SAID BUSINESS SCHOOL, University of Oxford

SEMINAR SERIES / Hilary 2013

'How to use DebtRank to eliminate systemic risk in financial networks'

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Andrew Cormack Seminar Room, Saïd Business School

Please note: although the seminar programme detailed was correct at time of printing, seminar arrangements are subject to change – for the latest information, please check the seminar webpage.

ABSTRACT:

Banks in the interbank network can not assess the true risks associated with lending or even borrowing, unless they have full information on the riskiness of all the other banks. These risks can be estimated by using network metrics (e.g. DebtRank) of the interbank liability network. With a simple agent based model in the philosophy of the CRISIS project, we show that by increasing transparency by making the DebtRank of individual nodes visible, and by imposing a simple incentive scheme, that reduces interbank borrowing from systemically risky nodes, the systemic risk in the financial network can be drastically reduced. This incentive scheme is an effective regulation mechanism, that does not reduce the efficiency of the financial network, since it only focuses on a homogeneous distribution of risk within the system in a self-organized critical way. We show that the reduction of systemic risk is to a large extent due to the massive reduction of cascading failures in the transparent system.

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