Discussion of Isoré: *"A Search Model of Bank Default"*

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Service for the Audience: What the Paper is About

First things first

- Very interesting paper with policy relevant implications (bank default, credit rationing, etc.)
- Highly topical contribution in macro-finance (risk-shifting $\leftrightarrow$ credit rationing)
- On top of that: paper provides a great *"playground"* for models discussed at this conference

Model Ingredients

- Three agents: financial investors $\leftrightarrow$ bankers $\leftrightarrow$ entrepreneurs
- Markets are potentially frictional $\Rightarrow$ Search model
- Credit market: pool of entrepreneurs search for loan; pool of banks screen applications:

$$m_C(\mathbf{N}_{\mathbf{E}^u_{k,t}}, \mathbf{N}_{\mathbf{C}^v_{k,t}})$$

entrepreneurs searching for a loan; **vacant credit lines**

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- Similarly, financial market: pool of financiers; pool of banks searching for financing:

$$m_F(\mathbf{N_{L_t^u}}, \mathbf{N_{C_t^u}})$$

financiers searching investment opp.; **credit lines banks want to finance**

- Banks are a collection of credit lines: unfunded/vacant/productive

$\Rightarrow$ "portfolio choice" of banks

- What are $N_{E_{k,t}^u}$, $N_{C_{k,t}^v}$, $N_{L_t^u}$, and $N_{C_t^u}$?

$\Rightarrow$ Nash bargaining solution

- How large are banks?

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- How to share proceeds from productive entities:

$$\underbrace{A_{k,t}}_{sector-specific} \qquad \underbrace{p_{j,k,t}}_{idiosyncratic}$$

- Output is used to reimburse bankers with bargaining power δ_C at rate $\Psi_{i,j,k,t}$
- Commercial banks pay financiers $\rho_{i,t}$ based on bargaining power δ_F
- Financial investors searching for banks bear opportunity cost c_I
- Bnaks bear cost c_B while searching for capital
- Entrepreneurs pay c_E while looking for a loan

$\Rightarrow$ Jointly also determine size of bank

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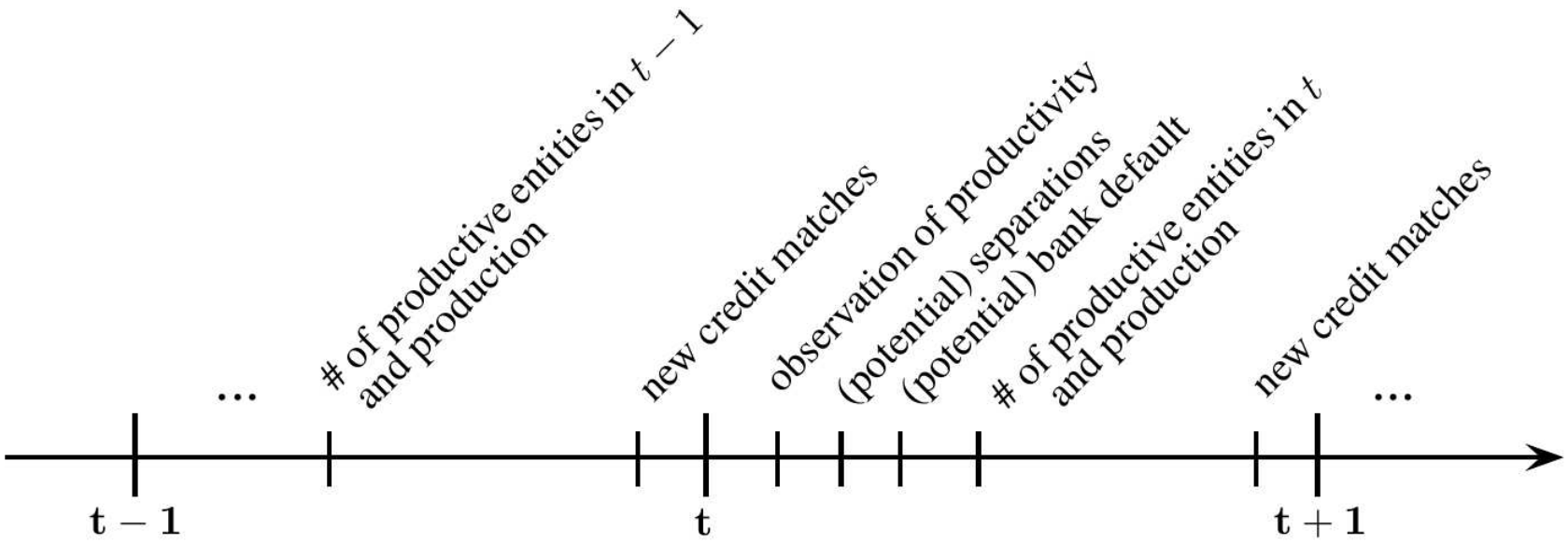

Figure: Timeline of the model

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- Surplus sharing on credit market:

$$\Psi_{k,t} = \arg\max \left(\mathbf{C^p_{k,t}} - \mathbf{C^v_{k,t}} \right)^{\delta} \left(\mathbf{V^p_{k,t}} - \mathbf{V^u_{k,t}} \right)^{(1-\delta_C)}$$

value fct. of credit line ; **value fct. of entrepreneur**

- Given search costs and transition probabilities, Bellman equations yield:

$$V^u_{k,t}; V^p_{k,t}(p) \quad ; \quad C^u_{k,t}; C^v_{k,t}; C^p_{k,t}$$

- Only credit lines with a sufficiently high productivity are continued:

$$p_{i,j,k,t} < p^R_{i,k,t}$$

- Similarly, surplus sharing on financial market:

$$\rho_t = \arg\max \left(I^v_t - I^u_t \right)^{\delta_F} \left(C^v_{k,t} - C^u_t \right)^{(1-\delta_F)}$$

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- Optimal bank size is determined by marginal cost of vacant credit lines
- Application screening cost is in creasing in the number of sector-k-vacant credit lines:

$$C_k = \kappa \left(N_{C^v_{i,k,t}} \right)^{\epsilon}$$

- The threshold for continuation is implied by $p^R_{i,k,t}$ and banks default if $I^v_t < I^u_t$

My Two Cents on the Paper

- Does credit screening make you a bank? How about maturity transformation? How about (demand) deposit taking?
- How to define welfare in the model? Relevant for optimal policy questions.
- You seem to implicitly assume that the number of "fitting" matches increases with the number of entrepreneurs/credit-lines/financiers. But this is not necessarily the case. Think of interactions amongst banks.
- You also seem to assume that each entrepreneur only applies for one credit line. What about the "rotten eggs"?
- How about different forms of the matching function?
- Model is a great playground to be included in network and ABM models.

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Thank you!