Non Fundamental Dynamics and Financial Market Integration

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Barcelona GSE Summer Forum
Asset Prices and the Business Cycle
June 2013

The question

- When two economies integrate their financial markets, are they more subject to non fundamental dynamics (i.e. bubbles)?

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- Clearly an important and policy relevant question

Summary

- Martin and Ventura (2011) present an OLG environment where bubbles reduce financial frictions and matter for growth
- This paper extends MV so likelihood of bubbles depends on tightness of financial frictions
  1. Very tight financial friction: no bubble
  2. Medium Financial Frictions: bubbles are possible
  3. Relaxed Frictions: no bubbles
- Corollary: If economies 1 and 3 integrate, become like 2 so, integration -> bubbles, even though 1 and 2 in autarky were bubble free

Outline

- Some intuition/questions on the results
- A short empirical exploration
- An even shorter discussion of policy implications

A simplified environment

- Two agents with endowment of 1 each at $t = 1$.Consume at $t = 2$
- Agent 1 can invest and produce tomorrow with productivity $A > 1$
- Agent 2 can invest and produce tomorrow with productivity 1
- Agent 1 can borrow b from agent 2
- In absence of financial frictions $b = 1$ (the unproductive lends all its endowment to the productive) and the economy grows at rate A. No role for bubbles

Borrowing Constraints

- Assume borrowing limited by a fraction of its future income

$$b \geq -\theta(1+b)A$$

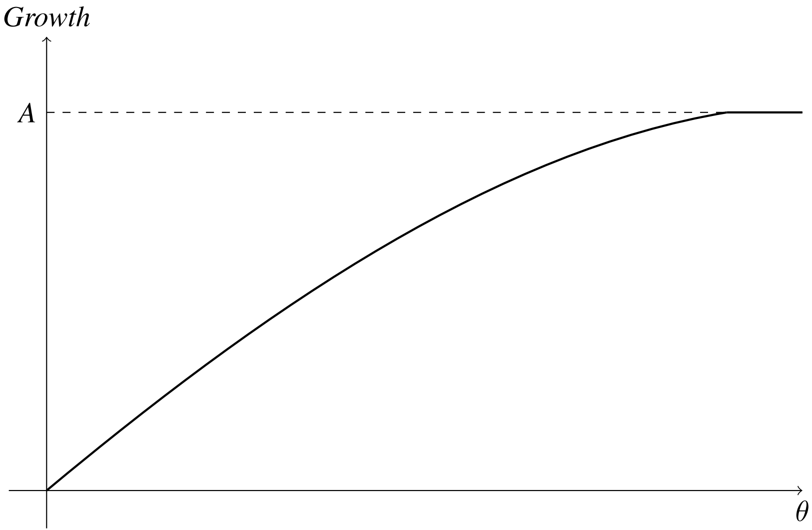
- Solving for b

$$b = \frac{\theta A}{1+\theta A}$$

- and for growth

$$g = \min(A, \frac{1+b}{2}A)$$

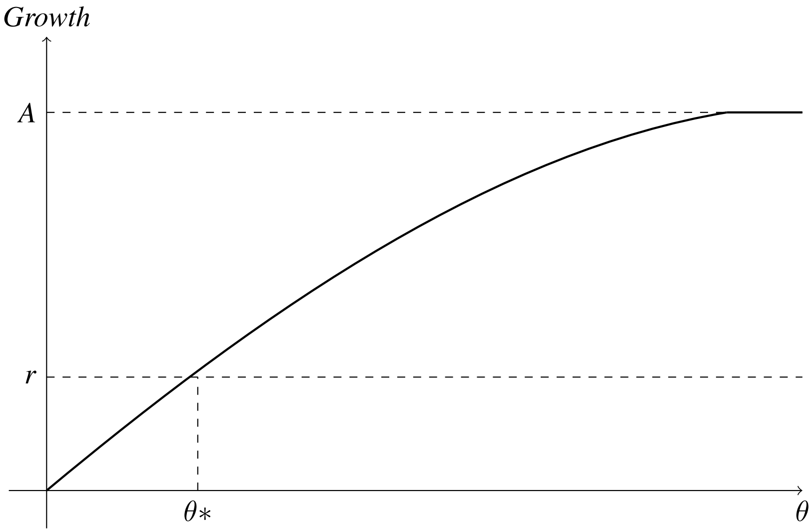
Growth and borrowing constraints



A bubble r

- A bubble r is simply a piece of paper
- Sold by the productive agent to the unproductive agent
- Price of it goes from 1 to $r > 1$
- In principle it could solve the financial frictions (as it transfers resources from the unproductive to the productive) but..
- To be sustainable has to generate enough growth

Can a bubble r be sustained?



My intuition

- Financial market frictions limits growth
- When they limit growth they might also limit the scope for bubbles..as bubble needs growth to be equilibria
- But in MV bubbles exactly circumvent tight financial frictions.. here they do not
- Not obvious from the simple environment why this is the case

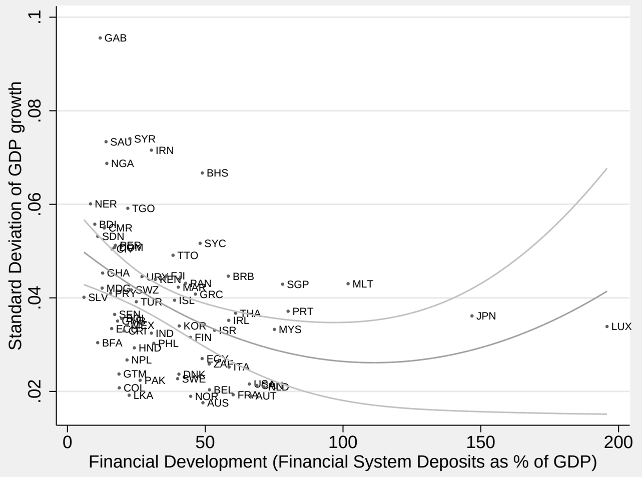
An empirical exploration

- Assume bubbles are associated with volatility
- The paper suggests that volatility should be non monotone in financial development
- Low in low financial development, High in medium and low again for high

Measures

- Volatility:Standard Deviation of yearly GDP growth (WDI, 1960-2011)
- Financial Development: Average deposits to financial Sector to GDP (Other measures as well) (WFD, 1960-2011)

Bubbles (Volatility) and Financial development



Controlling for GDP per capita

- Running the Regression

$$Vol_i = \beta_1 GDP\_PC_i + \beta_2 FD_i + \beta_3 FD_i^2 + \varepsilon_i$$

- Yields $\beta_2 < 0, \beta_3 > 0$
- Still no evidence of the increasing link!

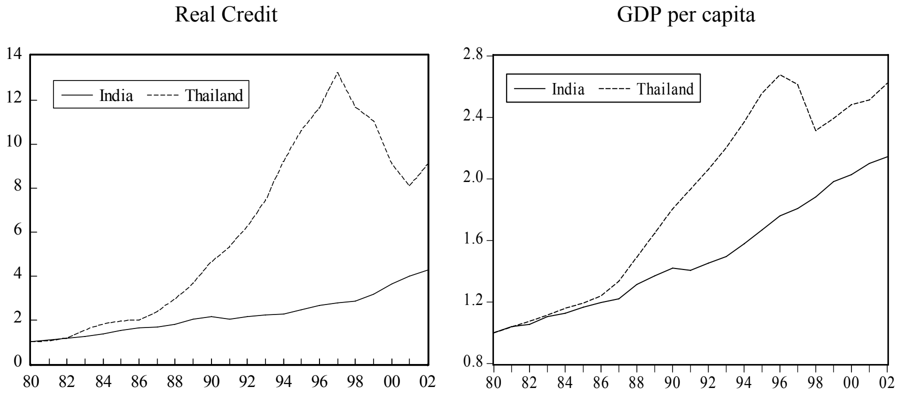
Empirical takeaway

- Overall the data consistent with one conclusion from the paper, i.e. more financially developed economies are less prone to bubble (less volatile)
- Less support for the part suggesting financially repressed economies less prone to bubbles
- Conclusion regarding openness have a slightly different angle. A financially mature economy that integrates with a one less financially developed could get infected by bubbles..

Policy recommendations

- Are bubbles good or bad?
- Bubbles introduce volatility (Bad) but can also enhance growth (good)..

Ranciere et al.



Note: The values for 1980 are normalized to one. The figures display annual credit and per-capita GDP series.

- Welfare analysis can be complicated, still very relevant..