

# Discussion of « The Design of a Central Counterparty »

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# Contribution of the paper

- Very important paper in the CCP literature, for sure one of the best contributions so far
- Why?
  - In perfect markets, no role for CCPs (who just split cash flows differently)
  - To explain CCPs, several frictions have been investigated
  - But one puzzling aspect remained: CCPs have a very different capital structure compared to banks or other firms
  - -> This paper explains precisely this aspect
- A few papers have looked at CCP's default waterfall
  - But not with optimal contracts -> Unclear what to draw from these papers
  - -> The paper does all this at once

# This discussion

- Very well-executed paper
  - I will not go into the details of the equations
- Highlight key mechanisms
- Discuss them in relation with empirical research or open questions

# Why are there CCPs?

- The model: insurance against idiosyncratic default risk
  - Alternative: directly pledge collateral
  - CCP substitutes for collateral when collateral is costly
- With limited pledgeability
  - Amount of collateral is limited
  - Monitoring activities can be conducted instead
  - But, for monitoring to be credible, need CCP to have equity at risk
- Thus, this last model explains three features of CCPs' default waterfall
  - First line of defense is ex ante monitoring efforts (membership requirements)
  - Second line of defense is the collateral of the defaulter
  - Third line of defense is CCP's skin in the game

# Empirical interpretation

- Why did CCPs emerge historically?
  - Many theories are based on (multilateral) netting benefits
  - This paper features a view on risk pooling with collateral
- First derivatives CCP: market for coffee future in Le Havre in 1882
  - Pledging collateral was difficult for practical reasons (paper securities)
  - No proper default fund, but the equity of a member-owned CCP is akin to it
  - The only monitoring was ex ante (traders needed to be known locally)
  - Akin to the model with first version of the model
- Later CCPs: Add a dissociation between default fund and outside equity
  - The model explains why: it increases the amount of risk pooling
  - But requires ex post monitoring: member-specific margin requirements?

# For-profit vs. member-owned CCPs

- Model has features that speak to CCP governance
  - For-profit CCPs (with non-member equityholders)
  - Member-owned CCPs
- Centralized monitoring with use of outside equity
  - Resembles for-profit CCPs
  - Bilateral monitoring resembles member-owner CCPs
- In large markets, centralized monitoring dominates
  - Due to economies of scale in monitoring (as in Diamond 1984)

# Empirical interpretation

- The first CCPs in history were member-owned
  - And many CCPs have remained member-owned for a long time
  - Member-owned CCPs were often linked to a particular exchange/marketplace
- For-profit CCPs boomed more recently
  - They seem to be more linked to OTC derivatives
  - Trading can take place globally, without links to a specific exchange
- In that respect, the model fares very well
  - Out-of-exchange markets likely to be larger
  - History suggests that if monitoring costs of a marginal member increases, then CCPs are more likely to be for-profit. Is that the case in the model?

# Policy implications

- The level of CCP equity is generally inefficient
  - Investors want too much CCP capital
  - And vice versa
- Inefficiency comes from disagreement over distribution of monitoring rents
  - Members and the CCP care about it
  - The social planner does not



# Empirical interpretation

- Major debates between members and CCPs in capital contributions
  - Consistent with the model
- If there was a market for CCP equity, would members buy it?
  - Rather than complaining the fees are too high and CCP equity too low?
- I guess the model provides some answer to this puzzle
  - External equity provides a benefit precisely because it is external, and thus can provide extra insurance
  - Thus, even if it was traded, members may not want to buy it
  - Is my interpretation correct?

# Conclusion

- Very deep paper
- Explains key features of CCPs and of their default waterfall