

**Date of the event:**

On Thursday, 16th June, 2011  
From 01:00 PM to 2:00 PM

**Location:**

Luxembourg School of Finance  
University of Luxembourg  
4 Rue Albert Borschette  
2<sup>nd</sup> Floor  
Modigliani Miller Auditorium (E02-003)  
L-1246 Luxembourg

**Registrations:**

- Free seminar (with lunch included)
- Registrations by email before June 10th, 2011
- At the following address : [lsf-events@uni.lu](mailto:lsf-events@uni.lu)

**Information:**

Ms Caroline Herfroy  
Tel : +352 46 66 44 6335

<http://www.lsf.lu/eng/Research/Seminars-and-Workshops>



The LSF is pleased to invite you to the following  
lunch seminar:

***Asset Pricing under Rational  
Learning about Rare Disasters***

*By Professor Christos Koulovatianos  
University of Nottingham, UK*

**Thursday, 16<sup>th</sup> June 2011  
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# ***Asset Pricing under Rational Learning about Rare Disasters***

***By Christos Koulovatianos***

The **Luxembourg School of Finance**

Is pleased to invite you to the

**LSF Seminar**

This paper proposes a new approach for modeling investor fear after rare disasters. The key element is to take into account that investors' information about fundamentals driving rare downward jumps in the dividend process is not perfect. Bayesian learning implies that beliefs about the likelihood of rare disasters drop to a much more pessimistic level once a disaster has occurred. Such a shift in beliefs can trigger massive declines in price-dividend ratios. Pessimistic beliefs persist for some time. Thus, belief dynamics are a source of apparent excess volatility relative to a rational expectations benchmark. Due to the low frequency of disasters, even an infinitely-lived investor will remain uncertain about the exact probability. Our analysis is conducted in continuous time and offers closed-form solutions for asset prices. We distinguish between rational and adaptive Bayesian learning. Rational learners account for the possibility of future changes in beliefs in determining their demand for risky assets, while adaptive learners take beliefs as given. Thus, risky assets tend to be lower-valued and price-dividend ratios vary less under adaptive versus rational learning for identical priors.