Discussion

Risk-Taking Dynamics and Financial Stability
An Evolutionary Perspective

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Summary

- **This paper**
  - Financial wealth distribution/accumulation $\Rightarrow$ Aggregate risk taking
  - *Distributions* $\Rightarrow$ *Aggregates*
- Positive results
  - Volatility and procyclicality
- Normative results

Environment

- Bankers/investors $(i = 1, \ldots, N)$ solve

$$\max_{c_{it}, k_{it+1}, S_{it}} \mathbb{E}_i \left[\sum_t^{\infty} (\beta_i)^t \log (c_{it}) \right]$$

$$c_{it} + k_{it+1} = \tilde{R} (S_{it}) k_{it}$$

- Two decisions
  - Consumption/savings
  - Investment/portfolio decision

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- Two decisions
  - Consumption/savings
  - Investment/portfolio decision
- Heterogeneity in
  1. Discount factor
  2. Beliefs
  3. **Investment opportunities**

Solution

- Log utility helpful for aggregation
  - Linear consumption/investment policies

$$k_{it+1} = \beta_i \tilde{R}\left(S_{it}\right) k_{it}$$

  - Myopic portfolio decision

$$S_{it}^{\star} \in \arg\max \mathbb{E}_i \left[\log\left(R_{it+1}\right)\right]$$

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- Result:
  - Growth-optimal portfolio: investors with dominated expected log returns disappear
- Motivates the following assumption
  - All investors have same expected log return, different volatilities

First scenario

- Two states (high and low), two investors (risky and safe)
- Proposition 1:
  - **(Volatility)** The higher the amount of capital in the hands of risky investors today, the higher the future volatility of capital
  - **(Pro-Cyclicality)** After positive shocks, capital losses are higher after a bad shock and capital is more volatile
- *Distributions* $\Rightarrow$ *Aggregates*

First-Best/Constrained Problems

1. First-best

$$\max \sum_i \theta^i \sum \beta_i^t \mathbb{E}\left[\log\left(c_{it}\right)\right]$$

$$\sum_i \left(c_{it} + k_{it+1}\right) = \sum_i \tilde{R}\left(S_{it}\right) k_{it}$$

   - Solution:
     - Breaks the link between past returns and investment
     - Constant optimal share of capital
     - Replicating complete markets

2. Constrained planner: intermediate result

Extensions

1. Spillovers: introducing a labor sector
   - Planner finds optimal to have smaller fluctuations, higher mean levels (Similar flavor to previous results)
   - Scope for bailouts (to increase wages)
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   - Introduced as technology for capital reallocation
   - "Completing markets"
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3. Policy results
   - Emphasis on "dynamic financial composition"

Comments/Thoughts

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3. Scope for more refined quantification
   - Rich cross section
4. Why infinitely lived investors?
   - Suggestion: OLG dynamics instead of log utility
   - Different predictions for ergodic distributions
   - Breakdown of growth optimal portfolio

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5. Evolutionary dynamics and welfare
   - Evolutionary dynamics: simple behavioral outcomes (often ad-hoc or myopic) to focus on dynamics/cross-section
   - But this paper brings welfare into the picture
   - Is there a big normative result can we can get out of it?
   - Are compositional effects of policy different from other effects?