Discussion of "Falling Interest Rates and Misallocation: Lessons from General Equilibrium" by Asriyan, Laeven, Martin, Van der Ghote, and Vanasco

Alp Simsek (MIT, visiting Booth)

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Secular decline in interest rates in recent decades. Many causes

Conventional wisdom: Low rates stimulate investment and output

Growing concern that low rates can create misallocation, zombies...

This paper: Low rates can induce inefficient misallocation through GE

Discussion: Simpler version to illustrate forces and policy implications

Two periods 0, 1. Single consumption good. Preferences $E_0[c_1]$

Small open economy: Can borrow and lend at the gross rate R

Entrepreneurs (E): Production function Ak

- Two types: $A \in \{A_L, A_H\}$ with unit mass and endowment w_L, w_H
- Borrowing constraint: Only fraction, λ , of output is pledgeable

Capital producers with a convex cost $\chi(k) \Longrightarrow$ Capital supply $K^{S}(q)$

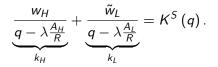
Equilibrium conditions: Marginal E has low productivity

Suppose H-types are constrained (w_H is low). Equilibrium:

• L-types are marginal. They determine the price of capital:

$$q = \frac{A_L}{R}$$

• Capital market clearing: There is $\tilde{w}_L < w_L$ such that:



• H-types' investment determines productivity:

$$Y_{H} = A_{L}K^{S}(q) + (A_{H} - A_{L})k_{H}$$

$$k_{H}=rac{w_{H}}{q-\lambdarac{A_{H}}{R}}$$
 where $q=rac{A_{L}}{R}$ and $K^{S}\left(q
ight)$

Low R expands K^S(q) (greater "neoclassical" investment)
Low R enables H-types to expand more (improved allocation)
Low R raises q and induces H-types to shrink (misallocation)

Special case with inelastic supply $(K^{S}(q) = 1)$ and $\lambda < \frac{A_{L}}{A_{H}}$:

$$Y_H = A_L + (A_H - A_L) k_H$$
 where $k_H = rac{w_H}{q - \lambda rac{A_H}{R}} = rac{w_H R}{A_L - \lambda A_H}$

Low *R* can even **decrease the output!**

Inefficient congestion on H-types via GE pecuniary externality:

- Social NPV of k_L is negative, even though private NPV ≥ 0
- Different than efficient allocation to less productive firms
- Different than inefficiencies in PE (MH, evergreening/reach for yield)

Extends to a surprise rates changes in a dynamic setting

- Kiyotaki-Moore (1997) "balance sheet" externalities are temporary
- Productive Es are (eventually) net buyers of capital/factors

Suggestion: Extend to broader factors. Congestion via wages/rents

Paper considers targeted interventions based on Es productivity

- Planner respects budget and borrowing constraints but chooses $\{k_A\}_A$
- Suppose planner sets binding limit \overline{k}_L . Problem with inelastic supply

$$\max_{\overline{k}_L} A_L + (A_H - A_L) k_H + (w_H + w_L) R$$

s.t. $k_H = \frac{w}{q - \lambda \frac{A_H}{R}} = 1 - \overline{k}_L$

• Set $\overline{k}_L = 0$ and $k_H = 1$. Avoid misallocation and maximize output!

How about non-targeted interventions, e.g., "monetary policy"?

Raising the interest rate can improve welfare

- Suppose planner subsidizes savings $R + \tau$
 - Financed with lump-sum period-1 taxes on each E
- Planner's problem with inelastic supply:

$$\max_{\tau} W = A_L + (A_H - A_L) k_H + (w_H + w_L) R$$

s.t. $k_H = \frac{w}{q - \lambda \frac{A_H}{R + \tau}} \leq 1$ and $q = \frac{A_L}{R + \tau}$

• Set τ so that $k_H = 1$. Avoid misallocation and maximize output!

Result generalizes to elastic supply: This model still has $\frac{dW}{d\tau}\Big|_{\tau=0} > 0$ • Second-order distortion on capitalists' surplus, $(qK^S - \chi(K^S))R$ Can extend result to monetary policy (closed economy + nominal rigidity)

- Raising R has macro costs: reduces aggregate demand & output
- But the macro costs are second order at the efficient factor utilization (Caballero-Simsek (2020) "Prudential Monetary Policy")

Aside: Macroprudential policy, $\overline{\lambda} \leq \lambda$, tends to worsen misallocation

- Binds relatively more for H-types than L-types
- Some support for monetary policy in favor of macroprudential policy!

Conclusion: Intuitive and policy-relevant mechanism

Elegant model with a very intuitive mechanism. Two conditions:

- L-types are marginal and determine the price of scarce factors
- H-types are constrained and determine aggregate productivity
- \Longrightarrow GE congestion. Social NPV < Private NPV. Low rates can hurt

Some suggestions:

- Focus on welfare not output. W declines under weaker conditions
- Given competing effects (on allocation), empirical evidence would help
 - Plan is reasonable: Interact low rates with land supply elasticity
- Broaden the argument to facilitate new empirical approaches:
 - Factors beyond capital/land. Skilled labor, commodities...
 - Heterogeneity in rate-sensitivity of capital: residential/nonresidential