



Savill Consulting

**Savill Consulting**

**Product Training Curriculum**

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## Structure

The curriculum is organised by asset class. The asset classes are:

- **Interest Rates**
- **Equity**
- **Foreign Exchange**
- **Credit**
- **Commodities**

In order to equip the learner with the requisite knowledge, there are three levels of training available:

**Level I** sessions provide the necessary “big picture” background to the main concepts of markets and products.

**Level II** encompasses a wide range of product-focused sessions that allow participants to deepen their understanding of a particular asset class.

**Level III** sessions are sessions that span across multiple asset classes with either a risk or a marketing focus.

## Timing

The sessions can be designed to run from half a day upwards, depending on the requirement: the length of the session will be driven by the training objectives of the particular module. Where practical, the sessions may be run at a variety of times to suit business needs.

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## *Level I: Overview Sessions*

### **An Overview of Investment Banking**

#### **Aim**

To provide an overview of the main financial markets in which an investment bank operates.

#### **Objectives**

By the end of the session the participant will be able to:

- discuss the main asset classes in which a bank operates, including the interest rate, equity, FX, credit and commodities markets
- describe the main clients with whom the bank deals, including banks, fund managers, insurance companies, hedge funds and corporates
- outline how markets products can be used to address the needs of the various clients
- describe the functionality of the main business units

#### **Prerequisites**

None

#### **Timing**

1 day

## ***Level I: Overview Sessions***

### **The Lifecycle of a Trade**

#### **Aim**

To provide an overview of the lifecycle of a typical investment banking transaction

#### **Objectives**

By the end of the session the participant will be able to:

- describe the main features of the product (s)
- outline the different reasons why the product is used
- describe how a deal is executed and the functions associated with this part of the cycle
- outline how an existing position is managed prior to settlement (e.g. revaluation and risk management)
- detail the different steps that form the settlement process

#### **Prerequisites**

None

#### **Timing**

1 day

## ***Level I: Overview Sessions***

### **Introduction to the Debt Capital Markets**

#### **Aim**

To provide an overview of the debt capital markets

#### **Objectives**

By the end of the session the participant will be able to:

- describe the motivations of borrowers
- discuss the motivations of various types of investor
- perform basic bond math using time value of money function
- discuss the various roles performed by a bank in a debt syndicate
- discuss the features of the different types of bonds, including the public v. private markets, domestic v international markets, MTNs and 144A
- describe the process of bringing a bond issue to market
- calculate all-in-costs of debt issuance after fees and expenses

#### **Prerequisites**

None

#### **Timing**

1 day



## ***Level I: Overview Sessions***

### **Introduction to the Equity Capital Markets**

#### **Aim**

To provide an overview of the equity capital markets

#### **Objectives**

By the end of the session the participant will be able to:

- list the features of the different types of equity transaction, including primary v seasoned offerings, accelerated bookbuilding, ADRs, convertible bonds and warrants
- describe the motivations of issuers
- discuss the motivations of various types of investors, including anchor and cornerstone investors
- discuss the various roles performed by a bank in a syndicate
- describe the process of bringing a IPO to market
- explain the importance of stabilisation and the role of the greenshoe in an IPO transaction
- outline the motivations and implications for seasoned issuance including rights and bonus issues

#### **Prerequisites**

None

#### **Timing**

1 day

## ***Level I: Overview Sessions***

### **Introduction to the FX Markets**

#### **Aim**

To provide an overview of the foreign exchange markets

#### **Objectives**

By the end of the session the participant will be able to:

- discuss the key metrics of the FX markets in terms of overall size, key centres, popular currency pairs etc.
- understand the conventions of the FX market
- explain the main drivers of FX rates
- describe the role of the various players in the FX markets
- calculate FX forward rates
- discuss the mechanics of an FX swap
- list some applications for FX swaps
- explain some basic FX trading strategies

#### **Prerequisites**

None

#### **Timing**

1 day

## ***Level I: Overview Sessions***

### **Portfolio Management**

#### **Aim**

To provide an basic understanding of portfolio management

#### **Objectives**

By the end of the session the participant will be able to:

- determine the return and the risk on an asset portfolio given the risks on its individual components and their return correlations
- define the concept of the portfolio frontier and explain how asset correlations affect its shape
- explain how the Sharpe ratio is used to compare the performances of different portfolios, and to identify optimal portfolios
- compare efficient portfolios with optimal portfolios
- explain what is meant by the alpha and beta coefficients of an index tracking portfolio
- discuss the Capital Asset Pricing Model
- apply different portfolio selection techniques using different models

#### **Prerequisites**

None

#### **Timing**

1 day

## ***Level I: Overview Sessions***

### **Introduction to Futures**

#### **Aim**

To provide an overview of futures

#### **Objectives**

By the end of the session the participant will be able to:

- define the main terminology associated with futures
- explain the main futures quoting conventions for selected futures contracts
- explain the intuition behind the valuation of futures
- describe how futures could be applied in a variety of different asset classes (e.g. interest rate, equity, commodities)

#### **Prerequisites**

None

#### **Timing**

1 day

## ***Level I: Overview Sessions***

### **Introduction to Swaps**

#### **Aim**

To provide an overview of swaps

#### **Objectives**

By the end of the session the participant will be able to:

- define the main terminology associated with swaps
- explain the main swap quoting conventions
- explain the intuition behind swap valuation
- describe how swaps could be applied in a variety of different asset classes, including interest rates, equity, currencies and commodities

#### **Prerequisites**

None

#### **Timing**

1 day

## ***Level I: Overview Sessions***

### **Introduction to Options**

#### **Aim**

To provide an overview of options

#### **Objectives**

By the end of the session the participant will be able to:

- define the main terminology associated with options
- explain the effect of combining options with underlying positions or other options
- explain intuitively how options are priced
- discuss the meaning of volatility and how it is determined
- describe how swaps could be applied in a variety of different asset classes, including interest rates, equity, currencies and commodities
- list some basic option trading ideas

#### **Prerequisites**

None

#### **Timing**

1 day

## ***Level II: Fixed Income***

### **Money Market Products**

#### **Aim**

To provide an overview of the main money market instruments and their use

#### **Objectives**

By the end of the session the participant will be able to:

- describe the mechanics and applications of a variety of money market instruments including government bills, commercial paper, certificates of deposits, bankers' acceptances and the Fed Funds market
- explain the mechanics of the repo market
- discuss the role of the risk treasury function within a bank and explain the concept of gapping
- compare the returns on a discount instrument with those of an interest bearing instrument
- compare the return on a money market instrument with those of a bond market instrument
- calculate the cost of carry and the breakeven on a money market instrument

#### **Prerequisites**

None

#### **Timing**

1 day

## ***Level II: Fixed Income***

### **Bond Mathematics and Market Risk**

#### **Aim**

To explain the methods of bond valuation and traditional measures of bond market risk

#### **Objectives**

By the end of the session the participant will be able to:

- describe the concept of yield to maturity
- calculate the price of a bond from its yield to maturity or vice versa
- calculate the value of a bond from a series of discount factors
- differentiate between the clean and dirty price of the bond
- identify the factors that influence the market price of the bond
- interpret the Macaulay duration of a bond
- calculate and interpret the modified duration of a bond
- calculate and interpret the basis point value of a bond
- explain and apply the concept of convexity

#### **Prerequisites**

None

#### **Timing**

1 day



## ***Level II: Fixed Income***

### **Repurchase Agreements**

#### **Aim**

To outline the main features of the repo and associated markets

#### **Objectives**

By the end of the session the participant will be able to:

- differentiate between a repo and reverse repo and explain the key jargon associated with the product.
- calculate the settlement amount on a repo transaction
- identify the main uses and applications of repos
- explain how repo collateral is managed
- explain the terms general collateral and special in relation to the repo market
- identify the key risks associated with the market

#### **Prerequisites**

A basic knowledge of the bond markets is required

#### **Timing**

1 day

## ***Level II: Fixed Income***

### **Bond Trading Strategies**

#### **Aim**

To provide an overview of the main bond trading strategies

#### **Objectives**

By the end of the session the participant will be able to:

- explain how a bond trading strategy could be designed using basis point value (BPV) weighting techniques
- design the following strategies:
  - Yield curve switch
  - Yield curve spread trade
  - Convergence trade
  - Credit spread trade
  - Butterfly / barbell trade
- calculate the financing requirements of the trade
- trade bonds in a simulated environment (optional)

#### **Prerequisites**

Knowledge of bond jargon and market risk concepts (e.g. duration, convexity and basis point value) will be assumed.

#### **Timing**

1 day

## ***Level II: Fixed Income***

### **Yield Curve Construction**

#### **Aim**

To construct a variety of yield curves and to construct a discount function from a variety of market sources

#### **Objectives**

By the end of the session the participant will be able to:

- identify the shortcomings of yield to maturity
- derive a zero coupon rate from its par curve equivalent and vice versa
- derive a forward rate from its zero curve equivalent
- describe the applications of par, spot and forward rates
- construct a discount function from a variety of market inputs:
  - deposits
  - exchange traded futures & FRAs
  - bonds and swaps
- outline the main techniques used to model the shape of yield curves

#### **Prerequisites**

Basic understanding of bond terminology

#### **Timing**

½ day

## ***Level II: Fixed Income***

### **Interest Rate Futures and Forward Rate Agreements**

#### **Aim**

To provide an overview of the short-term interest rate futures contracts and FRAs

#### **Objectives**

By the end of the session the participant will be able to:

##### *Forward Rate Agreements*

- outline the main features and terminology of an FRA
- calculate a forward rate using time value of money principles
- outline possible trading and hedging applications of FRAs
- revalue an FRA using mark to market principles

##### *Short Term Interest Rate Futures*

- describe the main features of a short term interest rate futures contract
- calculate a forward rate of interest from two money market deposit rates
- define, calculate and interpret the different types of futures basis
- describe the impact of a change in the basis on a hedging strategy
- implement either a stack or strip hedge
- describe what is meant by the futures convexity
- construct various futures trades including a calendar spread trade, a cross currency spread trade etc.

#### **Prerequisites**

None

#### **Timing**

1 day

## ***Level II: Fixed Income***

### **Bond Futures**

#### **Aim**

To outline the main features of the bond futures market

#### **Objectives**

By the end of the session the participant will be able to:

- describe the features of a typical bond futures contract
- derive the value of a bond future using time value of money concepts
- explain the role of the notional bond and the conversion factor
- calculate the settlement amount on a futures contract at expiry
- identify which of the deliverable bonds is the cheapest to deliver by calculating the implied repo rate
- describe how a bond future can be used to hedge a cash bond position
- explain what factors will impact the gross basis
- calculate and interpret the significance of the net basis
- calculate the profit and loss on a basis trade
- identify how bond futures could be used within a fixed income portfolio

#### **Prerequisites**

Basic knowledge of futures market terminology assumed

#### **Timing**

1 day

## ***Level II: Fixed Income***

### **Swap Valuation**

#### **Aim**

To explain the concepts of swap pricing for a variety of interest rate structures

#### **Objectives**

By the end of the session the participant will be able to:

- describe the main factors that influence the swap spread
- adjust the price of a swap to take into account different day basis conventions and compounding periods
- price and revalue a swap position as an equivalent position in a fixed and floating rate bond
- calculate the price / mark to market of a generic interest rate swap using a zero coupon technique
- outline how interest rate futures could be used to price an interest rate swap
- calculate the price / mark to market of a generic interest rate swap using the OIS curve
- interpret the basis point value of a swap
- describe the nature of the convexity bias in the swap pricing process
- calculate the price of a number of interest rate swap variations including:
  - Forward-starting swaps
  - Amortising swaps
  - LIBOR in Arrears swaps
  - Constant maturity swaps

#### **Prerequisites**

A basic understanding of swap terminology

#### **Timing**

1 day

## ***Level II: Fixed Income***

### **Swap Trading Strategies**

#### **Aim**

To describe the main generic swap trading strategies and how a swap position may be hedged

#### **Objective**

By the end of the session the participant will be able to:

- describe how a swap transaction could be hedged using either interest rate futures, exchange traded swaps or bonds
- describe the main interest rate swap trading strategies and what factors influence their profitability, including:
  - directional trades
  - yield curve spread trades
  - swap spread trades
- explain how traders views may be monetised using basis swaps

#### **Prerequisites**

A thorough knowledge of swap terminology is required

#### **Timing**

1 day

## ***Level II: Fixed Income***

### **Asset Swaps**

#### **Aim**

To provide an insight into the mechanics of asset swaps and the motivations of users

#### **Objectives**

By the end of the session the participant will be able to:

- discuss the rationale for using asset swaps
- explain the mechanics of an asset swap and the associated terminology
- perform the appropriate financial calculations associated with these strategies
- describe the sensitivity of an asset swap to changes in interest rates and credit spreads

#### **Prerequisites**

Knowledge of basic option terminology is required

#### **Timing**

1 day



## ***Level II: Fixed Income***

### **Caps, Floors and Swap Options**

#### **Aim**

To understand the mechanics of the principle OTC option structures and their application.

#### **Objectives**

By the end of the session the participant will be able to:

- describe how caps, floors, collars and swap options work
- explain how the various products are priced and the implications of cap – floor parity
- describe how the various products may be applied, including:
  - corporate liability management
  - investor yield enhancement through a structured note embedding caps and floors
  - bond issuer use of swap options to incorporate optionality within a straight bond or alternatively strip out existing optionality to create synthetic straight debt

#### **Prerequisites**

A thorough knowledge of option terminology is required. Basic understanding of swaps useful.

#### **Timing**

1 day

## ***Level II: Fixed Income***

### **Managing Corporate Interest Rate Risk**

#### **Aim**

To identify, quantify and manage corporate interest rate risk using interest rate derivatives

#### **Objectives**

By the end of the session the participant will be able to:

- identify the interest rate risks with a corporate's financials
- quantify the interest rate risks within the income statement and balance sheet
- describe how both vanilla and non-generic swaps may be applied to manage corporate liabilities
- describe how caps and floors may be applied to manage corporate liabilities
- discuss some corporate applications for swap options

#### **Prerequisites**

Basic understanding of interest rate derivatives

#### **Timing**

1 day

## ***Level II: Fixed Income***

### **Bond Portfolio Management**

#### **Aim**

To explain the practice of fixed income portfolio management

#### **Objectives**

By the end of the session the participant will be able to:

##### *Active management*

- predict bond and portfolio behaviour given alternative interest rate scenario projections

##### *Passive management*

- create and maintain a portfolio that will track the performance of a given bond index

##### *Immunization*

- create a portfolio that will have an ensured return over a specified horizon, irrespective of interest rate changes
- determine the impact of overlaying the portfolio with a variety of derivative based products such as:
  - bond futures
  - swaps
  - options
  - credit default swaps
  - credit linked notes
  - Exchange Traded Funds

##### *Performance attribution*

- calculate the total return for a bond portfolio and attribute the return to its components

#### **Prerequisites**

Good knowledge of fixed income principles and their derivatives

#### **Timing**

1 day

## ***Level II: Fixed Income***

### **Structured Interest Rate Derivatives**

#### **Aim**

To describe a variety of issuer and investor structured solutions using interest rate derivatives

#### **Objectives**

By the end of the session the participant will be able to:

##### *Issuer solutions*

- construct a collar with a knock in floor
- identify how a cancellable / collapsible swap is engineered
- identify the main components and applications of a participating swap
- reverse engineer a semi-fixed swap

##### *Investor solutions*

- design a range accrual structure
- enhance the return on an asset using swaps and binary options (e.g. knock in swaps, flexible frequency digital swaps)
- construct a series of strategies that “monetise” a particular view on the yield curve

#### **Prerequisites**

Good understanding of swaps

#### **Timing**

1 day

## ***Level II: Foreign Exchange***

### **Trading in the FX Markets**

#### **Aim**

To provide an insight into FX trading activities

#### **Objectives**

By the end of the session the participant will be able to:

- trade spot in a simulated environment as a market maker and market user
- calculate a forward FX rate
- interpret an FX swap quote
- explain why forward FX is traded using FX swaps
- trade forward FX swaps as market maker

#### **Prerequisites**

A basic understanding of FX mechanics

#### **Timing**

1 day

## ***Level II: Foreign Exchange***

### **Cross Currency Swaps**

#### **Aim**

To provide an overview of the applications and valuation of currency swaps

#### **Objectives**

By the end of the session the participant will be able to:

- describe the link between a series of FX forwards and currency swaps
- value a currency swap using discounted cashflows
- discuss the implications of the basis in currency swaps
- describe a variety of applications of currency swaps for both asset and liability management

#### **Prerequisites**

A basic understanding of FX mechanics

#### **Timing**

1 day

## ***Level II: Foreign Exchange***

### **FX Option Valuation**

#### **Aim**

To provide an overview of the main methods of option valuation

#### **Objectives**

By the end of the session the participant will be able to:

- derive the FX forward rate
- explain in simple terms the principles that underlie closed form solutions
- value FX options using a binomial technique
- discuss the meaning and derivation of volatility
- identify the option pricing model inputs and describe how a change in their values influences the option premium
- describe the concept of put call parity
- identify the circumstances where the model assumptions do not hold, including the implications of the:
  - term structure of volatility
  - volatility smiles
  - volatility skews

#### **Prerequisites**

Knowledge of basic option terminology is required

#### **Timing**

1 day

## *Level II: Foreign Exchange*

### **FX Option Risk Management**

#### **Aim**

To introduce the main measures of option market risk

#### **Objectives**

By the end of the session the participant will be able to:

- interpret and define the main measures of option market risk for FX options, including:
  - the underlying price: delta
  - actual volatility: gamma
  - implied volatility: vega
  - passage of time: theta
  - interest rates: rho and phi
- explain how the Greeks are used in a practical sense to manage FX risk in an option portfolio

#### **Prerequisites**

Basic knowledge of option pricing is required.

#### **Timing**

1 day



## ***Level II: Foreign Exchange***

### **FX Option Trading Strategies**

#### **Aim**

To describe the main FX option trading strategies

#### **Objectives**

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

- construct the following option strategies and analyse the associated market risks of:
  - directional options trades: bull and bear spreads
  - volatility-based options trades: straddles, strangles and butterflies
  - time-based options trades: calendar spreads
  - interbank option trades: risk reversals
- explain what is meant by the smile and the skew

#### **Perquisites**

A thorough understanding of the option Greeks will be assumed.  
Attendance on the Option Risk Management session is advised.

#### **Timing**

1 day

## ***Level II: Foreign Exchange***

### **Exotic Options**

#### **Aim**

To describe the main features and applications for a selection of exotic options

#### **Objectives**

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

##### *Barrier options*

- list the features of barrier options
- outline the principles of their valuation and hedging
- discuss the Greeks for barrier options
- describe some applications for both institutional and corporate clients

##### *Binary options*

- list the features of binary options
- outline the principles of their valuation and hedging
- discuss the Greeks for binary options
- describe some applications for both institutional and corporate clients

##### *Average rate options*

- list the features of average rate and average strike options
- outline the principles of their valuation and hedging
- discuss the Greeks for AROs
- describe some applications for both institutional and corporate clients

#### **Prerequisites**

Understanding of option pricing and Greeks

#### **Timing**

1 day

## ***Level II: Foreign Exchange***

### **Corporate Applications of FX Derivatives**

#### **Aim**

To provide an overview of the main plain vanilla option applications within a corporate context

#### **Objectives**

By the end of the session the participant will be able to:

- explain how the following forward products may be applied
  - par forwards
  - cross currency swaps
  
- explain how the following option products may be applied
  - single-period options
  - multi-period options, including range forwards
  - participation strategies

#### **Prerequisites**

A basic understanding of options

#### **Timing**

1 day

## ***Level II: Foreign Exchange***

### **Structured FX Solutions**

#### **Aim**

To describe a variety of structured FX option products

#### **Objectives**

By the end of the session the participant will be able to:

- design or reverse engineer a variety of structured FX products including:
  - American binary options
  - Cap spread options
  - Step-payment options
  - Knock-out forwards
  - Bonus forwards
  - a Forward Plus
  - Double barrier options
  
- Discuss the risks and rewards of the various FX structures

#### **Prerequisites**

Understanding of binary and barrier options

#### **Timing**

½ day

## ***Level II: Equities***

### **Equity Futures**

#### **Aim**

To outline the main features and applications of single stock and index futures

#### **Objectives**

By the end of the session the participant will be able to:

- describe the contract specifications of a typical equity index and single stock futures
- calculate the fair value of an equity future
- outline a number of possible applications for equity futures for equity investors including:
  - portfolio hedging
  - tactical asset allocation
  - index arbitrage

#### **Prerequisites**

Basic knowledge of futures markets terminology assumed

#### **Timing**

½ day

## ***Level II: Equities***

### **Equity Swaps**

#### **Aim**

To analyse the features and applications of equity swaps

#### **Objectives**

By the end of the session the participant will be able to:

- explain the terminology and mechanics associated with total return equity swaps, including:
  - index and single stock swaps, and
  - dividend swaps
- explain some applications for equity swaps
- describe the principles associated with the valuation of short term equity swaps
- highlight the problems associated with valuing longer dated equity swaps

#### **Prerequisites**

None

#### **Timing**

½ day

## ***Level II: Equities***

### **Principles of Equity Option Valuation**

#### **Aim**

To provide an overview of the main methods of option valuation

#### **Objectives**

By the end of the session the participant will be able to:

- explain in simple terms the principles that underlie closed form solutions such as the Black Scholes Merton model
- valuing options using a binomial technique
- discuss the concept of the Monte Carlo valuation technique
- identify the option pricing model inputs and describe how a change in their values influences the option premium
- describe the concept of put-call parity
- identify the circumstances where the model assumptions do not hold, including the impact of the:
  - term structures of volatility
  - volatility smile
  - volatility skew

#### **Prerequisites**

Knowledge of basic option terminology is required

#### **Timing**

1 day

## ***Level II: Equities***

### **Equity Option Risk Management**

#### **Aim**

To introduce the main measures of option market risk

#### **Objectives**

By the end of the session the participant will be able to:

- interpret and define the main measures of option market risk for equity options, including:
  - the underlying price: delta
  - actual volatility: gamma
  - implied volatility: vega
  - passage of time: theta
  - interest rates: rho
  
- explain how the Greeks are used in a practical sense to manage the various risks in an equity option portfolio

#### **Prerequisites**

Basic knowledge of option pricing is required.

#### **Timing**

1 day



## ***Level II: Equities***

### **Equity Option Trading Strategies**

#### **Aim**

To describe the main equity option trading strategies

#### **Objectives**

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

- construct the following option strategies and analyse the associated market risks of:
  - directional options trades: bull and bear spreads
  - volatility-based options trades: straddles, strangles and butterflies
  - time-based options trades: calendar spreads
  - interbank option trades: risk reversals
- explain what is meant by the smile and the skew

#### **Perquisites**

A thorough understanding of the option Greeks will be assumed.  
Attendance on the Option Risk Management session is advised.

#### **Timing**

1 day

## ***Level II: Equities***

### **Volatility and Variance Swaps**

#### **Aim**

To provide an overview of trading correlation within the context of the equity market

#### **Objectives**

By the end of the session the participant will be able to:

- explain the concept of trading implied and actual volatility
- describe the mechanics of volatility swaps
- describe the mechanics of variance swaps
- construct transactions using volatility and variance swaps including a dispersion trade between an equity index and its individual components
- compare the risks of a volatility trade using both swaps and equity options

#### **Prerequisites**

A thorough understanding of option terminology

#### **Timing**

1 day

## ***Level II: Equities***

### **Convertible Bonds**

#### **Aim**

To describe the main features and applications of convertible bonds

#### **Objectives**

By the end of the session the participant will be able to:

- describe the key features and interpret the key jargon associated with convertible bonds
- describe how a convertible bond may be structured
- outline some motives for issuing a convertible compared to alternative financing techniques
- identify some of the main motivations for investing in a convertible bond
- describe how the value of the convertible bond will change as market factors change
- describe the main features of a long volatility strategy (e.g. buy the convertible, short the stock)
- construct an asset swapped convertible bond strategy
- design a credit spread trade for an OTM convertible
- construct an equity switching strategy

#### **Prerequisites**

Knowledge of basic bond and option terminology

#### **Timing**

1 day

## ***Level II: Equities***

### **Exotic Options**

#### **Aim**

To describe the main features and applications for a selection of exotic options

#### **Objectives**

By the end of the session the participants will for a variety of exotic options, including....

- barrier options
- binary options
- basket options
- average rate options
- outperformance options
- quanto options

.... be able to:

- list the features of each option
- outline the principles of their valuation and hedging
- discuss the Greeks for each option
- describe some applications for each for institutional clients

#### **Prerequisites**

Understanding of option pricing and Greeks

#### **Timing**

1 day

## ***Level II: Equities***

### **Corporate Applications for Equity Derivatives**

#### **Aim**

To describe the main applications of equity derivatives within a corporate context

#### **Objectives**

By the end of the session the participant will be able to:

- explain the main features of the most popular instruments used to manage corporate equity exposures
- demonstrate how equity derivatives can be used in the following situations:
  - Hedging an employee share option scheme
  - Share buybacks
  - Monetising a cross shareholding
  - Changing the conversion price on a convertible bond using a call spread

#### **Prerequisites**

Basic knowledge of option terminology

#### **Timing**

1 day

## ***Level II: Equities***

### **Structured Equity Solutions**

#### **Aim**

To describe a variety of structured equity option products

#### **Objectives**

By the end of the session the participant will be able to:

- construct a variety of structures using a combination of instruments (e.g. capital guaranteed, reverse convertibles) using
  - average rate options
  - barrier options
  - basket options
  - cliquet options
- reverse engineer a number of structured products
- design a variety of structures that monetise a particular view on an equity market

#### **Prerequisites**

Knowledge of European and exotic option structures

#### **Timing**

½ day

## ***Level II: Credit***

### **Credit Default Swaps**

#### **Aim**

To analyse credit default swaps

#### **Objectives**

By the end of the session the participant will be able to:

- identify the main features of credit default swaps
- define the key terms and conditions associated with the product
- describe the nature of the different types of credit event and the implications
- discuss the way in which asset swaps are priced using both asset swaps and a model based approach
- describe how a CDS may be valued
- describe some credit default swap trading strategies
- compare single-name CDS market with CDS index market

#### **Prerequisites**

None

#### **Timing**

½ day

## ***Level II: Credit***

### **Total Return Swaps and Spread Products**

#### **Aim**

To provide an overview of the total rate of return swaps and credit spread products

#### **Objective**

By the end of the session the participant will be able to:

- calculate the settlement cashflows on a total rate of return swap
- outline the principles of total rate of return swap pricing and valuation
- describe some applications for total rate of return swaps
- describe the mechanics and pricing for credit spread products, including swaps and options
- describe some applications for credit spread swaps for both investors and corporates

#### **Prerequisites**

Knowledge of swap terminology is useful

#### **Timing**

½ day



## ***Level II: Credit***

### **Credit Linked Notes**

#### **Aim**

To provide an overview of credit linked notes

#### **Objective**

By the end of the session the participant will be able to:

- discuss the motivations for both issuer and investor in the process
- describe how credit linked notes can be constructed
- outline how credit linked notes can be priced
- reverse engineer a number of credit linked notes

#### **Prerequisites**

Knowledge of swap terminology is useful

#### **Timing**

½ day

## ***Level II: Credit***

### **Collateralised Debt Obligations**

#### **Aim**

To provide an overview of the Collateralised Debt Obligation (CDO) market

#### **Objective**

By the end of the session the participant will be able to:

- outline the main parties to a CDO transaction
- identify the motives for issuing a CDO (cashflow vs. market value)
- describe how a CDO issue is structured and how cashflows are dispersed to investors
- describe the nature of CDO credit enhancements
- outline how synthetic CDOs are structured
- describe the nature of Collateralised Synthetic Obligations

#### **Prerequisites**

Knowledge of default swaps is useful

#### **Timing**

½ day

## ***Level II: Commodities***

### **Commodity Derivative Overview**

#### **Aim**

To outline the features, pricing and basic applications for commodity forwards and options

#### **Objectives**

By the end of the session the participant will be able to:

- describe the features and mechanics of a range of commodity futures
- discuss the issues of pricing commodity forwards using the traditional “no-arbitrage” approach
- demonstrate some basic applications for commodity derivatives including those on:
  - oil
  - softs
  - precious metals
  - FFAs (Forward Freight Agreements)

#### **Prerequisites**

None

#### **Timing**

½ day

## ***Level II: Commodities***

### **Commodity Derivative Corporate Applications**

#### **Aim**

To outline a number of applications of commodity derivatives

#### **Objectives**

By the end of the session the participant will be able to:

- construct vanilla option strategies for a variety of market participants
  - Single option strategies
  - Min - max structures
  - Participations
  
- outline the features of a number of exotic commodity options, including:
  - Asian options
  - binary options
  - barrier options
  
- show how the exotic options could be applied in a variety of situations for both

#### **Prerequisites**

Knowledge of option terminology

#### **Timing**

1 day

## ***Level II: Commodities***

### **Commodity Derivative Applications for Investors**

#### **Aim**

To provide an overview of the commodity investments

#### **Objective**

By the end of the session the participant will be able to:

- describe the different techniques for investing in commodities
- outline the main features of investing in commodity indices
- calculate the return to an investor of transacting a total return swap based on the S&P GSCI
- describe a number of structured investment solutions

#### **Prerequisites**

Basic knowledge of commodity derivatives

#### **Timing**

1 day

### ***Level III: Cross Asset Class***

#### **Market Risk Workshop**

##### **Aim**

To understand the general process by which banks identify, measure, analyse and control the market risks that arise in their day-to-day business

##### **Objective**

By the end of the session the participant will be able to:

- identify the market risks within a bank's financials, including the risks of:
  - cash products
  - derivative products
- describe how a financial institution manages its market risk with a range of derivative products, and the market risks that arise to the bank in using such products
- describe a general methodology for the management of market risk including the following steps and tools:
  - measurement: incorporating the tool of mark-to-market
  - analysis: incorporating the tools of factor sensitivity, VAR and stress testing
  - control: incorporating the tools of triggers and limits
- discuss the workings and relevance of credit as a market risk factor, both from a bank's and corporate's viewpoint
- explain the role of the regulators in their overseeing of bank market risk

##### **Prerequisites**

Basic knowledge of cash and derivative products

##### **Timing**

2 – 3 days

### *Level III: Cross Asset Class*

## **Counterparty Credit Risk in Derivatives**

### **Aim**

To understand the general process by which banks identify, measure, control and attempt to mitigate the counterparty credit risks that arise in derivative transactions.

### **Objectives**

By the end of the session the participant will be able to:

- recognize terminology used in derivative counterparty credit risk management
- explain intuitively how counterparty credit risk can be measured
- recognize and assess implications of market factors that could impact counterparty risk over time
- recognize and evaluate other risk issues related to counterparty risk, i.e. documentary, suitability and appropriateness
- list the key clauses in the ISDA documentation and the CSA and how they may be modified in order to reduce the bank's credit exposure
- apply various risk mitigation techniques to the trade
- describe intuitively the calculation of the CVA charge and discuss its implications

### **Prerequisites**

Basic knowledge of cash and derivative products

### **Timing**

2 – 3 days

### ***Level III: Cross Asset Class***

#### **Achieving Advisory Status in Derivatives: Corporate Clients**

##### **Aim**

To understand a general methodology by which banks can effectively market derivative solutions to their corporate clients.

##### **Objectives**

By the end of the session the participant will be able to:

- effectively market derivative ideas to clients within a framework encompassing:
  - risk/ opportunity identification
  - risk quantification
  - understanding company objectives and views
  - presenting derivative ideas
- discuss the drivers of corporate risk management policy, and be more effective in dealing with client objections
- understand how derivatives may be applied by end-users to manage a range of interest rate , FX, equity and commodity risks
- present to clients in an intuitive way their exposures and solutions, and be able to show how various products can impact value creation for the firm.

##### **Prerequisites**

Basic knowledge of cash and derivative products

##### **Timing**

2 – 3 days



### *Level III: Cross Asset Class*

#### **Achieving Advisory Status in Derivatives: FI Clients**

##### **Aim**

To understand a general methodology by which banks can effectively market derivative solutions to their financial institutional clients.

##### **Objectives**

By the end of the session the participant will be able to:

- effectively market derivative ideas to clients within a framework encompassing:
  - understanding the FI client: banks v insurance v pension funds v real money investors v hedge funds
  - risk/ opportunity identification
  - risk quantification
  - presenting derivative ideas
- understand how interest rate, FX and equity derivatives may be applied by end-users to manage risks on the liability side of the balance sheet and enhance yields on their asset side
- explain how credit derivatives may be used by banks and institutional investors to monetise views and manage credit risk
- reverse engineer some structured notes

##### **Prerequisites**

Basic knowledge of cash and derivative products

##### **Timing**

2 – 3 days

### ***Level III: Cross Asset Class***

#### **Relative Value in the Debt Capital Markets**

##### **Aim**

To identify and monetise opportunities in the debt capital markets.

##### **Objectives**

By the end of the session the participant will be able understand how corporates and financial institutions can take advantage of relative value opportunities in the DCM as a result of:

- using non-generic and structured swaps in conjunction with bond issues
- combining collars and swap options with bond issues
- combining straight / puttable / callable debt , in conjunction with swap options to achieve specific objectives
- issuing in the international debt markets and swapping back into the currency of choice using cross currency swaps
- creating structured notes by combining MTNs with derivatives to achieve cheaper funding for issuers and specific pay-off structures for investors
- decomposing a convertible bond into its component parts – being a straight bond and an equity option – to unlock hidden value

##### **Prerequisites**

Basic knowledge of cash and derivative products

##### **Timing**

1 - 2 days