

FINA 556 Structured Products and Exotic Options

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Course Description

Over the past decade there has been an increasing need for equity structured products from the investors and corporate. Also, there was a great escalation in the sophistication of the financial products for meeting the needs from the investors, as a result many new derivatives products have been developed. *Equity Structured Products* were the major structured products that developed over the last ten years in the western countries and will become extremely important to the emerging markets, such as, China. The course looks will provide a survey about the major products, their risks, techniques for pricing and valuation, and key features of each exotic option that can be used to develop such equity structured products.

Tentative topic to be covered in this course include:

- Technical foundation for exotic options and structured products
- Survey of equity structured products, such as, yield enhancement and principal guaranteed
- Exotic and second generation options
- Basic guaranteed equity products: basic structuring, risks to investor, risks to issuer.
- Pricing and hedging, hedging costs, and time value
- More complex guaranteed products: guaranteed structures with embedded exotic options features
- Case studies

Objectives

This course aims to introduce students to equity structured products which incorporate an equity-linked component and to assess their suitability as investment vehicles. It also seeks to develop an awareness of how the products can be replicated and how 'fair' valuation of the products can be undertaken as well as how to develop hedging strategies to optimize the return.

After taking this course, you should be qualified as an **equity structurer**.

Textbooks:

Das, S., *Structured Products and Hybrid Securities*, 2nd ed. Wiley, 2001 (Optional)

Kat, H., *Equity Structured Products*, Wiley, 2002 (Optional)

www.oenb.at/en/img/phb_internet_tcm16-11173.pdf (A useful handbook about structured products)

Course format

Lectures, Tutorial, and Guest Speakers

Every two weeks, we will hold one tutorial to get some hand-on experience about product design and pricing.

Throughout the semester, we will invite speakers from the leading banks, such as, SG, Fortis, and RBS, to give guest lectures to share their experience in equity structured product design and pricing.

Students will be required to use Reuter's Xtra 3000 and write VBA codes to price exotic options, estimate greeks, design hedging strategies, and develop exotic structured products.

Grading

- Exam:
 - Final (Equity Structured Products): 40 percent
- Term Project (Two Members): 40 percent. Divided into two phases:
 - Market Survey and Product Proposal: 15 percent
 - Equity Structured Product Design, Pricing, and Stress Testing: 25 percent
- Two individual assignments: 10 percent (five percent each)
- Participation: 10 percent