Rama CONT
CNRS & Imperial College, London

Demystifying Black Swans: fire sales, price impact and endogenous risk

Prices, volatilities and correlation parameters often exhibit erratic behavior and extreme fluctuations during market crises. The traditional approach has been to either model these occurrences as "extreme" events or statistical outliers, or entirely dismiss them as 'black swans', impossible to model quantitatively. We argue that many such 'black swans' are in fact manifestations of endogenous market instabilities that arise as a result of feedback effects between price behavior and the resulting supply/demand dynamics generated by market participants. We propose some simple models which allow quantitative modeling of such endogenous risks and present some applications to the Quant Crash of August 2007 and the Great Deleveraging following the collapse of Lehman Brothers.

ESSEC BUSINESS SCHOOL

YOU HAVE THE ANSWER

For any information, please contact Patricia Fernandez (01 34 43 32 45 and fernandez@essec.fr)

http://isds-department.essec.edu/research/working-group-on-risk