Discussion of: "Foreign Capital and Economic Growth" by Prasad, Rajan, and Subramanian

> Aart Kraay The World Bank

# Simple Theory to Help Understand Puzzles

- Two assets, risky domestic capital k and safe foreign loans f
- Representative agent chooses c and k to maximize

$$\mathsf{E}\int_{0}^{\infty} \mathsf{In}(\mathsf{c}) \cdot \mathsf{e}^{-\delta \cdot \mathsf{t}} \cdot \mathsf{d}\mathsf{t}$$

subject to budget constraint

$$da = [\pi \cdot \mathbf{k} + \mathbf{r} \cdot (\mathbf{a} - \mathbf{k}) - \mathbf{c}] \cdot d\mathbf{t} + \mathbf{k} \cdot \mathbf{\sigma} \cdot d\omega$$

• Solution is:

$$c = \delta \cdot a$$
  $x \equiv \frac{k}{a} = \frac{\pi - r}{\sigma^2}$   $f = (1 - x) \cdot a$ 

### Theory, Cont'd

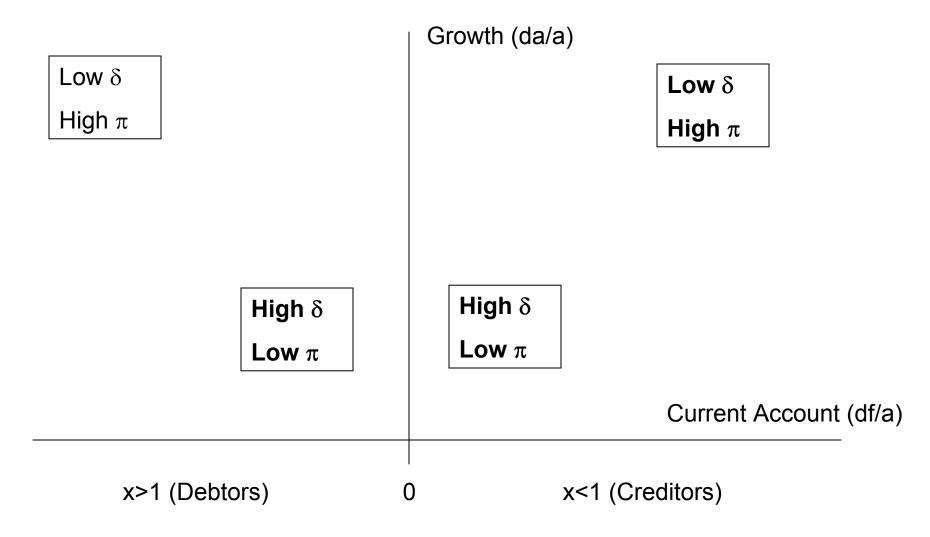
• Average (i.e. Expected) Growth and the Current Account

$$\frac{\mathrm{d}a}{\mathrm{a}} = \sigma^2 \cdot \mathbf{x} + \mathbf{r} - \delta$$

$$\frac{\mathrm{df}}{\mathrm{a}} = (1-\mathrm{x}) \cdot \frac{\mathrm{da}}{\mathrm{a}} = (1-\mathrm{x}) \cdot \left( \sigma^2 \cdot \mathrm{x} + \mathrm{r} - \delta \right)$$

- Assume countries differ in
  - productivity  $\pi$  (and so the portfolio share x)
  - patience  $\delta$  (and so the growth rate of wealth)
- Assume also growth rate of wealth always positive

#### **Current Accounts and Growth**



# **Implications of Theory**

- No reason to expect *any* correlation between CA and growth looking across all countries. Correlation depends on
  - whether country is a debtor or creditor
  - what the sources of variation in saving rates and portfolio shares are
- PRS puzzle is a puzzle only if most of the developing countries in their sample:
  - are debtors (x>1), and
  - have high (low) discount rates and low (high) productivity
- Sounds plausible, but worth investigating before declaring a puzzle

## **PRS Resolution of Puzzle**

- Poor countries with lousy financial systems but rapid productivity growth:
  - might invest a lot
  - but can't reduce saving to borrow against higher future income
- Not clear this does the trick in the theory
  - lousy domestic financial system doesn't mean you can't borrow from abroad to tilt consumption
  - countries with fast productivity growth invest a lot and also borrow -> CA deficits go with growth -> puzzle is back

# Is the Problem Lousy Financial Intermediation?

- Suppose financial system can't intermediate saving to productive investments (Ju and Wei (2006))
- In high-productivity growth countries
  - FDI finances domestic investments
  - Domestic savings flows abroad
  - fast growth but no big current account deficit
- Does this work empirically? Stock implication is that countries with lousy financial intermediation should have less negative NFA positions

#### **Does the Intermediation Story Work?**

Dependent Variable is NFA/Wealth	
In(Per Capita Wealth Relative to World Average) Rule of Law	0.129 (0.022)*** -0.095 (0.043)**
Ease of Access to Finance	Ò.029 ´
China Dummy	(0.038) 0.242 (0.024)***
Constant	(0.024)***
Observations	(0.137) 76
R-squared	0.48

## Is the Problem Kleptocracy?

- Kleptocratic governments borrow like crazy and put the proceeds in Swiss Bank Accounts
  - low growth
  - large current account deficits (since illegal capital outflows not recorded)
- Not implausible given scale of global current account imbalances!
  - try controlling for kleptocracy in regressions