QUANTVALLEY /FDR RESEARCH INITIATIVE

2017

Activities and Events organized by the Research Initiative (QMI) – ANNUAL REPORT

This document describes the activities organized by the Quantitative Management Research Initiative (QMI) during its fifth year of existence.

Draft January 2018

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QUANTVALLEY /FDR RESEARCH INITIATIVE
"QUANTITATIVE MANAGEMENT INITIATIVE (QMI)"

1. INTRODUCTION

Hosted within the Fondation du Risque (FdR) and with the support of the Institut Louis Bachelier (ILB), the work conducted within the framework of this Research Initiative is principally carried out by teams from the University Paris-Dauphine and the ENSAE (Ecole Nationale de la statistique et de l'administration économique). It benefits from partnerships with ADDSTONES GFI.

1.1. The objectives of the QMI

In the post-financial-crisis context, Quantitative Management professionals from the French Financial sector came together in 2010 to create QuantValley to promote Quantitative Finance and its benefits in terms of research, risk management and value creation for investors. The association was joined by GFI and UBS, and thanks to their support, the Quantitative Management Initiative (QMI) was born in early 2012. Today, the Quantitative Management Initiative (QMI), who is supported by ADDSTONES GFI, is investing even more in the promotion of research and the development of interactions between the academic world and the Professional world of Quantitative management and is structured around the following themes:

- Developing quantitative research applied to asset management;
- Facilitating knowledge transfer between academic environments and asset management agents;
- Responding to the research issues of various private partners;
- Encouraging collaboration with one or more companies that are leaders in fields relating to quantitative management;
- Promoting the image of asset management based on quantitative approaches;
- Increasing and consolidating the high level of excellence by organising reflexion, research and training activities on an international scale relating to one or more themes of general interest;
- Reflecting on the evolution of regulation pertaining to asset management.

1.2. Research axes of the QMI

Amongst the research areas of most interest to the QMI are:

Statistical Signal Processing

Application of signal treatment to the estimation of factorial models, the detection of outliers, the filtering of trends and the robust estimation of Kalman models is an active research field of the IdR QMI. The robust Kalman filter is in particular used in a project aiming to filter the leverage of Real Estate Private Equity funds form reported NAV. These funds are reporting on a quarterly basis, and the use of classic Kalman filter produces in general poor results in this specific context.

Listed market liquidity

Serge Darolles, Gaëlle Le Fol and Gulten Mero are working on dynamics measures of short-term and long-term liquidity measures based on the autocorrelation of return, volume and volatility. This research has been published in Journal of Econometrics (page 13).

Taking another look at serial correlations, Serge Darolles and Gaëlle Le Fol with another co-author are working on hedge funds liquidity and managers' skills (page 11).
Gaëlle Le Fol is also leading a new project that focuses on multivariate models to analyse the liquidity structure of a large panel of assets. Serge Darolles, Béatrice Sagna – PhD student under Gaëlle Le Fol's supervision and Christian Brownlees from Pompeu Fabra are part of that project. Fabrice Riva is for his part, with two co-authors, working on ETF liquidity (page 11).
A « Contributions in Liquidity » session leaded by Gaëlle Le Fol, Member of the QMI has been organised at the Computational Financial Econometrics (CFE) conference in London in December 2017 (page 14). During the same conference, several papers were also presented in the « Quantitative Investing » session organised by Serge Darolles, Member of the QMI. This session focused on the impact of liquidity in the design of investment strategies and portfolio allocation tools (page 14).

Algo and/or High frequency trading

Optimisation of the VWAP (Volume Weighted Average Price) replication algorithms, link between the speed of placing orders on the market and the arrival of information, liquidity trade-offs, maximum trading capacity.
Algo and High frequency trading defenders say that they provide liquidity and improve price efficiency. Serge Darolles, Gaëlle Le Fol and Gulten Mero, in a paper published in Journal of Econometrics, show that investors are acting strategically – by slicing their orders - to avoid being picked-off by HFTs. Doing so, they slow down the propagation of information in the prices. Again, this research has been presented several times in international conferences (page 15).
Marius Zoican, with some co-authors, has two papers on speed he has been presenting at several seminars and international conferences (pages 15 and 16). One of them, written with Albert Menkveld has been published in Review of Financial Studies (page 13).

Contagion and funds flows

Mardi Dungey and Eric Renault have also received funding of 10,000 euros by the QMI for their project on contagion modelling. Identifying contagion effects during periods of financial crisis is known to be complicated by the changing volatility of asset returns during periods of stress. To untangle this, they propose a GARCH (generalized autoregressive conditional heteroskedasticity) common features approach, where systemic risk emerges from a common factor source (or indeed multiple factor sources) with contagion evident through possible changes in the factor loadings relating to the common factor(s). This research has now been published in Journal of Applied Econometrics (page 13).

Risk disaggregation and portfolio allocation

A change in the structure of a fund's client base affects the potential mismatch between the liquidity of its assets and liabilities. An asset/liability approach for liquidity management is therefore critical and requires a client behaviour model. Serges Darolles and Gaëlle Le Fol are working with some co-authors on investor's behaviour and the consequences on funding liquidity risk. This research has been presented at several seminars and international conferences (page 15).
Emmanuel Jurczenko has published the third volume of the QuantValley collection, published with Elsevier, on Factor Investing (page 13). Each chapter deals with new methods for constructing and harvesting traditional and alternative risk premia, building strategic and tactical multifactor portfolios. This research has been encouraged by QMI and presented at a QMI Workshop in London in November 2017 (page 18)

Trend Following Strategies

Serge Darolles is working with his PhD Student Charles Chevalier on the characterization of a Multi-asset Trend Following Risk Premia that can be used to explain the cross sectional dispersion observed in the CTA space. The corresponding risk factor can be used to improve the explanatory power of the linear factor models generally used to analyse hedge fund portfolios.

Big data, machine learning and the new sources of information (Google, Twitter, ...)

The University of Rotterdam's project (mentioned above) also relates to this theme. A paper on the statistical analysis of big data has been presented at several international conferences (page 15) by Christian Gouriéroux. This has been published in Journal of Econometrics (page 13). QMI organized a workshop on "Big Data: A revolution for financial markets and the asset management industry?" in March (pages 17-18).

1.3. The QMI's organization

The steering committee

The steering committee reviews, monitors and prioritizes major QMI projects.

Scientifique Director

Gaëlle Le Fol, Professor, Université Paris-Dauphine and CREST

General Secretary

Fabrice Riva, Professor, Université Paris - Dauphine

Researchers from l'ENSAE and Université Paris-Dauphine

Serge Darolles, Professor, Université Paris -Dauphine

Jean-Michel Zakoïan, Professeur, CREST-ENSAE ParisTech

Other Members

Christian Gouriéroux, Professor, Université de Toronto

The Advisory Board

The Advisory board assists the Steering Committee in its supervising tasks over the activities of the project. The advisory Board members are:
Representing d'ADDSTONES-GFI : Pascale Gimet-Joussier

Representing l'ENSAE ParisTech : Philippe Cunéo

Representing the Université Paris-Dauphine : Bruno Bouchard

Representing the Risk Fondation: Jean-Michel Beacco

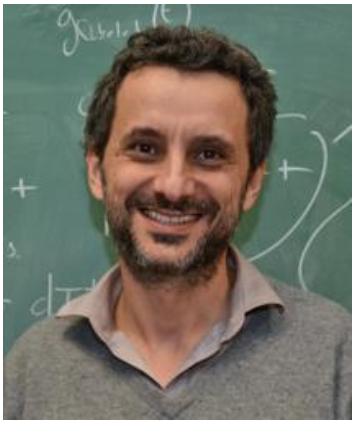
Qualified Person: Charles-Albert Lehalles (CFM)

International Experts: Michel Crouhy (Natixis), René Garcia (Edhec), Michael Rockinger (University of Lausanne), and Ronnie Sadka (Boston College)

The secretariat

Pauline de Saint Quentin, the secretary of QMI can be contacted at contact@qminitiative.org or pauline.desaintquentin@dauphine.fr or by telephone: +33 1 41 16 76 19.

The QMI's researchers



E. Bacry, CNRS and Ecole Polytechnique

P. Duvaut, Telecom Paristech

J. Dudek, Lutetia Capital

C. Gouriéroux, Toronto University

E. Jay, Quanted

S. Darolles, Université Paris - Dauphine

J.-M. Zakoïan, CREST and University Lille 3.

E. Jurczenko, EHL

G. Mero, Université de Cergy-Pontoise

E. Jouini, Université Paris - Dauphine

G. Le Fol, Université Paris - Dauphine and CREST

F. Riva, Université Paris- Dauphine

M. Rosenbaum, UMPC and Ecole Polytechnique

Marius Zoican, Université Paris-Dauphine

The QMI's associate researchers_____

Akindynos-Nikolaos Baltas, Visiting Researcher, Imperial College, Quantitative Analyst at UBS Investment Bank

D.E. Allen, Econometric Institute, Erasmus School of Economics, Erasmus University Rotterdam, The Netherlands.

Mardi Dungey, School of Economics and Finance, University of Tasmania, Australia

D. Keenan, Professor of Finance, Université de Cergy-Pontoise

Robert Kosowski, Professor, Center for Hedge Fund Research & Risk Management Laboratory at Imperial College Business School

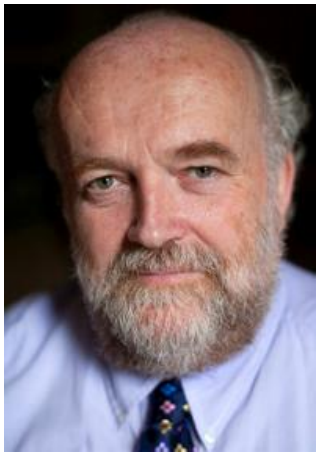
Dong Lou, Financial Markets Group, London School of Economics

M. McAleer, Professor of Quantitative Finance, Econometric Institute, Erasmus School of Economics, Erasmus University Rotterdam

Albert Menkveld, Professor, VU University of Amsterdam

Christopher Polk, Professor, Financial Markets Group, London School of Economics

Abhay Kumar Singh, PhD (Finance), MBA, B. Tech (I T)



Eric Renault, Professor, Brown University, USA

Vincent L. van Kervel, VU University of Amsterdam

3. RESEARCH ACTIVITIES

This research initiative aims to be a means of exchange and reflexion where research themes emerge naturally, and become the starting point of research articles in the best international journals. The QMI must also be able to create a research community around themes of interest to management companies by calling for research projects nationally and internationally and by reinforcing the QMI member teams by recruiting research assistants and publishing doctoral contracts.

3.1. Research Publications

- Date: 2017
- Themes: Quantitative Management

3.1.1. Working papers

Allen, D.E., McAleer, M. and Singh A.K., An entropy based analysis of the relationship between the DOW JONES Index and the TRNA Sentiment series. Working paper.

Allen, D.E., McAleer, M. and Singh A.K., Daily Market News Sentiment and Stock Prices. Working Paper.

Auray,S., and C., Gourieroux: Procyclicité des régulations Financières, CREST Working Paper.

Baltas A.-K., and R. Kosowski, Momentum Strategies in Futures Markets and Trend-following Funds. Working paper.

Becam, A., Darolles. S. and Le Fol, G., Serial correlation and time-varying liquidity in the hedge fund industry, QMI Working paper.

Becam, A., Darolles. S. and Le Fol, G., Smoothed Returns and Managers' skills, QMI Working paper.

Borgy, V., Idier, J. and Le Fol, G., Liquidity Problems in the FX market: Ask for the BIL, Working paper SSRN.

Calamia, A., Deville L. and F. Riva, The Provision of Liquidity in ETFs: Theory and Evidence from European Markets, Working Paper.

Darolles, S., Dubecq, S., and C., Gourieroux. Contagion analysis in the banking sector. Working paper.

Darolles, S., Dudek, J. and Le Fol, G., MLiq a Meta Liquidity Measure, working paper Université Paris - Dauphine.

Darolles, S., C. Francq and S. Laurent. Asymptotics of Cholesky GARCH Models and Time-Varying Conditional Betas", Working paper, submitted to Journal of Econometrics.

Darolles, S., Gagliardini, P., and C., Gourieroux: Survival of Hedge Funds: Frailty vs Contagion, Working paper.

S. Darolles, G. Le Fol and R. Sun, Liquidity Risk and Investor Behavior: Issues, Data and Models", Working paper.

Darolles S., and G. Roussellet, Hedge fund portfolio management with illiquid assets, working paper.

Darolles, S. and Vaissié, M., The Benefits of Dynamic Risk Management: Mitigating Downside Risk Without Compromising Long-Term Growth Prospects, Working paper SSRN.

Deville, L., J. Raposo, and F. Riva, "Event studies and (endogenous) zero returns", working paper.

Duvaut, P. and Jay, E., ODERIM (Outlier Detection for Risk Management), Mimeo.

Francq, C., and J.M., Zakoian, Joint Inference on Market and Estimation Risks in Dynamic Portfolio", Working paper.

Francq, C., and J.M., Zakoian, Expected Shortfall Estimation in Volatility Models", Working paper.

Gagliardini, P., Gourieroux, C., and M., Rubin (2017): " Positional Portfolio Management", submitted *Journal of Financial Econometrics*.

Gatheral J., T. Jaisson, and M., Rosenbaum, Volatility is rough, Working paper.

Gourieroux, C. (2017): “The Least Impulse Response Estimator for Stress Test Exercices”, CREST-DP.

Gourieroux, C., and J.C., Heam (2016): "Funding Liquidity Risk in a Regulatory Perspective", submitted *Journal of Banking and Finance*.

Gourieroux, C., and J., Jasiak (2017): “A Stochastic Tree with Application to Bubble Modelling and Pricing”, CREST-DP.

Gourieroux, C., Jasiak, J., and A., Monfort (2017): “Stationary Dynamic Equilibria in Rational Expectations Models”, R&R, *Journal of Econometrics*.

Gourieroux, C., Monfort, A., and J.P., Renne (2017): “Disastrous Defaults”, CREST-DP.

Gourieroux, C., and Y., Lu (2017): " Long Term Care and Longevity", R&R, *Journal of Econometrics*.

Gourieroux, C., and Y., Lu (2017): “Staying at the Zero-Lower Bound with Embedded Markov Chain”, CREST-DP.

Gourieroux, C., and A., Monfort (2017): “Economic Scenario Generators and Incomplete Markets”, CREST DP.

Gourieroux, C., Monfort, A., and J.M., Zakoian (2017): “Consistent Pseudo-Maximum Likelihood and Groups of Transformation”, R&R, *Econometrica*.

Haas M. D. and M. A. Zoican (2016), Beyond the Frequency Wall: Speed and Liquidity on Batch Auction Markets, Working paper. This paper received the Josseph de la Vega Prize 2016.

Huang W., C.-A. Lehalle, and M. Rosenbaum, How to predict the consequences of a tick value change? Evidence from the Tokyo Stock Exchange pilot program, Working paper.

Jurczenko E., T. Michel and J. Teiletche, "Generalized Risk-Based Investing", Working Paper SSRN.

Jurczenko E. and J. Teiletche, "Risk-based Investing: but what Risk(s)", Working paper.

Jurczenko E. et J. Teiletche (2018), "Risk-Based Allocation for Illiquid and Alternative Investments", 21 pages.

Khapko M. and M. Zoican, ‘Smart’ Settlement, Working Paper SSRN.

Lou D., and C. Polk, The Booms and Busts of Beta Arbitrage: Measuring the extent of the Low-Beta Crowd. Working paper.

Menkveld, A. and V. van Kervel, High-Frequency Trading around Large Institutional Orders. Working paper.

Menkveld, A., E. Pagnotta and M. Zoican, “Does Central Clearing affect Price Stability? Evidence from the Nordic Equity Markets”, Working paper and SSRN 2350762, Revise and resubmit at the Journal of Financial Economics.

Mero G, “Measuring Hedge Fund Performances: A Markov Regime Switching with False Discoveries Approach”, Working Paper.

Rosenthal D. W. R., Trading-Related Skill Across Investment Funds, Mimeo.

3.1.2. Published Papers

Allard, M., Bronsard, C., and C. Gourieroux, (2017), Aversion to Impatience, Uncertainty and Illiquidity”, Annals of Economics and Statistics, 125-126, 9-39.

Bouin M., M. Bozec, J. El Asmar, and G. Le Fol, (2017), Big Data: Quelle révolution pour les marchés financiers et la gestion de portefeuille, Revue Banque, Juin, 18-20.

Darolles S. , (2017), Liquidity risk and investor behaviour: Issues, data and models, *AMF Scientific Advisory Board Review*, forthcoming.

Darolles S., G. Le Fol, and Mero G., (2017), Mixture of Distribution Hypothesis: Analyzing daily liquidity frictions and information flows. Journal of Econometrics, 201, 367-383.

Darolles, S. and Vaissié, M. , (2017), Diversification at a Reasonable Price, Bankers, Markets & Investors 148, 2017, 49-58.

Dungey, M. and E. Renault, (2017), Identifying Contagion. Journal of Applied Econometrics, 1-23. Doi: 10.1002/jae.2593

Francq, C., O. Wintenberger, and J.M., Zakoian (2017), Goodness of Fit Test for Log-GARCH and EGARCH Models, forthcoming in Test, published online http://link.springer.com/article/10.1007/s11749-016-0506-2

Gagliardini, P., and C., Gourieroux (2017): "Double Instrumental Variable for Interaction Models with Big Data", Journal of Econometrics, 201, 176-197.

Gagliardini, P., and C., Gourieroux (2017): "Identification by Laplace Transforms in Panel or Time Series Models with Unobserved Stochastic Dynamic Effects", forthcoming Journal of Econometrics.

Gourieroux,C ., and J., Jasiak (2017): "Misspecification of Causal and Noncausal Orders in Autoregressive Processes", *Journal of Econometrics*.

Gourieroux,C ., and J., Jasiak (2017): "Noncausal Vector autoregressive Process : Representation, Identification and Semi-Parametric Estimation", *Journal of Econometrics*, 200, 118-134.

Gourieroux, C., and A., Monfort (2017): "Composite Indirect Inference with Application to Corporate Risks", Econometrics and Statistics.

Gourieroux, C., Monfort, A., and E., Renault (2017): "Consistent Pseudo-Maximum Likelihood Estimators", Annals of Economics and Statistics, 200, 187-218.

Gourieroux, C., Monfort, A., and J.P., Renne (2017): "Statistical Inference for Independent Component Analysis", *Journal of Econometrics*, 196, 111-126

Gourieroux, C., and J.M., Zakoian (2017): "Local Explosion Modelling by Noncausal Cauchy Autoregressive Process", *Journal of the Royal Statistical Society*, 79, 737-756.

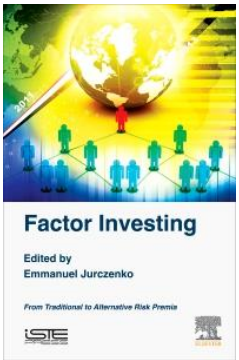
Jurczenko E. and J. Teiletche, (2017), "Active Risk-Based Investing", forthcoming in Journal of Portfolio Management.

Menkveld, A. and M. Zoican, (2017). Need for Speed? Exchange Latency and Liquidity. Review of Financial Studies, 30, 1188-1228.

3.1.3. Books and books' chapters

SPECIAL ISSUE "THEORETICAL AND FINANCIAL ECONOMETRICS: ESSAYS IN HONOR OF CHRISTIAN GOURIEROUX,"
Special issue "Theoretical and financial econometrics: essays in honor of Christian Gourieroux," forthcoming
S. Darolles, Université Paris – Dauphine, Member of QMI
co-guest editor with A. Monfort and E. Renault, Journal of Econometrics, vol. 201, Issue 2 (2017).

3.2. QUANTVALLEY/Wiley Monographs



- Date: 2017
- Themes: Quantitative Management

The QUANTVALLEY collection, published by Wiley, aims to bring together a set of monographs, short and related to the themes of interest to quantitative management. The target audience is management company employees as well as Masters students specialising in Finance.

E. Jurczenko (Editor), Ecole Hotelière Lausanne, Member of QMI
ISTE/Elsevier, 1st Edition 2017, 480 pages.

This new edited volume consists of a collection of original articles written by leading industry experts in the area of factor investing.

The chapters introduce readers to some of the latest research developments in the area of equity and alternative investment strategies. Each chapter deals with new methods for constructing and harvesting traditional and alternative risk premia, building strategic and tactical multifactor portfolios, and assessing related systematic investment performances. This volume will be of help to portfolio managers, asset owners and consultants, as well as academics and students who want to improve their knowledge and understanding of systematic risk factor investing.

4. RESEARCH EXPOSURE AND DIFFUSION

Over and above research production, the QMI aims to distribute quantitative management academic research throughout the scientific community but also towards quantitative management professionals (knowledge diffusion). To this end, the QMI's research will be presented in international conferences, within the framework of an annual conference addressed to academics and professionals. Furthermore, training (research applications) will be developed and the website will propose research articles and webinars than put that research into practice.

4.1. Conference and seminar participation

4.1.1. 11th CSDA International Conference (CFE 2017)

Organization of one session at the Computational and Financial Econometrics, London, December 2017

- Quantitative Investing, Session CO254.

S. Darolles, Chairman and organizer, Université Paris-Dauphine, Member of the QMI

- The smart vega factor-based investing: Disentangling risk premia from implied volatility smirk, **Anmar Al Wakil**, Université Paris-Dauphine, PSL Research University
- Managing hedge fund liquidity risks,
  Serge Darolles, Université Paris – Dauphine, PSL Research University, CREST, Member of the QMI
- Risk-based allocation for illiquid and alternative investments,
  Emmanuel Jurczenko, Ecole Hotelière de Lausanne and Member of the QMI
- Styles of private equity funds,
  Elise Gourier, Queen Mary University of London

- Multivariate volatility models, Session CO294

J.-M. Zakoian, Chairman and organizer, CREST, Member of the QMI

- On the economic determinants of optimal stock-bond portfolios: International evidence, **Christian Conrad**, Heidelberg University
- Estimation risk for the VaR of portfolios driven by semi-parametric multivariate models, **Christian Francq**, CREST and University Lille III
- Misspecification tests in conditional covariances for large cross-sectional dimensions,
  Bilel Sanhaji, Paris VIII University
- Consistent pseudo-maximum likelihood estimators and groups of transformations,
  Jean-Michel Zakoian, CREST and Member of the QMI

- Contributions in liquidity, Session CO272

Gaëlle Le Fol, Chairman, Université Paris-Dauphine, Member of the QMI

- Variation in funding liquidity and financial stability risks,
  Gregory Bauer, Bank of Canada

- Liquidity taking and stock returns,
  Milla Siikane, Tampere University of Technology
- Illiquidity and volatility spillover effects in equity markets during and after a financial crisis: An MEM approach,
  Yongdeng Xu, Cardiff University
- From a quote-driven to an order-driven market: The case of the EuroMTS government bond trading platform,
  Hanyu Zhang, University College Dublin

4.1.2. Seminar and conference participations

QMI's researchers have presented their work at several conferences and seminars:

"Asymptotics of Cholesky GARCH Models and Time-Varying Conditional Betas," with C. Francq and S. Laurent,

- AFFI Conference, 30 May-2 June, Valence.
- Econometric Society European Meeting, 21-25 August, Lisbon.

"Beyond the Frequency Wall: Speed and Liquidity on Batch Auction Markets", Haas M., and M. Zoican

- Invited seminar at Bank of England, March.

"Composite Indirect Inference with Application to Corporate Risk, " C. Gouriéroux and A. Monfort

- CFE, London, December.

"C*onsistent Pseudo-Maximum Likelihood Estimators and Transformation Group,* " C. Gouriéoux, A. Monfort and J.M. Zakoian.

- CFE, London, December.

"Double Instrumental Variable Estimation" P. Gagliardini and C. Gouriéroux

- University of Sydney, January.
- University of Queensland, Brisbane, January.

"Estimation Risk for the VaR of Portfolios Driven by Semi-Parametric Models, " C. Francq and J.M. Zakoian

- Southampton, Finance/Econometrics Workshop, May.
- Heidelberg, Financial Econometric Conference.

"Liquidity Risk and Investor Behavior: Issues, Data and Models" S. Darolles, G. Le Fol and R. Sun.

- Paris-Dauphine, House of Finance Days, 7 March 2017, Paris
- Quant Summit London, 15 March 2017, London
- AFG Risk Management Group, 9 MAY 2017, Paris
- AGEFI AM Tech Days, 9 October 2017, Paris.

"Managing Hedge Fund Liquidity Risks, " S. Darolles and G. Roussellet.

- The Role of Hedge Funds in …, 1-2 September, Manchester
- Mc Gill University, Finance Seminar, 21 November 2017, Montreal
- Laval University, Finance Seminar, 24 November 2017, Laval
- CFE, 16-16 December, Organized session, London.

"Noncausal Vector Autoregression : Representation, Identification and Semi-Parametric Estimation, " C. Gouriéroux, and J.M. Zakoian

- Sciences-Po, Seminar Paris, May.
- TSE, Seminar Toulouse, May.
- Southampton, Finance/Econometrics Workshop, May.
- Heidelberg, Financial Econometric Conference, September.

"Permanent capital, permanent struggle? New evidence from listed private equity, " S. Ain Tommar and S. Darolles

- Aix-Marseille University, Finance Seminar, 14 November 2017, Aix

"Pseudo-Maximum Likelihood and Lie Groups of Linear Transformations", Gourieroux, C., Monfort, A., and J.M., Zakoian

- EC2, Amsterdam, Guest speaker, December.

"Risk-Based Allocation for Illiquid and Alternative Investments", Jurczenko E. et J. Teiletche

- CFE, London, Decembre 2017

"'Smart' Settlement", Khapko M. and M. Zoican

- Invited seminars at Stockholm Business School , January.
- Invited seminars at ESCP Paris, February.
- SFS Cavalcade 2017 North America, Nashville, TN, United States, May.
- FIRN Sydney Market Microstructure Meeting, Sydney, Australia, April.
- 10th Financial Risks International Forum, Paris, France, March.

"Stationary Dynamic Equilibria in Rational Expectation Model, " C., Gouriéroux

- Malinvaud Seminar, Paris, February.
- Society for Nonlinear Dynamics and Econometrics, Paris, March.
- Conférence "Inference in Large Econometric Models", Monréal, May.

"The Least Impulse Response Estimator for Stress Test Exercices, " C. Gouriéroux

- In Honour of A. Trognon, Univ. Paris 1, October.

4.3. Annual Conference

Every year, the QMI organizes a conference. Intended for quantitative management experts – academics, professionals and journalists – it will aim to combine the research undertaken by members of the QMI, projects financed by the QMI and research by internationally renowned researchers, by organizing a guest session and presentation sessions for research articles. A roundtable has also been organized in which academics, journalists and professionals will be invited to take part in a debate.
However, this year we only had a roundtable.

Date, location: March 2017 (Paris)

- Themes: Quantitative Management

The QuantValley/Quantitative Management Initiative (QMI)'s first objective is to favor synergies between quantitative management firms, academia and market authorities in order to achieve excellence in research. To optimize the cooperation between professionals and researchers, the initiative organizes workshops and conferences with the support of its academic partners, Université Paris-Dauphine and ENSAE- the French National School of Statistics and Administration. The first QuantValley/QMI Annual Research Conference will explore and present new findings on the following topics: Statistical Signal

Processing, Market Liquidity, High Frequency Trading, Contagion and Systemic Risk, Risk Parity, and more generally all subjects dealing with Portfolio and Risk Management.

Venue :
Université Paris – Dauphine
Place du Maréchal de Lattre de Tassigny, 75016 Paris

Big Data: A revolution for financial markets and the asset management industry?

Université Paris-Dauphine, March 8, 2017

For some years now, the Big Data revolution is underway in the financial industry and is in everybody's mind. For many, the question is no more whether to focus on Big Data but rather how not to miss innovations that promise to transform the financial markets quickly. This conference aims at understanding the implications of the Big Data revolution. How to survive as a quant and a trader as Big Data takes over? What changes asset managers must operate to adapt to this new technology? What are the regulation challenges? There are the important questions that our experts have been answering during the conference.

Panel session: Big Data: A revolution for financial markets and the asset management industry?

Chairman: **Nicolas Doussinet** (Big Data Solution Manager & Big Data Architect)

- **Philippe Marie-Jeanne**, Chief Risk Officer & Head of the Data innovation Lab at AXA France
- **Lucia Marin**, Policy Desk Officer at ESMA

- **Jean-François Paren,** Managing Director, Global Head of Markets Research at Credit Agricole CIB
- **Pierre-Alexandre Pautrat,** Head of Global Markets, Risks, P&L and Finance ecosystem Bigdata community at Natixis

4.4. Seminars & workshops

Over and above research production, the QMI aims to distribute quantitative management academic research throughout the scientific community but also towards quantitative management professionals (knowledge diffusion). To this end, QMI organizes seminars to present new, effective investment techniques being developed by academicians and practitioners.

Factor Investing Conference: "From Traditional to Alternative Risk Premia"

After the success of the London 2015 Workshop on "Risk Based and Factor Investing", we organized a new event "From Traditional to Alternative Risk Premia ", by the QMI and Imperial College London Business School with the support of Unigestion and UBS.

THURSDAY, 9 NOVEMBER 2017

This event is organized by the Quantitative Research Initiative (QMI) and Imperial College London Business School, with the support of Unigestion and UBS. It will take place: Victoria and Albert suite at the Radisson Gloucester Road, London, Thursday 9 November.

8:30–9:30: Registration

9:30–9:45: Opening address

Robert Kosowski, Imperial College and Unigestion
Emmanuel Jurczenko, EHL and QMI
Gaëlle Le Fol, Université Paris – Dauphine and QMI
Fiona Frick, Unigestion

9:45–12:00: Factor Investing – Session 1

Chair: **David Jessop** (UBS)

- Vitali Kalesnik (Research Affiliates): *Investment and Profitability – Quality Factor that Actually Works*
Discussion: **James Sefton** (Imperial College)

- Daniel Giamouridis (Bank of America Merrill Lynch): *Go with the Flow, or Hide from the Tide? Trading Flow as Signal in Style Investing*
Discussion: **Charles-Albert Lehalle** (CFM)

- Dimitris Melas (MSCI): *Factor Investing and ESG Integration*
Discussion: **Aandreas Hoepner** (ICMA)

12:00–13:45: Lunch Break

13:45–16:00: Factor Investing – Session 2

Chair: **Robert Kosowski** (Unigestion and Imperial College)

- Jérôme Teiletche (Unigestion): *A Macro Risk-Based Approach to Alternative Risk Premia Allocation*
Discussion: **Spyros Mesomeris** (Deutsche Bank)

- Harindra de Silva (Analytic Investors): *Diversification and the Variance Risk Premium*
Discussion: **Pascale Della Corte** (Imperial College)

- David Jessop (UBS): Optimising *Cross-Asset Carry*
Discussion: **Bernd Scherer** (Bankhaus Lampe)

16:00–16:45: Coffee Break

16:45–18:00: Panel Session - Factor investing and Risk Premia: New trends and future challenges

Moderator: **Rob Mannix,** Desk Editor for Asset Management and Insurance (Risk Magazine)
- Alexei Jourovski, Managing Director and Head of Equities (Unigestion)
- Bob Bass, Managing Director (BlackRock)
- Gerben de Zwart, Head of Quant Equities (APG)
- Jesper Kirstein, CEO (Spektrum)

4.6. Website

The goal of the website is to become a showcase for the QMI and to encourage exchange between research and professionals by becoming for example a public library of research articles and computer code relating to quantitative management themes. Address: QMinitiative.org.

The website is a way to manage the annual conference and workshops registrations. Moreover, it is continuously updated.