

# Peer monitoring or contagion? Interbank market exposure and bank risk

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# Research Question

- How do institutional linkages in the interbank market affect bank risk?
- Main motivation is to empirically examine two competing theoretical arguments
  - **Peer monitoring** (*Flannery, 1996; Rochet and Tirole, 1996; Furfine, 2001;2002*)
  - **Risk contagion** (*Allen and Gale, 2000; Upper and Worms, 2004*)

# Key Findings

1. Large exposure to the interbank activities increases bank risk.
2. Neighbors matter— bank risk is positively associated with its neighbors' risk.

# Contributions and Implications

- Provide valuable empirical evidence on the dark side of interbank market activities.
- Banks should be cautious about participating heavily in the interbank market.
- Highlight the dark side of networks in terms of risk contagion.
- Regulators should pay more attention to the high degree of interconnectedness.

# Other value-added points

1. A nice approach to estimate interbank lending matrix (i.e. entropy techniques and unique data used as a prior information set).
1. Decomposition of Z-score is a novel approach to see how much interbank activities alone contribute to the overall risk.
1. Consider many kinds of heterogeneity of networks (i.e. degree of connections, core vs. periphery positions, domestic vs. foreign banks, big and small banks)

# Maturity Structure

- Does the Dutch interbank market primarily consist of long-term or short-term loans?
- Peer monitoring hypothesis assumes long-term relationships, otherwise banks have little incentive to monitor short-term loans (*Rochet and Tirole, 1996; Dinger and Hagen, 2009*).
- On the other hand, risk contagion might be more pronounced in cases of short-term relationships.
- So, it would be helpful if the paper could show some statistics of maturity structure. Robustness tests on long- vs. short-term loans could also be interesting.

# Bank ownership dummies included ?

- Bank ownership is a key determinant of bank risk .
- However, the regressions seems only have interaction term between bank type and risk, but do not directly control for bank type.
- Without controlling for the first-order important variable, the coefficient of the interaction term can be biased.
- For example, the interaction between foreign and neighbors' riskiness is negatively associated with bank risk. This is intuitively hard to understand.

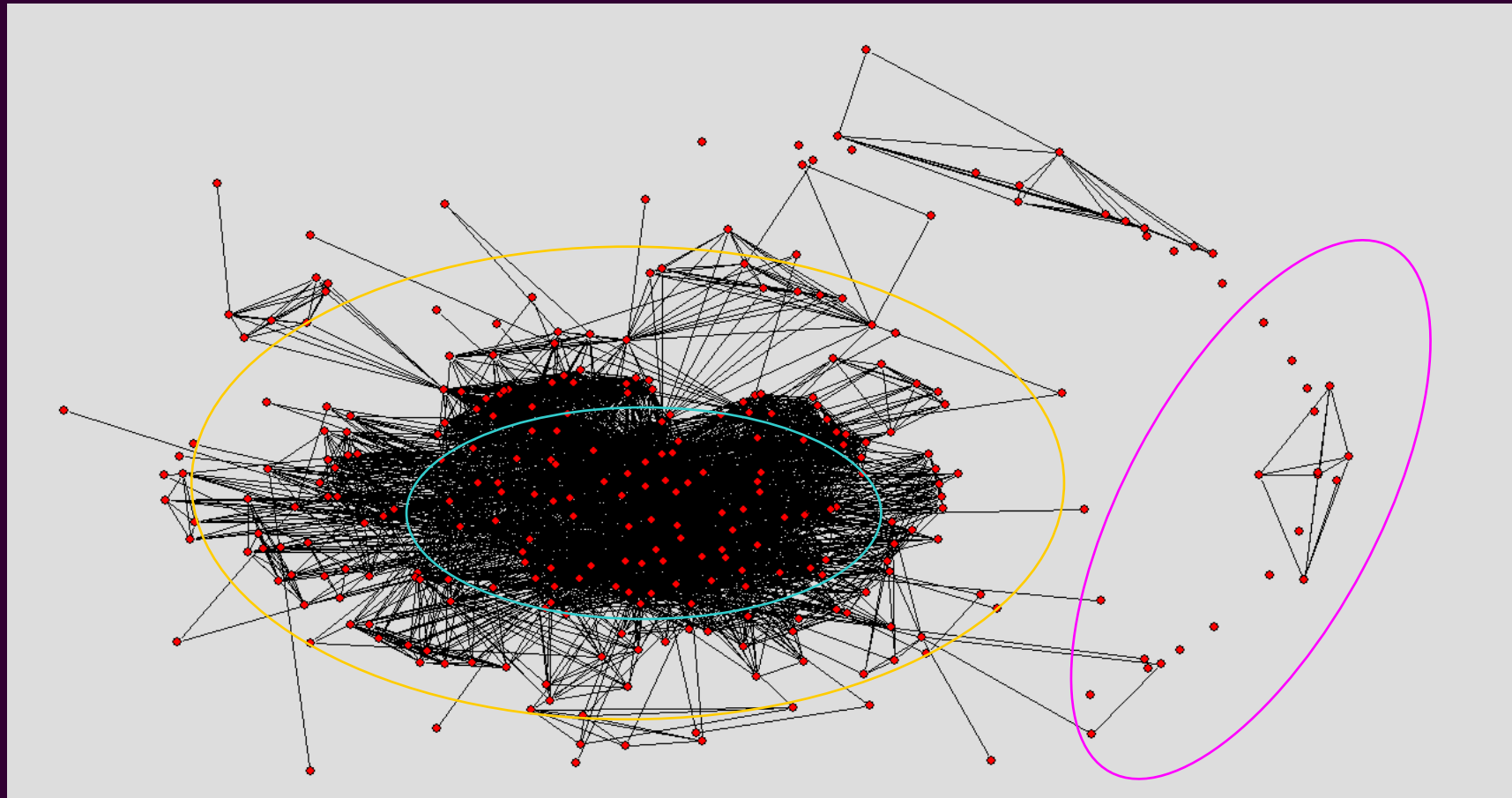
# More tests on risk contagion

- Risk contagion usually refers to domino effect, i.e. chain reaction driven by the liquidity shock of certain banks (*Allen and Gale, 2000*).
- So, it would be interesting if the paper could identify certain shocks and test the subsequent influence.
- Some measures like crash risk could be helpful to identify dangerous banks, i.e. sudden drop of deposit ratio below certain standard deviation (*Hutton, Marcus, and Tehranian, 2009*)



# More network measures

- Social network analysis can be used to capture many network characteristics (Wasserman and Faust, 1994; Hochberg, Ljungqvist, and Lu, 2007).



# Robustness tests

1. Interbank market participation could be endogenous.

- *Interest rate can be an instrument for the interbank activities*
- *Change regression, i.e. change of risk on change of interbank activities.*

2. More risk measures might be considered

- *Systematic risk*
- *Idiosyncratic risk*

- Thank you!