Discussion of

Foreign-currency exposures and the financial channel of exchange rates: Eroding monetary policy autonomy?

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Introduction

Foreign currency exposure and monetary autonomy
- EMEs accumulated foreign-currency exposure since the Asian crisis
- Does this limit the EME central bank autonomy?

Method
- Estimate interest rate rule for 21 floating SOEs (advanced and EMEs)
- Does domestic policy rate load on the “base”-country policy rate?
- Is foreign currency exposure relevant to this loading?

Answers
- Robust: Positive loading on the “base”-country policy rate
- This loading is increasing in foreign currency exposure
brief motivation and simple theoretical model

main comment: more (causal?) investigation of the channel

Overall, the paper provides evidence in favor of financial exposure channel.
Important contribution.
EME exposure

US dollar-denominated credit to non-banks outside the United States

Amounts outstanding, in trillions of US dollars

Graph A4

Further information on the BIS global liquidity indicators is available at [www.bis.org/statistics/about_gli_stats.htm](http://www.bis.org/statistics/about_gli_stats.htm).

1 Non-banks comprise non-bank financial entities, non-financial corporations, governments, households and international organisations.

2 Loans by LBS-reporting banks to non-bank borrowers, including non-bank financial entities, comprise cross-border plus local loans.
Georgios and Feng’s question

Is there a systematic response by EME central banks to base country interest rates over and above any exchange rate intervention?
Mundell Fleming framework ala Gourinchas (2017)
a domestic (small) open economy vs a foreign (large) economy

\[
Y = A + NX \\
A = \xi - \delta r - \zeta s \\
NX = \alpha(Y^* - Y) + \beta s \\
Y^* = A^* = \xi^* - \delta r^* \\
s = \theta(r^* - r) + \gamma r^* + \chi \\
\alpha, \beta, \delta, \zeta, \theta, \gamma, \chi \geq 0
\]

- \(Y\) is output; \(A\) is domestic absorption; \(NX\) is net exports; 
  \(r\) is the interest rate; \(s\) is exchange rate
- \(\gamma\) global financial cycle; \(\zeta\) other financial spillovers (balance sheet exposure, etc.); \(\chi\) exogenous UIP deviations
- \(\zeta = \gamma = \chi = 0\) is textbook Mundell-Fleming-Dornbusch model
CB is passive, $\Delta r = 0$

**Case 1:** $\zeta = \gamma = \chi = 0$

- Foreign demand for home goods falls and lowers $\text{NX}$ through $\alpha$
- Domestic currency depreciates and boosts $\text{NX}$ through $\beta$
- No effect on domestic absorption
- Domestic demand for imports $\downarrow$ i.e. $\text{NX}$
- $\Delta Y = \Delta \text{NX} = \left(\frac{-\alpha \delta + \beta \theta}{1+\alpha}\right) \Delta r^*$

**Case 2:** add $\zeta > 0$

- Financial balance sheet effects on domestic absorption open up
- $\Delta A = -\zeta \Delta s = -\zeta \theta \Delta r^*$
- If $\zeta$ large enough, domestic economy unambiguously contracts

$\zeta$ - financial channel motivation for stabilizing exchange rate
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hard peg, $\Delta r = \Delta r^*$

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- No effect on competitiveness as $\Delta s = 0$
- Domestic absorption contracts $\Delta A = -\delta r^*$
- Domestic demand for imports ↓ i.e. $\Delta NX = -\alpha \delta \Delta r^* + -\alpha \Delta Y$
- $\Delta Y = \Delta NX + \Delta A = -\delta \Delta r^*$
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- $\Delta Y = \Delta NX + \Delta A = -\delta \Delta r^*$ → “as-if” domestic monetary policy shock

**Case 2:** add $\zeta > 0$
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With $\gamma > 0$ (endogenous risk premia), passthrough to $\Delta r \uparrow$
Implications with $\zeta > 0$

**Case 1:** Do not react to $\Delta r^*$
- Balance sheet effects retard domestic absorption
- $\Delta Y = \frac{-\alpha \delta + (\beta - \zeta) \theta}{1 + \alpha} \Delta r^*$

**Case 2:** Hard peg
- No balance sheet effects as $\Delta s = 0$
- $\Delta Y = -\delta \Delta r^*$

Hard to put a bound on $\zeta$ theoretically.
Large theoretical literature (for e.g. Céspedes Chang & Velasco 2004, or Akinci Queralto 2019)
Big picture

Is there a tradeoff?

- Presence of a tradeoff implies that domestic output has to contract.
- Do we see this in the data?

Differential effect on output, exchange rate based on exposure, conditional on interest rate reaction?
Trilemma in history (+ shameless self promotion)

Jordá-Singh-Taylor (2019): *The long-run effects of monetary policy*

Data: 17 advanced economies 1890-2015

Use trilemma to identify monetary policy shocks for open pegs
Big picture 2

“Original sin” in a new bottle (Carstens & Shin 2019)

- Is foreign currency exposure (FCE) because of lack of domestic financial development?

- Du & Schreger: private sector offshore debt explains sovereign risk premia

- Can you use instruments to proxy for FCE? (Rajan Zingales ’98?, Levine ’05?)
Big picture 2

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Counterfactual loading on base rate?

- If EME didn’t have large FCE, would there still be a passthrough?
- Likely that the FCE is complementary to variety of factors (dollar invoicing, stability of reference currency, demand for safe assets, imported inputs/global value chains, trade credit,...)

Gopinath (2015), Mukhin (2019), Hassan (2013), Caballero Farhi Gourinchas (2008, 2016) ...
Are EMEs stabilizing exchange rates with the policy rate movements?

- Kalemli-Özcan (2019): UIP violations for EMEs comove with interest differentials
- Need larger movements in interest rate to stabilize $s$: $\left(1 + \frac{\gamma}{\theta}\right) \Delta r^*$
- Also suggestion: control for EMBI instead of VIX?
Challenge for EMEs to build a base for domestic currency borrowings

- low r-star, demand for dollar based liabilities $\rightarrow$ temptation to issue debt in dollar
- Hale Jones & Spiegel (2019): GFC gave impetus to home currency issuance
- path dependence in “what is safe”
1. Why no lags for base country rate?
   - Cointegration for domestic policy rate possibly taken care of by adding forecasts.
   - Unit root in base rate can be problematic for inference

2. Why forecasts instead of actual fundamentals in these economies?
   - VARs feature actual macro fundamentals in reaction function
   - Can use longer time series instead of starting in 2002.
     - Foreign currency exposure interpolated from annual to monthly
     - Can start in 1990 (Benetrix, Lane and Shambaugh 2015)
into details...

3. Omitted variables?
   - Exports and imports likely to change when the base rate changes
   - Not controlling for base country GDP, current account can be problematic.
   - I would add current and lag values of these variables as controls.

4. Why does the $R^2$ barely move despite all the controls?
   - Clarification: are interaction terms Table 3 onwards also added as levels?
   - Bit surprising that explanatory power is low in estimated rules.
into details...

5. Robustness suggestion
- check confidence bands with clustered standard errors at country level

6. Exposition suggestion
- Show how do EME with soft pegs behave?
- Could bilateral trade between EMEs explain policy rule response?
- If your trading partner is managed float (eg. India), you want to keep exchange rate stable for stability of bilateral trade relations.
putting it back together

EME policy rate loads on US rate


 Quantifying the foreign currency exposure channel is the main object

- Georgios and Feng have taken seriously this task. Lots of details in the paper
- As the much-admired referee #2 says, they are still scratching the surface
- How do we obtain causal quantitative import of foreign currency exposure?
Exchange rate arrangements

Number of countries weighted by their share in world GDP, 1950–2015, excludes freely falling cases

Percent

US dollar

UK pound

French franc and German DM (1950–1998) and euro
Share of world GDP in arrangements...
appendix
Vicondoa: 25 bp shock to US policy rate
EME exposure

Foreign currency credit to non-banks in EMEs

US dollar-denominated credit by region

Foreign currency credit to selected EMEs

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1 Amounts outstanding for the latest available data.

Sources: Datastream; Dealogic; Euroclear; Thomson Reuters; Xtrakter Ltd; national data; BIS locational banking statistics; BIS calculations.