



Derivative Credit Risk – Analysis and Management

ICMA EXECUTIVE EDUCATION



Objectives

A financial institution deals in many products with many counterparties. As the Lehman bankruptcy showed, monitoring and managing counterparty credit risk is essential to a firm's survival. Today derivatives trading can often create a bigger exposure for large financial institutions than cash instruments, given the relative volume being traded. The course is designed to provide an overview of the principles which are used to calculate, assess and manage derivative credit risk, and will focus on interest rate swaps and options.

Target Audience

This course is valuable for anyone responsible for managing or overseeing derivatives products and counterparty risk. It is equally valuable to the buy-side, sell-side or any other participant active in these products. The course is suitable for anyone with an understanding of the fundamental concepts of finance, fixed income and an understanding of the basic derivative products – this knowledge will be assumed and there will not be any basic review of these products.

Length and structure of the course

The course consists of two days of lectures and case studies. Each day typically consists of four 90 minute sessions with coffee breaks in the morning and afternoon and a lunch break in the middle. There is no exam for this course but candidates will get a certificate of attendance.

Course Outline

Session 1

Techniques for measuring derivative credit risk

- The Sutton formula
- Replacement cost
- Mark-to-market plus add-on
- Semi-analytical methods
- Monte Carlo simulation

Session 2

Interest rate swaps – valuation

- Zero coupon swap pricing
- Selecting the appropriate discount rate (LIBOR vs. OIS)

Interest rate swaps – risk drivers

- Factors influencing swap spreads
- Interpreting negative swap spreads

Session 3

Interest rate swaps – credit risk

- Deriving the PFE for interest rate swaps
- PFE for swap variations (e.g. forward-starting swaps, amortising swaps, accreting swaps)

Session 4

Interest rate options – valuation

- Principles of interest rate option pricing
- Factors influencing interest rate option premia

Session 5

Interest rate options – valuation (part II)

- Option risk management – the Greeks (i.e. delta, gamma, vega, theta)

Session 6

Interest rate options – Risk drivers

- Characterising yield curve behaviour
- Principal Component Analysis
- Theories of the yield curve
- The relationship between volatility and the yield curve

Session 7

Interest rate options – credit risk

- Deriving the PFE for interest rate options
- Caps and floors
- Swaptions (cash vs. physical settlement)
- Cancellable vs. extendible structures

Session 8

Managing derivative credit risk – documentation and mitigating strategies

- ISDA documentation
- Credit support annex
- Credit risk mitigation techniques
- Credit value adjustment (CVA)
- Bilateral counterparty risk (BCVA)
- Examples of ‘wrong way’ trades

Course Tutor

Neil Schofield: Neil is a visiting fellow at the University of Reading and is a freelance training consultant. From 2001 to 2008 he was global head of financial markets training at Barclays Capital in London. He was responsible for the design and delivery of a large number of seminars in a variety of different asset classes to many different audiences. Previous to that he was a director at Chisholm

Roth training in London and has also held positions at Chase Manhattan Bank as well as Security Pacific Hoare Govett (now trading as Bank of America). Neil has over 20 years of experience in financial markets. In 2007 he published his first book "Commodity Derivatives" and recently had a second published: 'Trading the fixed income, inflation and credit markets. A Relative Value Guide'



Course Information and Registration

Fees

The cost is GBP 1,250 for ICMA members and GBP 1,650 for non-members with further discounts as follows:

2 to 4 candidates – 5% discount each*

5+ candidates – 10% discount each*

*Please note that discounts are applied by way of a refund to the organisation when registration has closed and the final number of candidates from the firm has been determined.

Payment can be made by secure online credit card or by invoice. Please note that selecting invoice method will add GBP 50 (administration fee) to the course price.

Note that anyone requiring accommodation to take the course will be required to arrange this on their own; it is a class-based but non-residential course.

Further Information and Course Registration

To register please use our online registration system:
www.icmacentre.ac.uk/exec_registration

For any questions about the course, please contact:

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ICMA Executive Education

For many years ICMA Executive Education has made investment in executive education for the financial markets a priority. Its courses are administered and overseen by the ICMA Centre at Henley Business School, University of Reading.

Five Certificate Programmes are offered:

- Financial Markets Foundation Course (FMFC)
- Securities Operations Foundation Course (SOFC)
- International Fixed Income and Derivatives (IFID) Certificate

- Operations Certificate Programme (OCP)
- Primary Market Certificate (PMC)

All are recognised as certificates of competence in the capital markets and are successfully completed by large numbers of international participants each year.

ICMA Centre

The ICMA Centre, University of Reading has an international reputation for providing quality teaching programmes tailored to the capital markets industry. Established in 1991 with funding provided by the International Capital Market Association (ICMA), the Centre is housed in a purpose-built modernist building with state-of-the-art

facilities including two dealing rooms. In 2008, ICMA enabled an expansion to the building that now includes an additional 50 seat dealing room, 170 seat lecture theatre as well as new seminar rooms and a dedicated research area.

The International Capital Market Association

The International Capital Market Association (ICMA) is a unique organisation and an influential voice for the global capital market. It represents a broad range of capital market interests including global investment banks and smaller regional

banks, as well as asset managers, exchanges, central banks, law firms and other professional advisers. ICMA's market conventions and standards have been the pillars of the international debt market for over 40 years.

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