Discussion:
"Liability Dollarization, Sudden Stops & Optimal Financial Policy"
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Motivation

- Emerging markets face recurrent sudden stops of capital flows
- Sudden stops costly: declines in consumption with depreciations
- Capital controls and debt taxes useful to prevent overborrowing
- Most of analysis for environments of dollar denominated debt
- Domestic loans mainly in local currency
- And share of local currency foreign held debt rising in emerging markets

This paper: Denomination of debt matters for prescriptions

Context in Literature

Financial policies

- Capital controls useful with pecuniary externalities to prevent overborrowing (Bianchi 2011, Bianchi and Mendoza 2017)
- Analysis focused on dollar denominated debt

Debt denomination

- Local currency debt good for hedging fluctuations but bad for repayment commitment
  (Aguiar et al. 2013, Otonello and Perez 2017)
- Related to tradeoffs with long maturity debt (Arellano et al. 2015)

Here: Interaction between financial policies and debt denomination

Financial policy with externalities

Collateral constraints depend on prices: macroprudential externality

- High debt depresses prices and make constraints tighter
- Agents to not internalize and overborrow
- Policy: tax debt to prevent overborrowing

Borrowing in local goods: intermediation externality

- Debt burden lower when prices are low
- Good for insurance but bad for credibility
- Now financial policy more objectives and more instruments needed

Paper Findings

Local goods borrowing and no policy

- Constraints bind more but sudden stops smaller
- Welfare is higher than with dollar debt

Policy prescription

- Tax domestic debt to avoid overborrowing
- Subsidize capital inflows to induce credibility

Mechanisms in Model

- Period (t) constraints (after using $q_t = Ep^c_{t+1}/p^c_t(1+r)$ condition)

$$c^T_t = y^T_t - p^c_t b_t + \frac{Ep^c_{t+1}}{1+r} b_{t+1}$$

$$\frac{Ep^c_{t+1}}{1+r} b_{t+1} \leq -\kappa[y^T_t + p^N_t y^N]$$

- Low p^c_{t+1} reduce borrowing incentive and relax constraint
- Low p^c_t good because they reduce debt burden
- High p^N_t relax the constraint
- Debt b_t and borrowing b_{t+1} change equilibrium prices

Mechanisms: Intermediation Externality

- Borrowing in local goods reduce severity of sudden stops

$$c_t^T = y_t^T - p_t^c b_t + \frac{E p_{t+1}^c}{1+r} b_{t+1}$$

$$\frac{E p_{t+1}^c}{1+r} b_{t+1} \leq -\kappa [y_t^T + p_t^N y^N]$$

- Prices tomorrow decrease with borrowing $\frac{\partial p_{t+1}^c}{b_{t+1}} < 0$
- Looser constraint, can borrow more
- Bond prices disciplines borrowing, want to borrow less
- Milder sudden stop with local goods borrowing

Mechanisms: Insurance vs Credibility

- Burden of debt is state contingent but incentive to dilute

$$c_t^T = y_t^T - p_t^c b_t + \frac{E p_{t+1}^c}{1+r} b_{t+1}$$

$$\frac{E p_{t+1}^c}{1+r} b_{t+1} \leq -\kappa [y_t^T + p_t^N y^N]$$

- Prices today increase with tradable shock y_T
  - Local goods borrowing a good hedge
  - With sufficient b_t price effect insures consumption
- Prices increase with borrowing $\frac{\partial p_t^c}{b_{t+1}} > 0$
  - Want to reduce borrowing to reduce debt burden
  - Source of time inconsistency

Mechanisms: Macroprudential Externality

- Large borrowing makes constraints tight in future

$$c_t^T = y_t^T - p_t^c b_t + \frac{E p_{t+1}^c}{1+r} b_{t+1}$$

$$\frac{E p_{t+2}^c}{1+r} b_{t+2} \leq -\kappa [y_{t+1}^T + p_{t+1}^N y^N]$$

- Prices tomorrow decrease with borrowing $\frac{\partial p_{t+1}^N}{b_{t+1}} < 0$

- Tight constraint tomorrow with large borrowing today

Mechanisms: Financial Regulation

- Decentralized eqm: given prices choose b_{t+t} to smooth consumption

$$u_T(t)Ep^c_{t+1} = \beta(1+r)E_t\left(u_T(t+1)p^c_{t+1}\right)$$

- Time consistent planner: choose b_{t+1} to smooth consumption and manipulate prices

$$u_T(t)(Ep^c_{t+1} + \underbrace{\frac{\partial Ep^c_{t+1}}{b_{t+1}}b_{t+1}}_{\text{intermediation ext}} - \underbrace{b_t\frac{\partial p^c_t}{b_{t+1}}}_{\text{time inconsistency}})$$

$$= \beta(1+r)E\left[u_T(t+1)\left(p^c_{t+1} + \underbrace{\frac{\partial p^c_{t+1}}{b_{t+1}}b_{t+1}}_{\text{intermediation ext}}\right) - \underbrace{\mu_{t+1}\kappa\frac{\partial p^N_{t+1}}{b_{t+1}}Y^N}_{\text{macroprudential ext}}\right]$$

- Planner will want to set taxes and capital controls to equate these two

Comments on Model

- Financial policy geared at manipulating many prices, complicated
  - Reduce borrowing to avoid hitting constraint tomorrow
  - Increase borrowing for exploiting hedging and insurance
  - Alter borrowing to reduce time inconsistency problem
- Focus on policy with commitment
  - Can compare policy prescription for dollar vs local goods debt
- Conditionally efficient policy is a bit obscure
  - Conditionally efficient respects decentralized prices
  - Time consistent Markov solution more natural
- Financial policy with time consistent policy might be not be helpful at all!
  - Example where policy is bad for welfare due to time inconsistency?

Comments on Prescriptions

- Should debt taxes be lower in economies with large local goods borrowing?
- Policy mainly solving the macroprudential, intermediation externalities, or time consistency?
- Simple rules useful experiments
  - Constant taxes almost equal to Taylor type but far from optimal (remove Taylor type?)
  - Correlated policies? High debt tax in times of low capital control tax?
- Capital control subsidy and debt tax
  - Not clear force for capital control (very small) subsidy. What do we lose from abstracting from capital controls?
  - Two instruments needed only without commitment. In Markov problem, two taxes also needed?

Conclusion

- Interesting paper!
- Financial policy prescription depend on denomination of debt
- AND the degree of commitment of the financial regulator...