

Do central counterparties reduce counterparty and liquidity risk? Empirical results

A discussion by
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These views are my own and do not necessarily reflect those of the Single Resolution Board

Summary (1/2)

- **Aim:** employ network analysis methods to address the question *“How does CCP clearing affect counterparty and liquidity risks in the Colombian peso non-delivery forward market?”*
- **Data:** a unique dataset that contains monthly transactions and exposures from the OTC Colombian peso non-delivery forward market, in US dollars, from October 2011 to December 2018.
- **Methods:** compute standard metrics (density, mean geodesic distance, reciprocity and transitivity) on time-series for three (unweighted) networks:
 - Transactions to be cleared bilaterally (fi-to-fi);
 - Transactions to be cleared by the CCP (fi-to-fi, aka ‘alphas’);
 - Exposures after CCP interposition (fi-to-CCP, resulting from the ‘betas’ and ‘gammas’).

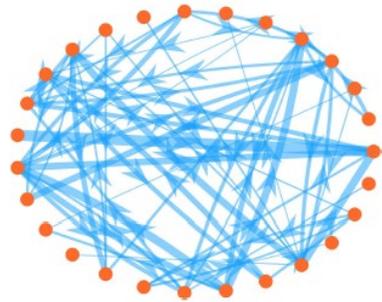
Summary (2/2)

- **Findings** (compared to bilateral clearing):
 - CCP clearing reduces liquidity risk in the transactional stage: finding a counterparty is easier as the network is more interconnected and financial institutions are closer.
 - CCP clearing significantly reduces counterparty risk: the significantly lower connectedness (i.e., density and transitivity) and higher distance reveals that exposures between financial institutions decrease manifestly after the transaction stage.
- **Contribution:** add to existing literature on the role of CCPs to the simultaneous mitigation of counterparty risk and liquidity risk (using network analysis).

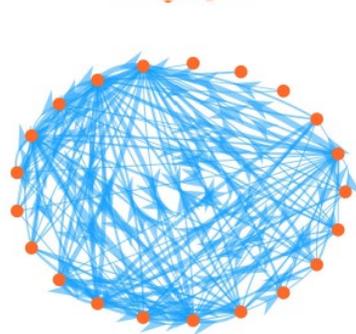
Discussion (1/2)

- Do the authors answer the research question?
 - Yes, to a degree.
 - It could be interesting to also explore the issue in additional detail:
 - could the weights/attributes of the edges provide additional information?
 - which banks remain active in the OTC market?
 - is there an overlap between the bilateral and CCP clearing networks?

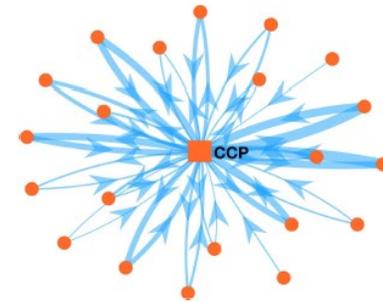
a.



b.



c.



Source: Fig 2 in the paper.

Discussion (2/2)

- Going beyond the research question, what is economic relevance of CCP clearing?
 - What was the effect on the market?
 - A potentially useful reference: G. Vuillemeys. “The Value of Central Clearing”. The Journal of Finance.
- Minor point: a clearer description of the institutional background could be useful to the reader.