

Discussion of

# **Regulating Capital Flows to Emerging Markets: An Externality View**

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# Externalities in borrowing

- In imperfect financial markets, borrowing is backed by the value of collateral.
  - Lower asset prices reduce this value, leading to a contraction of credit.
  - Balance sheet channel of monetary policy.
- Clearly a timely, and highly relevant issue.
  - For emerging markets...
  - ... but even in the more developed markets (Treasury takeover of mortgage related assets).
- Externality that is ignored by individual agents.
  - Reducing consumption lowers the value of collateral.
  - A price-taker agent ignores this, hence the reduction of consumption is socially inefficient.

# The central mechanism

- The consumer in the small country consumes traded and non-traded goods.

$$C = (C_T)^{\frac{1}{1+\sigma}} (C_N)^{\frac{\sigma}{1+\sigma}}$$

- Traded consumption affects the price of non-traded goods:

$$p_N = \sigma [C_T / Y_N]$$

- This price in turns affects the value of collateral. At time 1 borrowing is limited by the value of output:

$$B_1 < \kappa (Y_{T,1} + p_{N,1} Y_N)$$

- Borrowing is used to smooth consumption (depending on initial traded output) and finance an initial investment  $I$ .

# The shadow value of collateral

- In a decentralized allocation the borrower takes the price of non-traded goods as given.
  - If traded output is high, the constraint is not binding and desired borrowing is below the value of the collateral.
  - Otherwise, the agent borrows up to the limit.
- A social planner takes account of the impact of traded consumption on the value of collateral.
- If the constraint is not binding, the two allocations are the same.
- If output is low and the constraint is binding, the allocations are the same, but the shadow value of collateral is higher for the social planner.

# Impact on consumption and borrowing

- The model is extended to an additional initial period. Agents trade state contingent securities in the world market.
  - Decentralized agents ignore the fact that reducing consumption in some states worsens their collateral.
  - Leads to excessive borrowing.
- Not a problem if the world set the same price for all state contingent securities.
- Problem if securities paying off in a state of low output are expensive (« risk averse » world market).
- The externality also worsens the consequences of noisy expectations.
- Policy implication: discourage risky borrowing.

## How general is the parametrization?

- Model appears sensitive to parametrization. The constraint binds in the worst possible case ( $Y_{T1}=0$ ) if:

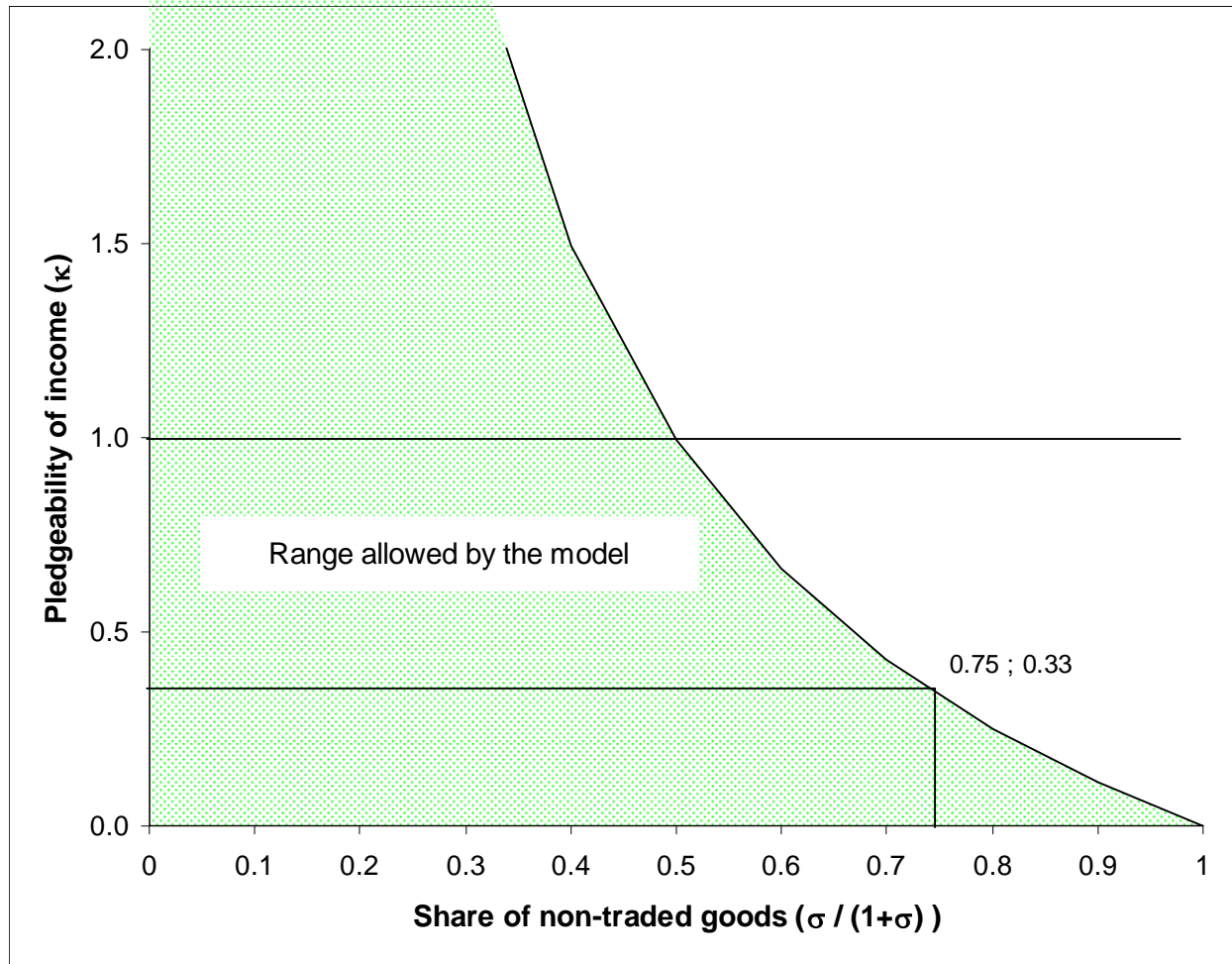
$$B_{1,\text{decentralized}} > \kappa\sigma C_{T,1,\text{decentralized}}$$

- If we take a log utility of consumption:

$$Y_{T,2} > \kappa\sigma Y_{T,2} + (1 + \kappa\sigma / \beta)(W_1 - I)$$

- The model requires a high initial investment  $I$ , or a low value of  $\kappa\sigma$  (indeed:  $\kappa\sigma < 1$ ).
- This is possible, but the inequality is reverted for reasonable parameters.

# Parametrization



# The role of investment

- Initial investment  $I$  prevents the model from generating odd outcomes. Consider the constrained allocation with  $(Y_{T1}=0)$ , and that the price elasticity of traded / non-traded demand is  $\theta$ .

- The borrowing limit and initial budget constraint are:

$$B_1 = \kappa (\sigma C_{T,1})^{1/\theta} (Y_N)^{(\theta-1)/\theta} \quad ; \quad C_{T,1} = (W_1 - I) + B_1$$

- This is fine either with a non-unit elasticity, or initial wealth.
- $I$  is not really investment as it does not lead to higher future output.
  - Crucial in a model that focus on collateral.



# The nature of collateral

- *Current* output serves as collateral.
- But output is gone by next period when the loan is due.
  - *Future* output would be preferable (but then current non-traded price loses its impact).
  - A stock measure (capital) would be even better.

# State-contingent assets

- The externality affects consumption and borrowing when the world price of Arrow-Debreu securities depends on output in the small country.
- The price of securities is driven only by world output.
- Tension between small-open economy assumption and link between output and price of securities.
  - Calls for a general equilibrium approach.
- Extension to expectation errors interesting, but only considers over-optimism.
  - Result could be different with two-sided expectation noise.

# Policy implications

- Borrowing in state contingent assets, or in one's currency is preferable. True, but is it new?
- FDI borrowing preferable to portfolio equity.
  - What is the distinction between them in the model?
- Points to the benefit of a peg, which takes the form of a control on traded consumption.
  - But anticipated state-contingent transfers are powerless (proposition 7).
  - How does a peg differ from that?
- Need a tighter link between the model and the policy prescriptions.

# Conclusion

- A highly relevant and timely topic: externalities in asset markets are at the forefront on policymakers worries.
  - The explosion in the trading of asset-backed instruments begs for a better modelization of their impact.
- Central intuition in the model is reasonable.
- Several aspects need tightening, as it is not clear how sensitive the results are.
  - Order of magnitude: on their own, agents take too much risk. But how much exactly?
- Policy prescriptions should be better linked to the model.