SCOR CHAIR

“*Market Risk and Value Creation*”

Activity report 2013 (first version)

Head of the Chair Christian Gollier

Co- Head of the Chair Stéphane Villeneuve

Scientific Council M. André Lévy-Lang Président de la fondation du risque
M Hervé Ossard Directeur IDEI

M Philippe Trainar Directeur des risques, SCOR
M Elyès Jouini Directeur de l'institut de Finance Dauphine
M Louis Eeckhoudt Professeur IESEG school of Management Lille
M Xavier Freixas Professeur Université Pompeu Fabra Barcelone

Last Meeting: Palais Brongniard, Paris November 21th 2013.

1. Objectives

The aim of the chair is to support the theoretical and applied research on Risk sharing mechanisms with the willingness to combine methodologies from financial economics, industrial organization and econometrics.

2. Researchers

- **Andrea Attar,** IDEI Researcher
- **Christophe Bisière,** Professor of Finance TSE
- **Christian Bontemps,** Professor of Economy TSE
- **Sébastien Van Bellegem,** Professor of Mathematics TSE
- **Helmut Cremer,** Professor of Economics TSE
- **Jean-Paul Décamps,** Professor of Mathematics TSE
- **Philippe De Donder,** Research Director CNRS
- **Christian Gollier,** Professor of Economics TSE
- **Augustin Landier,** Professor of Economics TSE
- **Jean-Marie Lozachmeur,** CNRS Researcher
- **Thomas Mariotti,** Research Director CNRS
- **Nour Meddahi,** Senior Researcher TSE
- **Sébastien Pouget,** Professor of Finance TSE
- **Pierre Pestieau,** Professor of Economy, Liege

- **Francois Salanié,** Research Director INRA
- **Emmanuel Thibault,** Professor of Economics Perpignan University
- **Jean Tirole,** Scientific Director TSE
- **Nicolas Treich,** Research Director INRA
- **Stéphane Villeneuve,** Professor of Mathematics TSE

3. Topics

Themes and methods

The following topics have been kept moving during the year 2013.

- **Risk Sharing Mechanism: Regulation, liquidity and solvency risks, Asset Pricing**

  This research topic aims to understand the consequences of regulatory solvency requirement when market imperfections like asymmetry of information or moral hazard are taken into account. The researchers involved in this topic are A. Attar, J.P. Décamps, C. Gollier, F. Salanié, T. Mariotti, J. Tirole, N. Treich and S. Villeneuve.

- **Risk attitude: Ambiguity and Psychological Bias**

  This research topic aims to understand the risk attitude towards ambiguous risks occurring when the probability distribution of losses are imperfectly known. This research topic has also been tackled within the framework of experimental economics. The researchers involved in this topic are C. Bisière, J.P. Décamps, C. Gollier, S. Pouget, F. Salanié, N. Treich and S. Villeneuve.

- **Econometrics: Extreme Risks and Interdependence**

  This research topic aims to study original econometrics methods for quantifying extreme risks and correlation between events. The researchers involved in this topic are C. Bontemps, S. van Bellegem and N. Meddahi

- **Longevity risk, long term care and (social) insurance**

Social insurance has long been at the core of public concerns, in France and elsewhere. This has been reinforced lately by the increasing importance of the longevity risk, including in its long term care dimension. We study the various aspects of this topic by using tools from the risk theory, microeconomics analysis, macroeconomic dynamics, optimal taxation, political economy, public economics and/or insurance theory. The researchers pursuing this research agenda are H. Cremer, P. De Donder, J.M. Lozachmeur, P. Pestieau and E. Thibault

4. Summary of the activities of 2012

Steering committee

At regular intervals and at least once a year, IDEI projects leaders meet with representatives of SCOR during a steering committee. The latest steering committee was held on May 16th 2013 in the presence of Jean-Charles Simon and Michal Zajac, respectively chief economist and economist at SCOR and, Augustin Landier and Stéphane Villeneuve as representatives of IDEI.

The committee is an opportunity for IDEI researchers to present their research results and enables the SCOR representatives to express their needs in terms of research. It also determines the orientation of applied research to meet the needs expressed by the SCOR management. Monitoring is done in two ways: the delivery of research papers and the development of internal seminars. Hence, SCOR teams are in constant contact with the IDEI researcher.

The steering committee has informed the scientific council of the departure of Jean-Charles Simon from SCOR. Moreover, the SCOR representatives have recommended through the steering committee that the research chair still focuses on extreme risk sharing, quantification of extreme risks and dependency problems.

Meetings organized by the chair:

- SCOR session on dependency in the workshop of the European Health Economics (Lyon), May 24th 2013

- SCOR session on dependency in the annual meeting of the Association for Public Economic Theory (Lisboa), July 7th 2013

- Workshop on Behavioral Finance Scor Kléber, May 16th 2013.

Prize and Grant:

- Jean TIROLE has been awarded "Honorary Fellow" at The Royal of Society of Edinburgh

- Jean TIROLE and his peer Bengt Holmstrom (MIT) have been awarded the 3rd ROSS PRIZE, created in honour of the renowned finance researcher Steve Ross for the article "Public and Private Supply of Liquidity" published in the Journal of Political Economy

- Augustin LANDIER and his co-authors J. Sauvagnat, D. Sraer, D. Thesmar have been selected by the Review of Finance as the winners of the Spaengler IQAM Prize at EFA 2013 for the best paper in the last year's issues for "Bottom-Up Corporate Governance

- Jean-Paul Décamps and Stéphane Villeneuve received in the 2013 risk forum the EIF 2012 Prize for the best finance paper "Free Cash-Flow, Issuance Costs and Stock Price Volatility"

- SCOR/GRIR Best Paper Award attributed to Henri Chiu for "Risk Aversion, Downside Risk Aversion and Paying for Stochastic Improvements"

- SCOR/EGRIE Young Economist Best Paper Award attributed to Sebastian Ebert and Philipp Strack for "Until the Bitter End: On Prospect Theory in a Dynamic Context"

PhD Student and Internship:

- Stéphane Villeneuve keeps doing the supervision of Lee Dinetan former student at the Ecole Normale supérieure Lyon.

Publications and Working papers:

- **Topic Risk Attitude**

- Armantier O. and Treich N., (2013), "*Eliciting beliefs: Proper scoring rules: Incentives, stakes and hedging*", European Economic Review, 62, 17-40

- Alary D., Gollier C., and Treich N., (2013), "*The Effect of Ambiguity Aversion on insurance and self-protection*", forthcoming Economic Journal.

- Arrow, K., M. Cropper, C. Gollier, B. Groom, G. Heal, R. Newell, W. Nordhaus, R. Pindyck, W. Pizer, P. Portney, T. Sterner, R. Tol, and M. Weitzman, (2013), "*Determining benefits and costs for future generations*", Science, 341, 349-350.

- Arrow, K., M. Cropper, C. Gollier, B. Groom, G. Heal, R. Newell, W. Nordhaus, R. Pindyck, W. Pizer, P. Portney, T. Sterner, R. Tol, and M. Weitzman, (2013), "*Should a Declining Discount Rate Be Used in Project Analysis?*", Review of Environmental Economics and Policy, forthcoming.

- Attanasi, G., C. Gollier, A. Montesano, and N. Pace, (2013), "*Eliciting ambiguity aversion in unknown and in compound lotteries: A smooth ambiguity model experimental study*", Theory and Decision, forthcoming.

- Baumstark, L., and C. Gollier, (2013), "*The relevance and the limits of the Arrow-Lind Theorem*", Journal of Natural Resources Policy Research, forthcoming.

- Bisière Christophe, Décamps Jean-Paul and Lovo Stephano (2011), "*Risk Attitude, Beliefs Updating and the Information Content of Trades: An Experiment*", accepted in Management Science.

- Gollier, C., J.K. Hammitt, and N. Treich, (2013), "*Risk and choice: A research saga*", Journal of Risk and Uncertainty (47), 129-145.

- Pouget, S. and Villeneuve, S. (2011), "*A mind is a difficult thing to change: Confirmation Bias in Financial markets, formerly Price formation under Confirmation bias*", a revision has been submitted to Review of Financial Studies.

➢ **Topic Market Mechanism: Regulation, Liquidity and Solvency risks**

- Attar, A, Mariotti, T and Salanié F., "*Non Exclusive Competition under Adverse Selection*", forthcoming in Theoretical Economics.

- Attar, A, Mariotti, T and Salanié F.,"*On Competitve Nonlinear Pricing*", TSE working paper.

- Décamps J.P. and Villeneuve S. "*Rethinking dynamic capital Structure models with Roll-over debt*", formerly "*On the modelling of debt maturity and endogenous default: a caveat*", IDEI Working Paper, n°528, forthcoming in Mathematical Finance.

- Décamps J.P. and Villeneuve S., "*Integrating profitability prospect with cash management*", formerly "*Corporate cash policy with liquidity and profitability risks*", awarded second best paper in the AFFI conference Lyon May 2013.

- Décamps J.P.; Guney E.; Rochet J.C. And Villeneuve S., "*Exit option under moral hazard*", mimeo.

- Fahri E. and Tirole J., "*Liquid Bundles*" formerly "*Information, Tranching and Liquidity*", submitted to Journal of Economic Theory

- Fahri E. and Tirole J., "*Deadly Embrace*", TSE working paper.

- Villeneuve S. and Warin X., "*Optimal Liquidity Management and Hedging in the presence of a non-predictable growth opportunity*", forthcoming Mathematics and Financial Economics.

➢ **Topic Econometrics**

- Donovon P., Goncalves S. and Meddahi N. (2013), "*Bootstrapping realized volatility measures*", Journal of Econometrics. Vol. 172, pp. 49-65.

- Christoffersen P., Feunou B., Jacobs K. and Meddahi N. "*The economic value of realized volatility: using high-frequency returns for option valuation*", Journal of Financial and Quantitative Analysis, forthcoming.

- Hounyo U., Gonçalves S. and Meddahi N. (2013), "*Bootstrapping Pre-averaged realized volatility under market microstructure noise*", submitted to the Review of Economic Studies.

- Gonçalves S., Hounyo U. and Meddahi N. (2013), "*Bootstrap inference for pre-averaged realized volatility based on non-overlapping returns*", Journal of Financial Econometrics, Revise and Resubmit.

- Bontemps C. (2012), "*Moment-based tests for discrete distribution*", IDEI working paper.

- Bontemps C., Dufour J.-M. and Meddahi N. (2013), "*Optimal moment-based tests for distributional assumptions*", working paper, Toulouse School of Economics.

- Bontemps C., Meddahi N. and A. Patton (2013) "*Testing Multivariate Distributional Assumptions*", working paper, Toulouse School of Economics.

- Bonomo M., Garcia R., Meddahi N. and Tédongap R. (2013), "*The long and the short of the risk-return trade-off*", to be submitted at the end of November to the Journal of Econometrics.

- Ghattassi I. and Meddahi N. (2013), "*Time-aggregation effects on estimating asset pricing models*", working paper, Toulouse School of Economics.

➢ **Topic Longevity risk, long term care and (social) insurance**

- H. d'Albis and E. Thibault, "*Ambiguous life expectancy and the demand for annuities*" submitted Journal of European Economic Association.

- Canta Ch. and P. Pestieau, "*Long term care and family norm*", The B.E. Journal of Economic Analysis & Policy (Advances), forthcoming.

- Cremer H., P. Pestieau and G. Ponthière, "*The economics of Long-Term-Care: A survey*", Nordic Economic Policy Review, n°2, 107-148, 2013.

- Cremer H., F. Gahvari and P. Pestieau, "*Endogenous altruism, redistribution, and long term care*", The B.E. Journal of Economic Analysis & Policy (Advances), forthcoming.

- Cremer H. and C. Goulao, "*Migration and social insurance*", Louvain Economic Review, forthcoming.

- Cremer H. and K. Roeder, "*Long-term care policy, myopa and redistribution*", forthcoming Journal of Public Economics.

- Ph. De Donder and P. Pestieau, "*Private, social and self insurance for long-term care: a political economy analysis*", CESifo WP 4352

- De Donder Ph. and M.-L. Leroux, "*Behavioral Biases and Long Term Care Annuities: A Political Economy Approach*" forthcoming to B.E. Journal of Economic Analysis & Policy

- Goulao C. and E. Thibault, "*Physical Activity and Policy Recommendations: A Social Multiplier Approac*h", The B.E. Journal of Economic Analysis & Policy (Advances), forthcoming.

International Conferences and Seminars:

- Bontemps, C., (May 2013), "Optimal moment-based tests for distributional assumptions", Financial Econometrics Conference, Toulouse (France).

- Cremer H., "Uncertain altruism and the provision of long term care" in the workshop of the European Health Economics (Lyon), aux Journées Louis-André Gérard-Varet (Aix-en-Provence) in the annual meeting of the Association for Public Economic Theory (Lisbonne) and in the annual conference of the International Institute of Public Finance (Taormina).

- J-P. Décamps "Corporate cash policy under liquidity and profitability risks", AFFI international conference, 2013, Lyon (France).

- C. Gollier has given the "Arrow lecture" on the topic "Socially responsible finance: A ethical approach to asset prices", Columbia University, New York.

- J.M. Lozachmeur, "Disability programs and motivation bias of social workers" annual meeting of the Society of Economic Dynamics, Seoul.

- T. Mariotti has presented the paper "On Competitive Noninear Pricing" in Cowles Foundation Annual Conference on General Equilibrium and its Applications, Yale -ENSAI Economic Day -London School of Economics seminar -LUISS Worshop on Macroeconomics and Financial Frictions-Université Paris Dauphine Workshop in Honor of Rose-Anne Dana

- Meddahi N., "Optimal moment-based tests for distributional assumptions", invited speaker, the 9th International Symposium on Econometric Theory and Applications (SETA), Seoul (South-Korea).

- Meddahi N., "Bootstrapping Pre-averaged realized volatility under market microstructure noise", Conference on Recent Developments in the Statistics of High Frequency Data (Toulouse).

- Meddahi N., "Optimal moment-based tests for distributional assumptions", Université de Montréal, Montréal (Canada).

- P. Pestieau, "Uncertain altruism and the provision of long term care", in the university of Bogota (Los Andes), Paris School of Economics (risk seminar), UQAM and Melbourne.

- E. Thibault, “Dynamics of capital accumulation with LTC insurance and family norms”, Journées de Dynamiques Economiques, La Rochelle.

- Stéphane Villeneuve has been Invited speaker in the Conference « les nouveaux outils du développement durable » Chaire FDD, Paris Dauphine on the topic « Dynamic Moral Hazard ».

- Stéphane Villeneuve has presented the paper “Corporate cash policy under liquidity and profitability risks” in Research Seminar in Probability and Statistics, Lisboa Mathematical finance seminar, Dublin London School of Economics seminar.