Demand-Driven Risk Premia in Foreign Exchange and Bond Markets

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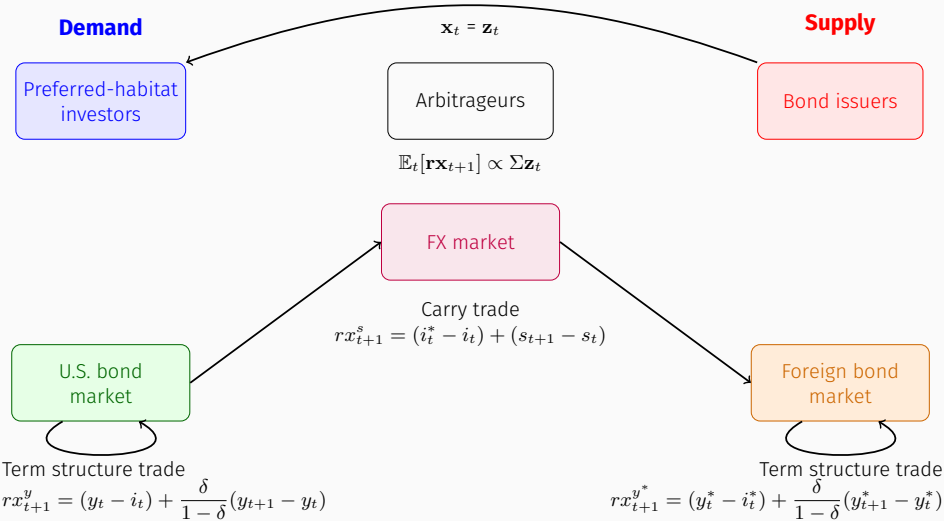
Summary

Theoretical Framework

- Two-country framework building on Greenwood, Hanson, Stein, & Sunderam (2023)



Implications & Empirical Strategy

Testable hypotheses

H1 Treasury demand shocks cause USD depreciation

H2 Treasury demand shocks decrease foreign government bond yields

H3 The strength of these spillovers depends on short-rate correlation:
higher correlation $\Rightarrow$ weaker FX reaction & stronger foreign bond yield reaction

Identification strategy

- Collect market reactions around the release of Treasury auction results:

  20-min window: $\Delta D_t^\tau \equiv ln\, F_{t,post}^\tau - ln\, F_{t,pre}^\tau$ $\qquad$ $\Delta FX_t \equiv ln\, S_{t,post} - ln\, S_{t,pre}$

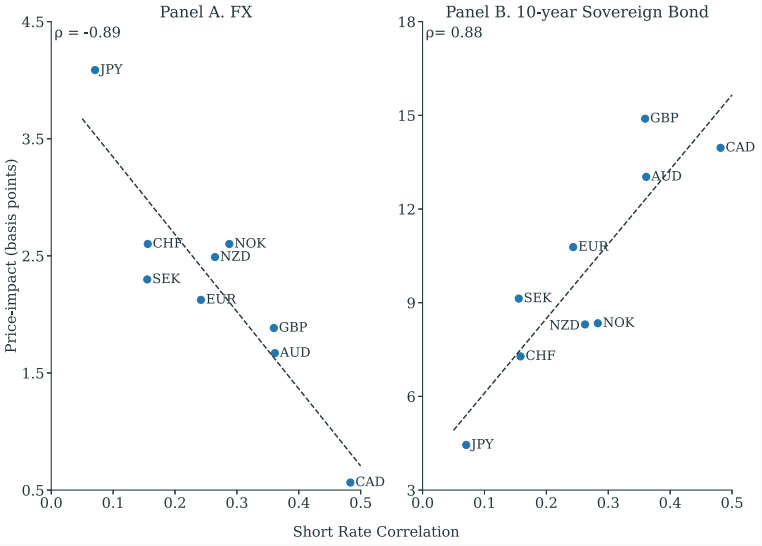
  Daily window: $\Delta Y_t^\tau \equiv Y_t^\tau - Y_{t-1}^\tau$

- Regress exchange rate and government bond yield reactions on demand shocks:

  Per country: $\Delta FX_t = \alpha + \beta \Delta D_t^\tau + \varepsilon_t$ $\qquad$ $\Delta Y_t^\tau = \alpha + \gamma \Delta D_t^\tau + \varepsilon_t$

  Panel: $\Delta FX_{i,t} = \alpha + \beta(\Delta D_t^\tau \cdot \rho_{i,t}) + \varepsilon_{i,t}$ $\qquad$ $\Delta Y_{i,t}^\tau = \alpha + \gamma(\Delta D_t^\tau \cdot \rho_{i,t}) + \varepsilon_{i,t}$

Findings



- **H1, H2, & H3:** ✓

- **Placebo exercise:** No effects on non-auction days → true D shocks
- **Persistence:** Spillovers persist for weeks → not microstructure noise
- **Bid-to-cover ratio:** Quantity-based shocks confirm spillover patterns
- **Investor heterogeneity:** Foreign officials matter for international transmission
- **Convenience channel:** Preferred-habitat dominates on risky days, convenience yield on safe days

Comments & Suggestions

#1: Shock Identification

- **Tick data:** Shock relies on last quote in 5-min bins, but tick data can be jumpy
  $\rightarrow$ Use median within each bin to reduce noise

  [Altavilla, Brugnolini, Gürkaynak, Motto, & Ragusa, 2019]
- **Futures prices vs yields:** Model formulated in yields, but shocks use futures prices
  $\rightarrow$ Convert into yield changes using BPV of the CTD

  [Bi, Phillot, Zubairy, 2025]
- **Maturity structure:** Auction results reveal info about *overall* Treasury demand
  $\rightarrow$ Extract a common demand factor, e.g., 1^{st} PC across all Treasury futures

  [Bi, Phillot, Zubairy, 2025]
- **Further clarifications:**

  (?) Did you aggregate futures price reactions across maturities? Or did you focus on 10-year ones?

  (?) Did you include TIPS/FRNs auctions?

  (?) Why should Bills be excluded?

#2: Arbitrage or Monetary Policy?

- Treasury demand ↑ ⇒ U.S. yields ↓ ⇒ USD depreciates (interest rate parity)
- Foreign FX appreciation affects inflation/output ⇒ foreign central bank may react

⇒ Foreign yields would change due to (expected) *monetary-policy* reaction

…not necessarily because arbitrageurs absorb correlated duration risk

(?) How much of the cross-country yield response reflects **policy synchronicity** rather than **arbitrageur risk-bearing**?

- Short-rate correlation (central in the model) may itself be endogenous to FX pass-through and policy reactions

Two suggestions:

1. Control for foreign policy expectations (e.g., futures on policy rates)

   If spillovers survive, arbitrage channel strengthened; if not, part may reflect policy reaction

2. Decompose foreign yields into expectations vs term-premium components

   Arbitrage channel predicts term-premium movement; policy channel predicts expectations movement

#3: Convenience-Yield Channel

- Safe-asset demand can generate USD *appreciation* and global yield comovement

  [Jiang, Krishnamurthy, & Lustig (2021); Engel & Wu (2023); Graziano & Phillot (2025); Graziano, Lombardo, & Phillot (2025)]
- Paper uses “safe vs risky” state dependence and sign-restriction VAR to distinguish between “preferred-habitat” and “convenience” demand shocks

(?) Why not account for convenience yields more directly?

Suggestion:

1. Control for relative convenience yields using Du, Im, & Schreger (2018) measure

   Available for G10 currencies over same sample, but only daily

Conclusions

- Very nice paper!
- Provides a clean empirical test of a preferred-habitat, portfolio-balance mechanism for cross-market spillovers using high-frequency Treasury-auction surprises
- Finds that Treasury demand shocks cause USD depreciation, lower foreign yields, and do so in line with short-rate correlation, consistent with the model's predictions
- Could benefit from clarifying shock construction, addressing alternative monetary-policy channels, & incorporating direct measures of convenience yields