

# IFF

# MASTERING SWAP MARKETS

Your practical guide to understanding, analysing,  
assessing and taking advantage of the swap markets

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Learning partner of

**QuantMinds**

## LEARN HOW SWAPS WILL HELP YOUR BUSINESS THRIVE

Swaps continue to play a fundamental role in the financial markets. Challenges like alternative reference rates, Libor rigging, increased collateral requirements and intense competition for clearing business, have not slowed the inexorable growth of this vital financial tool which enables borrowers, investors and banks to hedge their interest rate, currency, credit, equity, commodity, volatility and inflation exposures.

This course will give you the opportunity to integrate a theoretical knowledge of swaps with practical market applications. Reinforced through the use of practical exercises and case studies the course will ensure you understand the market fully.

### KEY BENEFITS

The course will allow you to apply your knowledge to real-life situations immediately

- ★ Calculate the risks and rewards of the swaps market
- ★ Apply and use interest rate derivatives effectively
- ★ Get a good grasp of swap products
- ★ Get to grips with the terminology and the jargon of the markets
- ★ Learn the pricing and arbitrage relationships in the swaps market
- ★ Apply swaps to risk management

### 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 QuantMinds 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

Please see the Derivatives & Trading Catalogue to see the related courses:  
<http://www.iff-training.com/DTCAT>

## COURSE LEADER

### ALAN MCDUGALL



Alan has been helping banks and their clients manage risk for over 30 years. He has designed and delivered over 1800 highly-interactive training days, in more than 40 countries, for the International Faculty of Finance, Kaplan, Goldman Sachs, Morgan Stanley, JP Morgan, HSBC, BNP Paribas, Societe Generale, UBS, Credit Suisse, Bank of America Merrill Lynch, Barclays, Nomura, Deutsche Bank, Rabobank, The Bank of England, The Financial Times, The London Stock Exchange, The European Stability Mechanism, the Universities of London and Cambridge, OPEC, the United Nations and many others.

He ran a currency swaps book for HSBC's International Treasury Management Group where he also advised banks and multinational corporations on the design and execution of their hedging, asset-liability and risk management strategies. He traded a proprietary fixed-income book at Scotia Capital Markets as well as running training courses for the fixed income traders, the salespeople and the Debt Capital Markets team.

The International Foreign Exchange Dealers Association (ACI) commissioned him to write 'Mastering Swaps Markets', published by the Financial Times and the University of Shanghai. He holds an MSc in International Banking and Finance and is the academic advisor to the award-winning financial education company INVSTR.

### 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



## MECHANICS OF SWAPS

### Mastering Swaps Markets

- Identifying risk
- Measuring risk
- Managing risk
- Identifying existing positions
- Creating a hedge for existing positions
- Creating the required position
- Swaps exercises

### Pricing a Corporate Bond

- ICMA 803.1 & 803.2
- Single discount rates
- Multiple discount rates
- Constructing a curve

### CASE STUDY Calculating Forward/Forward Prices and Zero-Coupon Rates

- Single discount rates
- The compound interest formula
- Forward/forward rates
- Par cash flows
- Calculating forward prices
- Calculating zero coupon rates

### CASE STUDY Hedging an Equity Portfolio

- Identifying, measuring and managing the underlying exposures
- Long and short positions
- Creating a hedge
- Alternative hedges
- Settlement
- Advantages of the swap market over the cash market
- Advantages of futures over swaps
- OTC and exchange traded derivatives

### Swap Curves and Government Curves

- The underlying commodity in an interest rate swap
- The underlying commodity in a currency basis swap
- Increases in supply
- Reductions in demand

## MEASURING AND MANAGING RISK

### CASE STUDY Contract Specifications

- Underlying instruments
- Price quotes
- Contract months
- Tick sizes
- Settlement procedures
- Position limits

- Block minimums
- All or none minimums
- Rulebook chapters
- Trading hours

### CASE STUDY How Hedging Works

- Measuring interest rate risk
- Duration weighted hedging
- Balancing the hedge
- Hedge ratios
- Testing the hedge

### CASE STUDY Interest Rate Risk Management

- Time value of money
- Future value and present value
- Implied repo rates
- Discount factors and compound factors
- Simple interest and compound interest
- Yield and return
- Act/act, act/360 and 30/360
- Interpreting the yield curve
- A guide to money market products
- Duration, PV01s and DV01s

### CASE STUDY Hedging Duration Gaps

- Duration hedging
- Duration exercises
- The economic value of equity
- Positive and negative gaps
- Estimating changes in the economic value of equity
- Durations of assets and liabilities
- Leverage adjusted duration gaps
- Hedging with forward contracts
- Hedging with the futures contracts
- Hedging with swaps
- Stress testing hedges
- EVE and duration gaps

### CASE STUDY Portfolio Management

- Investment policies
- Sensitivity to a 1% parallel shift in the curve
- PV01s & DV01s
- Analysing the portfolio
- Estimating the modified duration of the portfolio
- Hedging the portfolio in the swap market
- Calculating the delta vector
- Modified duration of the swap
- Stack hedging the portfolio
- Strip hedging the portfolio
- Implied yield curve views
- Stress testing the hedge
- Managing interest rate risk

### CASE STUDY Risk Management at Apple

- Investment policies
- Yield curve shifts
- Measuring interest rate risk
- PV01s, DV01s, duration and convexity
- Hedging with swaps
- Hedging with futures
- Measuring risk as futures equivalents
- Stack hedging and strip hedging
- Expressing a yield curve view
- Using derivatives to reduce risk
- Managing duration
- Natural hedging

### CASE STUDY Asset Swaps

- Mechanics of a par asset swap
- Cashflows of a typical par asset swap
- Credit considerations
- Asset swap on a discount bond
- Asset swap on a premium bond
- Interest rate risk of an asset swap
- PV01 sensitivities
- Cashflow matching risk
- Swap rate and LIBOR spread sensitivity
- Market asset swap
- Variations on asset swaps

### CASE STUDY Asset and Liability Management

- ALM hedging
- ALCO meeting
- Hedging, trading and market making - the Volker Rule
- Protecting the bank's earnings
- Defining a strategy
- Managing interest rate risk
- Calculating the impact on net interest income
- Calculating the impact on EVE

### CASE STUDY Amortising, Accreting and Roller-Coaster Swaps

- Amortising swaps
- Accreting swaps
- Roller-coaster swaps
- Hedging amortising, accreting and roller-coaster swaps
- Calculating the break-even swap rate in amortising structures
- Principles employed in hedging amortising, accreting and roller-coaster swaps

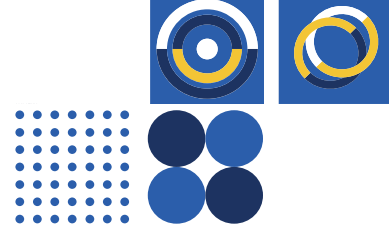
### CASE STUDY Credit Default Swaps

- Single name credit default swaps
- Bond and loan prices

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# COURSE AGENDA



- Comparing buying a bond with selling protection
- Negative basis trade
- Positive basis trade
- First to default protection
- The benchmark for correlation

## VALUING SWAPS

### CASE STUDY **FRAs, Futures and Interest Rate Swaps**

- Buying and selling FRAs
- Selling and buying futures
- Paying and receiving fixed rates in the swap markets
- Perfect hedges and basis risk
- Contrasting exchange traded and OTC derivatives

### CASE STUDY **Forward Rate Agreements**

- The mechanism of FRAs
- Calculating FRA rates
- Hedging and trading with FRAs
- Calculating the settlement amount
- FRAs and FX swaps
- Pricing forwards from FRAs
- FRAs and futures
- Contrasting the use of FRAs and futures in asset & liability management

### CASE STUDY **JP Morgan Swaps**

- Intraday trading
- Directional risks
- Taking a view
- Market making
- The Volker Rule revisited
- Realising gains and losses
- Marking to market
- Sensitivity

## Valuing Interest Rate Swaps: A Traditional Approach

- Zero coupon equivalent rates
- Discount factors
- Spot curves and implied forward rates
- The present value of the floating leg of the swap
- The present value of the fixed leg of the swap

### CASE STUDY **Rationale for OIS Discounting**

- Creating the OIS curve
- Bootstrapping Libor curves in an OIS world
- Libor curves

- Generation of an OIS curve when collateral is posted in a different currency
- Discounting of cross currency swaps
- Interest rate derivative pricing in the absence of a collateralised CSA

## SWAP DRIVEN DEALS

### CASE STUDY **Nestle's Swap Driven Bond Issue**

- Calculating the net proceeds of the deal
- Establishing the borrower's all in cost
- Creating a par/par structure
- Advantages and disadvantages of a par/par structure

### CASE STUDY **Swap Driven Bond Issues (Multilateral Development Bank)**

- Motives for borrowers
- Motives for arrangers
- Motives for investors
- The advantages of par/par structures
- Discount rates: a discussion

### CASE STUDY **Nordic Export Credit's Currency Swap**

- Fees and expenses
- Establishing the cash flows
- Plumbing diagrams
- All-in fixed rate costs
- All-in floating rate costs
- Initial payments and receipts
- Annual payments and receipts
- Dynamics of basis swap prices
- Hedging with basis swaps
- Cross default, pari passu and negative pledges

### CASE STUDY **FMC Corporation**

- Calculating the all-in-cost
- Summarising and generalising the arithmetic
- Benchmarking the deal to governments
- Benchmarking the deal to the swaps curve
- Asset swap spreads
- G-spreads and Z-spreads

## MANAGING CURRENCY RISK

### CASE STUDY **Multi-Currency Debt Management**

- Identifying the exposure

- Cash market alternatives
- Forward outright, FX swaps and currency swaps

## How Global Investors Turn Negative JGB Yields Into Big Returns

- Record-low negative yields
- Discount offered to dollar holders to borrow yen
- Fixed coupon equivalent for owning five-year JGBs
- Foreign demand for Japan's two- and five-year bonds
- Cross-currency basis swaps
- Demand for dollars

## HEDGING CHALLENGES

### Hedging Challenges

- Interest rate options
- Hedging pitfalls
- JP Morgan's London Whale losses
- ISDA - dispelling myths

### CASE STUDY **Portuguese Train Company Can't Escape Snowballs**

- Managing financial risks
- Laying off risks with banks
- Laying off risks with customers
- Snowball interest rate swaps
- Calculating downside risks
- The view of the courts
- Legal and moral significance of hedging and trading
- Bank/customer relationships

## SUMMARY

### CASE STUDY **The Rules of Risk Management**

- Return and risk
- Transparency
- Experience
- Known unknowns and unknown unknowns
- Communication
- Diversification
- Discipline
- Fraud, mismanagement, greed and corruption
- Common sense

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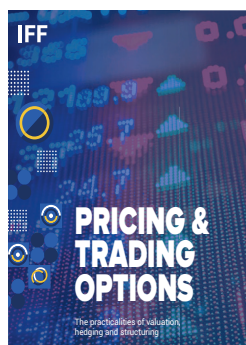
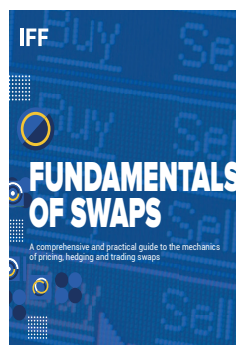
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**CPD Certified:**

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 DERIVATIVES AND TRADING PORTFOLIO**



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