

## **The International Medium of Exchange**

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June 2019

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Propose a theory of endogenous coordination on the international medium of exchange

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1. Households hold \$ because firms seek them as collateral to finance international transactions (trade)
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The model can explain some key stylized facts, e.g.,

- ▶ The world ends up holding massively US bonds, the US ending up as a net foreign debtor
- ▶ US earns an “exorbitant privilege” on its external position
  1. Short in \$, long in high-return foreign assets
  2. Liabilities:  $r < g$  in steady state possible

## What I like about the paper

An ambitious, innovative model that can speak to many issues in international finance

1. “Global imbalances”—is the US foreign position a reason for concern?
2. Unconditional failure of UIP—due to liquidity premia?
3. How fragile is the US’s dominant position in providing the world’s reserve asset (Eichengreen, 2011)?

More on this in my comments below.

## Comment I: Failure of UIP

The UIP puzzle. Regressions of the type

$$s_{t+1} - s_t = a + b(i_t - i_t^*) + u_{t+1} \quad (1)$$

yield slope estimates  $b \ll 1$ , often  $b < 0$

- ▶ High-interest currencies tend to appreciate going forward
- ▶ One of the most documented facts in Intl Macro

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In the model, US-\$ has persistently low return due to its special role as liquidity-providing asset

- ▶ What about currencies other than reserve currencies?
- ▶ Burnside et al. (2006) estimate  $b < 0$  in equ. (1) for nine currencies against the U.K. pound during 1976-2005

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→ Is the UIP puzzle different for the \$?



## Comment II: Multiplicity

The paper considers multiplicity of the type

1.  $\bar{X} = 1$ : all firms in all countries in RW seek \$
2.  $\bar{X} = 0$ : all firms in all countries in RW seek €
3.  $\bar{X} = 1/2$ : half of the firms in all countries in RW seek \$, the others seek €

Focuses on symmetric equilibria at the country level ( $\forall j \in [0, \mu_{rw}]$ )

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What about: all firms in *some* countries seek \$, all firms in the *remaining* countries seek €?

- ▶ Asian countries use Chinese renminbi, South-Americans use the Peso, ... ? (Eichengreen, 2011)
- ▶ I find this type of multiplicity more plausible

## Comment III: Unit of account

In your motivation and calibration: RW \$-invoicing share is 89%

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Difference vis-à-vis Gopinath and Stein (2018)

- ▶ How important is the medium-of-exchange channel beyond the \$'s role as unit of account?
- ▶ Role of the \$ as reserve asset

## Comment IV: $r < g$

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Is households' problem well defined?

- ▶ Intertemporal budget constraints exist?
- ▶ Natural borrowing limit is minus infinity
- ▶ Are infinitely-lived assets possible?
- ▶ Do transversality conditions hold in your equilibrium?

## Comment V: Exchange rates

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US's losing its reserve-currency status should depreciate the \$

- ▶ US gains when \$ depreciates, due to assets (debt) being denominated in foreign (domestic) currency
- ▶ “Valuation effects” on the exchange rate (e.g., Lane and Shambough, 2010)
- ▶ This matters e.g. for evaluating welfare effects



## Comment VI: Policy experiments

Policy analysis: the effects of tariffs and trade-wars

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Budget deficits out of control (Eichengreen, 2011)

- ▶ In the model, US bonds are safe in real terms (indexed debt)
- ▶ US fiscal limits and inflation (Cochrane, 2011)
- ▶ → US bonds may only be safe in nominal terms
- ▶ Could inflation trigger a sell-off of US assets in the RW?

## References

- ▶ Eichengreen, Exorbitant Privilege, The Rise and Fall of the Dollar, Oxford University Press, 2011
- ▶ Lane and Shambough, Financial exchange rates and international currency exposures, AER 2010
- ▶ Burnside, Eichenbaum, Kleshchelski and Rebelo, The returns to currency speculation, NBER working paper, 2006
- ▶ Cochrane, Inflation and Debt, National Affairs, 2011
- ▶ Gopinath and Stein, Banking, Trade, and the Making of a Dominant Currency, NBER working paper, 2018