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Saw Swee Hock Public Lecture in Statistics

Statistics, Risk & Regulation

by Professor Dr. Paul Embrechts

Professor of Mathematics
Department of Mathematics
ETH Zurich, Switzerland

June 5, 2013 (Wednesday)
6:00 p.m. - 7:00 p.m.
Rayson Huang Theatre(黃麗松講堂), HKU
Tea Reception at 5:30 p.m.

About the Talk

Since the early nineties, regulators of financial institutions worldwide (the Basel Committee) have hard-wired the calculation of statistical extreme risk measures into the national laws on banking and insurance regulation. A prominent example is the so-called Value-at-Risk (VaR), a quantile based risk measure to be calculated far in the loss tail of the Profit-&-Loss distribution. Standard quantile levels are 95%, 99%, 99.9% even 99.97%, hence extreme quantiles. In this talk I will review some of the methods, mainly EVT-based, used for the estimation of such risk measures and this for typical financial (return) time series.

I will also explain which role statistics can (has to) play in the regulatory process. Finally, we propose a further estimation method based on a Bayesian change point approach. This new approach will also be compared and contrasted with existing techniques. This example shows that quantitative risk management for banking and insurance can be an interesting source of novel research problems for statisticians.

About the Speaker

Since 1989, Paul Embrechts is Professor of Mathematics at the ETH Zurich specialising in actuarial/financial mathematics and quantitative risk management. He is a founding member and the current director of RiskLab. Previous academic positions include the Universities of Leuven, Limburg and London (Imperial College). Dr. Embrechts has held visiting appointments including at Paris 1 – La Sorbonne, ESSEC Paris, the Scuola Normale in Pisa (Cattedra Galileiana), the London School of Economics (Centennial Professor of Finance) and has an Honorary Doctorate from the University of Waterloo, Canada, Heriot-Watt University, Edinburgh, UK, and Université Catholique de Louvain, Belgium. He is an Elected Fellow of the Institute of Mathematical Statistics, Honorary Fellow of the Institute and the Faculty of Actuaries, Corresponding Member of the Italian Institute of Actuaries and is on the editorial board of numerous scientific journals. He belongs to various national and international research and academic advisory committees. He co-authored the influential books "Modelling of Extremal Events for Insurance and Finance", Springer, 1997 and "Quantitative Risk Management: Concepts, Techniques and Tools", Princeton UP, 2005. Dr. Embrechts consults for a number of leading financial and regulatory institutions. For full details of his CV, see his website: http://www.math.ethz.ch/~embrechts

For online registration, please go to http://www.saasweb.hku.hk/seminar/20130605.html

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All interested are welcome

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