Moody's Analytics Asset Quality Review and Stress Testing Solutions

Moody's Analytics offers a comprehensive coverage of the Asset Quality Review (AQR) and stress testing process to help institutions meet regulatory requirements and improve strategic planning. We provide our customers with an integrated, yet modular, framework that can be customized to fit their specific needs, including: expert advice, unrivalled data, market leading models, integrated software and analytical services. Our products and services enable institutions to quickly respond to regulatory demands, better understand and manage the AQR process and more effectively prepare for the forthcoming EU-wide stress test.

The Challenge: Get Ready for the AQR in Preparation for the 2014 EU-Wide Stress Test

During the first quarter of 2014 the European Central Bank (ECB) will conduct asset quality reviews and balance sheet assessments at the 140 largest banks, across the 17 EU countries that are joining the Banking Union. National banking supervisors will carry out asset quality reviews at major banks in the remaining 10 EU members. The results of the AQR will be crucial, as they will be used in the next EU-wide stress test that will be conducted by the European Banking Authority (EBA) and the ECB in the second quarter of 2014.

In preparation for the AQR, the EBA has launched a consultation on harmonized definitions of Non-Performing Loans (NPLs) and Forbearance Loans across Europe. The new NPL and Forbearance Loan definition guidelines are likely to have a significant impact on banks’ balance sheets; analysts estimate that problematic loans may increase by 20% compared to the narrow definition of impaired loans under current IFRS or local reporting rules.

To successfully pass the 2014 test and address the requirements efficiently, institutions need to start preparing for the forthcoming AQR and stress test with appropriate data, models, calibration capabilities and software.

7 Steps to Stress Testing Excellence – Based on our customer feed-back and domain expertise, Moody's Analytics identified a best of breed framework for efficient stress testing:

1. Define Scope & Governance
   - Scope of stress testing (bank-wide and business specific)
   - Governance of stress testing programme

2. Define Scenarios
   - Scenarios to test (regulator’s, idiosyncratic)
   - Validation of severity, duration and risk transmission channels

3. Data & Infrastructure
   - Data sourcing
   - Data compilation and formatting
   - Data audit
   - Data input into models

4. Model the Impact of Scenarios on Risk Parameters
   - Stressed PD, LGD, EAD
   - Stressed cash-flows
   - Stressed financials and P&L (loan loss provisions, profit generation capacity)

5. Calculate Stressed Key Performance Indicators
   - Stressed Regulatory capital / Economic capital/Book capital
   - Liquidity gap and ratios
   - Stressed VaR

6. Reporting
   - Reporting and disclosed information including ICAAP & ILAA (externally and externally)

7. Management Actions
   - Integration into risk appetite
   - Credit limits, liquidity planning and asset growth adjustments

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1 EBA Consultation Paper on Draft Implementing Technical Standards on Supervisory reporting on forbearance and non-performing exposures under article 95 of the draft Capital Requirements Directive Regulation (26 March 2013). Final guidelines are expected in Q3 2013.
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The Solution: Comprehensive Tools and Services to Address AQR and Stress Testing Requirements

Moody’s Analytics’ comprehensive set of tools and broad expertise can help you prepare and manage the AQR process and get ready for the next EU-wide stress test:

- **Assess the Impact of New NPL Definitions on Banks’ Balance Sheets**
  - Impact of new NPL definitions on banks’ portfolios and asset classes
  - Sensitivity analysis
  - Impact of default definition on key metrics – RWAs, NPLs, provisions, forbearance and problematic loans – across jurisdictions
  - AQR effects on FINREP/COREP reporting

- **Prepare Regulatory and Custom Reports**
  - Consolidation of AQR and stress testing data submission templates and documentation
  - Preparation of custom management reports

- **Assess Capital and Liquidity Requirements**
  - Capital shortfall and RWA estimation relative to tier capital requirements under different scenarios
  - Funding/liquidity estimations (LCR, NSFR)
  - Contingency and remediation action plans

- **Forecast Losses and Loss Absorption Capacity**
  - Bottom-up loan level estimation of losses over forecast period for a wide range of asset classes
  - Future profit generation capacity estimation: income-related modeling solutions across portfolios and asset classes to forecast pre-provision profit
  - Model development, testing and calibration
  - Scenario design

- **Conduct Data and IT System Integrity Reviews**
  - IT systems review
  - Origination and underwriting systems review
  - Loan file sampling and testing
  - Data tape and balance sheet reconciliation

- **Perform Loans/Books Reviews & Underwriting Processes Reviews**
  - Loan file and books reviews
  - Origination, underwriting & loss mitigation process reviews

- **Asset Class Coverage:**
  - Corporate
  - Residential Mortgage
  - Commercial Real Estate
  - Retail
  - Sovereigns
  - Structured Products
  - Corporate bonds other fixed income securities

2 Or Profit before impairment losses.
The Difference: Unique Combination of Domain Expertise, Comprehensive Capabilities and Relevant Experience

Moody’s Analytics provides comprehensive asset quality review and stress testing capabilities that incorporate deep domain expertise, best of breed modelling capabilities, unrivalled data-sets as well as integrated software, platforms and analytical services.

Deep Domain Expertise

» We have 20+ years experience advising and developing tools for credit loss estimation and forecasting.

» We have a proven track record of successfully implementing stress testing solutions throughout the world:
  – Most of US CCAR\(^3\) banks have used our data, models, services and software in some capacity for their official CCAR submissions.
  – Moody’s Analytics has assisted the EBA with the design of methodologies, implementation and reporting of stress tests in Europe.

Unsurpassed Data Set

» We have unsurpassed access to proprietary credit risk data including Moody’s CRD\(^\circ\) (Credit Research Database), the world’s largest and cleanest collection of data on private companies.

» Our extensive database of economic data covers more than 180 countries with more than 260 million time series from the best national and private sources, as well as key multinational data sets.

» We offer standardized alternative economic, supervisory and custom scenarios for 49 countries, produced by our team of 80+ experienced economists.

Market Leading Models for All Major Asset Classes

» We offer best in class, off-the-shelf and customized models across all major credit sensitive asset classes including: Retail, Corporate, CRE and Structured products.

» Moody’s Analytics owns a global structured finance waterfall and data library, we also have a fully staffed and world renowned economics division that provides essential expertise on economic and consumer credit trends.

» Our econometrics data and models cover the broad fixed income market and have been used extensively by financial institutions throughout the world for many years.

» Our models are statistically validated by a combination of our proprietary and third-party data.

Integrated Software and Analytical Services

» Our advisory services are complemented with a proven software division that can facilitate the implementation and automation of your AQR and stress testing solutions.

» We offer integrated software for enterprise-wide stress testing, data management and reporting that enables banks to implement an automated and auditable stress testing framework for both regulatory and strategic planning purposes.

» Moody’s Analytics also provides tailored AQR, stress testing and capital planning advisory, training and implementation services to assist institutions with the design, development and deployment of AQR and stress testing processes.

\(^3\) The Comprehensive Capital Analysis and Review is the US FED’s supervisory stress test for bank holding companies with $50+ billion assets.
Moody's Analytics offers an end-to-end solution to address asset quality review and stress testing needs

Relevant Experience

» Advisory/Research: Our consultants have diverse backgrounds including quants, risk policy experts, research specialists and developed multiple approaches that have been industry-leading solutions for loss estimation, credit analysis, loan origination and underwriting.

» Credit Risk and Loss Forecasting: We are credit risk management and loss estimation specialists with a complete offering of credit models. Our capabilities extend across the entire income statement and balance sheet. We offer deep expertise in estimating loan losses across a comprehensive set of asset classes including Corporate, CRE, Retail assets, sovereigns and structured products.

» Regulatory: We help clients manage and comply with regulatory requirements including EU-wide stress tests, CCAR, DFAST, Basel III, Dodd Frank Act and more. We maintain active dialogues with regulators to make sure we address their concerns and expectations.

» Economic: As a leader in global economic consulting, our world renowned economics division of 80+ economists provides robust country and regional econometric models that are the foundation for scenario analysis and enable a consistent modeling approach across all asset classes.

» Data Management and Integrated Software and Reporting: Our data management platform provides the infrastructure needed to implement a world-class stress testing framework by managing and centralizing all data required for asset quality review and stress testing. Our automated software and reporting tools streamline the asset quality review and enterprise-wide stress testing process and facilitate reporting.

About Moody's Analytics

Moody's Analytics, a unit of Moody's Corporation, helps capital markets and credit risk management professionals worldwide respond to an evolving marketplace with confidence. The company offers unique tools and best practices for measuring and managing risk through expertise and experience in credit analysis, economic research and financial risk management. By offering leading-edge software and advisory services, as well as the proprietary credit research produced by Moody's Investors Service, Moody's Analytics integrates and customizes its offerings to address specific business challenges.