

Discussion of

Reconnecting Exchange Rate and the General Equilibrium Puzzle

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4th Annual Meeting of CEBRA's IFM Program
October 2020

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 → PPP puzzle
- ii consumption → Backus-Smith puzzle
- iii interest rates → Forward premium (UIP) puzzle

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- All these puzzles are “unconditional”
- “Disconnect” is not a property of a model.
It is a feature of the data!
 - “Reconnect” cannot happen in a model

Two Core Puzzles

① Backus-Smith and UIP puzzles

- exchange rates are an order of magnitude more volatile than consumption, as well as mildly negatively correlated
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- Both puzzles are about a risk-sharing **frictions**

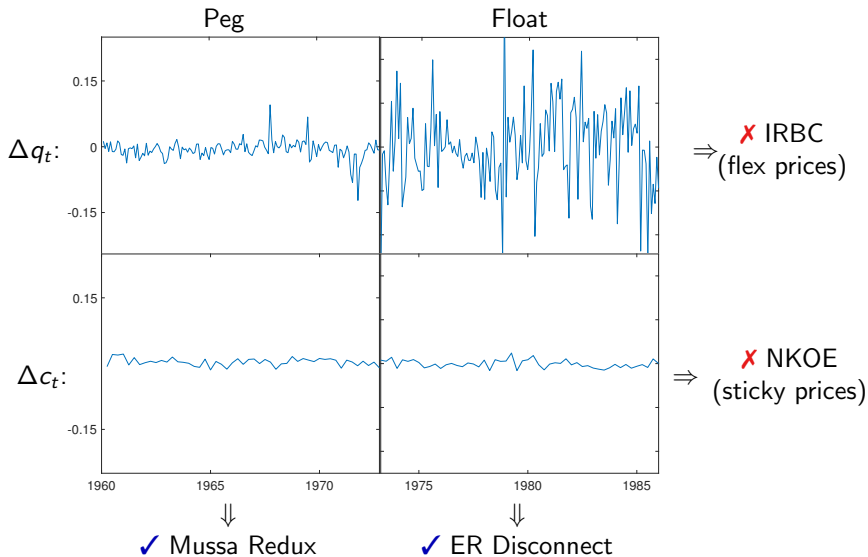
$$\mathbb{E}_t\{\sigma(\Delta c_{t+1} - \Delta c_{t+1}^*) - \Delta q_{t+1}\} = \hat{\psi}_t$$

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



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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-Maggiore'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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- But still: risk-sharing friction $\hat{\psi}_t$ (called Ω_t)
 - 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%
“the ER behavior is no longer disconnected from macro”
 - 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?
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 - ④ Backus-Smith vs UIP puzzle?
- 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)