

Regulatory Credit Risk Measurement

Basel II, III & IV with IFRS 9, Credit Risk Modeling, Validation & Stress Testing (18 CPD Points)

Introduction

The single most complex aspect of IFRS 9 is credit loss impairment. This is because IFRS 9 represents a very significant departure from the principles of its predecessor IAS 39. In terms of IFRS 9, entities are now required to estimate future losses, taking into account forward looking drivers of risk. This requires very significant modelling and data capabilities in order to forecast the future. Every lender is forced to confront the complexities of applying the impairment rules of IFRS 9. Implementation of IFRS9 impairment without a detailed understanding of its likely impact may result in adverse unforeseen consequences.

Emphasis is placed on understanding how data quality and rating system structure influence the models, the validation and stress testing processes and hence the resulting ECL. This course is designed to equip participants with the knowledge and techniques to enable them to comprehend the end-to-end intricacies of IFRS 9, build own credit risk models and regularly validate them within their organizations with minimal or no help.

What Makes This Course Different

- The training course is interactive in nature, proactive, pragmatic, action-based, non-theoretical and nonacademic.
- Case Studies will be based on Industry-specific data. You will also receive a package of detailed notes and take-home Excel templates.
- Comprehensive material covering all Basel II/III IFRS 9 angles
- Build step-by-step Excel-based credit risk models covering classification and the new “expected loss” impairment model

Requirements

- Own laptop with Microsoft Excel is compulsory.

Objectives

Through a mix of lecture and case studies, the workshop will equip participants to achieve a detailed understanding of the latest IFRS 9 standard, Basel II/III both for financial assets, liabilities and derivatives, including:

- The classification and measurement of financial instruments
- Basel II/III Best Practices – modeling, documentation, implementation, validation
- Data quality issues
- The new IFRS 9 impairment methodology based on expected losses – the modeling of the risk parameters
- Regulatory and IFRS 9 Disclosures

Who should attend?

- Credit Risk Analysts and Loan officers
- Model Developers

- Model Validators
- Internal Auditors
- Model Risk Auditors
- Finance Managers
- Bank Supervisors
- Retail & Other Finance personnel
- Financial and Investment analysts
- Executives and Managers
- Professionals in financial services industry
- Parties interested in risk modeling

Benefits

- Learn best practice credit risk modeling, validation and stress testing under Basel II/III-IFRS 9.
- Build own internal credit risk models with minimal or no help.
- Calibrate and validate scoring models and ratings scales.
- Learn how to build supporting databases for risk components such as, Probability of default (PD), Loss Given Default (LGD) and Exposure at Default (EAD) estimation and calibration
- Learn the pitfalls of risk component benchmarking and back-testing and stress testing
- Conduct scenario tests and sensitivity tests (stress testing)
- Quantify risk for informed risk management

COURSE CONTENT

Preliminaries

- What is IFRS 9? How does it differ from IAS 39?
- What are financial assets and financial liabilities?
- IFRS 9 history and implementation overview
- The History of the Basel Accords, including focus on Basel III and IV

- 1. Credit Risk Modeling**
- 2. What is a model?**
- 3. Reasons for Wider Use of Models**
- 4. Consumer credit models**
- 5. What is Model Risk?**
- 6. Model Validation Guiding Principles**
- 7. Model Components**
 - Data
 - Theoretical approach and code
 - Assumptions
 - Reports
- 8. Elements of a Sound Validation Policy**
 - Independent review
 - Defined responsibilities
 - Model documentation
 - Change control
 - Audit oversight

9. Validation Process: What are we Validating?

- Inputs
- Processing
- Output

10. What Areas Should We Test?

- Logic
- Benchmarking
- Back-testing
- Stress testing

11. Discrimination Analysis (Ratings Models)

- Pearson's Chi-Squared Test
- Two-Sample Kolmogorov-Smirnov Test
- Receiver Operating Characteristics (ROC)
- Cumulative Accuracy Profile (CAP) and Accuracy Ratio (AR)

12. Approaches to Independent Validation

- Third party review
- Benchmarking
- Comparison with actual events
- Stylized Facts on recoveries (various studies)
- Validation through Calibrating and Back-testing EAD
- Benchmarking
- Stress Testing – process and documentation

13. Pillar 1: Minimum Capital Requirements

- Credit Risk – Approaches to measure credit risk
- The Standardized Approach – The Simple and Comprehensive Approaches
- Credit Risk – The 2 Internal Ratings-Based Approaches (IRB)
- Expected and Unexpected Loss – BIS
- IRB – PD, LGD, EAD, M, K
- Scorecard Models (AS, BS, CS, Attrition, Propensity)
- RWA Formulae and the Capital Adequacy Ratio (CAR)

14. Retail PD Modeling

- The Scoring Concept
- PD Estimation Techniques
- The Logit Model
- Case Study: Building a Retail PD and a Retail Internal Credit Rating Model
- PD Model Validation – The Kolmogorov - Smirnov Test (at build)

15. Corporate & SMEs Probability of Default (PD)

- The Data Set and Data Cleansing
- Quality of Financial Statements
- Calculation of Financial Ratios
- Qualitative Drivers
- Model Building
- Pre-selection of Input Ratios

- Derivation of the Z-score and the Final Default Prediction Model
- Case Study
- Model Validation – The K-S Test and others
- Internal Credit Rating Model

16. Corporate Loss Given Default (LGD)

- Mortality-Based approach
- Regression Methods
- Case Study: Building a Corporate LGD Model (using both methods)
- Model Validation

17. Retail LGD Modeling

- Modeling Retail Loss Given Default (LGD)
- Key drivers of CLGD
- Estimating Recovery Rates
- Modeling LGD using regression
- A Mortality-based approach to estimate recovery rates - IRB
- Case Study: Building an LGD model for a particular portfolio
- LGD Model Validation

18. Corporate Exposure at Default (EAD)

- The CCF approach
- The LEQ approach
- Case Study: Building a Corporate EAD Model
- EAD Model Validation

19. Retail EAD Modeling

- Estimating credit conversion factors (CCF)
- Risk drivers for CCF
- Estimating Loan Equivalents (LEQ)
- Risk drivers for LEQ
- Case Study: Building an EAD model for a retail portfolio
- EAD Model Validation

20. Putting Credit Risk Parameters Together

- Basel II/III IFRS 9 Expected Loss calculations - CASE STUDY WITH REAL DATA
 - Capital Stress Testing, Sensitivity and Scenario Analysis
- PIT and TTC PD, LGD and EAD
- Capital Requirements Calculations
 - Regulatory Capital
 - Economic Capital
- Retail Risk Weighted Assets Calculations
 - Capital Stress Testing, Sensitivity and Scenario Analysis

21. ICAAP Report