

Discussion on

“Which network measures explain the interest rate spread in the Mexican secured and unsecured interbank markets?”

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The paper

- Very interesting paper with fantastic data
- Connects the financial network literature with microeconomic and machine learning techniques
- The authors find that the bank's network position strongly associates with the interest rate spread
- They find that centrality plays a major role in this relationship, supporting the “too-interconnected-to-fail” and “too-big-to-fail” hypotheses

Comments & suggestions #1

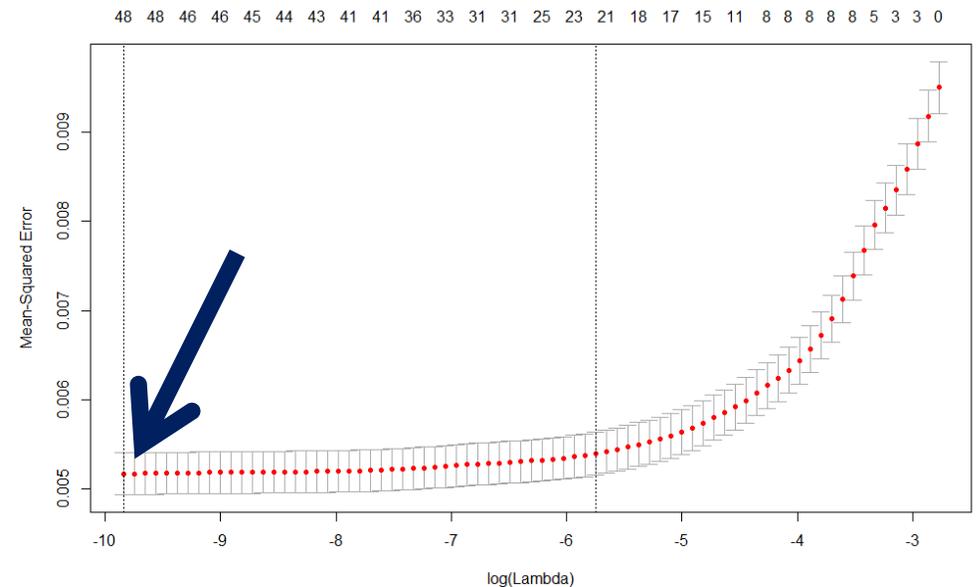
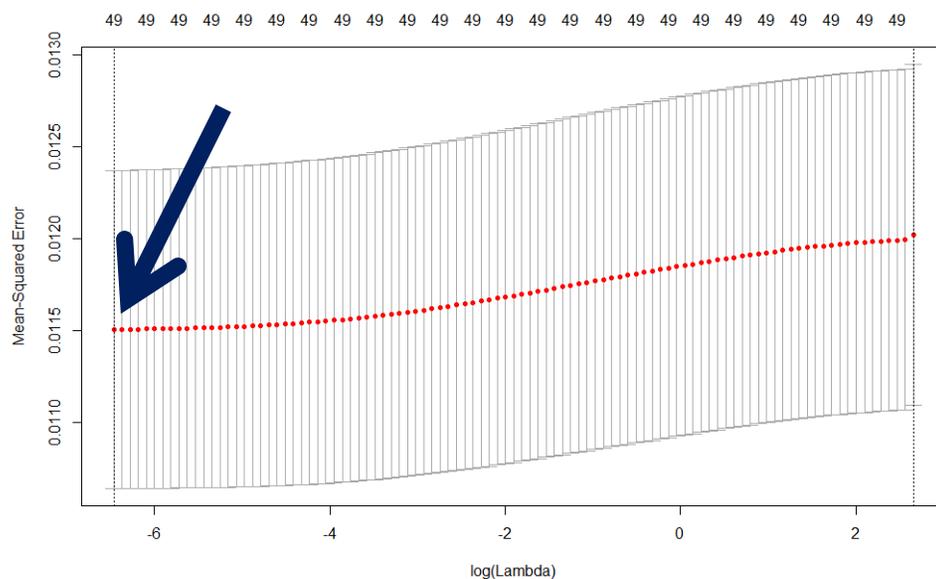
1. Network structure descriptors and balance-sheet information

- Extensive extraction of network features using many complex network and financial contagion metrics
- The same bank can have many network descriptors **IDENTICAL**, but with direct (and indirect) neighbors in completely different financial conditions
 - Imagine neighbors approaching illiquidity: interest rate spreads should be higher in this case
- **SUGGESTION:** mix network topology with balance-sheet information of neighbors in the specification
 - For instance, average (direct/indirect) neighbors' liquidity, size, leverage, etc

Comments & suggestions #2

2. Room for more complex machine learning methods

- **SUGGESTION:** Regularization is very low, suggesting there is room for more complex models → fitted models approach usual OLS as regularization is very small

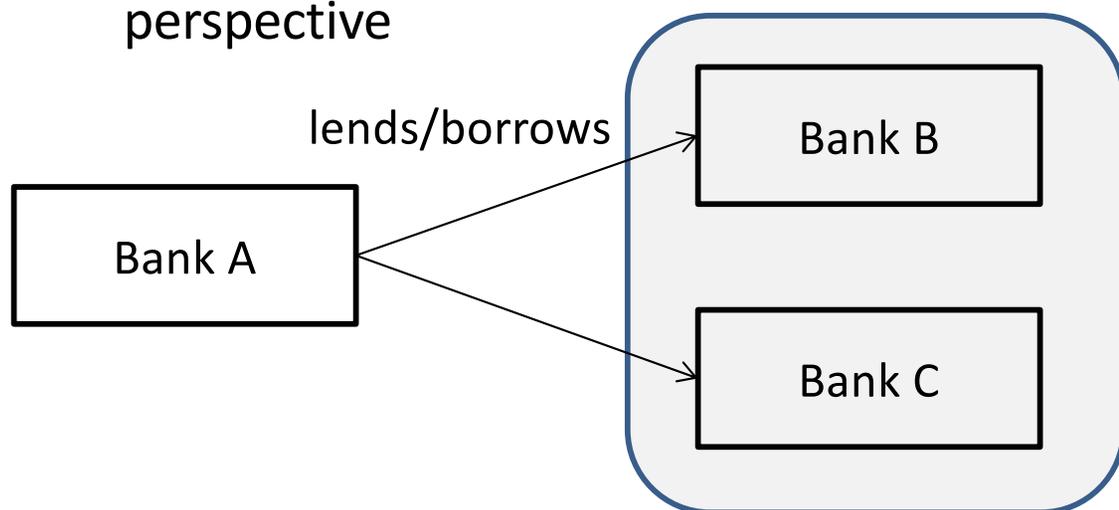


- Tradeoff between more complex (black-box) methods and traditional white-box methods: “*interpretable machine learning*” to uncover partial effects

Comments & suggestions #3

3. Dive into the transaction-level data

- The authors collapse transaction- to bank-level data in their analysis
- Establishing a financial connection only occurs when both parties agree
- Cannot control for demand or supply in the interbank market
- **SUGGESTION:** Use transaction-level data and make within-bank estimations via borrower/lender fixed effects
 - Enables to control either the demand or supply, depending on the analyzed perspective



“...compare network descriptors of B and C for the same lender/borrower A”

Minor comments

- **Model selection:** tune α (regularization mixture between L_1 and L_2) and λ (regularization term) together via k -fold cross-validation over the training set
- **More controls:** add bank size and its foreign exposure
 - Bank size should correlate with network centrality measures
- **Ratio AM/PM:** name is misleading → maybe rename to “morning share of ops” and use morning / all transactions expression
- **Literature review is long-winded:** streamline it with the most related literature only
- **Paper deals with associations and not causal effect:** review used verbs

Thank you!

Thiago Christiano Silva