Financial Accounting Advisory Services

Better portfolio evaluations – quantitative analysis to improve accuracy and reliability of your financial instrument valuations

May 2013
# Agenda

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**EMEIA Sub-areas**

- **Africa**
  Angola, Botswana, Republic of Congo, Equatorial Guinea, Ethiopia, Gabon, Ghana, Guinea, Ivory Coast, Kenya, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Nigeria, Rwanda, Senegal, Seychelles, South Africa, Tanzania, Uganda, Zambia, Zimbabwe

- **Belgium and Netherlands**

- **Germany, Switzerland and Austria**

- **Commonwealth of Independent States**
  Azerbaijan, Belarus, Georgia, Kazakhstan, Russia, Ukraine, Uzbekistan

- **Central and Southeast Europe**
  Albania, Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Greece, Hungary, Latvia, Lithuania, FYR of Macedonia, Malta, Moldova, Poland, Romania, Serbia, Slovakia, Slovenia, Turkey

- **France, Maghreb and Luxembourg**
  France, Luxembourg, Algeria, Morocco, Tunisia

- **Financial Services Organizations**
  Belgium, Channel Islands, France, Germany, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Switzerland, UK

- **India**

- **London**

- **Mediterranean**
  Italy, Portugal, Spain

- **Middle East and North Africa**
  Bahrain, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Oman, Pakistan, Palestinian Authority, Qatar, Saudi Arabia, Syria, United Arab Emirates

- **Nordics**
  Denmark, Finland, Norway, Iceland, Sweden

- **UK and Ireland**
  UK, Isle of Man, Republic of Ireland

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| EY Global |  
|---|---|
| Countries worldwide | 140 |
| Employees worldwide | 167,000 |
| US$ revenue (2011-12) | 24.4b |
Better portfolio evaluations
Better portfolio evaluations

Quantitative analysis to improve accuracy and reliability of your financial instrument valuations.

Companies are under pressure from regulators and new accounting standards to improve the way they value financial instruments. Pricing certainty, as well as greater consistency and comparability in financial reporting, is demanded.

We can help you meet this challenge. Using our proprietary Visual Portfolio tool, we can analyze your securities portfolio, whatever its size, and:

► Independently review the prices used in your valuations
► Identify relevant risk factors
► Highlight significant deviations
► Classify your financial instruments according to IFRS 9
► Show you the impact of IFRS 9 reclassifications and optimization potential

The introduction of valuation adjustments – such as credit valuation adjustment (CVA) and debt valuation adjustment (DVA) under IFRS 13 or US GAAP Accounting Standards Codification (ASC) 820 – is increasing the need for companies to ensure that their use of quantitative and valuation techniques is appropriate and accurate.

We can use the valuation knowledge, experience and tools gained from countless audit and advisory projects, together with our insights on the regulatory agenda, to help you deal with a wide range of valuation issues, such as multi-curve- and overnight index swap (OIS)-based derivative valuation.
Valuation and benchmark analysis for financial instruments portfolios

To evaluate your financial instruments in the new regulatory environment, you need support from experts who combine quantitative know-how with accounting expertise. Our team has the right tools and methodologies to make your valuation models and procedures more reliable.

Analytics of Visual Portfolio
- Quality analysis of portfolio data, such as consistent pricing
- Portfolio analytics with respect to structure, liquidity and performance
- Fair value consistency, leveraging various external pricing sources
- Identification and quantification of systematic valuation risks, based on pricing ranges and statistical evaluation
- Analysis of model estimates for cash flows, expected loss, pull-to-par and fundamental value
- Fair value hierarchy, according to IFRS 13

Key output of Visual Portfolio
- Transparent and consistent reporting and documentation
- Granular visual and tabular formats
- Detailed presentation of qualitative and quantitative insight
- Risk factor attribution

Input
- Client data
- Market data
- Vendor 1
- Vendor 2
- Vendor n

Visual portfolio database
- Data warehouse
- Analytics modules
- Check of quality, consistency and completeness
- Consolidation, Data enrichment, processing and rules engines

Output
- Ready-to-use analysis
- Expert review, charts, tables and graphs
- Workbook and database format
Analytics and identification of deviations

Visual Portfolio valuation and benchmarking tool

Our valuation and benchmarking analysis provides various flexible analytics, containing:

► Figures and diagrams on different levels of granularity
► Fair value deviations on different levels
► Highlighting of positions of special interest and specific views on demand
► Portfolio breakdown per asset class, rating, country, GIIPS exposure, market liquidity, concentration of asset-backed securities (ABS) vintages, etc.
► Market risk factor attribution

This allows us to detect systematic pricing deviations originating from potential data or process issues at a client’s site, and to benchmark our client’s price and risk management processes, including the verification of risk models.
Classification according to IFRS 9

Visual Portfolio classification tool

Our Visual Portfolio tool is based on a translation of the principle-based IFRS 9 standard into a set of criteria, and into various decision trees that make use of market and client data. The tool has been expanded, so it now processes loans and asset-backed securities by applying sophisticated techniques, such as text data mining for the look-through test.

Stage 1
Visual Portfolio IFRS 9 classification runs the set of rules on the portfolio, with three possible outcomes for each security: “fair value” (FV), “not conclusive” (NC) and “no indication of fair value” (NioFV).

Stage 2
An expert review verifies the validity of the generated results.

Stage 3
Results are consolidated into a final conversion report.

<table>
<thead>
<tr>
<th>Stage 1: automated result</th>
<th>Stage 2: expert review</th>
</tr>
</thead>
<tbody>
<tr>
<td>NioFV</td>
<td>FV</td>
</tr>
<tr>
<td>NioFV</td>
<td>2389</td>
</tr>
<tr>
<td>FV</td>
<td>116</td>
</tr>
<tr>
<td>NC</td>
<td>95</td>
</tr>
</tbody>
</table>

Stage 3
Results are consolidated into a final conversion report.
Migration analysis
Impact on balance sheet

Visual Portfolio migration analysis

For our migration analysis, we brought together “valuation and benchmarking” and “classification according to IFRS 9” in order to analyze the effects of the change from IAS 39 to IFRS 9. Of particular interest are migrations of single financial instruments from IAS 39 fair value (FV) categories to the IFRS 9 amortized cost (AC) category, and vice versa. Our analysis includes:

► Deep insights into the portfolio
► IFRS 9 cash flow test and the client’s business model
► Considerations concerning volatility risk and yield stability
► Information to optimize the resulting portfolio classification

Our outputs show the results on an executive level to find the best trade-off between flexibility, performance and balance sheet stability. It also comprises summary tables and detailed overviews of the optimization achieved.

<table>
<thead>
<tr>
<th>Change in total covered balance</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Old covered balance</td>
<td>15.288 b€</td>
</tr>
<tr>
<td>Change Corporates</td>
<td>+2 m€</td>
</tr>
<tr>
<td>Change Financials</td>
<td>-76 m€</td>
</tr>
<tr>
<td>Change Sovereigns</td>
<td>-33 m€</td>
</tr>
<tr>
<td>New covered balance</td>
<td>15.396 b€</td>
</tr>
<tr>
<td>Total Change of -107.7 m€</td>
<td></td>
</tr>
</tbody>
</table>

Migration per asset class

- Corporates - no migration
- Corporates - FV2AC
- Financials - no migration
- Financials - FV2AC
- Sovereigns - no migration
- Sovereigns - FV2AC
### IFRS 13 fair value measurement valuation adjustments and OIS

**CVA, DVA and OIS**

Changes arising from market practices, regulatory demands and IFRS 13 require financial institutions to reconsider how they value their financial assets and liabilities for regulatory and financial reporting. EY financial experts help you to model, calculate and document of CVA, DVA and OIS procedures. We analyze your business processes and investigate potential impacts on financial metrics, including regulatory capital.

<table>
<thead>
<tr>
<th>OIS modeling and pricing</th>
<th>Risk management</th>
<th>Collateral management</th>
<th>Treasury</th>
<th>Accounting</th>
<th>Financial reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>▶ Multiple-curve approach required for OIS discounting</td>
<td>▶ Should consider adopting the front office pricing model changes to capture the risk exposure accurately</td>
<td>▶ Need for front-office (FO) and collateral functions to collaborate</td>
<td>▶ Funding projection process needs to be reconsidered for OIS discounting</td>
<td>▶ Fair value measurement considerations – whether to include a CVA or DVA adjustment for a fully collateralized trade</td>
<td>▶ Need to consider the impact of LIBOR–to-OIS transition on accounting policies or estimates</td>
</tr>
<tr>
<td>▶ Increased computational and operational complexity</td>
<td>▶ Should consider updating risk models to reflect multi-curve sensitivities, basis risks and OIS discounting valuations</td>
<td>▶ Collateral management and optimization challenges due to multi-currency CSAs</td>
<td>▶ Collateral optimization implications</td>
<td>▶ Impact on P&amp;L</td>
<td>▶ Uncertainty over whether to consider OIS as level two or level three</td>
</tr>
<tr>
<td>▶ Illiquid or non-availability of OIS quotes for longer terms or some currencies</td>
<td>▶ Need to manage LIBOR-OIS spread risk and cross-currency basis risk</td>
<td>▶ Incidence of collateral disputes, due to inconsistent implementation of OIS discounting across institutions</td>
<td>▶ Funding challenges created by standardized CSA</td>
<td>▶ Hedge accounting implications:</td>
<td>▶ Implications and requirements for transferring from level two to level three</td>
</tr>
<tr>
<td>▶ Cross-currency basis needs to be incorporated into curve construction</td>
<td>▶ Should assess the impact of additional risk factors due to OIS on VaR</td>
<td></td>
<td>▶ Measurement of hedge ineffectiveness</td>
<td></td>
<td>▶ Need to define the requirements for level three input (e.g., sensitivity analyses)</td>
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**Better portfolio evaluations**
Appendix
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contacts – EMEIA

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About EY

EY is a global leader in assurance, tax, transaction and advisory services. The insights and quality services we deliver help build trust and confidence in the capital markets and in economies the world over. We develop outstanding leaders who team to deliver on our promises to all of our stakeholders. In so doing, we play a critical role in building a better working world for our people, for our clients and for our communities.

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