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Derivatives Fundamentals
Course Overview

Explore in this course the fundamentals of forwards, futures and options, namely what they are, how they are used, how market makers price them and understanding their risks. Learn important concepts related to the following terms:

Topics

- Derivatives
- Forwards
- Forward pricing
- Arbitrage
- Swaps
- Put-call parity
- Option pricing
- Breakeven
- Delta
- Vega
- Delta one
- Futures
- Carry
- Short selling
- Options
- Volatility
- Option graphs
- Option strategies
- Gamma
- Decay

Format

Delivery options	• Classroom session (1 day) • Virtual classroom (series of 1 to1.5-hour webinars) • In-house
Option 1: **Open course classroom**	You attend alongside other market participants £695
Option 2: **Virtual classroom**	You attend alongside other market participants via an interactive online classroom £595
Option 3: **In-house**	This course can be tailored specifically for your organisation and delivered at your offices, offering a cost effective solution for more than 5 employees.

Course Details

Derivatives Fundamentals at-a-glance

- Do you know how a forward or futures contract is priced? Is the pricing dependent on the view about what the underlying price will be in the future? A probability distribution of the returns of the underlying is usually used in the pricing of an option; doesn't that mean that the pricing is dependent on a view about the probable outcomes of the underlying price at expiration of the option? Traders often say "if you know how to hedge, you know how to price"; what does that mean? You will learn in this class it is possible to answer these fundamental technical questions about derivatives without the need of "rocket science"
- Also learn in this class the construction and pricing of various option strategies, how to draw their breakeven payoff graphs, and how traders and investors use these strategies
- Learn in this class the all-important option risk measures, the so-called option greeks; and understand them as P/L drivers of option positions

*Pre-requisite:
Participants do not need to have any pre-knowledge in the subject; though a general knowledge of how the financial markets function will be helpful

Who should attend?

People who are looking for an introduction to what forwards, futures and options are and how they are used; but who are also interested in understanding the concept of how these derivatives are priced and the factors which drive their values

People who have come across derivatives but like to see a refresher or relearn the subject systematically, especially the technical concepts

	Portfolio managers, corporate treasurers, salespeople and traders for financial firms who have been operating in the cash markets and wish to get involved with derivatives but do not need the technical details derivative quants usually work with
	New joiners to the financial industry
	Professionals in support functions such as operations, technology, risk and financial controls of financial institutions

What's covered?	
Content	Exercises & application
• What are derivatives? ➢ The grand design: the risk reward without the physical underlying	
• Forwards and futures ➢ Physical vs. cash settlement ➢ The mechanics of daily mark to market ➢ How are they use? ➢ Forward pricing based on carry: equity example ➢ Arbitrage, hedging and basis ➢ Application: bond forwards and FX forwards (interest rate parity)	• Class quiz on the uses of forwards and futures: what trade to do
• Short selling ➢ Hedging a long forward position using the underlying ➢ Securities borrowing and borrow cost	

• Swaps: a brief introduction ➢ Swaps vs. forwards: similarities and differences ➢ Examples: equity swap, interest rate swap, variance swap	
• Options ➢ What are options: key parameters to specify an option, such as strike, maturity, call or put option and option premium ➢ Understanding option payoffs ➢ Put-call parity	• Class quiz on option payoff: what trade to do
• Option valuation ➢ Key value drivers ➢ What is volatility: actual and implied volatility; VIX index ➢ Probability distribution: what do we need from it? ➢ Theoretical value: "5-stick" model	• Class exercise: price an option
• Option strategies and their payoff graphs ➢ Breakeven ➢ Typical strategies and their usages: vanilla call and put, call and put spread, straddle, strangle and butterfly	• Class exercise: figure out the breakeven of option strategies
• Option risk measures ➢ Underlying risk: delta ➢ "Optionality": gamma, decay and vega ➢ Option greeks as P/L drivers	• Class exercise: figure out the P/L and identify the P/L drivers

The "META" approach to Derivatives Fundamentals …what makes our course unique

- This class is a first level class on forwards, futures and options but is designed to be both technical and practical and includes discussions on some of the most sophisticated aspects about derivatives in simple terms

- This class utilizes simple arithmetic to provide a transparent illustration of the principles of derivative pricing, allowing the participants to understand the key concepts and focus on value drivers of derivatives before moving on to the technical details of complex derivative pricing models in future classes
- This class is presented by a former market practitioner who is also an experienced teacher; it includes real life examples and interactive class exercises

Meet Your Trainer:

Kai Hing Lum

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Financial Markets

Kai Hing is an expert financial markets educator.

Kai Hing held several roles during his 21-year tenure at UBS across audit, in which he focused on trading and derivative businesses; and a specialized team responsible for the structuring and risk assessment of complex trades and new businesses.

Equipped with both broad and detailed understanding of finance, Kai Hing then joined the renowned UBS Financial Markets Education team and took on global responsibility to manage programs, create content and teach courses to colleagues and clients on a wide range of topics on equities, fixed income, FX, derivatives, equity valuation, portfolio analysis, risk control frameworks and methodologies.

As an experienced presenter with energetic and enthusiastic presentation style, coupled with a deep understanding of the subjects from his practical experiences, Kai Hing constantly receives high praise from his audience.

Before his career in the financial industry, Kai Hing taught and did research in mathematics after obtaining his Ph.D. in mathematics from the University of Chicago.

Kai Hing leads on our Financial Markets offerings.