Discussion

Falling Interest Rates and Credit Reallocation: Lessons from General Equilibrium

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  Also cyclical low interest rate periods

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  How?
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- Elegant and carefully crafted framework
  - Theory + Dynamics/Quantification + Empirics

Outline of Discussion

1. Reallocation vs. Aggregate Effects (in general)
2. Mechanism in the paper
3. Comments/Remarks/Questions

Planning Problem: Reallocation vs. Aggregate Effects

- Let's start with the planning problem
  Adding up utilities

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- Social welfare

$$W = \underbrace{\int AF(k_A)\, dG(A)}_{\text{Output}} - R\left(\underbrace{\chi\left(\int k_A dG(A)\right)}_{\text{Cost of Investment}} - w\right)$$

Planning Problem: Reallocation vs. Aggregate Effects

- Take any perturbation (in the paper: interest rates)

$$dW = \int AF'(k_A)\, dk_A dG(A) - R\chi'(K) \int dk_A dG(A)$$

Planning Problem: Reallocation vs. Aggregate Effects

- Take any perturbation

$$dW = \int \left(\underbrace{\overbrace{AF'(k_A)}^{\text{Mg. Benefit}} - \overbrace{R\chi'(K)}^{\text{Mg. Cost}}}_{SNV_A} \right) dk_A dG(A)$$

- SNV_A : Social net valuation

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  1. First term captures reallocation: it is negative if $d\psi_A$ goes up for low NSV_A (low A)
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     This is the key mechanism of the paper!
  2. $\mathbb{E}_A\left[\psi_A SNV_A\right]$ is typically positive due to aggregate financial frictions
  3. This derivation only requires preferences, technologies, and resource constraints (different from paper)
     - No assumptions on market structure
     - Check "Welfare Accounting" for a general version of this decomposition

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- Effect of changes in rates
  - Low rates $\Rightarrow$ More borrowing capacity
  - Low rates $\Rightarrow$ High prices

    Stronger effect for for high k_A investors

$$\frac{dk_A(q(R), R)}{dR} = \underbrace{\underbrace{\frac{\partial k_A}{\partial q}}_{<0} \underbrace{\frac{dq}{dR}}_{<0}}_{>0} + \underbrace{\frac{\partial k_A}{\partial R}}_{<0} \gtrless 0$$

Comments/Remarks/Questions

1. **Role of net vs. gross capital purchases**
   - If investors start with some capital $qk_A = w + b_A + qk_A^0$

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2. **What is the right frequency for the model?**
   - Calibration is annual
   - Empirical analysis is high-frequency (aggregated)
   - We need
     - Persistent productivity differences
     - Persistent financial frictions
     - Not fully elastic capital supply in the long run

Comments/Remarks/Questions

3. **Empirical results**
   - "Monetary expansion is weaker in regions with a lower elasticity of real-estate supply"
   - Sector-Year, Sector-Region, Region-Year FE: sources of identification?
   - GDP in data vs. Output in the paper: $\frac{dW}{dR}$ vs. $\frac{dY}{dR}$

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4. **Evidence on the GE channel**
   - Key mechanism: prices of capital (real-estate) go up $\Rightarrow$ productive investors no longer purchase capital
   - Can we find more direct evidence?
     - Misallocation literature (dispersion on MPK)
   - Could there be other sources of misallocation?
     - Asymmetric information?
     - Bubbles?

Comments/Remarks/Questions

5. **Constrained efficient solution**
   - Papers finds that marginal entrepreneur is more efficient than in CE
   - Careful: less efficient entrepreneurs are worse off
   - Paper looks at aggregate efficiency

Conclusion

- Nicely executed paper
- Plausible channel for why lower rates reduce output and welfare via misallocation
  - Clear mechanism
- Going forward: more measurement needed!