Discussion of:
On the Desirability of Capital Controls

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Princeton University
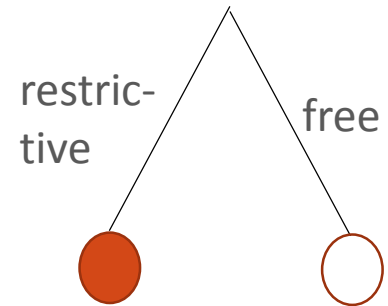
IMF Jacques Polak conference
Washington, DC, Nov. 13th, 2014

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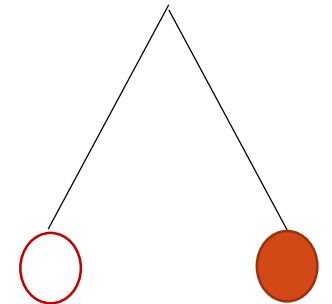
Capital Flows: IMF's Attitude - Pendulum

- **1940s**
  - IMF's Founders
    John Maynard Keynes & Harry Dexter White
  - Capital flows are responsible for
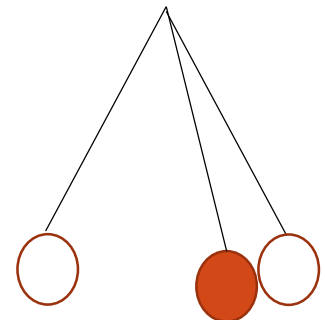   interwar instability

restric-tive   free

- **1970/80 Washington consensus**
  - De Larosière, Camdessus, DeLores, Lamy
  - Free trade: free flow goods and services
  - Free finance: free flow of capital

- **1999/2000 After SE Asia crisis**
  - Ostry, Ghosh, Habermeier, Chamen, Qureshi,
    Reinhardt (2010)

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Desirability of Capital Controls

- When is credit flow excessive?

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Desirability of Capital Controls

- When is credit flow excessive?
  - Heathcote & Perri:
    - "It depends"
    - Only in particular circumstances

Desirability of Capital Controls

- When is credit flow excessive?
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    - Only in particular circumstances

- Rationales for capital controls
  1. Terms of trade (ToT) manipulations
  2. Financial stability reasons (endogenous risk, runs)

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Desirability of ToT Manipulations

- Keynes (Costinot et al.) ex-post
  - Coordinate domestic firms to
  - Extract monopoly rent
  - Problem: typically
    - at the expensive of other country
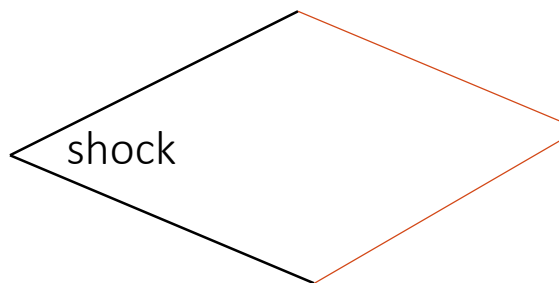   - No global welfare improvement

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Desirability of ToT Manipulations

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- "Terms of Trade hedge", Cole & Obstfeld 1991
  - Friction: incomplete markets, no equity trading
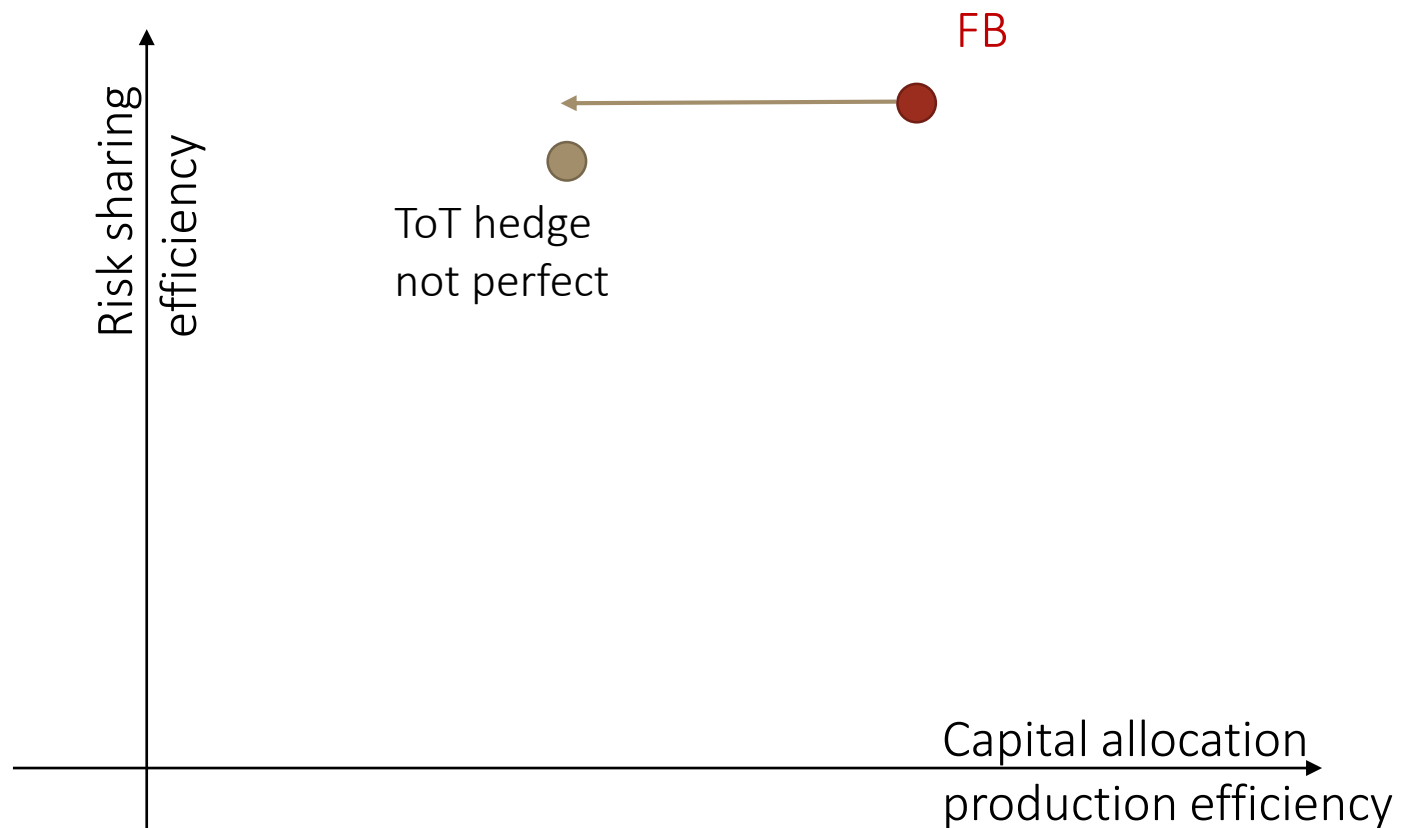
shock

Initial endow-
ment shock

ToT hedge

Initial endowment shock is
offset by ToT movement

Markets are quasi-perfect/complete

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Desirability of ToT Manipulations

- **BruSan2014**
  - Friction: incomplete markets (no equity)
  - With production
  - 2 forms of inefficiencies (can't be controlled independently)

FB

Risk sharing efficiency

ToT hedge
not perfect

Capital allocation
production efficiency

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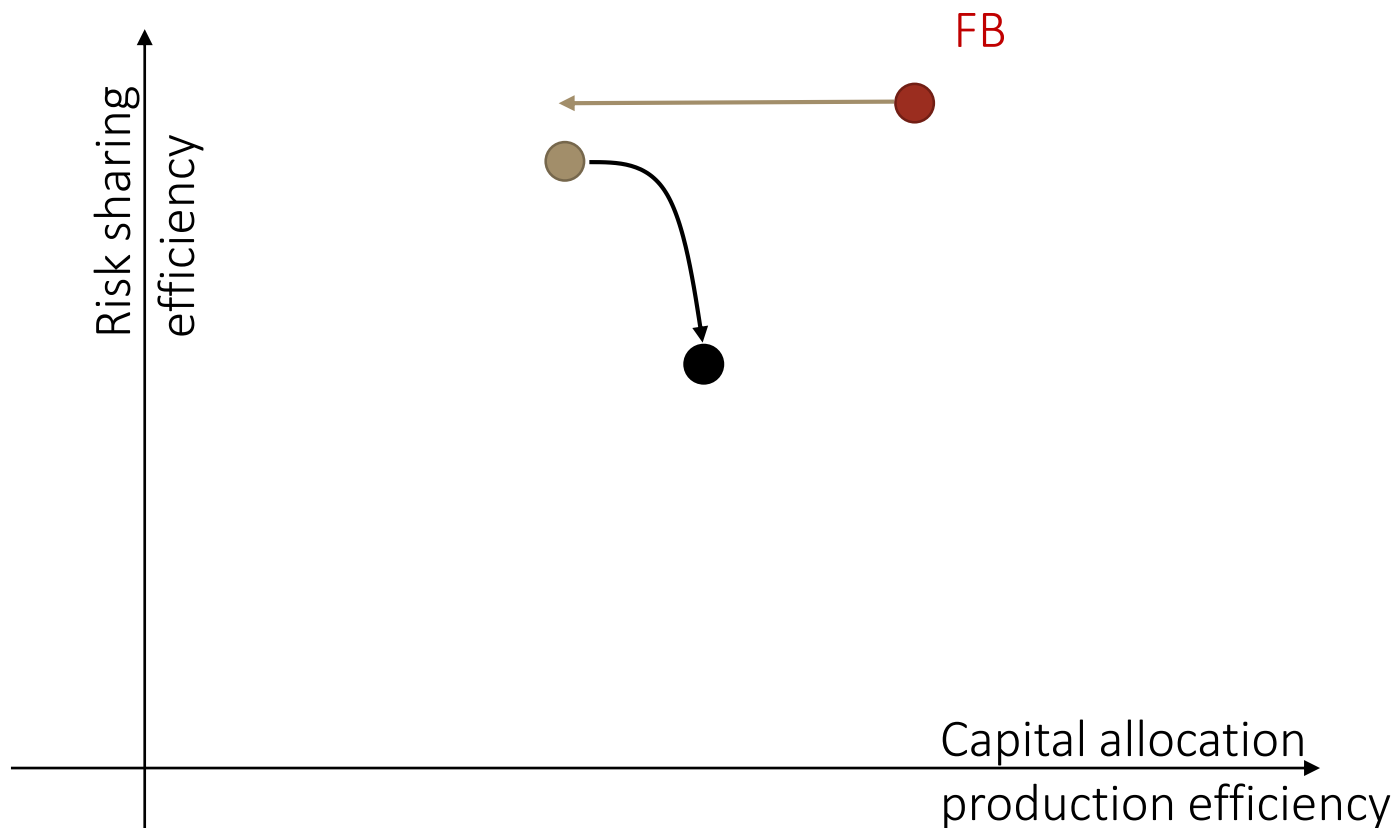 - 2 forms of inefficiencies (can't be controlled independently)

FB

Risk sharing efficiency

Capital allocation production efficiency

Credit flows improve capital allocation but worsen risk sharing

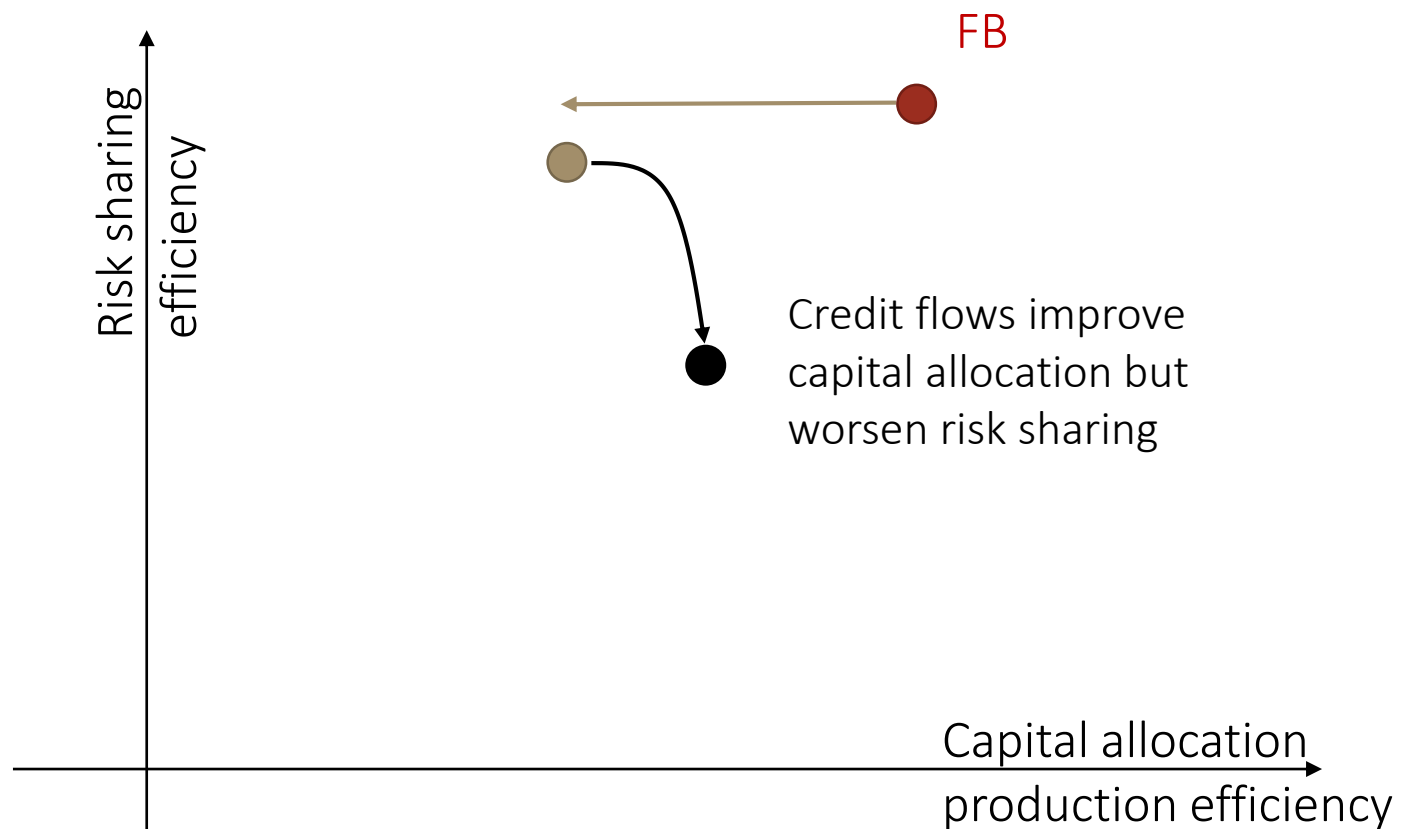# Desirability of ToT Manipulations

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Initial shock   ToT hedge
"capital shock"

- Too much "investment" (capital reallocation) funded with "hot money"
- Constrained inefficient due to pecuniary externality
  - Agents take prices as given and don't internalize that they partially destroy "ToT hedge"

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Desirability of ToT Manipulations

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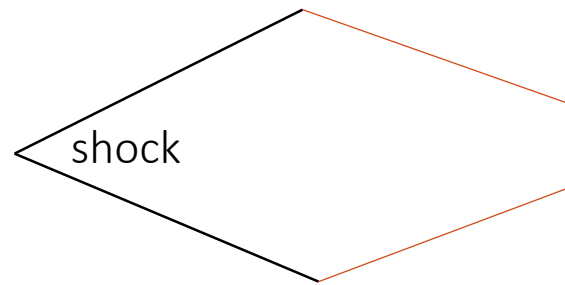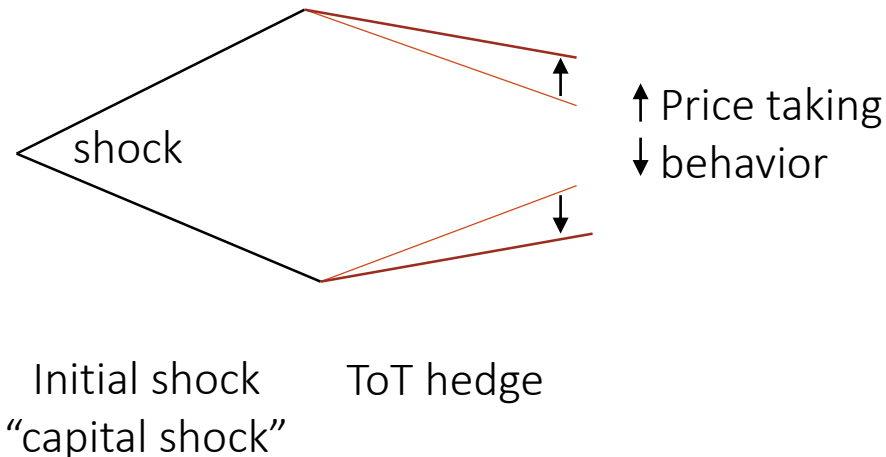 - Friction: incomplete markets (no equity)
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shock

↑ Price taking
↓ behavior

Initial shock
"capital shock"

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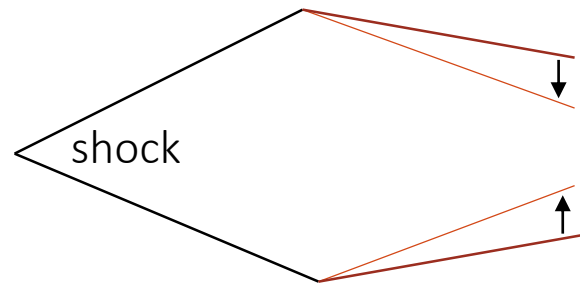 - 2 forms of inefficiencies (can't be controlled independently)

shock

Capital controls reduce pecuniary externality

Initial shock
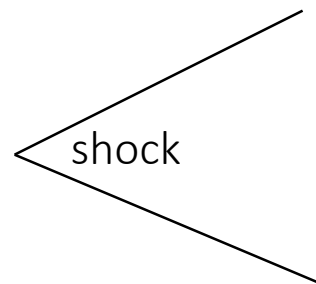"capital shock"

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ToT Manipulation in Heathcote & Perri

- Put in a classical BKK model
  - TFP Productivity shocks (persistent)
  - Strong home bias and anti-home bias

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- <u>HP-Scenario 1:</u> (+ve shock is bad and good for others)
  - Strong home bias, strong ToT reaction ($\sigma < 1$)
  - 1's productivity increase funding with credit inflow
  - 2's ToT improves and becomes richer
  - (Home bias leads to extra demand of good b)

shock

Initial shock
"TFP shock"

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shock

Capital controls
reduce "ToT overhedge"

Initial shock
"TFP shock"

ToT overhedge

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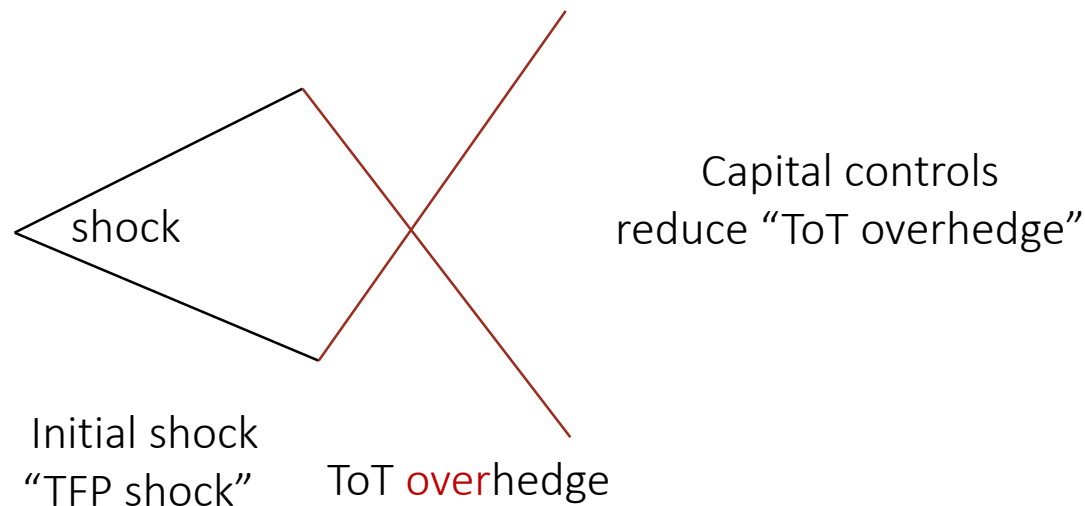# ToT Manipulation in Heathcote & Perri
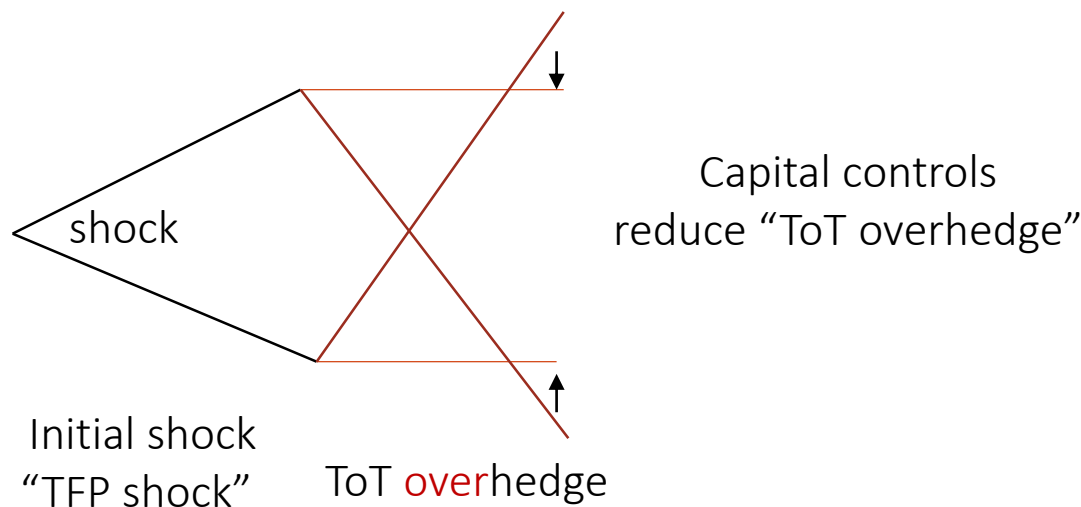
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ToT overhedge

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ToT Manipulation in Heathcote & Perri

- **HP-Scenario 2:** (+ve shock is good, very bad for others)
  - Strong anti-home bias, weak ToT reaction ($\sigma > 1$)
  - 1's productivity increase + credit outflow
  - Fund country 2 to produce more of good b
  - Credit outflow indebts country 2
    (just to produce more of good b which country 1 wants)

  - Evaluation of "foreign bias"
  - Import share for small country is high $\neq$ foreign bias is high
    - Theory: 2 countries of equal size
    - Important share depends on country size

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Bond Denomination

- HP: Bond is denominated in
  - ½ domestic consumption and ½ foreign consumption basket

- Quibble: … but intermediate good is not tradable
  - Only input goods a and b are tradable

- Extension:
  - Analysis with foreign denominated bond market (Dollar bonds)

Financial Instability

- No liquidity mismatch problems

A   L

Technological liquidity

- Perfect Reversibility

Market liquidity

- Perfect, no price impact

Funding liquidity

- Debt is short-term (hot money)

Liquidity

Maturity mismatch
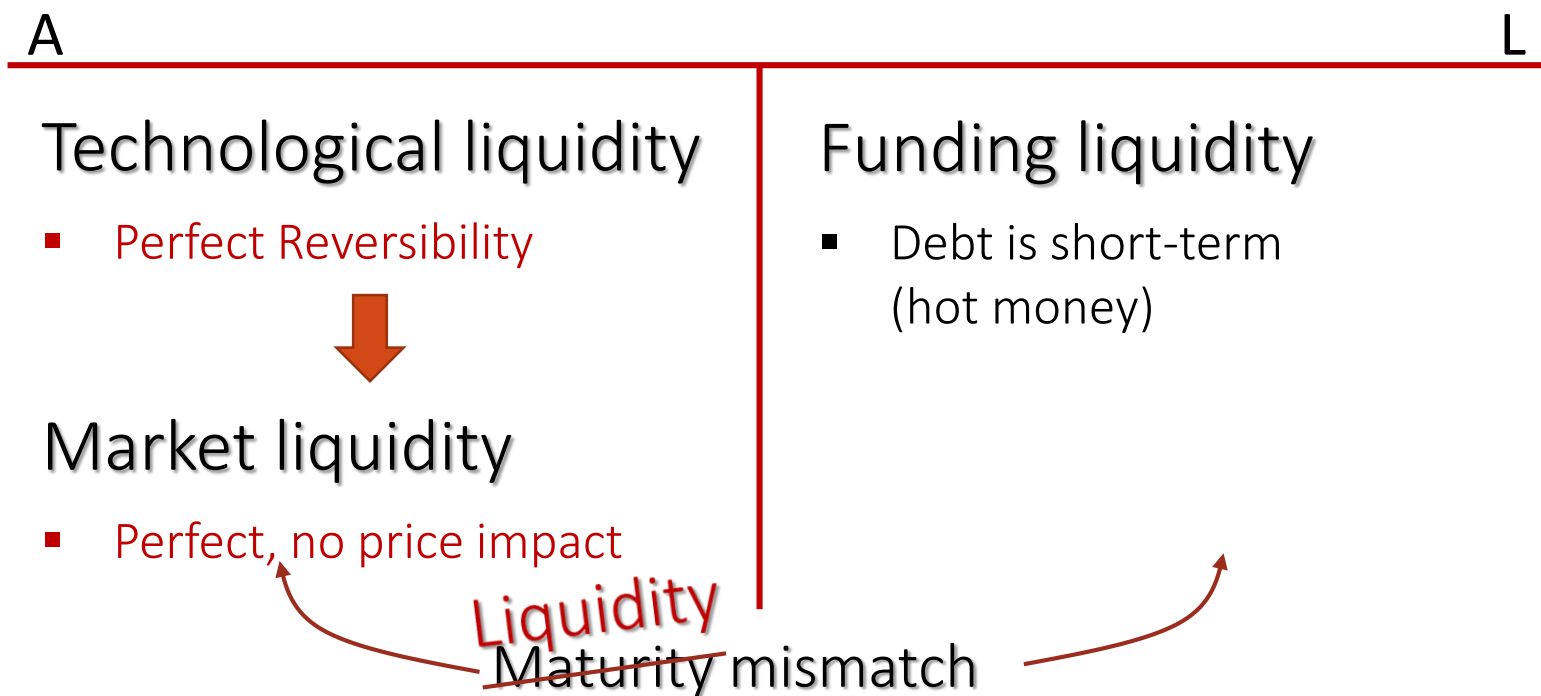
- No drop in asset prices, no fire sales
- No endogenous risk, no time-varying risk premium
  - Amplification
  - Multiplicity (runs/sudden stops)

Financial Instability

- **2 types of runs/sudden stops**
  - Creditor run a la Diamond & Dybvig
  - Debtor run (BruSan2014)
    - Fellow country men get cold feet, fire sell physical capital
    - Asset price drop
    - Loss in net worth ➡ forced to join the run

- **Risk premium is time varying**
  - Depends on net worth of constrained actors

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Within Country Stability & Global Factors

No frictions   Perfect risk sharing   →   Single global risk
                      Perfect investment   factor
                                                       (weighted sum of
                                                       local factors)

Cross-country   Imperfect risk   →   Global risk factor
frictions   sharing   →   Local risk factor

Relative importance
depends on frictions

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Within Country Stability & Global Factors
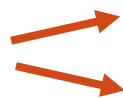
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Within-country frictions	MoPo to mitigate frictions ("The I Theory")	Implications for credit flows

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Within Country Stability & Global Factors

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Relative importance depends on frictions

- **Importance of global vs. local factors depends on**
  1. Degree of global risk sharing
  2. Whether within-country frictions are aligned/MoPo aligned
     - Divergent MoPo → global factor less important
       - Recent events: Euro long-term interest rate decouples from US rates (structure break)

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Why Discriminate Against Foreigners?

- Model could be a domestic economic model
  - Reinterpretation of home bias is needed

- Political Economy Aspects:
Danger of Abuse - protectionism
  - Lobbying against foreigners for competitive advantage

- Underlines importance
to have well founded justification for intervention
  - This paper makes an important step in this direction.

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Conclusions

- Capital controls affect production scale & risk sharing
- Free market can be inefficient due to pecuniary externality
  - Credit flow (hot money) can be excessive – in both directions!
  - Manipulation of ToT can improve in very specific circumstances
    - Be aware of political economy problems!
  - Financial instability issues seem first order
    - Illiquidity (irreversibility)
- Why bond denominated in "average currency"?
- Global & local risk factors
  - Within country frictions lead to MoPo reaction ("I Theory")
  - Frictions can push in same or opposite direction
  - Strong reaction in credit flows (due to carry trades)

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Quibble

- Approximation around
  - deterministic SS – could be far away from stochastic SS
- Third order approximation – only around SS
  - Different away from SS