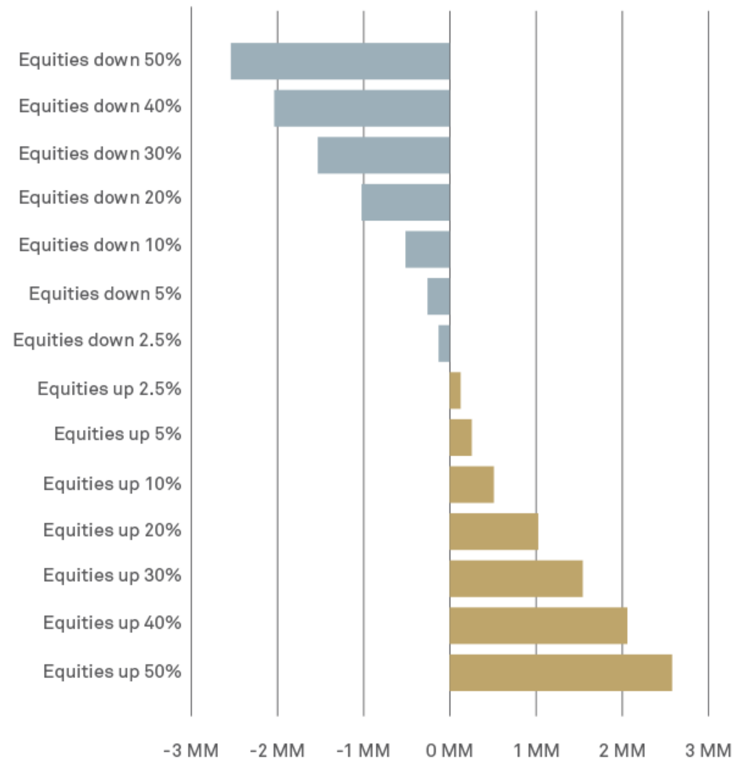


Figure 14:
Manager 16 – Exposures, Equity Sensitivity



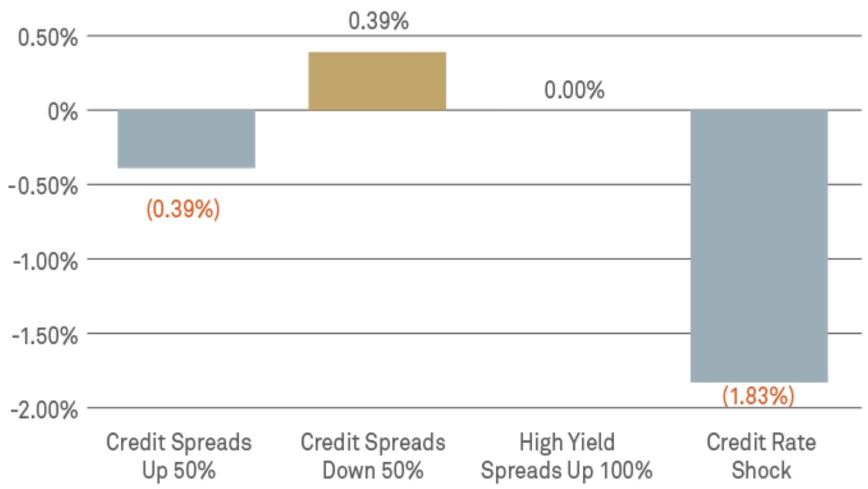
Different Risk Results

Interest Rate Sensitivity

- Hedge fund manager letters often provided limited information about different aspects of interest rate risk sensitivity
- In the group of hedge funds included in this analysis, position level detail reveals greater sensitivity to credit spreads than is apparent using only exposures

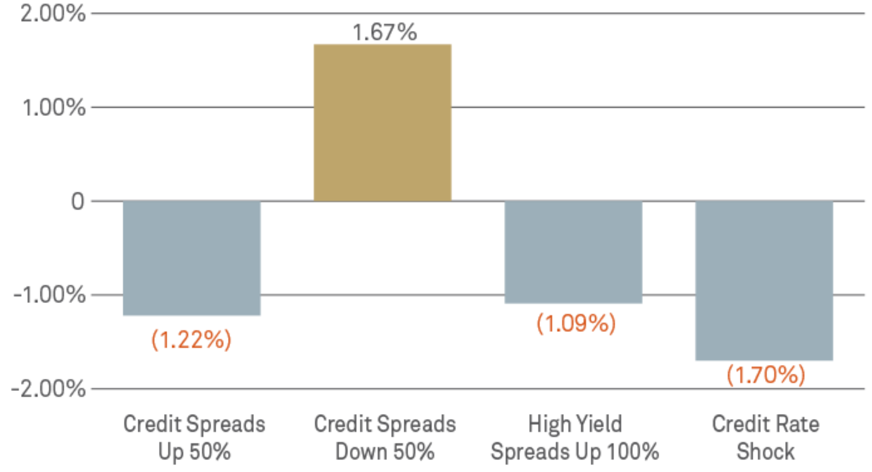
Hedge Funds: Exposure Level Data

Figure 20:
P & L % Change – Total Scenario



Hedge Funds: Position Level Data

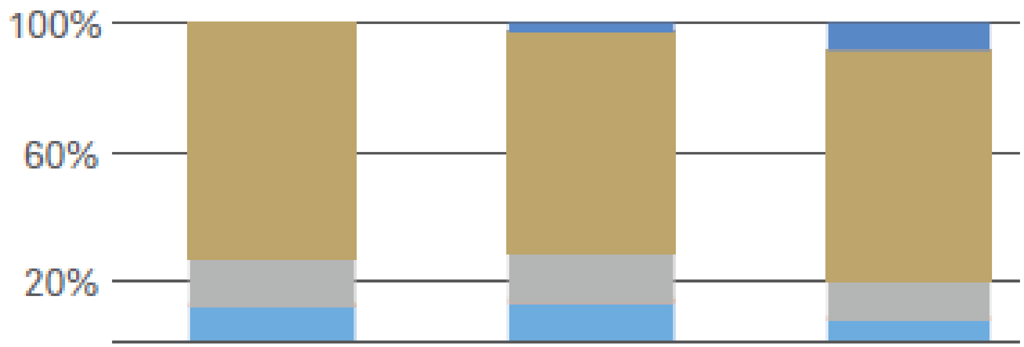
Figure 22:
P & L % Change – Total Scenario



A Total Fund View of Exposures

What is Lost Without Position Level Detail?

Figure 26:
Market Value Regional Allocations
Data as of December 31, 2014



	Position	Exposure	Proxy
Global	0%	3.7%	8.8%
North America	73.3%	68.8%	71.8%
Europe, Mid East, Africa	14.7%	14.2%	11.6%
Central/South/Latin	1.0%	1.0%	0.7%
Asia Pacific	11.1%	12.3%	7.0%