Discussion of

Reconnecting Exchange Rate and the General Equilibrium Puzzle

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Exchange Rate Disconnect

- An umbrella of exchange rate properties (puzzles):
  1. low correlation
  2. "excess" volatility

  of exchange rates with/relative to macro variables:
  - i. inflation $\longrightarrow$ PPP puzzle
  - ii. consumption $\longrightarrow$ Backus-Smith puzzle
  - iii. interest rates $\longrightarrow$ Forward premium (UIP) puzzle

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- "Disconnect" is not a property of a model.
  It is a feature of the data!
  - "Reconnect" cannot happen in a model

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- Both puzzles are about a risk-sharing frictions

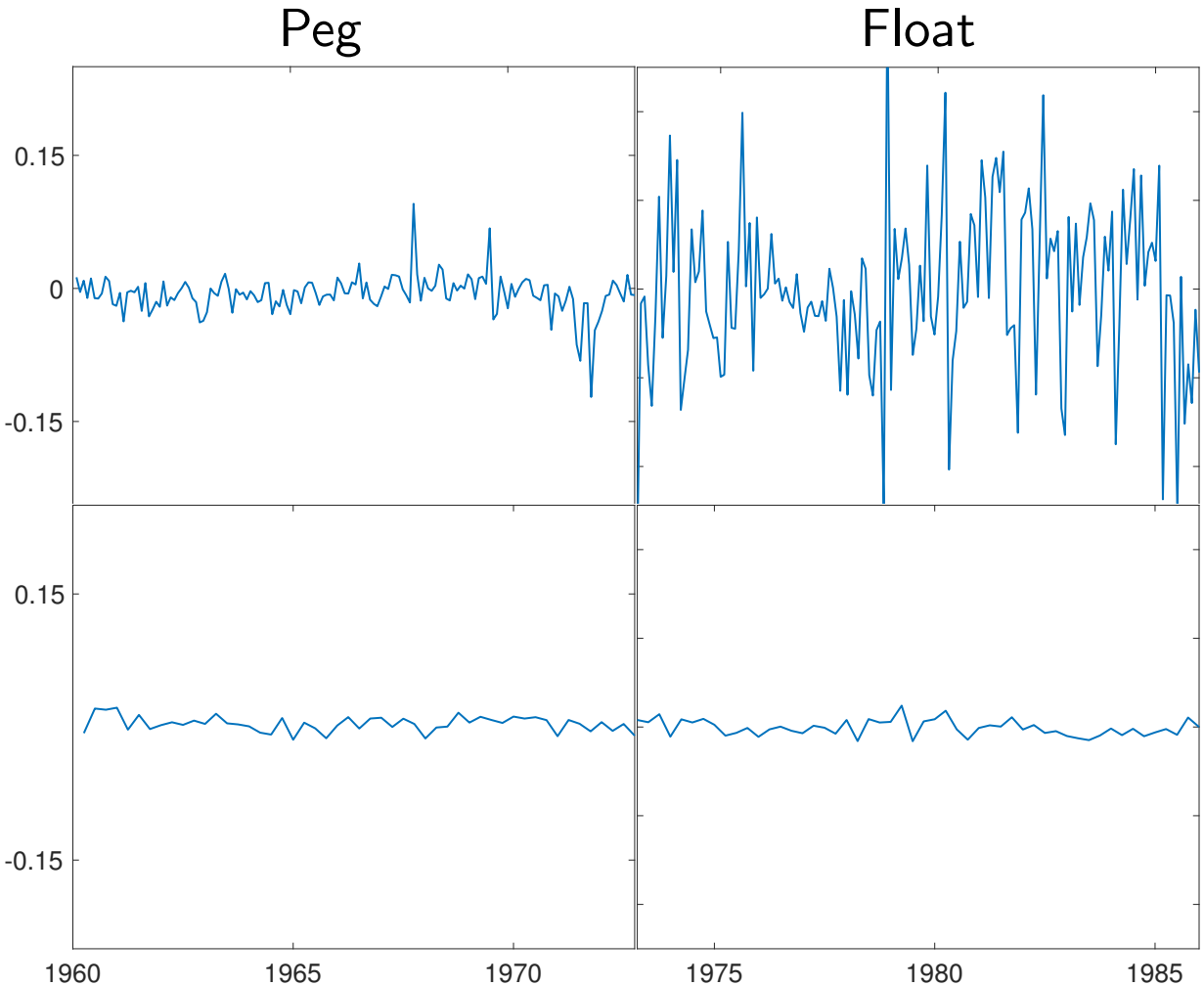
$$\mathbb{E}_t\{\sigma(\Delta c_{t+1} - \Delta c^*_{t+1}) - \Delta q_{t+1}\} = \hat{\psi}_t$$

or

$$i_t - i^*_t - \mathbb{E}_t \Delta e_{t+1} = \hat{\psi}_t$$

— Itskhoki-Mukhin (2019a,b): segmented financial market

Mussa Puzzle Redux



$\Rightarrow$ ✗ IRBC (flex prices)

$\Rightarrow$ ✗ NKOE (sticky prices)

$\Downarrow$ ✓ Mussa Redux

$\Downarrow$ ✓ ER Disconnect

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Alternative Models

Segmented markets

(This paper, Jeanne-Rose'02, AAK'09)

IRBC/NKOE

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Expectation errors & Heterogeneous beliefs

(Gourinchas-Tornell'04, Bacchetta-vanWincoop'06)

Financial frictions

(Gabaix-Maggiori'15, Bruno-Shin'15, Brunnermeier-Sannikov'15)

Risk premium under complete markets

(Verdelhan'10, Colacito-Croce'11, Farhi-Gabaix'16)

Convenience yield (BiU)

(Engel'16, Valchev'16, JKL'18)

IRBC/NKOE

This Paper

- A number of departures from:

$$\mathbb{E}_t\{\sigma(\Delta c_{t+1} - \Delta c^*_{t+1}) - \Delta q_{t+1}\} = \hat{\psi}_t$$

1. Complete markets instead of segmented incomplete markets
2. Epstein-Zin non-recursive utility and non-separable utility instead of separable CRRA
3. Volatility shocks to productivity and monetary policy
4. Nominal rigidities

- But still: risk-sharing friction $\hat{\psi}_t$ (called Ω_t)

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- This mechanism goes a long way/some way in replacing exogenous wedge $\hat{\psi}_t$ (Ω_t)
  - — reduces its contribution to ER volatility from 86% to 56%
  - — yet, cannot deliver the Fama regression properties in the absence of Ω_t

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- Which ingredients matter:
  1. Why these subset of shocks instead e.g. long-run risk, rare disasters or long-run productivity news?
  2. What is the role of sticky prices? (maybe for Mussa puzzle)
  3. Complete vs incomplete markets?
  4. Backus-Smith vs UIP puzzle?

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- Conditional puzzles and conditional moments
  - e.g., does UIP hold condition on a level monetary shock, in the model and in the data?
  - are shocks correlated: e.g., a level monetary policy shock induces a risk premium shock (see Alvarez-Atkeson-Kehoe)