MOODY'S ANALYTICS

COURSE OUTLINE:

Managing Market Risk in a Fixed-Income Portfolio

2 days
16 CPE Credits

Overview

This two day programme covers the management of market risk in a fixed income portfolio. The programme takes participants through the valuation and risk measures of fixed income products, and deals with the management of the portfolio risks using derivatives. The coverage then extends to the calculation and analysis of potential risk under a Value at Risk framework. The course also links risk management techniques and methodologies to regulatory risk management requirements.

Learning Objectives

By the end of the course participants will be able to:

- Understand the pricing techniques for fixed income products
- Distinguish between credit and market risk measures
- Calculate risk measures (duration, PV01, convexity) on fixed income products
- Analyse portfolio risk using factor sensitivities
- Understand the application of a range of fixed income derivatives in risk management
- Describe and compare the methodologies used in Value at Risk calculations
- Understand the applications and shortcomings of Value at Risk
- Analyse portfolio risk using Value at Risk and suggest corrective actions if required

Who Should Attend

This course is useful for:

- Portfolio/asset/fund managers
- Credit/lending officers
- Investment and commercial bankers
- Fixed income professionals
- Risk managers
- Banking supervisors

Program Level

Program Level: Introductory

Prerequisites: Suggested one-two years experience in a capital markets/structured finance related function or relevant business related degree.

Advanced Preparation: None

Delivery Method: Group-Live

Accreditation

Moody's Analytics is registered with the National Association of State Boards of Accountancy (NASBA) as a sponsor of continuing professional education on the National Registry of CPE Sponsors. State boards of accountancy have final authority on the acceptance of individual courses for CPE credit. Complaints regarding registered sponsors may be submitted to the National Registry of CPE Sponsors through its website: www.nasbaregistry.org.

WHY MOODY'S ANALYTICS?

Current and Consultative

Our seminars are created and updated utilizing the extensive experience, skills and research of Moody's Analytics. For in-house training, we work with you to understand the distinct needs of your organization and design, implement, and track the performance of your learning programs from end-to-end, including skills assessment, program design, implementation, evaluation, and enhancement.

Comprehensive Coverage

We offer a broad set of technical and soft skills programs that can be combined and adapted to the needs of your staff. Our areas of expertise include banking, finance, sales negotiation and leadership development:

Unparalleled Expertise

Our training solutions leverage over a century of experience in risk assessment and the comprehensive tools, data, and analysis of Moody's Analytics to deliver timely, in-depth, and comprehensive knowledge. In delivery, our people make the difference – they combine deep experiences as financial practitioners, intellectual passion for the content, and superior academic credentials with a commitment to delivering outstanding quality.

Managing Market Risk in a Fixed-Income Portfolio – Agenda

DAY ONE

Session 1: Pricing fixed income products

- Discounting contractual cash flows in a bond
- The yield to maturity as risk free rate plus credit spread
- Accrued interest and the clean & dirty price
- Yield based vs. credit adjusted pricing
- Distinguishing between interest rate & credit spread sensitivity
- Case study: on fixed income pricing

Session 2: Duration and convexity

- The impact of maturity and coupon on bond price sensitivity
- Calculating duration
- Using modified duration to calculate the price sensitivity to a 1bp shift in yield
- Key rate risks in a portfolio
- Duration changes: the impact of convexity
- Predicting price changes using a Taylor expansion
- Negatively convex products
- Case study: on duration, convexity & portfolio sensitivity

Session 3: Managing market risk using derivatives

- Interest rate swaps: review of mechanisms and cash flows
- Swapping floating or fixed rate assets
- Duration, convexity and key rate risks for IRS
- Understanding the risks in a portfolio of bonds and swaps
- Bond futures: product review
- Calculating the duration of the bond future using the CTD
- Integrating bond futures into fixed income hedging
- Swaptions: product review
- Understanding the risks of a swaption using the "Greeks"
- Integrating swaptions into fixed income hedging
- Currency swaps: product review
- Managing FX risk in fixed income portfolios
- Managing the risks on the derivatives: counterparty credit risk and credit valuation adjustments

DAY TWO

Session 4: Value at Risk

- What is VaR and what does it communicate?
- Getting an intuitive grasp on VaR, holding periods and degrees of confidence
- Risks not in VaR
- Variations: CVaR, 3W etc
- Regulatory capital for market risks
- Backtesting
- Can you hedge VaR? Is zero VaR meaningful?
- Case study: where VaR failed – LTCM

Session 5: VaR methodologies

- Modelling how asset prices move
- Correlation in asset prices
- Portfolio risks given volatility and correlation
- Historical simulation vs. Parametric vs. simulation approaches
- What approaches are used by the market and why?
- Case study: on the comparison of VaR methodologies

Session 6: VaR calculations

- VaR on a single bond
- VaR on a foreign currency bond
- Time series issues: price or yield time series?
- Decomposing a fixed income portfolio into standardised zeros
- VaR on a fixed income portfolio
- Case study: on the calculation of VaR

RELATED COURSES

- Structured Finance
- Introduction to Derivatives
- Introduction to Credit Derivatives
- Managing Credit Risk in a Fixed-Income Portfolio
- Inflation Products
- Counterparty Credit Risk

CONTACT US

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