

Credit Portfolio Management: Key Concepts

A two-day intermediate level workshop on how credit portfolios are managed, modelled and sensitised within Basel II and economic capital frameworks.

TARGET AUDIENCE

Bankers, regulators and analysts who wish to gain insight into the credit portfolio management process, without being modellers themselves. The course is targeted at an intermediate level. Related workshops include: Credit Risk: Introduction to Key Concepts, which provides an introduction to the topic, and Risk Management in Banks & the Capital Implications which provides a broader overview of all risk management areas.

COURSE OBJECTIVES

Participants will be equipped to:

- Identify the key elements of credit risk: probability of default, loss given default and exposure at default
- Evaluate the inter-action of credit risk exposures within a portfolio and how these can be measured and quantified
- Review how the main drivers of credit risk are modelled and sensitised
- Understand how credit portfolio modelling is used within the overall risk management and regulatory and economic capital process.

CONTENT

CREDIT RISK OVERVIEW

The goal of this section is to teach the fundamental concepts of credit risk

- Traditional and current definitions of credit risk: default and credit migration
- Credit risk for different market participants e.g. bank lender, fixed income investors, CDS counterparty, credit insurer
- Categories of credit risk: lending, issuer, contingent, pre-settlement, settlement, country / transfer, other
- Key concepts of credit risk: default, recovery and exposure
- Differing approaches under Basel II, US GAAP, IFRS, internal models and market practices (e.g. ISDA agreements).

PORTFOLIO RISK MANAGEMENT

The goal of this section is to review the various techniques used to manage and measure credit risk within a portfolio and to understand the key drivers of credit risk.

Risk management strategy

- Portfolio management objectives: balancing risk appetite and diversification to maximise risk adjusted returns
- Diversification, granularity and correlation concepts
- Contagion risk – lessons learned in mature and emerging markets
- Techniques to spread risk: syndication, sub-participation, whole loan sales, credit derivatives, securitisation
- Liquidity: assumptions re: liquidity of credit market
- Focus on credit default swaps: basic structure, uses, variants, issues and uncertainties to consider as a hedging tool.

Measuring portfolio risk

- Portfolio credit risk versus single credit risk
- Credit risk loss distributions: quantifying expected and unexpected losses
- Contrasting credit and market risk measurement

- Key drivers of credit risk:
 - Probability of default: using rating models and rating migration
 - Correlations: importance and issues with estimation
 - Loss given default: recognition, calculation issues
 - Exposure at default: estimation issues for different risk types
 - Maturity and time horizon.

CREDIT RISK MODELS

The goal of this section is to review the key types and approaches of credit portfolio models.

Introduction to credit portfolio models

- Basic statistics for risk management: volatility, correlation, VaR, Monte Carlo simulation
- Alternative modelling approaches
 - Default models and mark to market / multi-state models
 - Structural and reduced form models
 - Conditional and unconditional models
- Widely used models: KMV, Credit Risk+, CreditMetrics, Credit Explorer
 - Key features and advantages and disadvantages of each model
 - Who uses what model?

Scenario and sensitivity analysis

- Why scenario analysis is necessary and different methodologies
- Role of scenario analysis within the stress testing framework
- Sensitivity of key inputs: probability of default, loss given default, number of rating scales etc.

CAPITAL ALLOCATION

REGULATORY FRAMEWORK

- Basel capital adequacy model and comparison with other models
- Single credit risk concepts: Basel I and Basel II standardised approach
- Basel II internal ratings based methodologies
- Capital requirements for a simple portfolio under Basel I, Basel II standardised and Basel II internal rating methodology.

Economic capital:

- Key differences between regulatory (Basel II) and economic capital
- Comparison of models
 - Relationship between shareholder, regulatory and economic capital
 - Different types of capital: credit risk capital, market risk capital, etc.
 - Credit VaR: VaR and Credit VaR disclosure for a leading institution.

CONCLUSION

- Role of credit portfolio management: veto rights, advisory or profit centre
 - Within credit department: controller or adviser
 - Decisions makers: front office portfolio optimisers
- Lessons learned from and impact of sub-prime crisis and credit crunch.