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Title: The Optimal Design of Central Counterparties for Credit Default Swap (joint with Rama Cont)

Abstract: Central clearing of credit default swaps (CDSs) through Central Counterparties (CCPs) has been proposed as a tool for mitigating systemic risk and counterpart risk in CDS markets. The design of CCPs for CDS involves the implementation of margin requirements and a clearing fund (or default fund), for which various designs have been proposed. We study the impact of the design of these requirements on the incentives for CDS clearing of the CDS inter-dealer market. We assume all CDS contracts of the market are cleared in a CCP. First of all, we derive a unique Nash equilibrium of inter-dealer market CDS demands and also the condition for the existence of a non-zero unique Nash equilibrium of the demands. Then we find an optimal design of the requirements of the CCP to maximize the utilities of the dealers. Finally, we propose an optimal design of the requirements to maximize the profit of the CCP.