



# IFF

# CREDIT RISK

Three days of practical training on the best  
market focused strategies and techniques  
for effective credit risk management

**Contact:**

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Learning partner of

**RiskMinds**

Understanding credit and its risk is a key skill for any finance practitioner and this course will give you the essential insights and skills to be able to identify, quantify and manage credit risk effectively.

You'll begin with the basic understanding of what credit risk is and how it arises in many real-world cases such as banking, insurance, corporates and trade. This develops into credit analysis and modelling of credit risk for both single counterparties and portfolios. The course looks at a range of quantitative techniques which are employed by class leading models. These include models of default, ratings transition, transition matrices and default correlation. This course will also cover the regulatory requirements arising from these techniques.

You'll look at the management and optimisation of credit risk by the use of credit derivatives and securitisation. Of course, no such analysis would be complete without the regulatory impact of Basel III and other regulatory constraints on credit portfolios.

## KEY BENEFITS

- ★ Learn clear concise techniques to manage credit risk in portfolios, loans and instruments effectively
- ★ Cover the most commonly used models for assessing credit risk exposure
- ★ Improve your knowledge with in-depth analysis of portfolio performance and optimisation
- ★ Get to grips with the latest regulatory requirements & developments regarding Credit Risk, Basel II, Basel III and beyond
- ★ Understand the challenges credit risk management faces and what you need to do to deal with these challenges effectively
- ★ Learn from practical and interactive exercises, case studies and discussions on real-life market situations

## ABOUT IFF

IFF has been the chosen training provider of the world's best finance and energy professionals since 1991. We are part of Informa PLC and the learning partner of the RiskMinds series of events.

- We continually develop and improve our training to make it more effective for you
- You'll learn from practising, highly-experienced financial experts
- You'll experience interactive and practical training - implement what you learn straight away
- We limit class sizes so the trainer can adapt the content to suit you

## COURSE LEADER

DR ANDREW STREET



For three decades Dr Andrew Street has been involved in the forefront of the pricing, trading and management of financial risk in world markets. He has direct experience of running and regulating large financial institutions globally, including being trading head of an investment bank and a senior adviser at the Bank of England. He is a world renowned speaker, educator and consultant on financial risk and its regulation and control.

He is also a part-time finance lecturer at universities both in the UK and US, including Cambridge and New York Universities. He is currently very active in international risk consulting and training with his company Value Consultants Limited whose clients include Central Banks, Regulators, International Banks, Fund Managers, Insurance Companies and Hedge Funds.

Hear from the trainer himself at:  
[www.iff-training.com/VIDCR](http://www.iff-training.com/VIDCR)

## DATES & PRICE

Please contact a member of our team for more details

## CONTACT US

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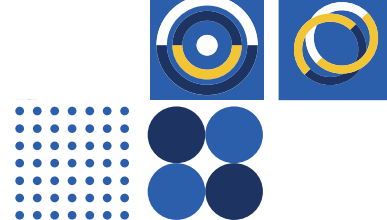
## IN-COMPANY TRAINING

IFF's bespoke training solutions will help you address your specific key business challenges. The programme is designed for you, with content focusing on the issues you and your teams are facing. The course can then be delivered at your choice of location face-to-face, digitally or a combination of the two.

- ★ Tailored content – 100% targeted to cover your needs
- ★ No travel or time out of the office – we will come to you
- ★ Value for money – train teams of staff at the same time
- ★ Risk free – we've been doing this for over 30 years

We will meet you anywhere in the world. Please contact Leigh Kendall on +44 (0)20 7017 7190 or email: [Leigh.Kendall@informa.com](mailto:Leigh.Kendall@informa.com)

# COURSE AGENDA



## Introduction to Fundamental Credit Risk and Analysis

- What is credit risk and how does it arise?
- Regulatory distinctions in credit risk – specific and counterparty / banking vs. trading book
- The credit crunch and its origins – how has this affected our approach to credit risk?
- Definitions of default, failure to pay and other credit events
- Simple models of corporate structure, subordination and default processes
- Merton's enterprise model and default risk – KMV model
- Credit risk as default probability, recovery rates / LGD and exposure
- Relationship to balance sheet and cash flow statements
- Relationships to debt and equity prices
- Ratings agents approach to credit risk – has it failed?
- Lessons to be learned from the credit crunch and sub-prime debacle
- How did Lehman's collapse? – relationships to liquidity and other risk

## Portfolio Credit Risk

- Probability of default, loss given default and correlation of default
- Credit risk of portfolios compared with single positions
- Loss distributions and relationship to expected loss, worst credit loss, economic and regulatory capital definitions
- Introduction to portfolio credit risk models
  - CreditRisk+
  - CreditMetrics
  - McKinsey
- Optimising portfolios for best risk/return
- Tail risk



### LAPTOP WORKSHOP

Spreadsheet exercises using simple portfolio credit model

## Overview of Basic Statistics

- Some elementary statistics – standard deviation, Pearson correlation, skewness
  - volatility of market factors



### EXERCISE

Estimation of market factor volatilities

- covariance and correlation, correlation matrix



### EXERCISE

Estimation of market factor correlations

- problems with real-world data
- Monte Carlo simulation methodology
  - overview of Monte Carlo technique
  - Cholesky decomposition
  - problems with the variance/covariance matrix



### EXERCISE

Performing Cholesky decomposition

## Modelling Credit Exposure of OTC Derivative Products

- Loans, bonds and derivatives
- Transaction-based models
- Foreign exchange transactions
- Interest rate swap transactions
- CEF calculations
- Effect of CMTM
- Market factor-based models
- Counterparty exposure simulation models
- Handling credit exposure limits
- Integration of netting
- Integration of margin/collateral
- Integration of liquidity risk
- Stress testing
  - incremental transactions
  - market discontinuities
- What lessons have we learned from the credit crunch with regard to stress testing?

## Evaluating the Credit Risk of Derivatives

- Expected and unexpected credit loss
- Default only vs. economic loss
- Credit loss profile
- Simulation approach to economic capital
- Risk rating model
- Rating migration matrix
- Loss given default

## Managing Credit Risk: Securitisation and Risk Transformation

- Concepts of regulatory capital for credit risk and return on assets
- Techniques for moving risk off balance sheet
  - securitisation and synthetic securitisation
  - CDOs and other tranche products
- Pros and cons of securitisation for origination firms and investors

- The role of rating agents
- The roots and effects of sub-prime meltdown
- How has the model broken down in the credit crunch?
- What is going to replace it?



### CASE STUDY

Analysis of a CDO in the sub-prime meltdown

## Managing Credit Risk: Credit Derivatives and Risk Transfer

- What are credit derivatives and why are they used?
- Single name credit derivatives (unfunded and funded structures)
  - Credit Default Swap (CDS)
  - total return swap
  - first-to-default basket note
- Pricing and risk of single obligor credit derivatives
- Basket and Tranche CDS, index based CDS
- Regulatory capital impacts of credit derivatives
- Documentation and legal issues



### LAPTOP WORKSHOP

Spreadsheet exercises with single name credit derivatives

## Regulatory Capital – Requirements for Credit Risk

- Regulatory capital under Basel I
- Regulatory capital under Basel II
- Changes under Basel III
- Standardised approach
- Foundation internal ratings based approach
- Advanced internal ratings based approach
- Basel II / III risk weight functions
- Basel trading book issues
  - counterparty credit exposure
  - double default effects
  - short-term maturity adjustment
  - unsettled trades
- Wrong way risk
- CVA, FVA and DVA – what are they and how do they affect us?
- What changes can we expect in the future as a result of the credit crunch? FRTB and Basel IV



### DISCUSSION SESSION

Credit risk management post credit crunch – a new paradigm? How will we make money in the new high cost, low leverage world?

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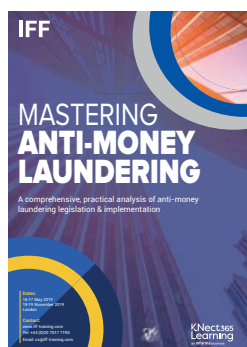




#### CPD Certified:

IFF is recognised by the CPD Certification Service and have been approved to award CPD points towards professional development certifications. Attendance at this course will earn you 40 CPD points.

## COURSES IN THE IFF RISK MANAGEMENT PORTFOLIO



The learning partner of

# RiskMinds

See the website for full details [www.iff-training.com](http://www.iff-training.com)