THE MACROECONOMICS OF LABOR AND CREDIT MARKET IMPERFECTIONS

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CONTEXT

- Extends the standard Diamond–Mortensen–Pissarides (DMP) matching model to **two search markets**: credit and labor.

- Shows how the interaction between these two frictions creates a **financial accelerator** (a general equilibrium feedback loop between the two markets).

- Contributes to how tighter financial conditions directly increase equilibrium unemployment and magnify the economy's response to shocks.

Main question:
How do **credit market imperfections** interact with **labor market frictions** to determine unemployment, vacancies, and output?

- Can a tractable, symmetric, two-market search model generate a "credit channel" or "financial accelerator" that amplifies macroeconomic volatility?

ANSWER: CORE MECHANISM

- A firm passes through four stages: fund-raising → recruitment → production → destruction.

- Each stage involves search frictions and Bellman value equations for entrepreneur (E_i) and banker (B_i). (i = 0, 1, 2, 3)

- Free entry: $B_0 = E_0 = 0$.

- Equilibrium tightness:

$$\phi^* = \frac{1 - \beta}{\beta} \frac{k}{c} \qquad \text{(credit market tightness = E/B)}$$

- Loan contract (given wage):

$$\rho = \beta(y - w) + (1 - \beta) \frac{(r + s)\gamma}{q(\theta)}$$

- **Feedback loop(the Accelerator):** tighter credit $\Rightarrow$ fewer financed firms $\Rightarrow$ fewer vacancies ($\theta \downarrow$) $\Rightarrow$ Lower aggregate output and lower expected profits for all matches $\Rightarrow$ Fewer banks enter the credit market $\Rightarrow$ Credit becomes even tighter

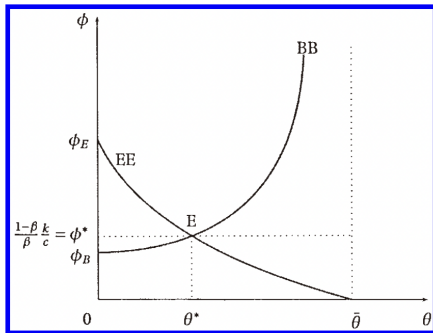## ILLUSTRATION: CREDIT–LABOR INTERACTION

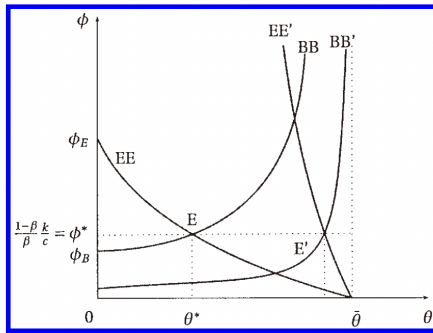FIGURE 1. EQUILIBRIUM CREDIT AND LABOR TIGHTNESS

FIGURE 2. MORE EFFICIENT CREDIT MATCHING

- $\bar{\theta}$: hypothetical, frictionless Pissarides equilibrium. It is the level of labor market tightness (θ) the economy would have if credit markets were perfect.

POSITIONING

- A New Accelerator: The amplification mechanism is purely from the general-equilibrium interaction of two search markets.

- Integrates finance into DMP framework—links unemployment and financial conditions.

- Provides a unified micro-foundation for the **credit channel of monetary policy** (which could be seen as affecting k or r).

CONCLUSION AND LIMITATIONS

- **Main insight:** Credit frictions amplify employment fluctuations—forming a financial accelerator through labor-credit interaction.
- **Policy relevance:** Financial liberalization lowers long-run unemployment but may cause short-run overshooting.
- **Limitations:**
    - Homogeneous firms and banks; no collateral or default risk.
    - Lack of the empirical calibration.
- **Future work:**
    - Add firm/bank heterogeneity, collateral, and monetary policy channels.
    - Empirically test the "credit gap" amplification magnitude.