Fixed income I

ECTS : 3

Description du contenu de l'enseignement :

The course aims to offer students a broad understanding of the fixed income products, both qualitatively and quantitatively. Relative prices of assets will be studied in the context of arbitrage relationship. The course will also present the market organization as well as its culture, and main characters. The design and implementation of 'dealing room alike' spreadsheets will illustrate the theories and models outlined. Particular emphasis will be given to pragmatic thinking in order for students to focus, in context, on the relevant details. Fixed income 101: starting up with the concept of actualization

Understand actualization curves and learn how to select the most appropriate one upon specific contexts.
Fixed income at a glance: needs for financing, basic products and market organization
What you should know about issuers, investors, intermediaries and their respective interactions
Bonds and loans: the center of the fixed income galaxy
Price and compute risks for the main styles of debt instruments using actualization and credit curves
Hedging the risks with swaps and more: how to select and price interest rate and credit derivatives
Anticipate risks thanks to interest rate models. Use and price derivatives for hedging or speculation.
Building and analyzing fixed income portfolios: a quantitative approach
Compare actuarial and statistical approaches for ex ante and ex post fixed income portfolio analysis
Setting up fixed income arbitrage strategies: from the mindset to the know-how.
Understand the taxonomy of arbitrage strategies and get ready for practical implementation
Nonlinear fixed income products: volatility and correlation products
Learn about the main fixed income nonlinear products and their pricing basics

Compétence à acquérir :

Technical knowledge (probabilities for fixed income, basic actuarial techniques, etc.) and market knowledge.

Mode de contrôle des connaissances :

80% Final written exam 20% involvement in class and workshops/homework

Bibliographie, lectures recommandées :

Technical Fabozzi, F. J., The handbook of Fixed Income Securities, McGraw-Hill Education, 8th edition, 2012, 1840p. Hull, J. C., Fundamentals of futures and Options Markets, Pearson, 9th edition, 2016. Inspirational Thorp, E. O., A man for all markets, 2017, Random House, 416p. Zuckermann, G., The Greatest Trade Ever, 2009, Crown Business, 306p. Lowenstein, R., When Genius failed, 2001, Random House, 291p. Taleb, N., The Black swan: The Impact of the Highly Improbable, 2007, Random House, 436p.