

“Persistent Liquidity Shocks and Interbank Funding” by Marcel Bluhm



Discussant remarks

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Disclaimer

The views expressed are mine and should not be attributed to the Bank of Canada or its staff

Summary

- Stylised model of the interbank market
- Network model with core-periphery structure (mapping)
 - Large banks dominate wholesale activity
 - Small peripheral banks connect to these hubs
- Central bank faces trade-off in setting interest rates
 - Low: more economic activity, credit, financial fragility
 - High: less financial fragility, credit, activity
 - Sophisticated interbank market raises activity for all rates

Stylised model of the interbank market (IBM)

$$IBM_T = (1 - lr) \sum_{j=1}^T S_j (1 - \delta)^{j-1}$$

- Lower required liquidity ratio allows for larger IBM
- Larger liquidity shocks necessitate larger exchanges
- Higher persistence of liquidity shocks leads banks to lend/borrow more and at longer maturities (extant literature: $\delta=1$)

δ, S, lr are deterministic

Haldane (2009): Rethinking the financial network

- Interconnected networks exhibit ‘knife edge’ dynamics
 - Complexity + homogeneity \Rightarrow fragility
 - Financial innovations amplify Knightian uncertainties \Rightarrow seizures
 - Small number of increasingly homogenous, vulnerable hubs

- Improving network stability
 - Mapping: improved data, analysis & communication
 - Regulating the ‘super-spreaders’: 20% cause 80% of spread
 - Restructuring: promote hierarchy, sub-structures; reduce complexity

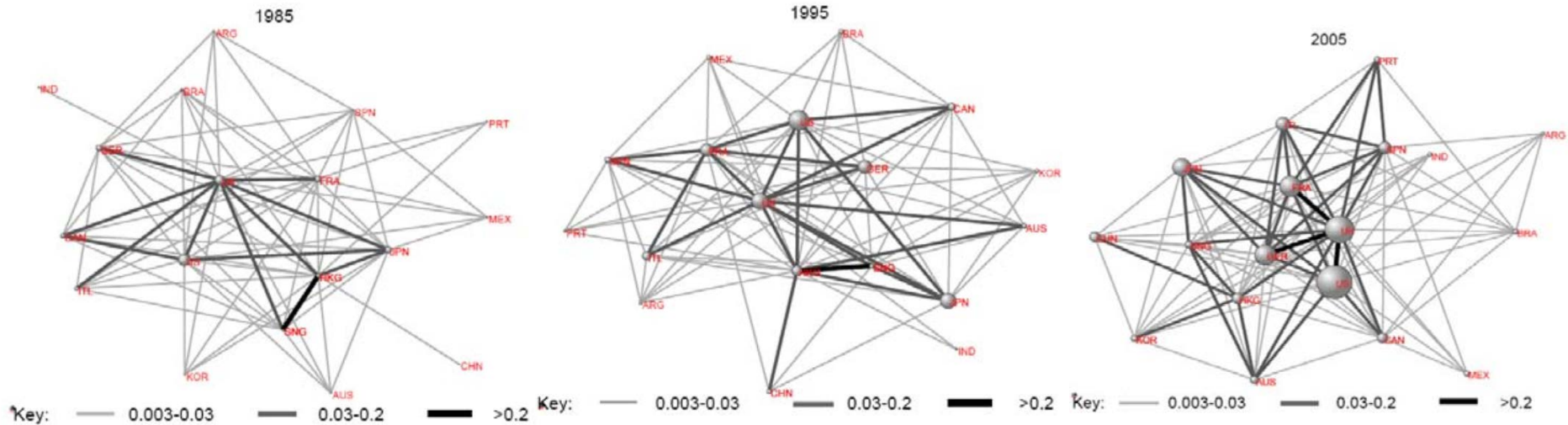
Evolution of the international financial network

Cross-border stocks of external assets and liabilities in 18 countries in 1985, 1995 and 2005

Chart 1: Global Financial Network: 1985

Chart 2: Global Financial Network: 1995

Chart 3: Global Financial Network: 2005



Specifically, nodes are scaled by $(\text{Total External Assets} + \text{Total External Liabilities})$ for each node, and links between nodes i and j by $(\text{Total External Assets}_{ij} + \text{Total External Liabilities}_{ij}) / (\text{GDP}_i + \text{GDP}_j)$. The data are developed and analysed in Kubulec and Sa (2008).

Conclusions

- Useful model to demonstrate IBM's role, structure & operation
 - Deploy with examples (relate to evidence in Section 1)

- Network properties & dynamics
 - Time variation
 - 'Robust yet fragile' tipping point dynamics
 - Interconnectedness itself as a source of fragility
 - Complexity, dimensionality, innovation \Rightarrow uncertainty