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 (fit-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?

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?

• Minor point: a clearer description of the institutional background could be useful to the reader.