Olivier Scaillet

Contact Information

olivier.scaillet@unige.ch

++41 22 379 88 16 (direct) // ++41 22 379 81 03 (HEC)

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HEC Genève UNI MAIL, Faculté des SES, Bd du Pont d'Arve 40, CH - 1211 Geneve 4, Suisse

EMPLOYMENT

- Professor of finance and statistics at GFRI, Université de Genève.

  Co-director of the Master of Science in Finance
- Senior Chair at Swiss Finance Institute.
- Head of Project 10 in NCCR FINRISK.

Education

1996	**Ph. D. Thesis** from Université Paris IX Dauphine, U.F.R. Mathématiques de la décision : *"Modelling and Estimation of the Term Structure of Interest Rates"*
1993 - 1994	**DEA MASE**, Université Paris IX Dauphine
1991 - 1993	**Master in statistics**, Université Libre de Bruxelles

1986 - 1991	**Business degree** (Ingénieur Commercial), Finance Option, Ecole de Commerce Solvay, Université Libre de Bruxelles

Research interests

- Financial Econometrics
- Term Structure Modelling
- Risk Management in Finance and Insurance
- Derivative Pricing
- Asset Allocation
- Encompassing Theory
- Nonparametric Statistics
- Specification Tests

Books

- *Econométrie de la Finance : Analyses Historiques*, with C. Gouriéroux and A. Szafarz, Collection Economie et Statistiques Avancées, Editions Economica, Paris (1997). ISBN 2-7178-3502-4.

Publications in Econometrics

A. Econometric Theory

- *"Robust subsampling"*, with L. Camponovo and F. Trojani, Journal of Econometrics, 167, (2012), 197-210. Abstract pdf
- *"Nonparametric instrumental variable estimators of quantile structural effects"*, with P. Gagliardini, Econometrica, 80, (2012), 1533-1562. Abstract pdf Technical report
- *"Tikhonov regularisation for nonparametric instrumental variable estimators"*, with P. Gagliardini, Journal of Econometrics, 167, (2012), 61-75. Abstract pdf Technical report
- *"Testing for equality between two copulas"*, with B. Rémillard, Journal of Multivariate Analysis, 100, (2009), 377-386. Abstract pdf
- *"Local multiplicative bias correction for asymmetric kernel density estimators"*, with M. Hagmann, Journal of Econometrics, 141, (2007), 213-249. Abstract pdf
- *"Multivariate wavelet-based shape preserving estimation for dependent observations"*, with A. Cosma and R. von Sachs, Bernoulli, 13, (2007), 301-329. Abstract pdf
- *"A Kolmogorov-Smirnov type test for shortfall dominance against parametric alternatives"* with M. Denuit and A.-C. Goderniaux, Technometrics, 49, (2007), 88-99. Abstract pdf

- *"Kernel based goodness-of-fit tests for copulas with fixed smoothing parameters"*, Journal of Multivariate Analysis, 98, (2007), 533-543. Abstract pdf
- *"A fast subsampling method for nonlinear dynamic models"*, with H. Hong, Journal of Econometrics, 133, (2006), 557-578. Abstract
- *"A Kolmogorov-Smirnov type test for positive quadrant dependence "*, Canadian Journal of Statistics, 33, (2005), 415-427. Abstract pdf ps
- *"Consistency of asymmetric kernel density estimators and smoothed histograms with application to income data"*, with T. Bouezmarni, Econometric Theory, 21, (2005), 390-412. Abstract
- *"Density estimation using inverse and reciprocal inverse Gaussian kernels"*, Journal of Nonparametric Statistics, 16, (2004), 217-226. Abstract pdf ps
- *"Indirect inference, nuisance parameter and threshold moving average models"* with A. Guay, Journal of Business and Economic Statistics, 21, (2003), 122-132. Abstract
- *"Instrumental models and indirect encompassing"* with G. Dhaene and C. Gouriéroux, Econometrica, 66, (1998), 673-688. Abstract
- *"Quasi indirect inference for diffusion processes"* with L. Broze and J.M. Zakoïan, Econometric Theory, 14, (1998), 161-186. Abstract
- *"Estimation d'équations de diffusion à partir d'observations discrètes et de méthodes fondées sur des simulations"* with L. Broze and J.M. Zakoian, Mélanges en l'honneur de Simone Huyberechts, Cahiers du CERO, Vol. 36, (1994), 43-55.

B. Econometrics applied to Finance and Insurance

- *"Technical trading revisited: persistence tests, transaction costs, and false discoveries"* with P. Bajgrowicz, forthcoming in Journal of Financial Economics. Abstract pdf
- *"False discoveries in mutual fund performance: Measuring luck in estimated alphas"* with L. Barras and R. Wermers, Journal of Finance, 65, (2010), 179-216, **Banque Privée Espirito Santo Award Prize 2008**. Abstract pdf NYTimes 13/07/2008 Le Temps 19/11/2008 Le Temps 24/11/2008 Forbes Investment Guide 08/12/2008 L'Hebdo Supplement Finance Hiver 2009 L'Agefi 30/03/2009 La Libre Entreprise 13/06/2009 Financial Times 21/10/2009 Financial Times 02/05/2010 Financial Times 09/05/2010 National Post 29/06/2010
- *"Testing for stochastic dominance efficiency"* with N. Topaloglou, Journal of Business and Economic Statistics, 28, (2010), 169-180. Abstract pdf
- *"Testing for threshold effect in ARFIMA models: Application to US unemployment rate data"* with A. Lahiani, International Journal of Forecasting, 25, (2009), 418-428. Abstract pdf
- *"Local transformation kernel density estimation of loss distributions"*, with J. Gustafsonn, M. Hagmann and J.P Nielsen, Journal of Business and Economic Statistics, 27, (2009), 161-175. Abstract pdf
- *"Assessing multivariate predictors of financial market movements: A latent factor framework for ordinal data"* with P. Huber and Maria-Pia Victoria-Feser, Annals of Applied Statistics, 3, (2009), 249-271. Abstract pdf

- *"Business and financial indicators: what are the determinants of default probability changes?"* with F. Couderc and O. Renault, in Credit Risk: Models, Derivatives, and Management, Chapman & Hall, Financial Mathematics Series, (2008), 235-268. Abstract pdf
- *"The estimation of copulas: theory and practice"* with A. Charpentier and J.-D. Fermanian, in Copulas: From theory to application in finance, Ed: Rank J., Risk Publications, London, (2007), Section 2.
- *"Estimation of recovery rate densities: non-parametric and semi-parametric approaches versus industry practice"* with M. Hagmann and O. Renault, Recovery Risk: The Next Challenge in Credit Risk Management, Eds: Resti, A., Sironi, A., Altman E., Risk Publications, London, (2005), 323-346.
- *"Sensitivity analysis of VaR and Expected Shortfall for portfolios under netting agreements"* with J.D. Fermanian, Journal of Banking and Finance, 29, (2005), 927-958. Abstract pdf ps
- *"Some statistical pitfalls in copula modeling for financial applications"* with J.D. Fermanian, in Capital Formation, Governance and Banking, Nova Science Publishers (2005), 57-72. Abstract pdf ps
- *"Nonparametric estimation of conditional expected shortfall"*, Revue Assurances et Gestion des Risques/Insurance and Risk Management Journal, 74, (2005), 639-660. Abstract pdf ps
- *"Non parametric tests for positive quadrant dependence"* with M. Denuit, Journal of Financial Econometrics, 2, (2004), 422-450. Abstract
- *"On the way to recovery: A nonparametric bias free estimation of recovery rate densities"* with O. Renault, Journal of Banking and Finance, 28, (2004), 2915-2931. Abstract pdf ps
- *"Testing for concordance ordering"*, with A. Cebrian and M. Denuit, Astin Bulletin, 34, (2004), 151-173. Abstract
- *"Option pricing with discrete rebalancing"*, with J.L. Prigent and O. Renault, Journal of Empirical Finance, 11, (2004), 133-161. Abstract
- *"Nonparametric estimation and sensitivity analysis of expected shortfall"*, Mathematical Finance, 14, (2004), 115-129. Abstract
- *"The origin and development of VaR"*, in Modern Risk Management: A History, 15th Anniversary of Risk Magazine, Risk Publications, London, (2003), 151-158.
- *"Nonparametric estimation of copulas for time series"*, with J.D. Fermanian, Journal of Risk, 5, (2003), 25-54. Abstract pdf ps
- *"A nonparametric analysis of stock index return dependence through bivariate copulas"*, European Investment Review, 1, (2002), 7-16.
- *"The dynamics of US credit spread indices"*, with O. Renault, European Investment Review, 1, (2002), 45-49.
- *"An empirical investigation in credit spread indices"* with J.L. Prigent and O. Renault, Journal of Risk, 3, (2001), 27-55. Abstract pdf ps
- *"Sensitivity analysis of Values at Risk"*, with C. Gouriéroux and J.P. Laurent, Journal of Empirical Finance, **Bi-Annual Award Winning Paper of Best Paper published in JEF**, 7, (2000), 225-245. Abstract
- *"Multiregime term structure models"* with C. Gouriéroux, Finance, 19, (1998), 71-92.
- *"Analyse empirique de la théorie des anticipations de la structure par terme des taux d'intérêt"*, Bulletin du Service d'Analyse Economique de l'IRES, Janvier, (1998), 101-

127.

- *"A new index of Belgian shares"* with R. Anderson and D. Reinard, Revue de la Banque, 3, (1998), 126-130.
- *"Unemployment insurance and mortgages"* with C. Gouriéroux, Insurance : Mathematics and Economics, 20, (1997), 173-195. Abstract
- *"Comparaison de la rentabilité historique de l'immobilier, des actions, des obligations et du monétaire"* with T. de Roquemaurel, Banque et Marchés, 28, (1997), 16-20.
- *"Estimation de modèles de la structure par terme des taux d'intérêt"* with L. Broze and J.M. Zakoian, Revue Economique, XLIV Congrès de l'AFSE, Vol. 47, N° 3, (1996), 511-519.
- *"Testing for continuous-time models of the short-term interest rate"* with L. Broze and J.M. Zakoian, Journal of Empirical Finance, Vol. 2, (1995), 199-223. Abstract

Publications in Asset Pricing

A. Derivative Pricing

- *"Pricing American options under stochastic volatility and stochastic interest rates"* with A. Medvedev, Journal of Financial Economics, 98, (2010), 145-159. Abstract pdf
- *"A primer on weather derivatives"*, with P. Barrieu, Handbook on Uncertainty and Environmental Decision Making, International Series in Operations Research and Management Science, Springer Verlag, forthcoming (2008). Abstract pdf
- *"Weather derivatives"*, with P. Barrieu, Encyclopedia of Quantitative Finance, John Wiley & Sons Ltd, forthcoming (2008). pdf
- *"CMS spread options"*, with S. Galluccio, Encyclopedia of Quantitative Finance, John Wiley & Sons Ltd, forthcoming (2008). Abstract pdf
- *"Swap market models"*, with S. Galluccio, Encyclopedia of Quantitative Finance, John Wiley & Sons Ltd, forthcoming (2008). Abstract pdf
- *"Linear-quadratic jump-diffusion modelling"*, with P. Cheng, Mathematical Finance, 17, (2007), 575-598. Abstract pdf
- *"Approximation and calibration of short-term implied volatilities under jump-diffusion stochastic volatility"*, with A. Medvedev, Review of Financial Studies, 20, (2007), 427-459. Abstract pdf
- *"Theory and calibration of Swap Market Models"*, with S. Galluccio, Z. Huang and J.-M. Ly, Mathematical Finance, 17, (2007), 111-141. Abstract
- *"An autoregressive conditional binomial option pricing model"* with J.L. Prigent and O. Renault, in Selected Papers from the First World Congress of the Bachelier Finance Society, eds. Geman, Madan, Pliska and Vorst, Springer Verlag, Heidelberg, (2001), Inquire UK prize 2001. Abstract pdf ps
- *"Convergence of discrete time option pricing models under stochastic interest rates"*, with J.P. Lesne and J.L. Prigent, Finance and Stochastics, 4, (2000), 81-93. Abstract
- *"A correction note on the first passage time of an Ornstein-Uhlenbeck process to a boundary"*, with B. Leblanc and O. Renault, Finance and Stochastics, 4, (2000), 109-111. Abstract

- *"Lookback and barrier options: A comparison between Black-Scholes and ACB pricing"* with J.L. Prigent and O. Renault, Finance, 20, (1999), 143-152. Abstract pdf ps
- *"Path dependent options on yields in the affine term structure model"*, with B. Leblanc, Finance and Stochastics, 2, (1998), 349-367. Abstract
- *"Compound and exchange options in the affine term structure model*", Applied Mathematical Finance, Vol. 3, (1996), 75-92. Abstract
- *"Options on futures and forward contracts in the affine term structure model"*, with B. Leblanc, Advances in Futures and Options Research, Vol. 8, (1995), 241-261.

B. Asset Allocation

- *"Optimal asset allocation for pension funds under mortality risk during the accumulation and decumulation phases"*, with P. Battocchio and F. Menoncin, Annals of Operations Research, 142, (2007), 141-165. Abstract pdf ps
- *"Optimal asset management for pension funds"*, with F. Menoncin, Managerial Finance, Vol. 32, (2006), 347-374. Abstract pdf

Working Papers in Econometrics

A. Econometric Theory

- *"Testing for symmetry and conditional asymmetry with asymmetric kernels"*, with M. Fernandes and E. Mendes, HEC Genève DP 2011.01 and Swiss Finance Institute DP2011.32. Abstract pdf
- *"Robust resampling methods for time series"*, with L. Camponovo and F. Trojani, HEC Genève DP and Swiss Finance Institute DP 2009.38. Abstract pdf
- *"A specification test for nonparametric instrumental variable regression"*, with P. Gagliardini, HEC Genève DP 2007.06 and Swiss Finance Institute DP 2007.13. Abstract pdf Technical report
- *"Reverse score and likelihood ratio tests"* with G. Dhaene, IRES DP 2026 and CREST DP 2000-60. Abstract pdf ps
- *"Bartlett identities tests"* with A. Chesher, G. Dhaene and C. Gouriéroux, IRES DP 9919, CREST DP 9932 and CORE DP 9939. pdf ps
- *"Forecast intervals in ARCH exponential smoothing"* with L. Broze and G. Mélard, CORE DP 9481 and CREST DP 9502.
- *"Estimation of models with ARCH errors and applications"* with R. Azrak and G. Mélard, User's guide TSE Time Series Software, 1993.

B. Econometrics applied to Finance and Insurance

- *"Time-varying risk premium in large cross-sectional equity datasets"* with P. Gagliardini and E. Ossola, HEC Genève DP and Swiss Finance Institute DP 2011.40. Abstract pdf

- *"Jumps in high-frequency data: spurious detections, dynamics and news"* with P. Bajgrowicz, HEC Genève DP 2011.03 and Swiss Finance Institute DP 2011.36. Abstract pdf
- *"Reconstitution de la courbe des taux zéro-coupon et modèles d'arbitrage"* with A. Frachot, mimeo.
- *"Estimation of the term structure from bond data"* with C. Gouriéroux, CREST DP 9415 and CEPREMAP DP 9415.

Working Papers in Asset Pricing

A. Derivative Pricing

- *"Weak convergence of hedging strategies of contingent claims"* with J.L. Prigent, FAME DP 39 and HEC Genève DP 2002.02. Abstract pdf ps
- *"Variance optimal cap pricing models"*, with J.P. Laurent, IRES DP 9902 and CREST DP 9907. Abstract pdf ps

B. Asset Allocation

- *"Mortality risk and real optimal asset allocation for pension funds"*, with F. Menoncin, HEC Genève DP 2003.23 and FAME DP 101. Abstract pdf ps

EDITORIAL ACTIVITIES

- Associate Editor (2007-) of the Journal of Business and Economic Statistics.
- Associate Editor (2011-) of Econometric Theory.
- Associate Editor (2012-) of Econometrics Journal.
- Associate Editor (2012-) of Management Science. Distinguished Service Award 2013.
- Associate Editor (2011-) of the Journal of Banking and Finance.
- Associate Editor (2012-) of Stat.
- Associate Editor (2013-) of Stochastic Analysis and Applications.
- Co-Editor of the special issue "(EC)2 Conference Econometrics of Financial and Insurance Risks", Vol 5, 1, Winter 2007, of the Journal of Financial Econometrics.
- Co-Editor of the special issue "Semiparametric methods in econometrics", 2007, of the Journal of Econometrics.