Volatility Trading Strategies

ECTS : 3

Description du contenu de l'enseignement :

The objective of the course is to give in-depth knowledge about Volatility Trading Strategies.
The goal is to provide participants with the various uses of volatility, its dynamics, the instruments to trade it, the risks embedded in and how to avoid classic pitfalls about volatility.

We will cover main instruments to trade Volatility (from vanilla options to more complex products as Conditional Variance swaps or Vix Options) and how to manage them in the various volatility strategies (Vega/Gamma Trades, Relative Value Trading, Risk Overlay, Cross-Asset volatility arbitrage strategies, Convertible Bonds Arbitrage, Variance Trades, Dispersion…).

Course outline:

The course (4 Courses Sessions and 3 Lab Sessions) will go through the following themes:

- Vanilla Options Trading Strategies and associated risk/returns
- Multi-Leg Option Strategies
- Volatility Investment Solutions
- Dynamic Hedging of associated Risks
- Risk Overlay for Long Equity portfolios
- Cross Asset Volatility Arbitrage Strategies
- Convertible Bonds Arbitrage
- Volatility Swaps and Variance Swaps Dynamics
- Variance Swaps Replication
- Correlation and Dispersion Trading
- Vix : Dynamics and related products

Compétence à acquérir :

Practical knowledge to design quantitative investment strategies.

Bibliographie, lectures recommandées :

Bennett C. (2012), Volatility Trading, Santander Research Notes
Cochrane, J.H.(2005), Asset Pricing, Revised Edition, Princeton University Press.
Demeterfi, Derman, Kamal & Zou, (1999), More Than You Ever Wanted to Know About Volatility Swaps, GS Research Notes
Hull, J. (2006), Options, futures and other derivatives, 6th ed., Pearson Prentice Hall
Ilmanen, A. (2011), Expected returns, Wiley Finance.
MacDonald R. L. (2006) Derivatives Markets, 2nd ed., Addison Wesley
Riva, F. (2008) Applications financières sous Excel en Visual Basic, 3ème éd., Economica.
Taleb, N. (1997) Dynamic Hedging: Managing Vanilla and Exotic Options, Wiley