Global vs. Local Banking: A Double Adverse Selection Problem

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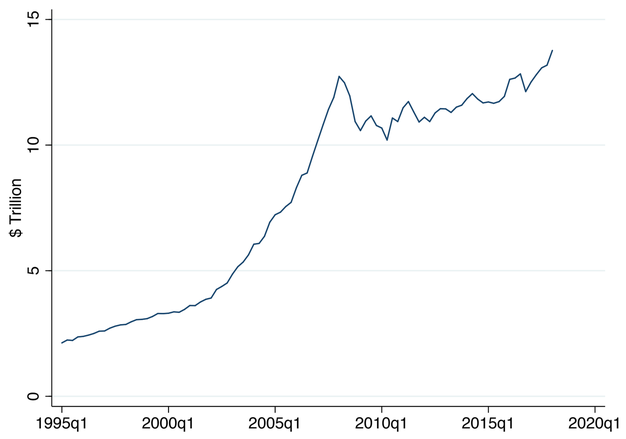
What I do

- Study how globalization of banking systems has affected credit allocation and the macroeconomy.
- Show—both theoretically and empirically—that it creates a double adverse selection problem in credit allocation, which generates spillover and amplification of funding shocks across countries.

Motivation

Total Global Banking Credit, All countries

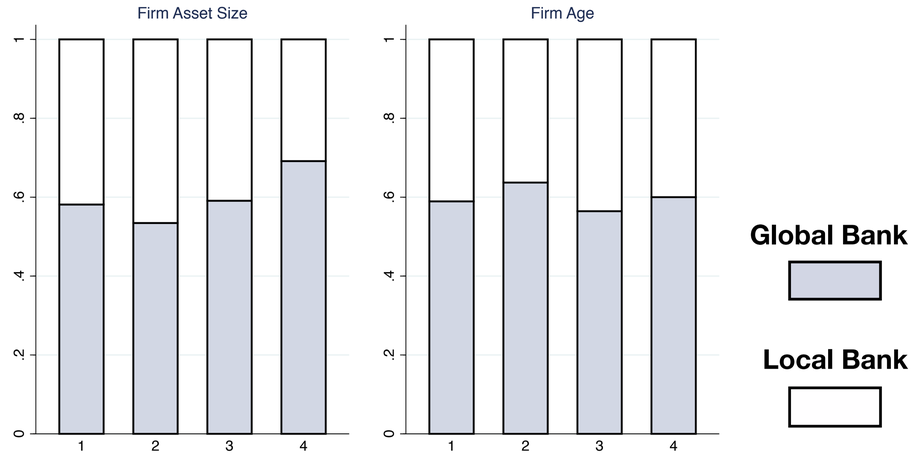


Research questions:

- Why do some firms borrow from global banks instead of the traditional local banks?
- What role do global banks play in propagating shocks?

Traditional Theory

Firm-Bank Sorting, by Firm Size and Age Quartile



New Theory

- Global banks specialize information on global risk.
- Local banks specialize information on local risk.

Model

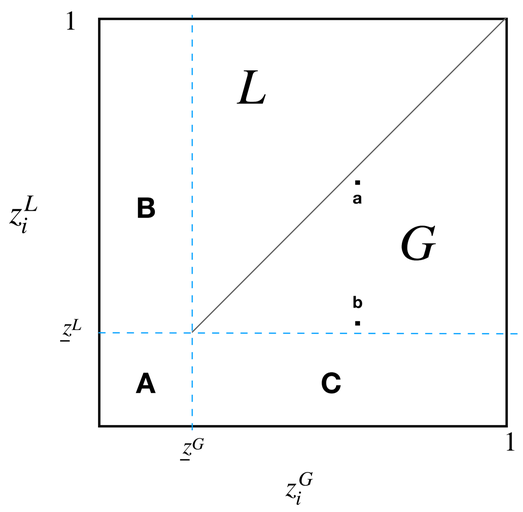
Ingredients

- Firms: returns dependent on global and local risk.

$$z_i = \underbrace{z_i^G}_{global} + \underbrace{z_i^L}_{local} + \underbrace{u_i}_{idiosyncratic}$$

- Banks: double information asymmetry.
  - Global banks (G) → information on z_i^G.
  - Local banks (L) → information on z_i^L.
  - Offer break-even interest rates that reflect firm and adverse selection.

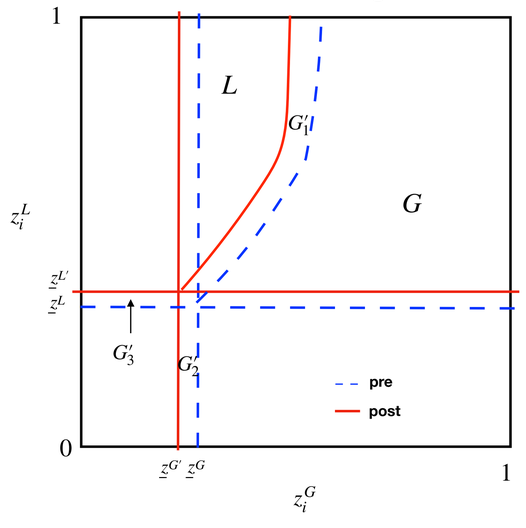
Prediction 1: Equilibrium firm-bank sorting and double adverse selection



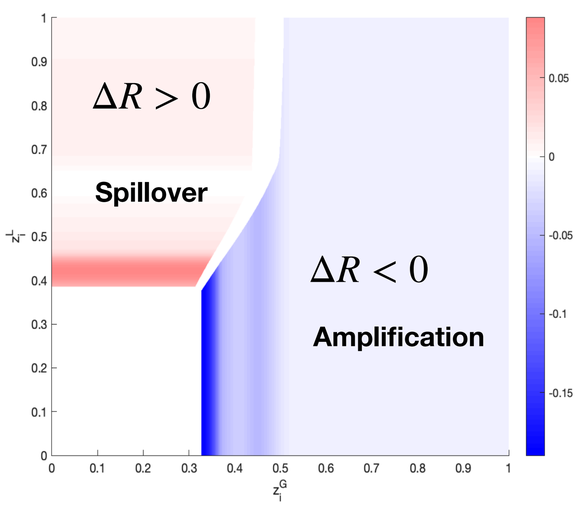
Prediction 2: Adverse selection channel of international transmission.

Example: expansionary monetary policy in home country of global banks

Extensive Margin



Intensive Margin

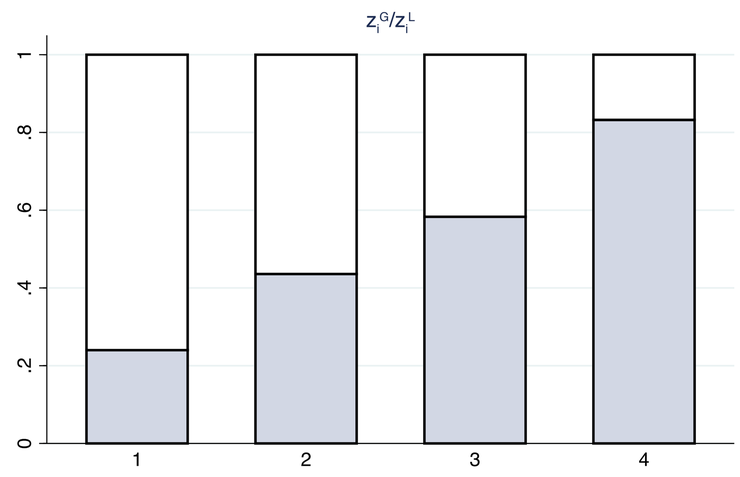


Empirics

Data:

- Syndicated loans from Dealscan across 24 countries.
- Firm balance sheet data from Amadeus, Orbis, Compustat Global.

Test 1: Global banks lend more to firms with higher z_i^G/z_i^L, and vice versa for local banks



$$z_{it} = \underbrace{\beta_i^G z_t^G}_{z_{it}^G} + \underbrace{\beta_i^L z_t^L}_{z_{it}^L} + u_{it}$$

Test 2: Shock to bank funding cost affect credit allocation at the extensive and intensive margin.

- Laboratory: Eurozone firms
- Funding shock: monetary policy shocks
- Data: tick-by-tick futures data (Source: CQG Data Factory)
  - Eurozone monetary policy shock: 3-month Euribor futures
  - US monetary policy shock: 30-day Federal Funds futures

$$\Delta Y_{it} = \sum_{q=1}^{3} \beta^q (\Delta USR_t \text{ x } T_{it-1}^q) + \sum_{q=1}^{3} \delta^q (\Delta EUR_t \text{ x } T_{it-1}^q) + \sum_{q=2}^{3} \gamma^q T_{it-1}^q + \nu_i + \sigma_t + \epsilon_{it}$$

	(1) Extensive	(2) Intensive
$\Delta MP^{US} * T^1$	-0.049	**-89.354***
	(0.119)	(48.542)
$\Delta MP^{US} * T^2$	**-0.241****	62.796
	(0.120)	(52.769)
$\Delta MP^{US} * T^3$	-0.117	**98.427****
	(0.118)	(46.293)
$\Delta MP^{EU} * T^1$	0.057	**136.864****
	(0.118)	(56.249)
$\Delta MP^{EU} * T^2$	**0.264****	76.563
	(0.118)	(52.087)
$\Delta MP^{EU} * T^3$	0.173	**-101.876***
	(0.116)	(54.681)
Firm FE	Yes	Yes
Time FE	Yes	Yes
Observations	11,454	3,367
R-squared	0.067	0.052

A 25-basis-point shock to Euro area monetary policy

- ↑ the probability of firm in the second tercile of z_i^G/z_i^L distribution switching into a US bank by 8.5 percentage points.
- ↓ the interest rate spread for the infra-marginal firms that continue to borrow from US banks by 25 basis points.

  ➡ Spillover effects
- ↑ the interest rate spread for the infra-marginal firms that continue to borrow from Euro area banks by 34 basis points.

  ➡ Amplification effects