Quantitative Techniques for Credit Derivatives

LondonFinancialStudies
capital markets learning

A practical two-day programme with in-depth coverage of mathematical models used for the analysis of credit risk.
Presented by Professor Wim Schoutens

THE COURSE

The aim of this course is to develop a solid understanding of the current framework for modelling and pricing credit derivatives. Participants will gain the mathematical and practical background necessary to apply the various models in the market and will learn about recent advances in the field.

PRIOR KNOWLEDGE

A good maths background including probability theory, basic stochastic processes, basic concepts of financial products and some knowledge of programming.

WHO SHOULD ATTEND?

- Quantitative Analysts
- Risk Managers
- Financial Engineers
- Researchers
- Others involved in credit risk modelling in the capital markets

About LFS

London Financial Studies is a specialist teaching resource that concentrates exclusively on capital markets. We offer individuals, teams and companies a unique and expert teaching resource that combines theoretical understanding with practical experience. LFS is well known for its personal approach and the economic value that it delivers to clients.

This program is accredited by the CFA and Institute members are eligible for 16 Continuing Education credit hours.

34 Curlew Street
Butlers Wharf
London SE1 2ND

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DAY I

Credit Risk Modelling

This section describes and analyses some of the popular mathematical models for the pricing of financial derivatives in an univariate credit setting.

Fundamentals

- Components of credit risk
- Default and survival probabilities
- Instruments

Modelling

- Intensity based modelling
- Firm's value models
- Jump models

Credit Derivative Pricing

- Credit default swaps
- Calibration
- Pricing of payer and receiver swaptions on single name CDSs
- Dynamic spread generators
- Exotic option pricing on single name CDSs

Credit Index Modelling

- Black's Model
- Jump models
- Pricing of payer and receiver index swaptions under advanced models
- Calibration

The Teacher

Wim Schoutens is a Professor in financial engineering research in the Department of Mathematics at the Catholic University of Leuven, Belgium. He has extensive practical experience of model implementation and is well known for his consulting work in the banking industry. Wim is also the author of 'Lévy Processes in Finance: Pricing Financial Derivatives' and co-editor of 'Exotic Option Pricing and Advanced Lévy Models', both published by Wiley. His research interests cover all areas of financial mathematics, and recent publications cover jump driven credit models as well as equity models, model risks, hedging of exotics and multivariate financial modelling.

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DAY II

Portfolio Credit Risk Modelling
This section discusses portfolio credit risk modelling. Dependency among the assets in the portfolio is crucial in the modelling and for the pricing of multivariate credit derivatives.

Default dependency and Portfolio Models

- Causes of correlation
- Joint default probabilities
- Conditional default probabilities

CDO Pricing

- Binomial model
- One factor Li model
- CDO pricing details
- Generic jump models for CDOs
- The Gamma CDO model
- Gaussian vs Gamma based correlation

Multivariate Index Modelling

- Correlated dynamic jump models for credit indices
- Calibration on swaption market
- Matching correlation
- Hybrids

Recent Advances

- CPPIs and CPDOs under jump models
- Assessing the gap risk under jump dynamics

Our work is built on four complementary key values

Practical application
What we teach is soundly based in current best practice. Our teachers have extensive practical experience in relevant capital markets.

Intellectual clarity
Our teachers are first class communicators and acknowledged experts in their fields. They combine extensive practical experience with profound theoretical understanding. As skilled communicators, they get the message across quickly and effectively. Course exercises deliver effective practical learning that participants remember long after leaving the classroom.

Personal approach
We try to understand the needs of each person and structure courses and packages of real benefit to them. All our teaching groups are small enough to enable individual needs to be assessed and met continually.

Economic value
We understand the commercial environment in which our clients operate. What we teach them delivers tangible benefits to their personal performance and the bottom line of their companies.

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Booking Form

The course fee is £1045 per day plus VAT and includes lunch, refreshments, full documentation, all relevant Excel macros and spreadsheets and access to our on-line Library.
An early booking discount of 10% is available for bookings made more than 20 working days before the start of the course. Multiple booking discounts are also available.
Invoices will be sent out with payment instructions and are payable by the earlier of 14 days from receipt or the first day of the course.

Quantitative Techniques for Credit Derivatives (Please fill in 1 form for each booking)

PLEASE WRITE CLEARLY IN BLOCK CAPITALS

Course Dates:	Name:
Title: ☐ Dr ☐ Mr ☐ Mrs ☐ Ms	Company:
Job Title:	Department:
Phone:	E-mail:

Details of person to whom invoice should be sent:

Name:	E-mail:
Phone:	Job Title:

Payment Type: ☐ Invoice ☐ Credit Card

Address for Invoice:

Booking Code (if applicable):	Purchase Order:

I have read and accept the booking conditions on this page

Signed:	Date:

Registration

To confirm your place, please return this booking form by fax to: +44 (0)20 7378 1062

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General Course Booking Conditions

Cancellations
An administration fee of 15% of the full brochure price will be charged for written cancellations received more than 20 working days prior to the start of the course. Delegates who request cancellation 20 working days or less before the course start date, or who do not attend, will be charged the full course fee. In the event of delegates not being able to attend, substitutes are welcome at any time for no extra charge.

Postponements
Delegates may make one postponement of a course place from the date of first booking to the next available date free of charge provided that the postponement request is received more than 20 working days before of the start course. All other postponements will be subject to a fee of 15% of the full brochure price.

VAT
For courses run in the United Kingdom, VAT at 17.5% is due on all fees unless a VAT Exemption Certificate is provided at the time of booking.

Disclaimer
London Financial Studies reserves the right to cancel or postpone courses for reasons beyond its control. Under all circumstances the company's liability is limited to a full refund of the course fee paid.

Intellectual Property Notice

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