# FEDERAL RESERVE BANK OF SAN FRANCISCO

# Discussion of "A Model of U.S. Monetary Policy and the Global Financial Cycle"

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Sylvain Leduc
Federal Reserve Bank of San Francisco

## Great paper that checks all the boxes!

- ✓ Addresses an interesting question
- ✓ Derives novel analytical results
- ✓ Provides a quantitative assessment of the mechanism
- ✓ Has important policy implications

# A GE framework of the global financial cycle

- Introduce global intermediaries in NK open economy model
- Global intermediaries (GIs) facilitate international capital flows
- US policy impacts intermediaries' net wealth and ability to bear risk
  - Changes in risk pricing of international assets

for spillovers

#### GIs are the model's essential actors

GIs allocate their wealth to holdings of US and international bonds

$$\sum_{j=1}^{n} E_{j,t}^{-1} (B_{mj,t} + B_{mj,t}^{\delta}) = W_{m,t}$$

Gls care about profits in US dollars

$$\prod_{m,t+1} = \sum_{j=1}^{n} \frac{(1+i_{j,t})B_{mj,t}}{E_{j,t+1}}$$

Choose portfolio allocation to maximize mean-variance preferences

$$E_t \prod_{m,t+1} - \frac{a}{W_{m,t}} Var_t \prod_{m,t+1}$$

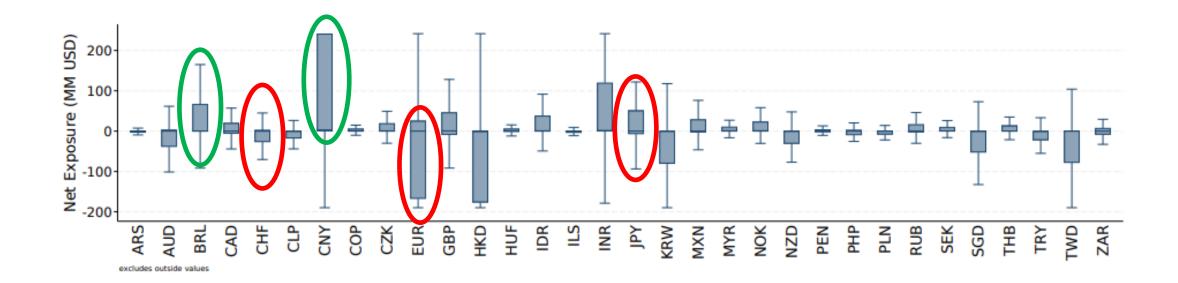
# Provide more direct info on GIs

#### Dodd-Frank: A treasure trove of information

- Largest US banks must provide detailed information on portfolio holdings (Y14 data)
- Largest US banks must provide daily internal risk limits to the Federal Reserve (Volcker rule)
  - Information provided at the trading desk level

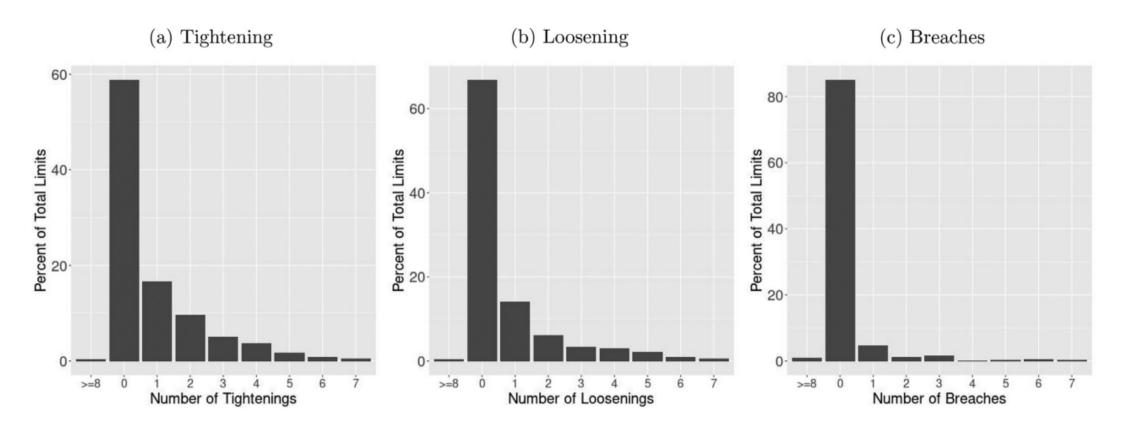
# Banks' net currency exposures

US banks' net exposures by currency (Barbiero et al. 2024)



## Banks' internal risk limits are changing often

#### Anderson et al. (2023)



# Global financial cylce and risk factors

### Covariances as parameters: reasonable?

• Excess returns on one-period bond in currency *j* 

$$ex_{j,t+1} = \frac{E_{j,t}}{E_{j,t+1}} (1 + i_{j,t}) - (1 + i_{1,t})$$

• Under approximation method, excess returns compensate for risk

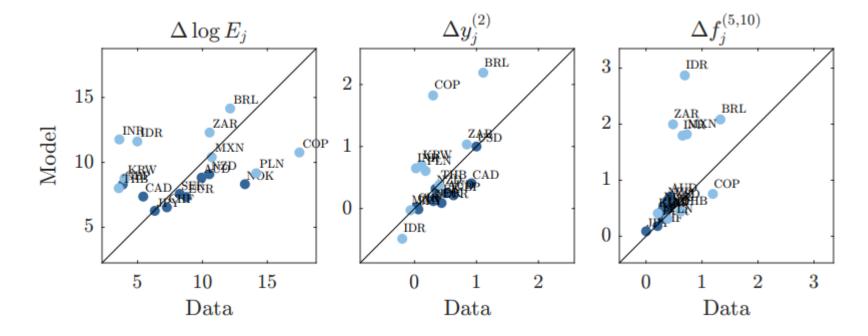
$$ex_{j,t} = \frac{\overline{a}}{\omega_m} \left[ \sum_{k=2}^n Cov \left( ex_{j,t+1}, ex_{k,t+1} \right) \frac{b_{mk}}{q_k} \right]$$

- Risk reflects the covariances with all trades and GIs' bond holdings
- If US policy is a central driving force, taking covariances as <u>parameters</u> is a strong assumption

# Model validation

### Bring more evidence to validate the model

Model partly estimated to match G10 exchange rate and yields data

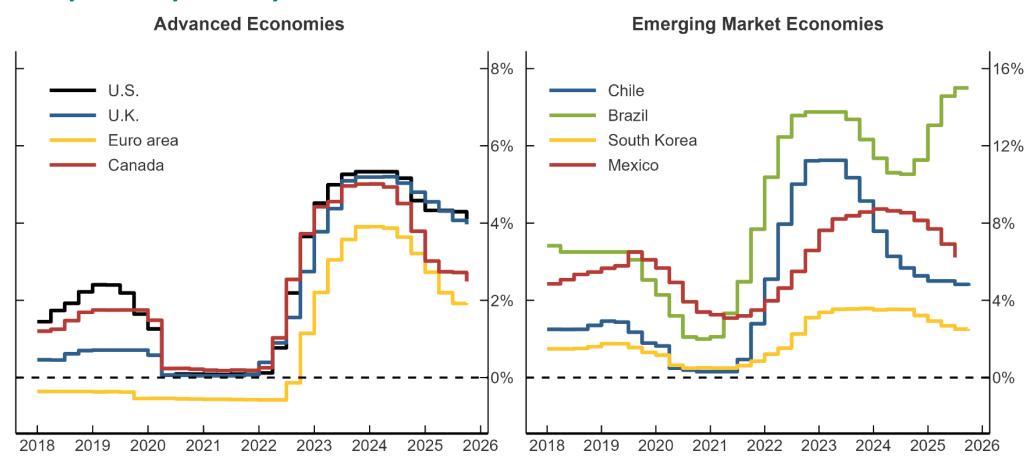


- Critical parameters are unobserved, so difficult to assess estimation
- Examine responses of real variables to gage model performance further

# Examine post-pandemic policy responses

# Policy spillovers or correlated/global shocks?

#### **Policy rates by country**



Note: Monthly series of overnight interbank rates.

Source: OECD via Haver Analytics

## Have a look at the paper!

- Analytically sound approach
- Intuitive channel
- Will be useful for policy analysis

