

Discussion of

## **Collateral Advantage**

*Exchange Rates, Capital Flows and Global Cycles*

by Devereux, Engel & Wu

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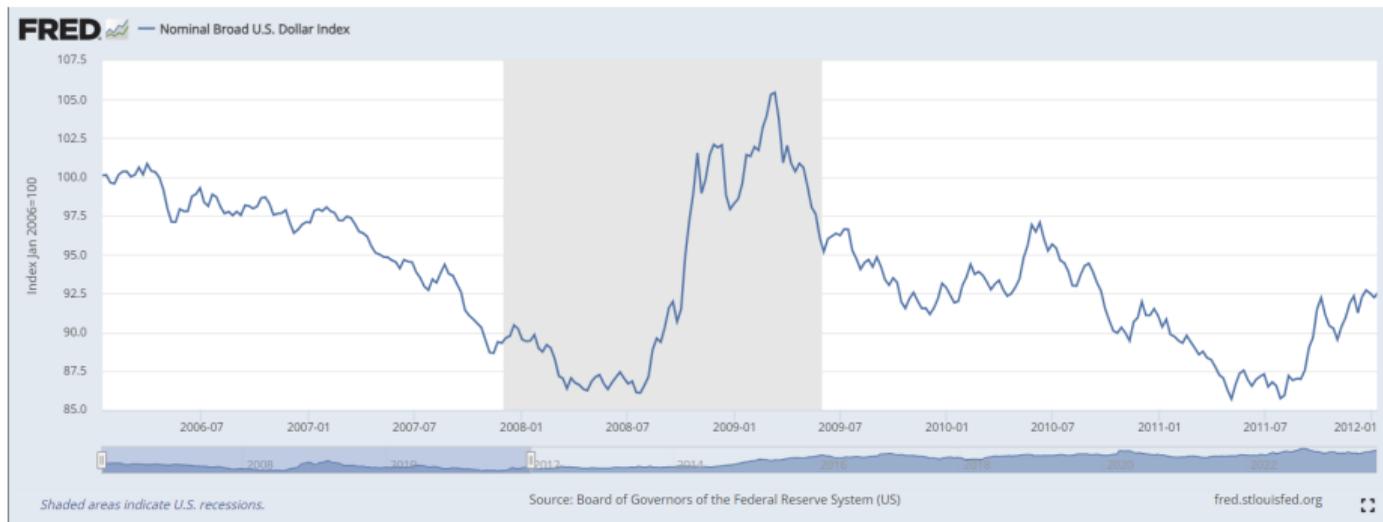
## Motivation: U.S. & International Capital Flows

$$NFA = TB + \underline{\text{Valuation Effects}}$$

### Stylized Facts about U.S. international capital flows

- Leveraged asset position → *“Global Venture Capitalist”*
- Higher returns in normal times → *“Exorbitant privilege”*
- Transfer to the RoW in bad times → *“Insurance” or “Exorbitant duty”*
- Gross positions fall in bad times → *“Retrenchment”*

# Motivation: Dollar Appreciates during *Bad Times*

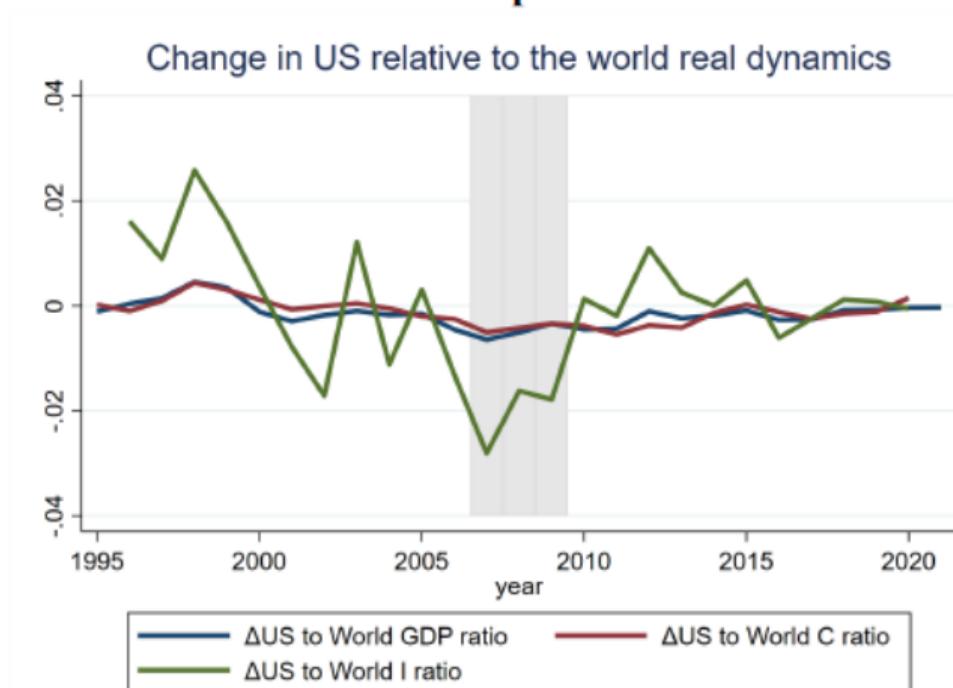


# Motivation: Dollar Appreciates during *Bad Times*



# Motivation: U.S. GDP fell more w.r.t. *Rest of the World*

## Lower panel



# This Paper

## Goals!

1. Stylized Facts about U.S. international capital flows
2. Dollar *appreciation during financial crisis*
3. Greater fall in U.S. output vs. Global output *during financial crisis*

## This Paper:

1. World GE model of portfolio choice & asset price
2. Leverage constraint → Gertler and Karadi [2011]
3. Endogenous convenience yield → Jiang et al. [2021], Engel and Wu [2023]

# Main Mechanism & Results

- Home & Foreign, sticky prices (LCP) + capital goods
- Banks at  $H$  &  $F$  issue deposits, invest in bonds & capital s.t. leverage constraint

$$\kappa_h D_h + \kappa_f S_t D_f + \kappa_{Kh} Q_t K_h + \kappa_{Kf} S_t Q^* K_f \leq \nu \times N_t$$

- **Calibration:**  $\kappa, \kappa^*$  target SS portfolios & convenience yield

$$\kappa_h = 0.025, \kappa_f = 0.40, \kappa_h^* = 0.05, \kappa_f^* = 0.32, \kappa_{Kh} = \kappa_{Kf} = 0.41, \kappa_{Kf} = \kappa_{Kh}^* = 0.49$$

## Normal Times:

- U.S. bonds are better collateral  $\rightarrow r_f - r_h = 1\% \rightarrow$  **Convenience yield**
- U.S. bank is more leveraged  $\rightarrow NFA/GDP = -18.5\% \rightarrow$  "GVC"

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## Global Financial Crisis Shock: $\nu_t = \nu_t^* \downarrow$

- Collateral advantage  $\rightarrow$  U.S. UIP Premium  $\uparrow$   $\rightarrow$  U.S. dollar appreciates
- Higher U.S. leverage  $\rightarrow$  U.S. NFA  $\downarrow$   $\rightarrow$  tighter credit  $\rightarrow$   $Y_t/Y_t^* \downarrow$
- Valuation effects + rebalancing  $\rightarrow$  retrenchment

## Comment # 1: Financial Intermediaries & Source of Deleveraging

Morelli et al. [2022]:

- U.S. households save
- U.S. firms subject to capital shock
- E.M. are *riskier* & can *default*

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- Subject to borrowing constraint
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Devereux, Engel & Wu

- Sticky Domestic & Export Prices
- *Keynesian* Households → 0.50



- Fire sale  $\neq$  de-leveraging shock



⇒ **D.E.W. mechanism can lead to it ?**

## Comment # 2: Implications for U.S. Monetary Policy Transmission

U.S. Monetary Policy shock  $\uparrow R_{h,t+1}$

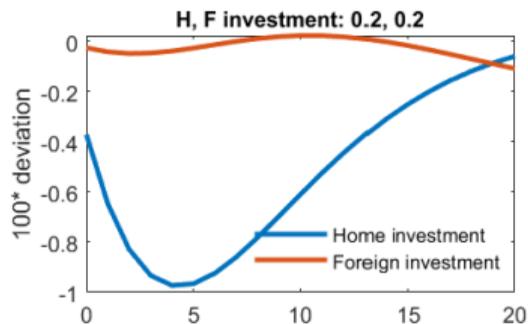
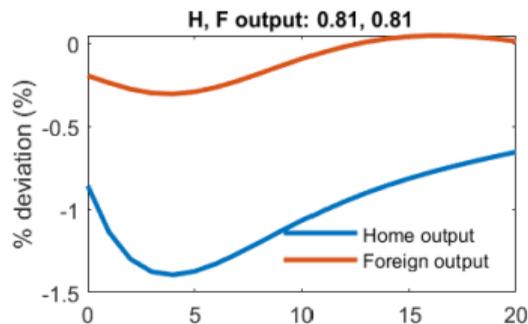
- $\downarrow$  U.S. banks demand for U.S.  $K$
- $\uparrow$  U.S. banks demand for Treasuries
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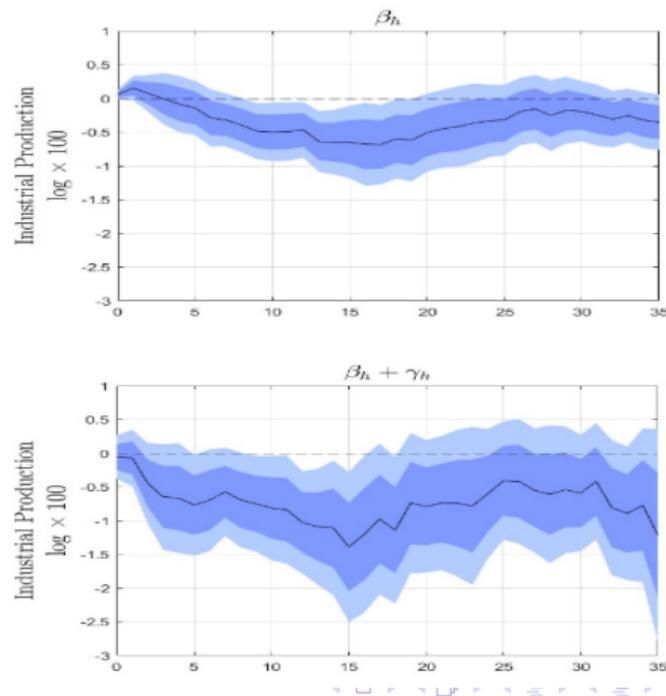
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Impact of U.S. MP in US & RoW



# Other Comments:

## 1. Global vs Domestic Banks

- ▶ Global banks hold treasuries
- ▶ Domestic banks do not hold treasuries
- ▶ What are the regulations? → what are other stylized facts ?

## 2. Quantitative Model Features

- ▶ Keynesian Households
- ▶ LCP
- ▶ What is the  $\neq$  with  $\uparrow$  demand for dollar assets?

## 3. Dollar Funding across the World

- ▶ Increasing role of dollar funding outside the U.S.
- ▶ Increasing role of intra-country dollar financing

## Conclusion

- Very interesting paper
- A lot of work done!
- Can't wait to apply it to EMs issues

## References

- Charles Engel and Steve Pak Yeung Wu. Liquidity and exchange rates: An empirical investigation. *The Review of Economic Studies*, 90(5):2395–2438, 2023.
- Mark Gertler and Peter Karadi. A model of unconventional monetary policy. *Journal of monetary Economics*, 58(1):17–34, 2011.
- Zhengyang Jiang, Arvind Krishnamurthy, and Hanno Lustig. Foreign safe asset demand and the dollar exchange rate. *The Journal of Finance*, 76(3):1049–1089, 2021.
- Juan M Morelli, Pablo Ottonello, and Diego J Perez. Global banks and systemic debt crises. *Econometrica*, 90(2):749–798, 2022.