

## 2 - Day Workshop: *Basic Introduction to Options and Swaps*

### Course objectives

The workshop “Basic Introduction to Options and Swaps” is designed to provide a thorough introduction to the world of financial derivatives. Focus of the workshop is on mechanics, pricing and application of Options and Swaps including interest rates as needed to understand the concepts presented.

This workshop will help participants to understand the idea of derivatives and to acquire thorough knowledge about key concepts used in Finance all over the world. The workshop also gives an overview on interest rates as needed to understand especially the idea of swaps. Swaps are a key tool for managing market risk in e.g. Fixed Income portfolios. Therefore, the course also introduces basic concepts of Fixed Income portfolio management.

Important trading and hedging strategies using options and swaps will be presented in detail, including the embedded risk of such strategies.

### Workshop background

Derivatives are a key part of global financial markets. Basic knowledge of these instruments is important for understanding how financial markets work nowadays and how such instruments can benefit the investors. This is especially important since the subprime and Euro crisis started as derivatives play an important role here.

All derivatives involve risk. Therefore, understanding the risk components embedded in derivatives is a central aspect as well. Various concepts and their application as a key part of the workshop and the interactive exercises.

This practical 2-day introductory workshop to hedging and trading strategies using options and swaps is organized to give a clear understanding of these financial instruments and their application when managing portfolios or hedging risks. The course is designed around many exercises and mini case studies.

### Who for?

The workshop is designed for junior and middle level managers working in finance, asset and risk management as well as accounting who want to get a structured introduction to derivatives. Students preparing for the CFA or FRM exams would also greatly benefit from the course.

This workshop is very interactive. This means that the concepts will be presented with many applications which are explained by the trainer and by using many exercises that have to be solved by the participants with the trainer’s support.

Hand-held calculators needed to solve some of the exercises will be provided. Some familiarity how to use a hand-held calculator is an advantage.

No prior knowledge on the subjects is required. The mathematics needed to understand the concepts presented is kept to a minimum (high school level).

### Benefits of the workshop

The workshop will enable you to:

- Get a thorough understanding of Options and Swaps through looking at their benefits and the risks involved.
- Understand how Options and Swaps markets work.
- Get to know the mechanics, pricing and application of Swaps.
- Understand the different types of Swaps and their application in the equity, fixed income and commodity markets.
- Learn different hedging and trading strategies using Options.
- Explore the different types of interest rates as related to Options and Swaps.
- Learn how duration is calculated and how Swaps can be used in Fixed Income risk management to adjust the portfolio’s exposure to interest rate risk using Swaps.
- See how these derivatives are used in practice through examples and case studies.

## Workshop agenda

The workshop covers the markets of financial derivatives in general as needed in modern Finance nowadays. Focus in this two-day workshop is on Options and Swaps and the related hedging and trading strategies. The course is designed around many exercises and one major case study on a prominent historical failure involving derivatives.

Day 1	
09.00 – 09.15	Introduction and Course Description
09.15 – 10.45	Preliminaries: <ul style="list-style-type: none"> <li>• Types of Rates</li> <li>• Measuring Interest Rates</li> <li>• Zero Rates</li> <li>• Determining Treasury Zero Rates</li> <li>• Forward Rates</li> <li>• Forward Rate Agreements</li> </ul>
10.45 – 11.15	Coffee break
11.15 – 12.45	Swaps (part I): <ul style="list-style-type: none"> <li>• Mechanics of Interest Rate Swaps</li> <li>• Day Count Issue</li> <li>• Confirmations</li> <li>• The Comparative-Advantage Argument</li> <li>• LIBOR Rates and Swap Zero Rates</li> <li>• Valuation of Interest Rate Swaps</li> </ul>
12.45 – 14.00	Lunch break
14.00 – 15.30	Swaps (part II): <ul style="list-style-type: none"> <li>• Currency Swaps</li> <li>• Valuation of Currency Swaps</li> <li>• Credit Risk</li> <li>• General Introduction to Other Types of Swaps</li> <li>• Compounding Swaps</li> <li>• More Complex Swaps</li> <li>• Equity Swaps</li> </ul>
15.30 – 16.00	Coffee break
16.00 – 17.00	Mechanics of Options Markets: <ul style="list-style-type: none"> <li>• Types of Options</li> <li>• Option Positions</li> <li>• Underlying Assets</li> <li>• Specification of Stock Options</li> <li>• Trading</li> <li>• Commissions</li> <li>• Margins</li> <li>• OCC, SEC and CFTC</li> <li>• Warrants, Employee Stock Options, and Convertibles</li> </ul>

Day 2	
09.00 – 09.15	Recap of Workshop Day 1
09.15 – 10.45	Case Study “LTCM”
10.45 – 11.15	Coffee break
11.15 – 12.45	Properties of Stock Options <ul style="list-style-type: none"> <li>• Factors Affecting Option Prices</li> <li>• Assumptions and Notation</li> <li>• Put-Call Parity</li> <li>• Early Exercise: Calls on non-Dividend-Paying Stocks</li> <li>• Early Exercise: Puts on non-Dividend-Paying Stocks</li> <li>• Effect of Dividends</li> </ul>
12.45 – 14.00	Lunch break
14.00 – 15.15	Trading Strategies Involving Options. <ul style="list-style-type: none"> <li>• Strategies Involving a Single Option and a Stock</li> <li>• Spreads</li> <li>• Combinations</li> <li>• Other Payoffs</li> </ul>
15.15 – 15.30	Trading Strategies Involving Options: <ul style="list-style-type: none"> <li>• Strategies Involving a Single Option and a Stock</li> <li>• Spreads</li> <li>• Combinations</li> <li>• Other Payoffs</li> </ul>
15.30 – 16.00	Coffee break
16.00 – 17.00	Introduction to Options Pricing <ul style="list-style-type: none"> <li>• Options Pricing Using Binomial Trees</li> <li>• Pricing European Options Using the Black-Scholes Formula</li> </ul>

### Disclaimer

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