

The AFI Department & the Department of Mathematics
of the KU Leuven

kindly invite you to the Seminar Afternoon:

“Systemic Risk and Contingent Capital”

March 12, 2012, 2pm.

Program

- 1.45pm - 2.00pm: Welcome
- 2.00pm - 2.45pm: **Daniël Linders** (KU Leuven)
Measuring the degree of herd behavior in financial markets
- 2.45pm - 3.30pm: **Jan De Spiegeleer** (Jabre Capital & KU Leuven)
Steering a bank around a death spiral: Multiple Trigger CoCos
- 3.30pm - 4.00pm: coffee break
- 4.00pm - 5.00pm: **Dilip Madan** (Maryland University)
On the pricing of contingent capital notes.

Venue:

KU Leuven Business School
Room HOGC 02.101,
Naamsestraat 69,
3000 Leuven

Participation free of charge.

Registration mandatory via email to:
Wim.Schoutens@wis.kuleuven.be
or
Jan.Dhaene@econ.kuleuven.be

ABSTRACTS

2.00pm - 2.45pm: Daniël Linders : Measuring the degree of herd behavior in financial markets

ABSTRACT: In this paper we introduce new measures for the strength of the co-movement between dependent random variables. We combine the distribution of the sum and the theory of comonotonicity to derive a whole class of dependence measures, called herd behavior measures. This framework enables us to derive different indices for the co-movement between stock prices. Such an index gives the expectation of the market about future co-movement between stock prices. Each index will be model-free and can be determined for any stock market index provided an appropriate series of vanilla options is traded on this index as well as on its components. Special members of this class are the HIX and the CIX. As an illustration, we determine historical values of the 30-days HIX and CIX for the Dow Jones Industrial Average, covering the period January 2006 to October 2009.

2.45pm - 3.30pm: Jan De Spiegeleer: Steering a bank around a death spiral: Multiple Trigger CoCos

ABSTRACT: In this paper we start with the introduction of two pricing models to value contingent convertibles. One model ("rule of thumb") has its roots in credit derivatives pricing while the second model implements an equity derivatives approach. From these models we then quantify the equity sensitivity and the negative gamma resulting from the design of a contingent convertible and illustrate the possible pitfalls of a death spiral on the share price. We conclude that moving away from one large single CoCo issue towards more but smaller issues with accounting triggers spread across an extended range, will alleviate the death spiral risk.

4.00pm - 5.00pm: Dilip Madan: On the pricing of contingent capital notes.

ABSTRACT: A bank's stock price is modeled as a call option on the spread of random assets over random liabilities. The logarithm of assets and liabilities are jointly modeled as driven by four variance gamma processes and this model is estimated by calibrating to quoted equity options seen as compound spread options. On defining riskweighted assets as asset value less the bid price plus the ask price of liabilities less the liability value we endogenize capital adequacy ratios following the methods of conic finance for the bid and ask prices. All computations are illustrated on CSGN.VX, ADRed into USD on March 29 2011.

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