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Photography: Bernd Hartung, pp. 2, 3, 4, 5, 8, 12 (picture #3)

The KPMG iRADAR
Valuation Assurance Service
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Valuation Assurance for Alternative Investments
The KPMG iRADAR provides service to more than 530 member firm clients in 20 different countries. The KPMG iRADAR integrates sophisticated software with the expertise of a specialized team of financial analysts to offer a variety of services to banks, investment funds, pension funds, hedge funds and portfolios of insurance entities. Functionality ranges from analyzing the profile and structure of investment portfolios to identifying potential risk areas with each entity’s portfolios.

The KPMG iRADAR team has developed a unique Valuation Assurance Package based on our long-standing experience and focused on the needs of the alternative investment industry. This assurance service is provided globally from the Cayman Islands, Germany and India.
In light of current market turbulence, stakeholders are demanding more transparency. This development is creating new challenges for the alternative investment industry. The challenges KPMG professionals are observing are shown in the picture below.

**External Demand for Transparency**

**External Demand Triangle**

- **Investors and Advisors**
  - Investors are demanding additional assurance on valuations and specific disclosure topics.
  - Advisors value transparency on valuation in their due diligence process.

- **Regulators**
  - AIFM Directive Level 2 demands additional checks and controls on valuations (e.g., comparison with third party valuations).
  - Dodd-Frank Act requires defined procedures and policies concerning securities’ valuation.
  - IOSCO calls for a regular third party review and disclosure to investors of valuations.

- **Independent Directors**
  - Directors are seeking external and independent views on valuations.
  - Directors’ awareness has risen significantly in the light of recent litigation.

- **Internal Awareness for Quality and Consistency**
  - Internal Requirement Circle

- **Industry Benchmarking**
  - Peer group benchmarking is seen to be highly valuable for hard to price investments.
  - Changing market standards lead to new challenges for valuations and related disclosures.
  - The KPMG iRADAR offers independent valuation assurance and unique peer group benchmarking.

- **Consistency across Funds**
  - Different administrators may derive different valuations for identical assets.
  - Asset managers seek to derive consistent valuations and disclosures among their funds.
  - The KPMG iRADAR applies independent valuation approaches consistently across funds.

- **Administrator**
  - Many fund companies invest significant resources in shadowing asset valuation.
  - Reconciling valuation differences is often difficult and time consuming.
  - The KPMG iRADAR can mitigate the risk related to outsourcing valuations.

**Enhance your Competitiveness**

The KPMG iRADAR Service offers a Valuation Assurance Package uniquely designed for the alternative investment industry. This package addresses external stakeholder demands for transparency and supports the quality and consistency of asset valuations for all related processes and across all administrators. The package can be tailored to the specific needs of the alternative investment industry. The independent valuation assurance report increases credibility for current and prospective investors and can be utilized as a marketing instrument. The KPMG iRADAR in depth valuation analytics differentiate the investment manager’s product in a crowded marketplace.
The KPMG iRADAR Valuation Assurance Services

What can you expect?
- Independent assurance
- Transparent approach
- Easy to read reporting package
- Tangible results
- Market differentiator and marketing instrument
- Industry best practice benchmarking of administrators’ processes
- One consistent valuation approach across funds
- Reports detailing discretionary level of assurance

What do you get?
- Full coverage of a fund’s financial instruments
- Advanced valuation techniques
- Compliance with ISAE 3000 standards
- Application of security, quality and independence standards for audit firms
- On-site workshop

How does it work?
- Assurance Report (see pp. 8-11)
  - Statement
  - Analytics
- Detailed analytics for internal use
- Traffic Light Report – pointing out strengths and weaknesses
- Executive Summary – reflecting results on the level of the fund
- Instrument Details – listing results and decision triggers for each instrument

Hedge Fund Data Upload
- No specific format required
- Secure interface
- Generally accepted data integrity

Data Mapping
- Mapping to the KPMG iRADAR’s specific tables
- Quality check done by the KPMG iRADAR

Independent Valuation
- 10 years in production
- 30+ specialists involved
- 630 clients in 20 countries
- 40,000 portfolios processed annually
- 250,000 securities analyzed in database
- The KPMG iRADAR operates out of the Cayman Islands, Germany and India

Assurance Package
- Tailored quarterly assurance reporting
- Detailed results and analytics
- Regular on-site workshops
- Knowledge transfer
- Process benchmarking
- Industry best practice recommendations

Local Contact
- Local client support
- Communication of results

Stakeholders
- Advisor
- Investor
- Director
- Manager
- Administrator

Investor

Director

Manager

Administrator
Example Assurance Report

Example Assurance Statement

To the Council of Committee
HFund Ltd
Sureal Level 1
0200 Supply. East
I June 2013

Assurance Statement

We have been engaged by the assurance committee of HFund Ltd. Known as “HFund”, the purpose of this engagement was to provide an independent opinion on the valuations performed by HFund’s independent pricing services. As such, it is our belief that the information provided is complete and correct.

Scope of Engagement

The scope of our assurance engagement was limited to the valuations of the following categories of assets: CDS, Bonds, Stocks, FXO, FXF, IRS, ETD, Equity Swaps, CFD. On behalf of the assurance committee, we have received and reviewed a report on the results of our assurance engagement.

Determination of Valuable criteria

We identified a number of criteria which are used to determine the value of the portfolio. These criteria include the market value of the portfolio, the volatility of the portfolio, the correlations of the portfolio, and the historical performance of the portfolio.

The management’s responsibility

HFund Ltd is responsible for the preparation of the financial statements included in the report. The management is responsible for ensuring that the financial statements are complete, accurate, and conform to the relevant accounting standards.

Example Assurance Analytics

Example 1

Price Analysis for Mixed Asset Classes

HFund has provided a portfolio for assurance purposes. This document outlines the results of our valuation of this portfolio.

Overall the KPMG iRADAR was able to process 1,766 out of 1,836 investments (96%). A further 59 investments could be analyzed with limited additional data. The appendix to this document provides an overview of the data utilized for this purpose.

Overall we identified a market value variance of USD 203k which represents 0.09% of the total market value. USD 178k of this variance can be directly reconciled within usual pricing uncertainties by performing further analysis. The remaining USD 25k represents 0.01% of the overall portfolio value and lies within the expected range, on a portfolio basis, for a portfolio of this complexity, and would be considered immaterial within the context of an audit.

Example 2

Price Analysis for Bonds, Loans and Convertibles

The chart on the right illustrates the impact of high pricing uncertainty on the valuation of this portfolio and the observable pattern. Each of the points in the scatter represents a debt instrument.

The analysis shows that the number of observations with a negative price deviation outweighs the number of observations with positive price deviation. A negative price deviation indicates that the prices submitted are lower than the reference prices derived by the KPMG iRADAR’s independent pricing process.

Higher pricing deviations occur for debt instruments with higher pricing uncertainty. Furthermore, where there are higher pricing uncertainties, the debt instruments tend to be valued conservatively.

Peer Group Analysis

- Average peer group prices were determined for 130 securities
- On average, the KPMG iRADAR compares each security with 5.5 prices within its database
- Average standard deviation: 0.33%
- Volume weighted average price deviation: -0.24
Example 4
Price and Fundamental Analysis for Securitizations - CLO

For the analysis of the CLOs, the KPMG iRADAR applied a fundamental valuation in which the performance of the underlying loan pool was simulated and the resulting cash flows were applied according to the waterfall structure. The expected cash flows per tranche were discounted at a corresponding market rate. Within such an analysis the most relevant input parameters are default, recovery and prepayment rates as well as the discount margin.

The chart on the right, shows the sensitivity of the tranche’s value for each of the selected transaction towards the expected default rate. As the scope of the analysis includes mezzanine tranches only, the effect of changes in parameters will only be material if rather extreme scenarios are considered.

The analyzed CLO’s deviations, stated below, are within our expected range. The total deviation amounts to USD 34k.

Results CLO Modelling – 60% Recovery Rate

<table>
<thead>
<tr>
<th>Name</th>
<th>MV Client delivered</th>
<th>MV Client reconciled</th>
<th>Deal Spread</th>
<th>Client Spread</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example Bank (B) 1 (20-DEC-2015)</td>
<td>1,011,925</td>
<td>574,237</td>
<td>100</td>
<td>218</td>
</tr>
<tr>
<td>Example Bank SA-NV 3 (20-MAR-2015)</td>
<td>302,721</td>
<td>92,187</td>
<td>300</td>
<td>325</td>
</tr>
</tbody>
</table>

Summary

<table>
<thead>
<tr>
<th>Market Value Deviations</th>
<th>Number of Swaps</th>
<th>Notional USD</th>
<th>MV Client USD</th>
<th>Total MV Deviations USD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>220</td>
<td>1,879,360,350</td>
<td>1,742,770</td>
<td>150,811</td>
</tr>
<tr>
<td>Within range</td>
<td>211</td>
<td>1,856,996,800</td>
<td>-30,179</td>
<td>-878,788</td>
</tr>
<tr>
<td>Out of range</td>
<td>9</td>
<td>20,363,950</td>
<td>1,772,948</td>
<td>1,029,959</td>
</tr>
<tr>
<td>Thereof under consideration</td>
<td>2</td>
<td>20,049,000</td>
<td>1,314,647</td>
<td>1,018,697</td>
</tr>
<tr>
<td>Remaining</td>
<td>7</td>
<td>314,550</td>
<td>458,302</td>
<td>117,007</td>
</tr>
</tbody>
</table>

Top 2 Variances based on independent CDS Spreads

<table>
<thead>
<tr>
<th>Name</th>
<th>MV Client USD</th>
<th>Deviation USD</th>
<th>Shift</th>
<th>Client Spread</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example Bank PLC 5 (20-JUN-2015)</td>
<td>-649,806</td>
<td>-164,832</td>
<td>1,298</td>
<td>5,273</td>
</tr>
<tr>
<td>Example Finance 5 (20-SEP-2015)</td>
<td>1,260,779</td>
<td>159,516</td>
<td>669</td>
<td>3,863</td>
</tr>
</tbody>
</table>

Top 2 Variances based on client CDS Spreads

<table>
<thead>
<tr>
<th>Name</th>
<th>MV Client delivered</th>
<th>MV Client reconciled</th>
<th>Deal Spread</th>
<th>Client Spread</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDS Example Bank (B) 1 (20-DEC-2015)</td>
<td>1,011,925</td>
<td>574,237</td>
<td>100</td>
<td>218</td>
</tr>
<tr>
<td>CDS Example Bank SA-NV 3 (20-MAR-2015)</td>
<td>302,721</td>
<td>92,187</td>
<td>300</td>
<td>325</td>
</tr>
</tbody>
</table>

Valuation Results for CLOs

<table>
<thead>
<tr>
<th>ISIN</th>
<th>Name</th>
<th>Category</th>
<th>Original/Current Rating</th>
<th>Notional EUR</th>
<th>Market Value Deviation USD</th>
<th>Client Price</th>
<th>The KPMG iRADAR’s Reference Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>XS00000000001</td>
<td>Example 1 CLO, Class D</td>
<td>Cash Flow</td>
<td>BB8-BB</td>
<td>800,000</td>
<td>1,766</td>
<td>54.80</td>
<td>54.63</td>
</tr>
<tr>
<td>XS00000000002</td>
<td>Example 2 CDO-I, Class E</td>
<td>Cash Flow</td>
<td>BB/C-,CCC-</td>
<td>1,500,000</td>
<td>32,479</td>
<td>49.00</td>
<td>47.38</td>
</tr>
</tbody>
</table>