



Introduction to Financial Engineering

The current globalization trends in all financial markets call for customized answers for each type of client. Financial Engineering is a newly created discipline among both practitioners and academics that tackles that requirement. Using as building blocks the tools of risk management, derivatives, product structuring, statistics and financial institutions, we will develop a framework for designing and implementing tailor made instruments and solutions through an exciting creative process.

Targeted Audience

Risk managers, corporate treasurers, fund managers, sell side analysts and vendors, financial advisors, capital and fixed income markets specialists and risk auditors.

Special Offer

Clients who register for this course will receive a complimentary 4-month subscription to FT.com. The Financial Times is the world's most respected financial newspaper, providing a broad assessment on finance, business and the industrial sector. The move to the electronic version follows an ongoing review of our environmental responsibilities as a global business and as part of the Pearson group. FT.com also has features that are not available in hard copy, such as: Special Reports, Alphaville, editor blogs, education sections and much more! Subscriptions will start within 6-8 weeks of the start of class and are limited to one subscription per client. (Please note: as of May 1, 2011, the electronic subscription replaces the hard-copy 3-month Financial Times subscription.)

Advance Preparation

No advance preparation required.

Prerequisites

Attendees must have a solid knowledge of basic financial theories. Including: NYIF Fixed Income Suite, Overview of Capital Markets and Fundamentals of Derivatives or equivalent knowledge.

Learning Objectives

Students will be able to:

- . Demonstrate solid understanding of the basic theories behind modern finance
- . Discuss fluently upon the building blocks of financial instrument design
- . Have the skill to build and to judge if buying, or criticize if selling, a tailor-made financial instrument

Follow-Up Courses

Credit Default Swaps: From Vanilla to Exotic - Evening

Derivatives Suite: Strategies, Trading & Valuation

Level: Basic

CPE Credits: 21.5

Instructional Method: Group-Live

Detailed Outline

Day 1 - The Basic Building Blocks of Financial Engineering

Traditional Financial Instruments Vs Derivatives

- . The basic theoretical framework in modern finance
- . The fundamentals of design behind the universe of financial instruments
- . The fundamentals of design behind the universe of derivatives

Statistical Models to Measure Risk in New Instruments

- . Review of basic and intermediate statistical measures of risk

Day 2 - The Creative Process of Building New Instruments

The Study of Complex Structures

- . The main relations inside and around a Trust as a legal figure
- . The method of re-packaging cash flows
- . The insertion of derivatives into a complex financial structures

The Assembly of Exotics and Hybrids

- . Review of the main building blocks inside exotic instruments and contracts with special clauses

- . Advance models of volatility and credit risk for new instruments
- . The risk profile of a new tailor-made instrument

- . Hybrids of fixed income and capital components
 - . Hybrids of fixed income and commodity components
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Day 3 - The Financial Engineering Solution Mapped on the Global Financial Strategy of the Firm

Financial Engineering Designing Lab

- . Group session aimed at judging a tailor-made financial instrument from the buy-side
- . Group session aimed at criticizing a tailor-made financial instrument from the sell-side
- . Live team-work exercise aimed at designing a tailor-made instrument to solve a proposed problem

Financial Strategy Impact of Tailor-made Instruments

- . Modeling competing strategies to find the most efficient solution using Montecarlo Simulations
- . Expected impact on cash flow, return and P/L of a hedging strategy
- . How does the financial engineering solution fit into the broad financial strategy of the firm?

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