BANK LENDING AND RELATIONSHIP CAPITAL

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Abstract

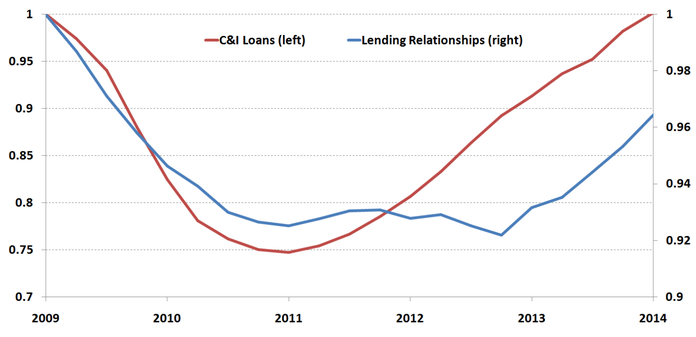
I develop a dynamic equilibrium theory of bank lending relationships in an economy subject to search frictions and limited enforceability.

The model features a contracting problem, embedded within a directed search equilibrium, with aggregate and bank-specific uncertainty.

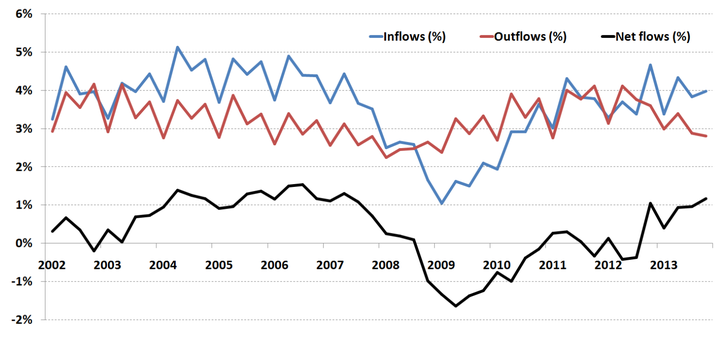
The interaction of the two frictions distorts the optimal allocation of credit along both the intensive and extensive margins and generates a slow accumulation of relationship capital.

I calibrate the model to study aggregate and cross-sectional implications and analyze policies aimed at reviving bank lending.

Fact 1: Sluggish Credit Recovery



Fact 2: Credit Relationship Flows



Crises characterized by a sizable destruction of lending relationships lead to a significant contraction in credit and a slow recovery, consistent with the Great Recession.

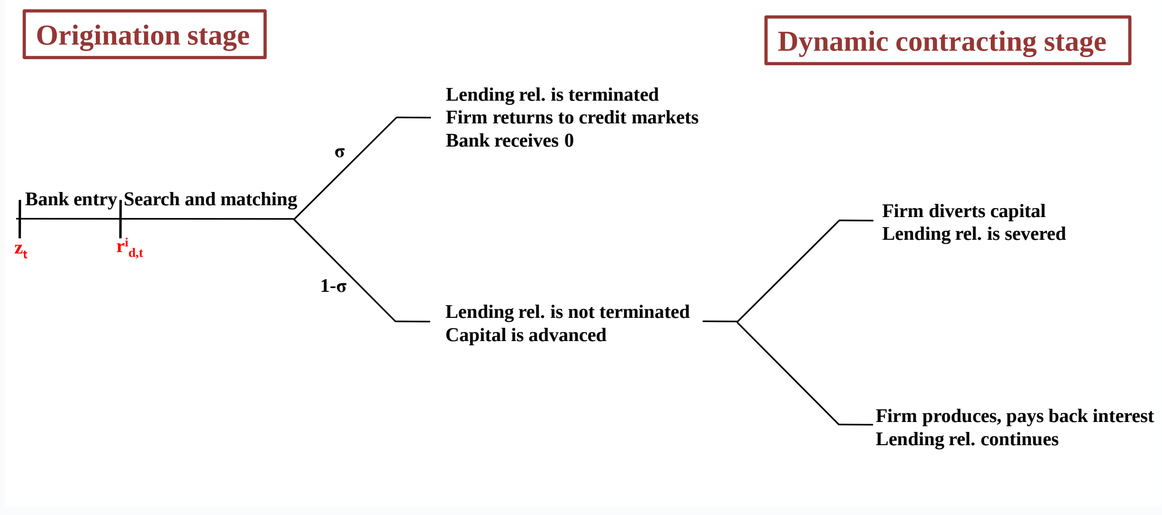
MODEL

Key Ingredients

- **Premise A**: **Relationship banking matters**
  - Banks alleviate credit frictions through repeated interactions with borrowers
  - Long-term financing contract subject to limited contract enforceability
  - Intensive margin of credit
- **Premise B: Credit markets are decentralized and imperfectly competitive**
  - Forming new lending relationships is neither free nor immediate
  - Directed search environment
  - Extensive margin of credit

- **A novel approach to credit markets:**
  - **General Equilibrium framework with real and financial shocks**
  - **Jointly accounts for the formation *and* dynamics of credit relationships**

Timeline



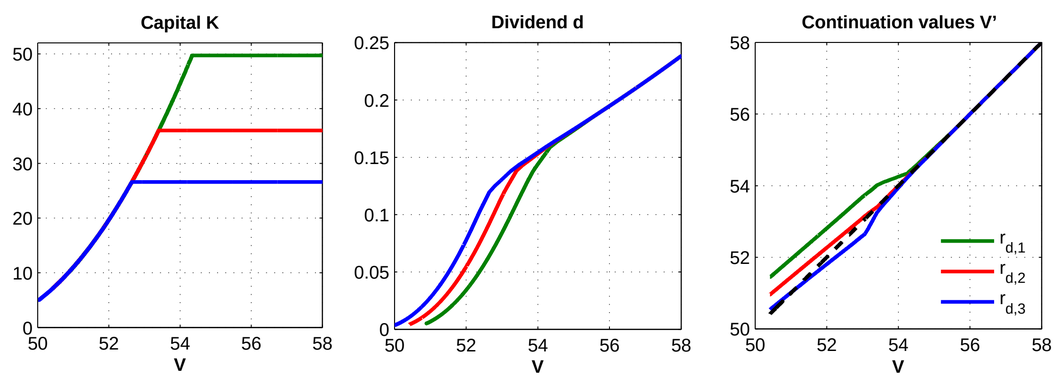
A. Long-Term Financing Contract

- **Dynamic Contracting Problem**

$$B(z, r_d, V) = \max_{K,d,\{V'\}} f(z,K) - d - r_d K + \beta \mathbb{E}\left[(1-\sigma) B(z', r'_d, V')\right]$$

subject to

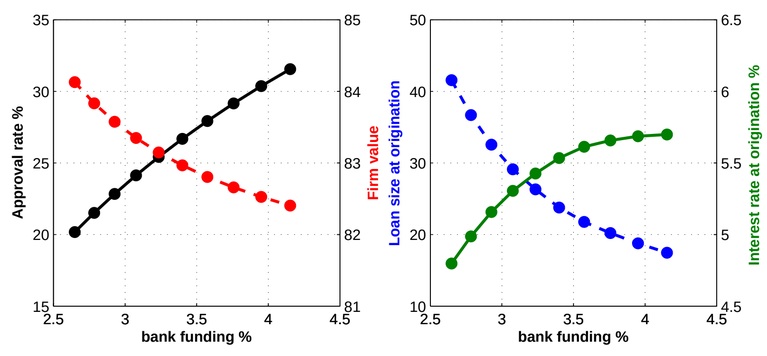
$$\begin{aligned} V &= u(d) + \beta \mathbb{E}\left[(1-\sigma)V' + \sigma W'\right], && \text{(Promise-Keeping)} \\ V^O(z,K;W) &\leq V, && \text{(Enforcement)} \\ d &\geq 0. && \text{(Non-negativity)} \end{aligned}$$



B. Credit Origination in Frictional Markets

- **Credit markets: decentralized, subject to search and matching frictions**
  - Degree of competition and financing uncertainty are endogenous
- **Each bank type chooses the optimal contractual terms to advertise**
  - The generosity of these terms is reflected by firm value $\mathbf{V}$ at origination
  - Equilibrium market tightness: ratio of loan offers to applications, $\boldsymbol{\theta(V)}$
- **Banks choose optimal contract terms to maximize expected profits**

$$B^*(z, r_d; W) = \max_V q(\theta(V;W)) B(z, r_d, V; W)$$



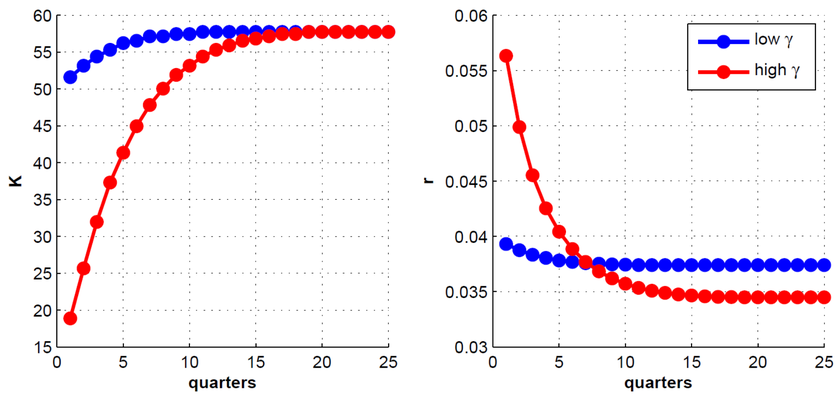
RESULTS

A. Banking Crises

- **Response after an increase in bank funding costs**
- **Propagation mechanism due to intensive *and* extensive margins of credit:**
  (a) severance of lending relationships in the crisis
  (b) slow process of credit reallocation during recovery
- **Asymmetric effects across borrowers**

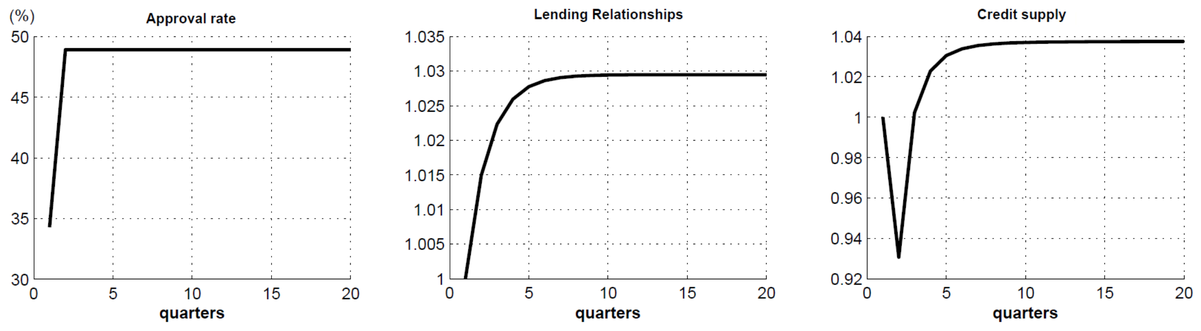
B. Bank Competition Effects

- **Evolution of contractual terms depends on degree of bank competition**



C. Policy Experiment: Reviving Credit Origination

- **A novel policy targeting credit-rationed borrowers: Subsidy to origination costs**
  - Different from Funding for Lending scheme or T-LTRO
- ***Positive effects:*** improved access to credit and lending rates for rationed borrowers
- ***Negative effects:*** funded borrowers can become more constrained in the short-run (GE effect)



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