Thoughts on "Clearing networks:Effects of network topology on exposures and margin needs"

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Some Backgrounds

Growing interest/concern over central counterparties

- Debate over global one CCP or local CCPs for OTC derivatives (especially CDS)
  - Several CCPs started/will start provide clearing services for CDS
    - ICE US trust ,CME/Citadel (US market)
    - ICE Clear Europe, Eurex Credit Clear,Liffe Bclear, LCH.Clearnet (European market)
- CPSS-IOSCO working group is reviewing the recommendations for CCP

Main questions of the paper

To explore relationship between network topology and efficiency of CCP

Whether more restricted access to direct CCP clearing (= more tiered system)

leads to increase/decrease exposures?

leads to increase/decrease margin pressures?

Network topology of a CCP is partly determined by its access policies

= highly suggestive from the viewpoint of oversight policies as well

Main findings of the paper

Exposure

Increasing access ⇒

less total GCM exposures (less CCP single exposure)
more total CCP exposures
less total sum of exposures in the system

Intuitive results

Margin requirement

Increasing access ⇒

Margins initially decreases but increases beyond certain point
(in case margins can be recycled)

The opposite pattern
(in case margins cannot be recycled)

Underlying reasons?

Suggestions for further work

- Incorporating other concerns over CCP
  - Default risk, default fund
  - Additional margin requirement
  - Loss sharing
- Expansion to multi asset classes
  - Difference in nature of assets
    - Government bond, derivatives (CDS)
  - Difference in type of market structures
    - OTC or organized exchange market