

CRAG - IRGC Symposium 2013

WORKSHOP 2 DECISION MAKING UNDER UNCERTAINTY: BEHAVIOURAL ASPECTS

Thursday, November 21, 13:30 – 17:15, BC 420

When facing risky decisions, individuals often make choices that deviate from those of a fully rational *homo economicus*. The “human touch” in decision making under risk is the theme of this workshop, with speakers from academia and industry exploring the effects of behavioral shortcomings on individual and group pay-offs, as well as on the stability of systems such as financial markets. Central questions include how decision makers respond physiologically and psychologically to outliers in financial markets (Peter Bossaerts), how their risk-preferences might depend on the probabilities they face (Thomas Epper), and how individuals might come to estimate their own risk attitude (Martin Weber). The behavioral insights can inform the design of systems that are resilient to both human (mis)behavior and randomness. A practical perspective in this workshop is added concerning current procedures to manage crises in a multinational company (Pierre Lauquin) and about how large corporations with significant exposure to risk implement a risk-return tradeoff in their resource-allocation and investment decisions (Boris Galonske). The workshop is an amalgam of viewpoints about the normative theory, a mix of observations from the laboratory and the real world, as well as a bundle of prescriptions on how to overcome some of the human failures so as to improve the overall quality of decision making under uncertainty.

- 12:00 REGISTRATION DESK OPENS
- 13:30 **Humans and Financial Markets: An Evolutionary Mismatch?**
Prof. Dr. Peter Bossaerts, University of Utah
- 14:10 **Foundations and Implications of Probability-Dependent Risk Attitudes**
Dr. Thomas Epper, ETH Zürich
- 14:50 **Nestlé: Structured Approach to Face Risk and Crisis**
Pierre Lauquin, Nestlé
- 15:30 COFFEE BREAK
- 15:50 **Implementation of Risk-return Portfolio Management & Decision Making in large Corporates**
Boris Galonske, Oliver Wyman
- 16:30 **How much to Invest into Risk or Can we do the Trade-off Between Risk and Return?**
Prof. Dr. Martin Weber, University of Mannheim
- 17:15 COCKTAIL RECEPTION , AT "LE HODLER" IN THE ROLEX LEARNING CENTER

ORGANISER BIOGRAPHIES

Rüdiger FAHLENBRACH

Associate Professor, Swiss Finance Institute, EPFL

Rüdiger Fahlenbrach is Swiss Finance Institute Associate Professor at Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland. Formerly on the faculty of the Fisher College of Business of the Ohio State University (USA), he holds a Ph.D. in Finance from the University of Pennsylvania (Wharton). He has research interests in empirical corporate finance, in particular corporate governance and entrepreneurship. Ruediger Fahlenbrach has published in some of the leading academic journals in finance, including the Journal of Finance, the Journal of Financial Economics, the Review of Financial Studies and the Journal of Financial and Quantitative Analysis. His research has been reported in many large-circulation newspapers such as The New York Times, The Wall Street Journal, The Economist, Le Temps, NZZ, Handelsblatt, Forbes Magazine, USA Today, and Fortune Magazine.

Thomas WEBER

Professor, Chair of Operations, Economics and Strategy, EPFL

Thomas A. Weber holds the chair of Operations, Economics and Strategy at the Management of Technology and Entrepreneurship Institute at EPFL. Earlier he was a standing faculty member at Stanford University. Professor Weber is an Ingénieur des Arts et Manufactures (Ecole Centrale Paris) and a Diplom-Ingenieur in Electrical Engineering (Technical University Aachen). He holds master's degrees in Technology and Policy and Electrical Engineering and Computer Science from MIT, and a PhD from the Wharton School. He was a visiting faculty in Economics at Cambridge University and in Mathematics at Moscow State University. Between 1998 and 2002, he was with the Boston Consulting Group. His current research interests include the economics of information and uncertainty, the design of contracts, and strategy.

SPEAKER ABSTRACTS AND BIOGRAPHIES

Peter BOSSAERTS

David Eccles Professor of Finance, University of Utah

HUMANS AND FINANCIAL MARKETS: AN EVOLUTIONARY MISMATCH?

Financial markets generate distinctly non-gaussian outcomes. Specifically, outliers (outcomes in the tails of the distribution) are far too common. Evidence has been mounting recently that the noradrenergic system in the human brain is hardwired to react in specific ways to outliers. The reaction is well-adapted to situations where outliers signal regime shifts and necessitate behavioral adjustment. But it is ill-adapted to outliers in financial markets, which are generally an integral part of the risk they generate without signaling the need to change. The talk will describe results from experiments where subjects were exposed to outliers that did or did not signal change. We discovered significant behavioral differences, and were able to detail the complications in neural control when outliers were inconsequential. Implications for financial market participation, regulation and design will be discussed. The issues have broader implications than just finance, and extend to, e.g., the type of risks associated with climate change.

BIOGRAPHY. Since 2013, Peter Bossaerts is David Eccles Professor of Finance at the University of Utah. Before he was at Caltech, arriving there from Carnegie Mellon University in 1990, promoting eventually to chaired professor. At Caltech, he was also Executive Officer for the Social Sciences and Chair (Dean) of The Humanities and Social Sciences. He was at EPFL between 2006 and 2010. Peter Bossaerts pioneered experimental methods to study financial decision making and financial markets, as well as research at the intersection of finance and neurobiology. He is Fellow of the Econometric Society.

Thomas EPPER

Researcher in Economics, ETH Zürich, University of Zürich

FOUNDATIONS AND IMPLICATIONS OF PROBABILITY-DEPENDENT RISK ATTITUDES

A large body of evidence has documented that risk preferences depend nonlinearly on outcome probabilities. I discuss the foundations and implications of probability-dependent risk preferences and offer some example applications. I argue that probability dependence provides a unifying framework for explaining many real-world phenomena, such as the equity premium puzzle, the long-shot bias in betting markets, and households' under diversification and their willingness to buy small-scale insurance at exorbitant prices. Recent findings indicate that probability dependence is not just a feature of laboratory data, but is indeed manifest in financial, insurance, and betting markets. The neglect of probability dependence may prevent researchers and practitioners from understanding and predicting important phenomena.

BIOGRAPHY. Thomas Epper is a postdoctoral researcher at the Chair of Economics, ETH Zürich, and at the Department of Economics, University of Zürich. He teaches at both Zürich universities and at the University of Fribourg. Thomas studied management and economics at the University of Zürich, from which he also received his Ph.D. degree in 2011 (summa cum laude). During his studies, he acquired experience in the finance and consulting industry. Thomas's main interests are game and decision theory (in particular choice under risk/ambiguity), and their applications. In his research, he combines theory and econometric methods. Thomas published articles in *Econometrica*, *Annual Review of Economics*, *Journal of Risk and Uncertainty*, among others.

Pierre LAUQUIN

Long Term Risk Manager, Nestlé

NESTLÉ: STRUCTURED APPROACH TO FACE RISK AND CRISIS

Having to cope with risks and crisis is not unusual in a company like Nestlé. In this worldwide company created in 1866 where 340'000 employees from more than 120 different countries work together, engage with difference of cultures / languages and ensure sufficient understanding and alignment of perceptions is already a real challenge. Crisis situations does add a layer for inappropriate human behavior, which can quickly lead to major business impacts in today's fully interconnected world. Nestlé has in place different procedures to avoid or reduce risks, and put a strong emphasis on training and scenario testing, which is an efficient solution to reduce frequency and consequences of wrong decision making under stress in real situations

BIOGRAPHY. Pierre Lauquin is "Long Term Risk Manager" at Nestlé since 2010, with an objective of building a world wide holistic vision of risks and opportunities which could impact Nestlé in the next 5+ years. He has had an over 20 years career with Nestlé, having filled positions as different as graphic designer, web intranet/extranet worldwide project development manager, IT specialist, worldwide Marketing web services buyer, and Finance Controller. Pierre studied mathematics and architecture, and started his career in 3D architecture modeling, before moving to design. Mr. Lauquin has a diploma in Enterprise Risk Management from Geneva University, in Marketing from SAWI Lausanne, and architecture from EPSIC Lausanne, Switzerland.

Boris GALONSKE

Partner, Member of Leadership Group, Global Risk & Trading, Oliver Wyman

IMPLEMENTATION OF RISK-RETURN PORTFOLIO MANAGEMENT AND DECISION MAKING IN LARGE CORPORATES

The presentation will explain how risk-return decision making is being implemented in large corporates with high capital intensity and commodity exposures. Examples from the energy industry are being provided and institutional implications are being pointed out. Historic practices and current practices will be contrasted. The trend for further evolution of decision making and supporting systems will be explained as they are currently being addressed by leading firms in the sector.

BIOGRAPHY. Boris Galonske is a Partner and a member of the leadership group of Oliver Wyman's Global Risk & Trading practice based in Zürich. He advises top management across different industries and markets with a specialization in energy across all sub sectors and process industries on strategic and operational topics very much associated with decision making under uncertainty. Boris Galonske holds a degree in Economics from Christian-Albrechts-University in Kiel. He is a member of the International Association for Energy Economics (IAEE) and an advisor to the World Energy Council (WEC) and the OECD's Futures Program.

Martin WEBER

Chair for Banking and Finance, University of Mannheim

HOW MUCH TO INVEST INTO RISK OR CAN WE DO THE TRADE-OFF BETWEEN RISK AND RETURN?

Estimating one's own risk attitude is central for any financial decision making. Financial theory assumes that we are able to do it, regulators request that it could be done and the financial industry provides methods how to do it. Research shows that standard procedures suffer from biases and advocates that investors have to "experience" the riskiness of the financial instrument.

BIOGRAPHY. Prof. Dr. Dr. h.c. Martin Weber has a Chair for Banking and Finance at the University of Mannheim. He is also Director of the University's Institute of Investment Banking. He studied mathematics and business administration and received his Ph.D. as well as his habilitation for business administration from the University of Aachen. Before joining the University of Mannheim he held Professorships at the Universities of Cologne and Kiel. He spent about 3 years as visiting scholar at UCLA, at the Wharton School, at Stanford University and at the Fuqua School of Business, Duke University. His main interests lie in the area of banking, behavioral finance, and its psychological foundations. He is the author of numerous publications in these areas and co-author of textbooks on decision analysis and banking. Sprecher (Director) 1997-2002 and Stellvertretender Sprecher (Deputy Director) 2003-2008 for the Sonderforschungsbereich 504 of the German National Science Foundation (Rationalitätskonzepte, Entscheidungsverhalten und ökonomische Modellierung, Rationality, Decision Making and Economic Modelling) and he serves on the editorial board of various national and international journals. Dekan (Dean) of the Faculty for Business Administration, University of Mannheim (4/2004 - 03/2006). Member of The German Academy of Natural Scientists Leopoldina, Member of The Berlin-Brandenburg Academy of Sciences and Humanities. He was awarded an Honorary Doctoral Degree by the University of Münster in June 2007.