

Risk measures

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Course : 12 hours - TP : 0 hours

Objectives

This course is an introduction to risk measures in finance. It presents the classical tools, their empirical motivations, dynamic extensions and statistical inference methods adapted to the needs of the financial sector.

Outline

- Introduction - Financial Risk. Regulation, Reserves and Risk Measures - Risk Factors and Loss Distributions. Definition and interpretations of VaR. Relationship to conditional moments. VaR and distribution tails. Risk aggregation.
- Risk measures. Distorting measures. Sensitivity to portfolio composition. Consistent risk measures
- Estimation - Properties of the empirical distribution function. Empirical quantile function. Computation of empirical quantiles. Asymptotic properties. Methods for estimating risk measures. Non-parametric estimation. Dynamic models of conditional moments. Quantile regression. Dynamic VaR models..

Références

- GOURIEROUX, C. et JASIAK J. (2001) : Financial Econometrics, Princeton University Press.
- GOURIEROUX, C. et A. TIOMO (2007) Risque de crédit, Economica.
- KOENKER, R. (2005) Quantile regression, Cambridge University Press.
- McNEIL, A.J., FREY, R. et P. EMBRECHTS (2005) Quantitative risk Management, Princeton University Press.