Crises and Networks in finance : new challenges for the industry

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Proposed by :

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Rationale:

In 2008, the global economy experienced a major financial crisis, the so-called "sub-prime crisis", regarded by experts as a major threat for the world-wide banking and financial system. This has thus led to many substantial analyses not only of the origins of the crisis but also and above all of the mechanisms that enabled it to spread throughout the world and the reasons for its massive impact on the economy world-wide.

Ten years later, it is therefore natural to wonder whether the efforts made to improve the regulation governing the economic and financial networks have been effective, whether the mechanisms inducing fast and world-wide spreading of systemic risks are better understood and controlled, and whether new risk management strategies have been designed and implemented.

To investigate these issues, it appears mandatory and beneficial to have recourse to the large variety of tools and concepts aiming to address the analysis of "complex systems and phenomena", stemming from many different scientific fields, ranging from econometric (structural) vs micro-founded (agent-based) modeling to graph theory and statistical signal processing.

The goal of the proposed workshop is thus to gather an interdisciplinary panel of world-leading experts from different fields of science (Accounting, Financial Economics, Mathematics, Physics, Statistics...), both from academy and industry. A series of (likely) seven presentations will hence address "Crises and network in finance" with different perspectives, such as impact of network topology, characterization of graph dynamics, ability to and relevance of clustering and classification, machine learning, financial time series multivariate statistical analysis, extreme event forecasting, estimation in large dimension.

Speakers:

Monica Billio is professor of Econometrics and head of the Department of Economics of the Ca' Foscari University of Venice. Her main research interests include financial econometrics, business cycle analysis, dynamic latent factor models and simulation-based inference techniques. She is involved in many research projects financed by the European Commission, Eurostat and the Italian Ministry of Research (MIUR).

Jean-Philippe Bouchaud is founder and Chairman of Capital Fund Management. He has been an adjunct professor of physics at École Polytechnique since 2009 and is co-director of the CFM-Imperial Institute of Quantitative Finance at Imperial College London. His work covers the physics of disordered and glassy systems, granular materials, the statistics of price formation, stock market fluctuations and the modelling of financial risks. He has been named Quant of the Year 2017 by Risk Magazine. He is member of the French Academy of Sciences.

Minyue Dong is an associate professor of accounting at Ecole des Hautes Etudes Commerciales (HEC) de Lausanne. She is an expert in financial security and bank accounting. Professor Dong recently became co-editor of the *International Journal of Accounting*.

Liudas Giraitis is professor of econometrics at Queen Mary University of London. Professor Giraitis is a world-recognized expert in statistical theory, with significant experience in application to finance. He has completed extensive research on long memory and integrated I(d). His research bridges the fields of econometrics, statistics and probability theory, with a substantial emphasis on time series analysis.

Thomas Lux holds the chair of Monetary Economics and International Finance at the University of Kiel. Professor Lux has been the Head of the Research Area "Financial Markets and Macroeconomic Activity" at the Kiel Institute for the World Economy from 2008 to 2013 and the Bank of Spain Professor in Computational Economics at University Jaume I from 2011 to 2016. His research interests cover theoretical and empirical aspects of financial economics including the application of concepts from statistical physics and network theory in financial economics.

Didier Sornette is professor of Entrepreneurial Risks at ETH Zurich and has been a Swiss Finance Institute Faculty Member since 2007. Professor Sornette is the founding director of the Financial Crisis Observatory. His research interests include the development of diagnostic tools for financial market anomalies, such as price bubbles, and the prediction of financial crises. He has been elected Fellow of the AAAS for pioneering and novel developments in the prediction of crisis and extreme events in complex systems in 2014.

Last speaker TBA.

Tentative Schedule: (exact agenda to be detailed later)

April 11th, 2019	April 12th, 2019
13:45 Welcome address	9:00 Talk5
14:00 Talk1	10:00 Coffee break
15:00 Talk2	10:30 Talk6
16:00 Coffee Break	11:30 Talk7
16:30 Talk3	12:30 Concluding Remarks
17:30 Talk4	
18:30 end of Day I	

Venue : The workshop will take place at Ecole Normale Supérieure de Lyon, Descartes Campus, 46 allée d'Italie 69364 Lyon cedex 7. Room D2 128.

Registration : is free of charge but mandatory at :

https://framaforms.org/crisis-and-networks-in-finance-new-challenges-for-the-industry-1545032975