# Discussion of "Banking, Trade, and the Making of a Dominant Currency" by Gita Gopinath and Jeremy Stein

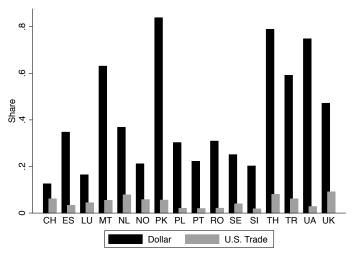
Adrien Auclert

Stanford

Hoover Policy Conference May 4, 2018

# Gopinath (2015) 'The International Price system'

Dollar's invoicing share in imports vs share of imports from U.S.



### This paper

- ▶ U.S. dollar widely seen as a dominant currency
- Plays outsize role in denomination of
  - 1. Trade invoicing, including non-U.S. country pairs
  - 2. Deposits of non-U.S. banks
  - 3. Borrowing of non-U.S. firms
- Moreover
  - 4. U.S. dollar borrowing typically cheaper
    - systematic uncovered interest rate parity (UIP) violations
  - 5. Corporate balance sheets are often currency mismatched
- This paper
  - ► Connects facts 1–5 using a unified, elegant theory
  - ▶ Derives potential implications for EUR and RMB going forward

#### Two key ingredients

- ► Two key model ingredients:
- 1. U.S. dollar as unit of account for assets and liabilities, including
  - Trade payables = liability for importers
  - ► Trade receivables = asset for exporters
  - ▶ Sticky prices in invoicing currency ⇔ lack of FX indexation
  - Currency risk in balance sheet, just like any other asset or liability
  - ▶ Generates hedging incentives, connecting facts 1 3

#### Two key ingredients

- ► Two key model ingredients:
- 1. U.S. dollar as unit of account for assets and liabilities, including
  - Trade payables = liability for importers
  - ► Trade receivables = asset for exporters
  - ► Sticky prices in invoicing currency ⇔ lack of FX indexation
  - Currency risk in balance sheet, just like any other asset or liability
  - ► Generates hedging incentives, connecting facts 1 3
- 2. U.S. dollar as safe store of value
  - ► Generates cheap dollar funding... (fact 4)
  - ... and incentive for currency mismatch in balance sheets (fact 5)

▶ Importers have trade payables invoiced in \$...

Exporters

Banks

Assets	Liabilities

Assets	Liabilities

Assets	Liabilities
	\$

▶ generating a demand for \$ deposits...

Exporters

Assets Liabilities

Banks

Assets	Liabilities

Assets	Liabilities
\$ ←	\$

▶ pushing down on \$ rates and encouraging exporters to borrow \$...

Exporters

Assets	Liabilities
	\$

Banks

Assets	Liabilities
\$	\$

Assets	Liabilities
\$	\$

▶ in turn encouraging exporters to invoice in \$... (not fully: mismatch)

Exporters

Assets	Liabilities
\$ ←	\$

Banks

Assets	Liabilities
\$	\$

Assets	Liabilities
\$	\$

which finally affects other countries' importers

Exporters

Banks

Assets	Liabilities
\$	\$
_	

Assets	Liabilities
\$	\$

Assets	Liabilities
\$	\$

#### Key questions

- Why doesn't the whole world dollarize?
  - ▶ Benefits of flexible exchange rates are unmodeled in the paper
  - Optimal currency area literature mostly modeled the costs of union
  - ▶ This paper fleshes out the benefits side. Could integrate both?

#### Key questions

- Why doesn't the whole world dollarize?
  - ▶ Benefits of flexible exchange rates are unmodeled in the paper
  - Optimal currency area literature mostly modeled the costs of union
  - ▶ This paper fleshes out the benefits side. Could integrate both?
- Multiple equilibria?
  - USD replaced GBP after WWI
  - EUR or RMB might in principle become dominant currencies instead
  - ▶ But existing assets and liabilities have long maturities.
  - Anchor of history probably very strong

#### **UIP** violations

Risk-neutral savers (importers) value dollars in utility

$$\begin{aligned} \max \quad & C_0 + \beta \mathbb{E}\left[W_1\right] + \theta \alpha_{\$} \log D_{\$} \\ & C_0 + D + \mathcal{E}_0 D_{\$} \leq W_0 \\ & W_1 = D\left(1+i\right) + \mathcal{E}_1\left(1+i_{\$}\right) D_{\$} \end{aligned}$$

Generates UIP violation (exhorbitant privilege) at equilibrium:

$$1+i = \mathbb{E}\left[\left(1+i_{\$}\right)\frac{\mathcal{E}_{1}}{\mathcal{E}_{0}}\right] + \frac{\theta}{\beta}\frac{1}{\mathcal{E}_{0}}\frac{\alpha_{\$}}{D_{\$}}$$

- Complementary to typical risk-based explanation
- But does not generate CIP violations?
  - ► This relies on assuming that swapped \$ do not yield utility
  - ▶ Could make opposite assumption and explain cross-currency basis

#### Testing the theory

- ▶ Paper tests in data one cross-country prediction
  - ▶ Countries with larger  $\alpha_{\$}$  also have larger  $D_{\$}$
- ► Theory provides many micro-level predictions:
  - ▶ Importers with larger  $\alpha_{\$i}$  have larger  $D_{\$i}$  within a country
  - **Banks** whose clients are importers with larger  $\alpha_{i}$  issue more \$ loans
  - Exporters who choose to invoice in \$ also tend to borrow in \$
- Would be nice to test these in firm/bank level data

### Concluding thoughts

- Novel, coherent framework linking prominent role of dollar in trade invoicing and banking:
  - ▶ \$ invoicing creates asset-liability management motive for firms
  - Creates causal chain from import invoicing to export invoicing, via cheap funding
- My view: role of dollar as unit of account more important than safe store of value, and most essential part of the story
- Expect many more papers on the topic
  - Flesh out testable implications