Banking, Trade, and the Making of a Dominant Currency

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Dollar Dominance

1 Trade invoicing

- $\frac{\$ \text{ invoicing}}{\text{imports from U.S.}} = 4.7, \qquad \frac{\text{€ invoicing}}{\text{imports from euro area}} = 1.2$

- Prices rigid in currency of invoicing

2 International banking and corporate borrowing

- $ liabilities of non-U.S. banks comparable to U.S. banks

- $ share foreign currency local liabilities of banks: 62%

- Currency mismatch

3 Central bank reserves

- Dollar: 64%; Euro: 20%; Yen: 4%

4 'Exorbitant Privilege'

- Violation of Uncovered Interest Parity

Our Contribution

1. **Unified theory** for dominance in trade invoicing *and* finance

2. **Strategic complementarity** of unit of account and store of value

3. **Dominant currency**, despite multiple candidates

4. 'Currency mismatch' and 'exorbitant privilege'

Building Block I

- Preference for 'safety' tied to invoicing

$$\max C_0 + \beta \mathbb{E}_0 W_1 + \theta \log(M)$$

$$M = \left(D_h^{\alpha_h} D_\$^{\alpha_\$} \right)^{\frac{1}{\alpha_h + \alpha_\$}}$$

$$Q_h = \beta + \theta \frac{\alpha_h}{(\alpha_h + \alpha_\$) D_h}$$

$$Q_\$ = \beta + \theta \frac{\alpha_\$}{(\alpha_h + \alpha_\$) D_\$}$$

Building Block II

- Limits to safe asset creation

$$\bar{\mathcal{E}} B_\$ + B_h \leq \gamma_L N$$

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$$\bar{\mathcal{E}} B_\$ + B_h \leq \gamma_L N$$

- EM banks/firms: comparative disadvantage in $ safe asset creation

$$\frac{Q_\$ - \beta}{Q_h - \beta} = \bar{\mathcal{E}}$$

- Currency Mismatch

- UIP Violation & Exorbitant Privilege: $Q_\$ > Q_h$

Building Block III

- Invoicing exports in dollars raises dollar collateral
  - Access cheap dollar financing

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  - Access cheap dollar financing

- This feeds into preference for dollar safe assets

$$\alpha_{\$i} \equiv a + b \int_{j \neq i} \eta_j dj$$

Reinforcing Mechanism
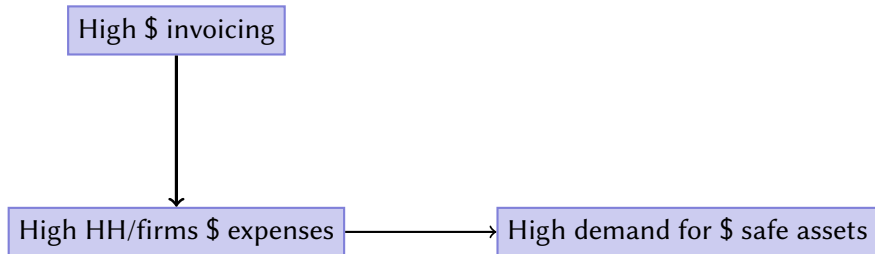
Reinforcing Mechanism

High $ invoicing

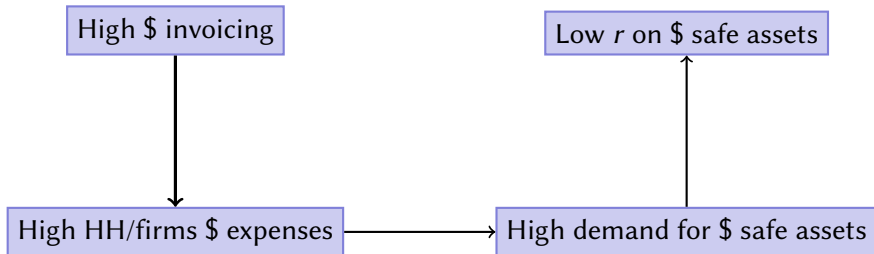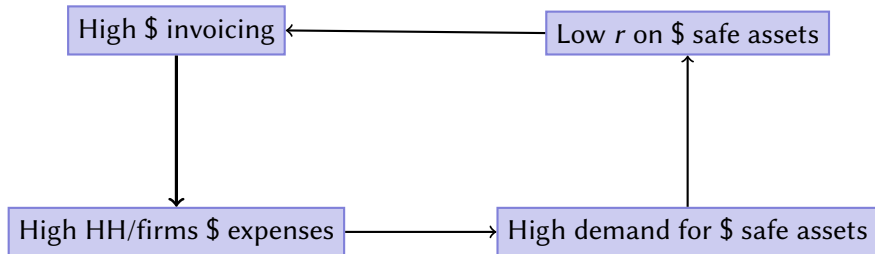# Reinforcing Mechanism

High $ invoicing

↓

High HH/firms $ expenses

Reinforcing Mechanism

High $ invoicing

High HH/firms $ expenses ⟶ High demand for $ safe assets

Reinforcing Mechanism

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┌─────────────────┐                          ┌──────────────────────┐
│ High $ invoicing │                          │ Low r on $ safe assets │
└─────────────────┘                          └──────────────────────┘
         │                                                 ▲
         ▼                                                 │
┌────────────────────────┐      ┌──────────────────────────────┐
│ High HH/firms $ expenses │ ──▶ │ High demand for $ safe assets │
└────────────────────────┘      └──────────────────────────────┘
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Reinforcing Mechanism

High \$ invoicing ← Low r on \$ safe assets

High \$ invoicing → High HH/firms \$ expenses

High HH/firms \$ expenses → High demand for \$ safe assets

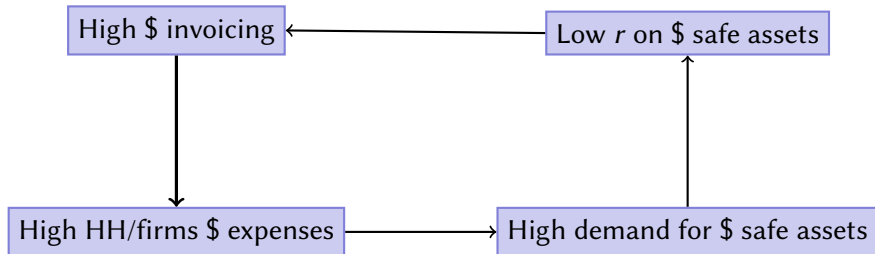High demand for \$ safe assets → Low r on \$ safe assets
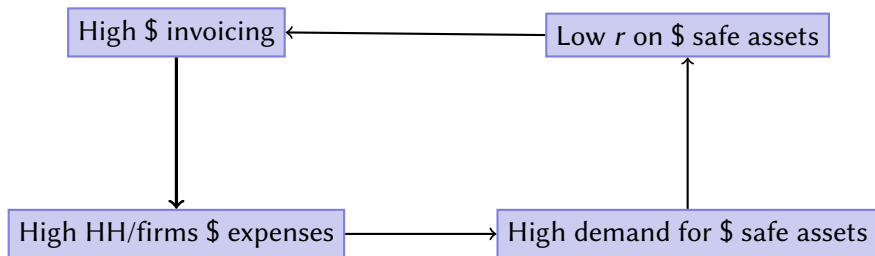
Reinforcing Mechanism

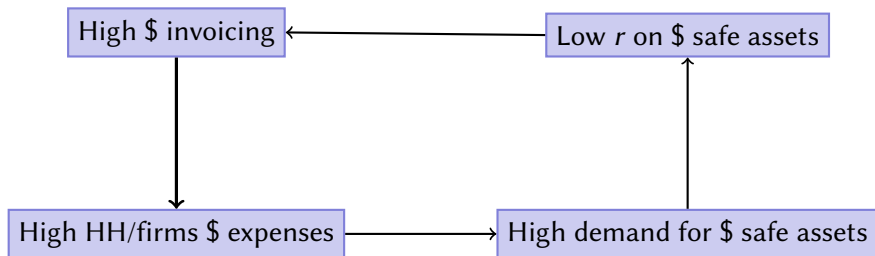1. Dominant currency country has to be large

Reinforcing Mechanism

1. Dominant currency country has to be large
2. Dollar dominates despite dollar and euro being ex ante similar

Reinforcing Mechanism

① Dominant currency country has to be large

② Dollar dominates despite dollar and euro being ex ante similar

③ UIP violations for dollar and euro do not have to be different

Reinforcing Mechanism

1. Dominant currency country has to be large
2. Dollar dominates despite dollar and euro being ex ante similar
3. UIP violations for dollar and euro do not have to be different
4. Dollarization of central bank reserves

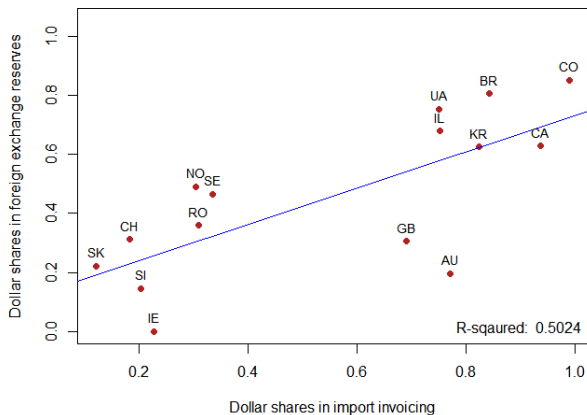# Data: Relation between trade invoicing and bank liabilities
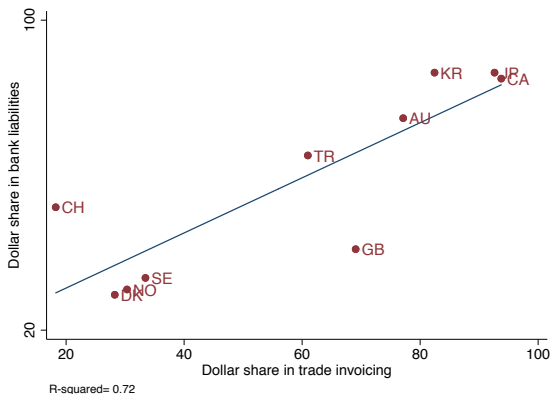
R-squared= 0.72

BIS Locational Banking Statistics, Local Liabilities

Data: Relation between trade invoicing and bank liabilities

R-squared= 0.82
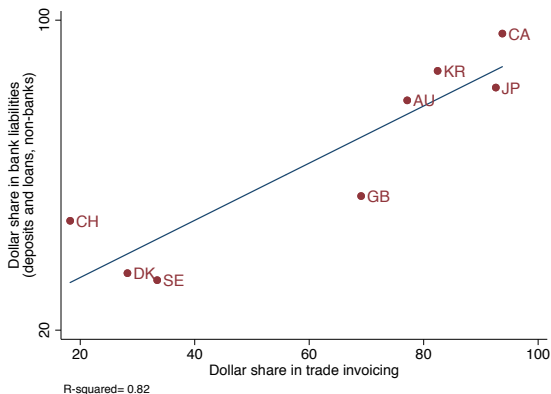
BIS Locational Banking Statistics, Local liabilities

Data: Relation between trade invoicing and central bank reserves

IMF, Wong (2007), Gopinath & Stein (2018, AER P&P)

Eichengreen (2010): *"...experience suggests that the logical sequencing of steps in internationalizing a currency is: first, encouraging its use in invoicing and settling trade; second, encouraging its use in private financial transactions; third encouraging its use by central banks and governments as a form in which to hold private reserves."*

- Dollar take over of British pound in early 20th century

- Internationalization of Renminbi China's Renminbi
  - Share as settlement currency: 0% in 2010, 25% in 2015
  - Second most widely used currency in global trade finance