Discussion of Bengui and Bianchi's
"Capital Flow Management when Capital Controls Leak"

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Introduction

- John Williamson (**1995**), *The Management of Capital Inflows*, made the case for prudential capital controls, with Chilean URR as poster child

- 1998: Chili abandons its capital controls

- The Bank of Chili had become weary of the race between regulation and circumvention

- Circumvention is a first-order issue for the future of capital flow management (through capital controls)

Introduction

- Bengui-Bianchi (BB) present a model

- Builds on the new literature on prudential controls (Korinek, 2010; Bianchi, 2011; etc)

- An important question and a useful contribution

    - theorists often do not pay attention to circumvention

Summary

- Bianchi (2011)
    - class of models in which the boom-bust cycle in capital flows is magnified by fluctuations in the value of the country's "international collateral"
    - a Pigouvian tax on debt inflows can be used to smooth out the excessive volatility in capital flows.

- Departure from Bianchi (2011): the tax applies only to a subset of agents

- Leakage: the effect of tax is partially undone by by the actions of the unregulated agents

Summary

Results

- The gains from macroprudential controls may remain susbstantial in spite of leakage

- The optimal tax on capital inflows could be lower or higher than in the absence of leakage

- Macroprudential policy can have significant redistributive effects between regulated and unregulated borrowers

- I like the paper

- There seems to be something generic about the question asked by BB
    - something that does not depend on the details of the financial friction to be mitigated by macroprudential regulation

- Let me explore the answer(s) with a more simple (and ad hoc) model (Jeanne, 2014)
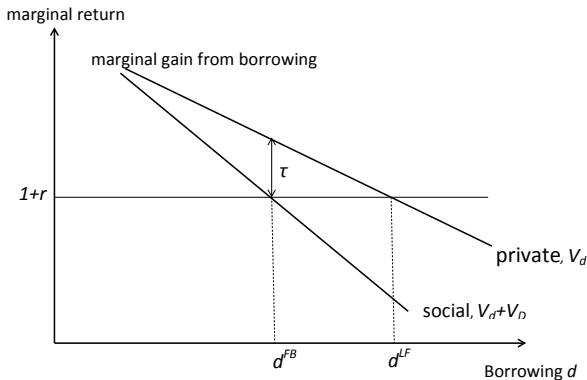
Comments

- Assume identical atomistic borrowers with ex-ante welfare

$$V(d, D) - (1 + r)d$$

d **individual** debt

D **aggregate** debt

$U_D < 0$ because of aggregate systemic externality

marginal return

marginal gain from borrowing

$1+r$

τ

private, V_d

social, $V_d + V_D$

d^{FB}

d^{LF}

Borrowing d

There are different ways one can think about circumvention in this model:

- intensive margin: all borrowers circumvent at the margin

- extensive margin: some borrowers escape the tax altogether

They may lead to different results

Comments

- Assume borrowers are identical and can issue regulated and unregulated debt

$$d = d_r + d_u$$

cost of issuing unregulated debt $f(d_u)$, where $f(\cdot)$ is increasing and concave

- Each borrower minimizes the non-interest cost of borrowing

$$C(d) = \min_{d_r + d_u = d} [\tau d_r + f(d_u)]$$

- Envelope theorem,

$$C'(d) = \tau,$$

the same as without circumvention, so borrowers choose the same d

- **Irrelevance result:** The macroprudential policymaker should not change the level of the macroprudential tax in response to circumvention

Departure from irrelevance (1)

- Assume now that instead of being strictly concave the cost is a linear function

$$f(d_u) = \gamma d_u$$

- Then the policymaker should not increase the tax rate above γ

$$\tau \leq \gamma$$

Circumvention now constrains regulation

- The same kind of results may be obtained with a fixed cost of circumvention

Comments

Departure from irrelevance (2)

- Assume that borrowers are heterogeneous, and have different costs of circumvention

$$f_i(d_u) = \gamma_i d_u$$

- Then regulation separates the borrowers in two groups, the regulated borrowers (with $\gamma_i > \tau$) and the unregulated borrowers (with $\gamma_i \leq \tau$)
  - denote by d_r and d_u the debt of the representative agent in each group

- Increasing τ shifts borrowers from the regulated group to the unregulated group

- Extensive margin $\longrightarrow$ reason to moderate regulation

Comments

- Let us make "Calvinist" assumption that borrowers are predestined to be in regulated or unregulated group (like BB)

  - $\gamma_i = 0$ for some borrowers and $\gamma_i = +\infty$ for others

- Then leakage operates completely at the intensive margin inside the unregulated group

- Incomplete offset of macroprudential policy

$$\frac{\partial d_r}{\partial \tau} < \frac{\partial D}{\partial \tau} < 0 < \frac{\partial d_u}{\partial \tau}$$

Comments

- How is optimal level of τ affected by circumvention?

- It takes a higher tax to achieve the same aggregate debt target $\rightarrow \tau$ should be higher

- The tax distorts the allocation of debt between regulated and unregulated borrowers $\rightarrow \tau$ should be lower

- On balance, ambiguous: τ could be higher or lower

Comments

- I wrote a generic model in which there is a need to tax debt for prudential reasons

- With circumvention:

    - Irrelevance result

    - Departures from irrelevance; the tax rate could go up or down, depending on how one models circumvention

- The only robust result: circumvention does not completely obviate the need for regulation in general

- The simple model does not do full justice to BB, but it highlights intuition behind main results and puts them in broader context

Comments

- One would like to discipline the model using information about circumvention in the real world

- One can make a case for BB's modeling choice
  - some agents seem better able to circumvent than others (e.g., large firms vs. small borrowers; Forbes on Chile)

- But seems extreme to assume that some agents are captive at any level of tax
  - in Bianchi (2011) the optimal tax can exceed 20 %: isn't it too high?

- The private sector can reduce the cost of circumvention by investing in "circumventional capital"
  - dynamic problem: the tax should not be kept too high for too long

- It is difficult to differentiate the tax by type of inflows (Klein and Shambaugh, 2013)

Conclusions

- Very nice paper

- One last thought: one reason to manage capital flows through reserves rather than capital controls may be related to circumvention

THANK YOU