Exotic Options & Structuring

ECTS : 3

Description du contenu de l'enseignement :

Structured Products offer tailor made investment solutions which can combine equities, currencies, commodities, credit or interest rates to meet specific investor's needs in term of expected returns, frequency of cash flows and investment horizons and respect constraints such as risk level and specific legal and fiscal aspects. The most known Structured Products (Linked Notes) are based on exotic optional component to achieve their investment objectives. The last financial crisis leads to important changes in rules and regulations with regard to investor protection (MiFID II). A first effect was the simplification of Structured Products destined to retail market. Today Sophisticated products concern only the most discerning customers (institutional and client of private banks) The course will recall some key elements in fixed income and derivatives to concentrate first on exotic payoffs and then structured products. We will have a review of products from each main asset class. We will learn how to build them, how to hedge them, how to manage the life cycle and how to insure liquidity and create a secondary market. At the end of the course we will look to regulatory aspects, the cost of capital and liquidity and distribution rules. The course includes the uses of online pricer and simulations. Course outline:

- Quick review of basics: Asset Class, derivatives, Greeks
- Exotic Options: Dispersion, Barrier, Digitals, Lookback, Autocallable
- Structured Products: introduction to the market, strategies, Linked Notes
- Structured Products Life cycle process: creation, pricing, secondary market
- Regulatory aspects: distribution rules, capital cost, liquidity
- How to improve valuation of derivatives using machine learning methods and their capacity to extract features and detect patterns from a large data set

Compétence à acquérir :

Knowledge in structured products: how to build them (funded, or unfunded), how to hedge them and how to manage the life cycle.

Mode de contrôle des connaissances :

Final Exam

Bibliographie, lectures recommandées :

- Blümke, A., How to Invest in Structured Products: A Guide for Investors and Asset Manager, Wiley, 1st Edition, 392 pages, 2009.
- Bouzoubaa, M. and A. Osseiran, Exotic Options and Hybrids: A Guide to Structuring, Pricing and Trading, Wiley, 393 pages, 2016.
- Hull, John C., Options, Futures & other Derivatives, International Edition, 10th Edition, 2018.