

Understanding Derivatives: A Complete Overview

Overview

This is a comprehensive course which covers all of the major components of the derivatives markets from forwards, futures & CFD's to options, swaps and credit derivatives. You will learn what they are, how they work and why we use them- all in plain English.



The course is set at the introductory to intermediate level and is focused at any delegates who have introductory knowledge of the financial markets and want to learn about derivatives in more detail. What makes this course different is that we not only explain how the products work in plain English but we explain the techniques used by professionals and different organisations to manage risks and generate returns using derivatives. The concepts of valuation of the respective derivatives are introduced without delving into any detailed mathematics.

We discuss all of the details of derivatives from:

- The Jargon of derivatives.
- The tools you need to understand derivatives.
- Volatility and payoff profiles;
- Forwards and the cost of carry;
- Contango, backwardation and full carry;
- Futures and all the different types of contracts and margin;
- Basis and hedging;
- Currency swaps and FX swaps;
- Interest rate swaps and why they are so important;
- Some exotic swaps and exchange listed variations;
- CFD's
- ISDA;
- Options and the framework for pricing (we use odds and gambling to explain probability and how to price options);
- Option strategies, exotics and the "Greeks" (incorporating delta hedging);
- Mimicking and synthetics.
- Credit derivatives.

Please refer to the agenda for more info.

Geometric Progression is a B-BBEE level four contributor.

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Level: Intermediate

Prerequisites

Please note, **this course assumes delegates have a basic understanding of the financial markets.** Refer to the "Understanding the Financial Markets" for more information. Delegates who register for the course will receive PDF notes to recap the key introductory concepts.

Duration:

Five 4.5 hour morning sessions online

Suitable for:

All Treasury staff from Back Office through to Front Office including:

- Business analysts
- Professionals
- Investors
- Traders
- Regulators & Compliance Staff
- Risk Managers
- Fund Managers & Trustees
- Graduates and interns.
- Delegates registered to write CFA® exam, FRM® exam, PRM® exam or RPE.
- Anyone seeking a greater insight into the Derivatives Market.

A certificate is available on request



Agenda

1. The tools & tricks you need to know to understand derivatives

- Derivatives: Why are they so popular?
- Volatility & how to measure it;
- Derivatives Jargon you need to know;
- Mark-to-market and it's measures.
- Spread Trading

2. Forwards

- What they are, how they work & making money from them;
- The cost of carry;
- Application and use of Forwards.

We use cows and shares to demonstrate the concept of the cost of carry. The notes are extensive and include Currency forwards.

3. Futures & CFD's

- What they are, how they work & making money from them;
- Margin & the Clearinghouse; Delivery & close out;
- Basis, normal backwardation and contango;
- Application of Futures;
- Futures contracts including:
 - ◊ Single Stock futures; Index Futures; Mini contracts; Commodity Futures; Yield X currency Futures; Interest rate futures.
- Hedging with futures (STRIPS and Rolling Hedges).
- Understanding and trading CFD's;

Local and international examples will be used. We will reference a live screen and everyone will "take a position".

4. Currency SWAPS

- What they are & how they work;
- Application of Currency SWAPS.

5. Interest Rate SWAPS & FRAs

- What they are, how they work & why they are so important.
- Why Banks needs SWAPS & FRA's (ALCO).
- Asset SWAPS
- Applications for corporates, Insurance companies & Banks
- Simplistic Valuation of SWAPS and FRAs.
- The SWAP curve
- MTM of SWAPS
- Some Non-vanilla Interest Rate SWAPS such as Amortising SWAPS, Roller coasters, Off Market SWAPS, Yield Curve and Basis SWAPS, Equity SWAPS, Exchange Traded SWAPS, OIS etc.

6. A Brief word on ISDA

- The Master Agreement & Schedules;
- Confirmations; Cherry Picking and Netting;
- The CSA.

7. Options

- What they are & how they work;
- Naked vs Covered;
- The put call parity;
- Application of options & Trading in Options (on and off the Exchange);
- Probability and distributions;
- How to price options **without** any complex maths!
- Trading JSE options

In this section, delegates will learn how to gamble in order to understand the framework of how options are priced.

8. The “Greeks” in plain English

- Delta & Delta Neutral trading;
- Gamma, Vega, Theta, Rho;
- Volatility smiles.
- The big deal about the Greeks and superior alternatives.

9. Some Option Strategies

- Straddles, Strangles, Bull and Bear Spreads;
- Butterflies & Ratio Spreads etc.

In this section you learn how to take advantage of the market if it is going up, down, moving sideways or is volatile.

10. Synthetics and Mimicking

- Covered Calls & Portfolio Insurance
- Synthetics & Replication of FRAs SWAPS, Futures, Options and spot securities.

This section brings all derivatives together in that delegates will find out how to replicate another derivative (or spot product) with a combination of others.

11. Exotic Options

- Forward Starting Options, Barriers, Digitals, Asian options;
- Real Options etc.

12. Collars, Caps, Floors & Corridors

- What they are and how they work
- Application of Collars, Caps, Floors and Corridors.

13. Securitisation

- Understanding Securitisation in simple English.
- MBS, CMOs, CDOs,
- The Subprime crisis including an open floor discussion.

The reason why an introduction to securitisation is included is because the jargon helps explain many of the Credit derivatives.

14. Credit Derivatives

- Understanding Credit derivatives and why we use them.
- Types of Credit Derivatives and how they work including:
 - Credit Default Swaps, Portfolio Default SWAPS;
 - Credit Linked notes;
 - Synthetic CDOs etc.

15. Examples of Corporate Disasters with Derivatives.

- The Tulip Crises; Orange County
- Nick Lesson; Daiwa
- Long Term Capital;
- Socgen etc

This section spread over the 3 days and includes video interviews and plenty of multimedia. Each case includes an open floor discussion.

Video and multimedia is used throughout the course to re-inforce concepts.



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Some of the Clients who have attended our Public Courses



Email: mark@gpifm.com
Web: www.gpifm.com
Tel: 021 794 8332



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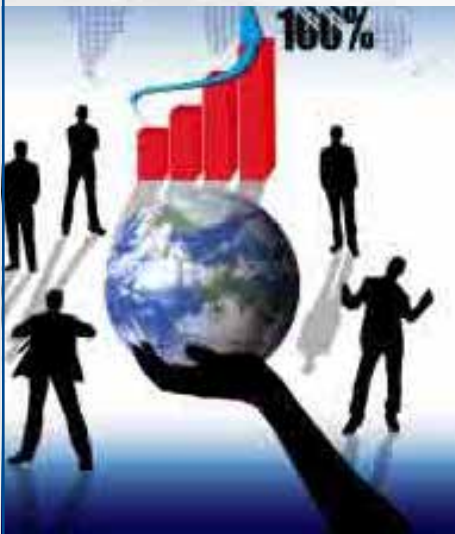
Tutor: Mark Raffaelli CFA,FRM

Mark is a practising CFA Charterholder and fellow member of the Global Association of Risk Professionals (FRM). Mark's extensive experience includes:

- Trading in Spot & Derivative Products professionally.
- Development of quantitative financial models for surveillance, performance attribution, price validation, price models, risk and automation.
- Developments of Apps for the investment and insurance industry.
- Machine Learning and Deep Learning with Sklearn and Tensorflow in the Financial Markets for Banks, Asset Managers and general business.
- Trading in Spot & Derivative Products professionally.
- Fund & Bank consulting regarding valuations, curves, Var, surveillance and market abuse.
- Mark programs in: Python, Javascript (including Angular and Ionic), Php, Excel VBA, JAVA & ".net".



Those who have attended Mark's courses will know about his passion and ability to cut through jargon, simplify technical issues and provide real life examples.



What makes Geometric Progression different from other providers:

- We don't regurgitate traditional textbooks; instead we share real life experiences.
- We explain all the products as they relate to your own lives in plain English.
- We practice what we preach.
- We love multimedia and include video and film in all our courses.
- We are one of the few providers that offer advanced courses relating to the financial markets, modelling and implementation.

Things delegates have said about this course:

- Now I finally understand Derivatives –Thanks Mark, your energy is addictive."
- "Mark has a fresh approach. It was fantastic to have someone explain derivatives in words I understand without repeating the same stuff textbooks churn out!"
- "The course was enlightening and Mark is an amazing presenter "
- "I don't know how I managed to survive so long without using derivatives in my business. Mark, keep up the passion! "
- "As a risk manager, I am very weary of Derivatives, however after this course I now know how to use them to effectively manage risk".