

**Discussion of**  
**“Global Footprints of Monetary Policies”**  
by Miranda-Aggripino, Nenova, Rey

Ben Schumann  
54th Konstanz Seminar

May 25, 2023

# The paper

## Is a great read

("[...] EMEs, which are hit by a double whammy", "[...] financial markets dance to the same tune")

And also

- ▶ Extends **Global factor (GF) in asset prices** across space (and time) → service to profession ✓
- ▶ Estimates new **GFs of global capital flows** → service to profession ✓
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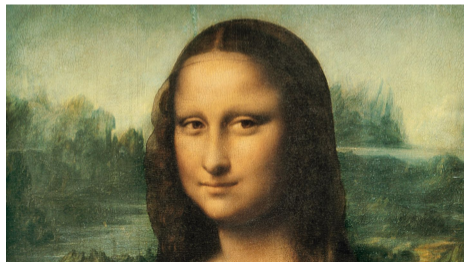
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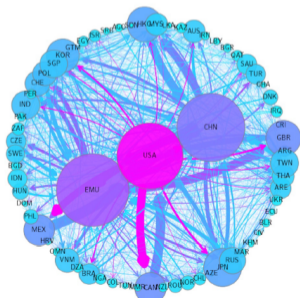
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# The paper (continued)

- ▶ Separates factors into “financial” and “real” (commodity & trade & growth) factors
- ▶ Reconfirms results of Miranda-Agrippino and Rey [2020] on global reach of US MP
- ▶ Estimates the effects of Chinese (CN) MP
- ▶ “Compares” the effects of US monetary policy and CN monetary policy
  - \* CN MP rather propagate via “real” channels → commodity & trade & growth
  - \* US MP rather propagate via “financial” channels → risk aversion & US-\$

**This discussion:** Mainly focuses on this “comparison”.

I argue that:

- ▶ Combining (all) factors with SVAR could “drive home” the story of **real vs financial giant**
- ▶ We **should compare “apples and apples”** in order to make judgements on different MP effects
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# Comment 1: Tying together the different sections

## Compelling story of the paper

- ▶ There are these 2 different types of factors (real and financial)
- ▶ There are these 2 different types of “giants” in the global economy
- ▶ Policy of one giant rather transmits via real and for the other one via financial channels

## My first thoughts:

- ▶ Real “giant’s” monetary policy: Stronger impact on real factors
- ▶ Financial “giant’s” monetary policy: Stronger impact on financial factors

But we never see this “culmination” of the separate sections in action. Why?

Conjecture: Because (as of now) analysis does not allow to judge which impact is “stronger”?

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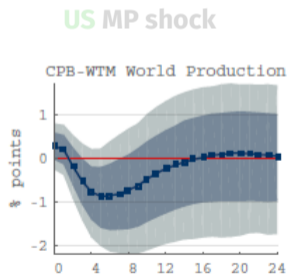
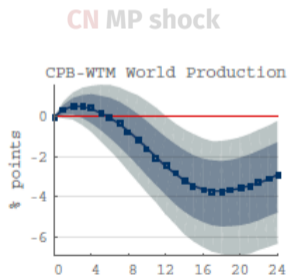
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This paper fits really nicely into one of the major themes of this century

## US vs. CN: Who is dominating the political landscape and the global economy?

“we compare the global effects of US monetary policy with [...] surprise changes in the Chinese monetary policy stance”

So which central bank is more powerful?



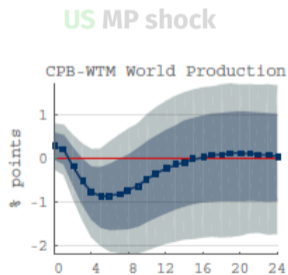
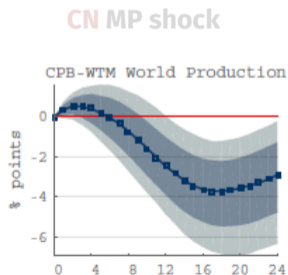
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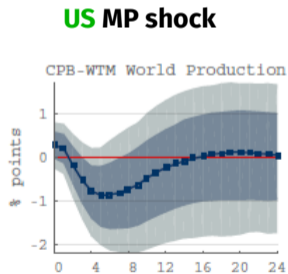
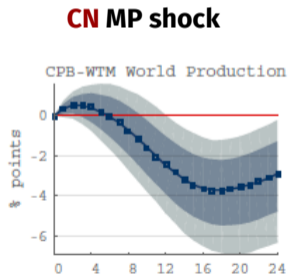
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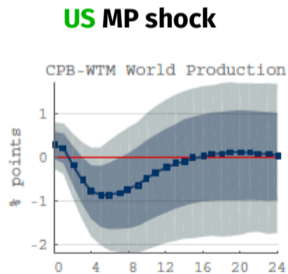
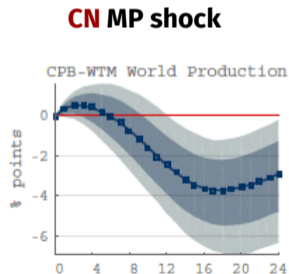
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“we **compare** the global effects of US monetary policy with [...] surprise changes in the Chinese monetary policy stance”

But do we really **compare** apples and apples?



# Towards comparing apples and apples

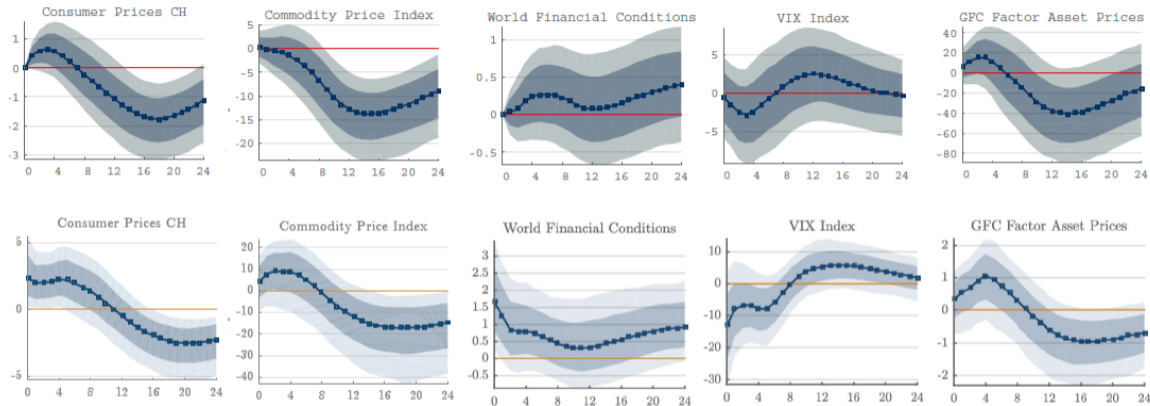
Some (unfortunate) differences between estimation and identification of US MP and CN MP shock

	<b>US</b>	<b>CN</b>	<b>CN <u>New</u></b>
<b>Normalization</b>	100Bps	1% increase in MPS	100Bps
<b>Identification</b>	IV	Recursive "Taylor Rule"	"IV??"
<b>Instrument</b>	HF $\Delta$ of FF4	(cleaned) residual of MPS	Daily $\Delta$ of IRS
<b>Information effects</b>	Excluded	Included?	Included?

**For CN: Pick your poison → Next Slides: A proposal**



# Comparing the two CN identification schemes



“New” IV based approach yields many unintuitive estimates

→ Stick with previous approach for this point of discussion

# Exploiting the “Taylor-type rule”

(Former) Governor Zhou (2015): “The **objective** of the [...] **Chinese monetary** authority, [...] is that of **maintaining prices** and the **value of the Renminbi stable**, [...] and **promoting economic growth**”

My “Taylor-Type rule” interpretation of this is

$$mps_t^{cn} = \alpha_1 \pi_t^{cn} + \alpha_2 \widehat{RMB}_t + \alpha_3 \widehat{Y}_t^{cn} + \sigma_{mp}^{cn} \epsilon_{t,mp}^{cn} \quad (1)$$

with  $mps_t^{cn}$  as the monetary policy stance.

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# Which “Taylor-type rule” did the authors impose?

Judging from the IRFS, authors imposed the following ordering

1. **Non-Moving Variables ( $y_t^{NM}$ )**: Prices, Output, World Variables, GF Capital Flows
2. Monetary policy stance indicator ( $mps_t^{cn}$ )
3. **Moving Variables ( $y_t^M$ )**: RMB, Commodity Prices, VIX, GF Asset Prices

**Which structural policy rule does this imply?**

# The structural policy rule implied by a Cholesky ordering

Disregarding the lagged terms, the authors write down the following system

$$\underbrace{\begin{bmatrix} y_t^{NM} \\ mps_t^{cn} \\ y_t^M \end{bmatrix}}_{Y_t} = \underbrace{\begin{bmatrix} b_{1,1} & 0 & 0 \\ b_{2,1} & b_{2,2} & 0 \\ b_{3,1} & b_{3,2} & b_{3,3} \end{bmatrix}}_B \underbrace{\begin{bmatrix} \epsilon_{t,1} \\ \epsilon_{t,mp}^{cn} \\ \epsilon_{t,3} \end{bmatrix}}_\epsilon \quad (2)$$

Because  $B$  is lower triangular so is its inverse ( $B^{-1} = A$ )

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After rearranging the MP equation such that it looks like a “Taylor-type rule”

$$mps_t^{cn} = -\frac{a_{2,1}}{a_{2,2}} y_t^{NM} + \frac{0}{a_{2,2}} y_t^M + \frac{1}{a_{2,2}} \epsilon_{t,mp}^{cn} \quad (4)$$

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Thus: Cholesky implies → structural rule governing the monetary policy stance indicator (MPS)

- ▶ includes all non-moving variables (prices, output, World variables, GF capital flows)
- ▶ excludes all moving variables (RMB, GF Asset Prices, VIX, etc)

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# What would former governor Zhou say?



**Hold on! Was that really my intention?**

## Comment 2: Killing two birds with one stone

**Instead of** imposing recursive ordering for **impact matrix**  $B$  (or using an (endogenous?) IV),

- ▶ Divide  $Y_t$  into the policy variables in “Taylor-type rule” ( $y_t^P$ ) and the others ( $y_t^O$ )
- ▶ **Impose** ‘Taylor rule’ of Zhou (2015) on the **structural matrix**  $A = B^{-1}$  (See Arias et al. [2019])

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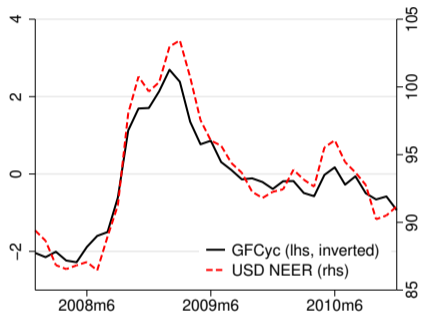
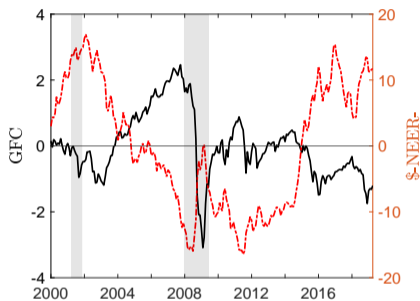
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## Comment 3: Global financial cycle or dollar cycle?



**What gives rise to this correlation and how does causality flow?**

# The GFCyc and the US-\$. How does causality flow?

## Why are the US-\$ and the GFCyc so correlated?

Authors argue: **Time varying aggregate risk aversion** (TVARA) underlies the global factor (GFCyc)

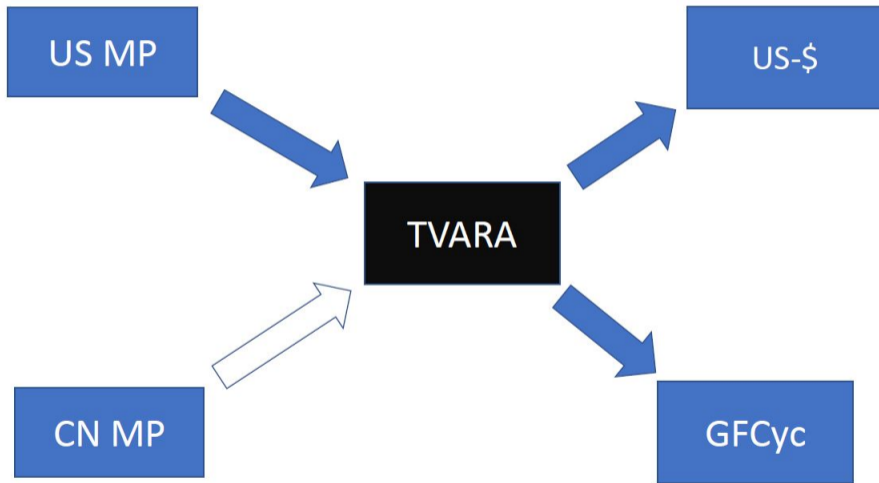
$$GFCyc = f(\text{time varying aggregate risk aversion})$$

To **rationalize the correlation pattern**

$$US-\$ = f(GFCyc \text{ and/or time varying aggregate risk aversion})$$

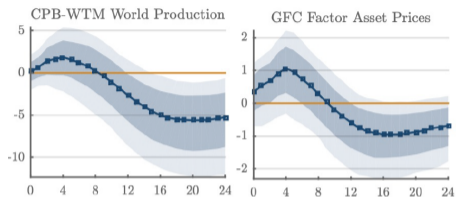
Authors: US-\$ and GFCyc as two **separate amplifiers of global shocks**

# The transmission mechanism sketched in the paper

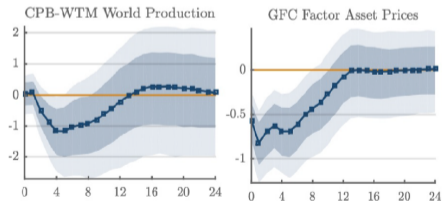


# CN MP has little effect on TVARA and global financial cycle

**CN MP:** Effects on (global) output *large*, Effects on TVARA/GFCyc *small*



**US MP:** Effects on (global) output *“small”*, Effects on TVARA/GFCyc *large*



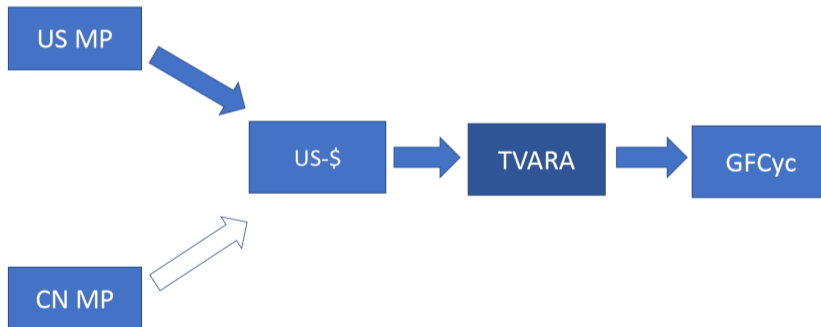
Puzzle? → Maybe its the US- $\$$ ?



# The role of the US-\$ as a possible explanation

Georgiadis et al (2023): GFCyc and US-\$ **not** two separate amplifiers

- ▶ US-\$ dominance in global financial architecture necessitates existence of GFCyc
- ▶ Whatever moves US-\$, moves TVARA and thereby GFCyc

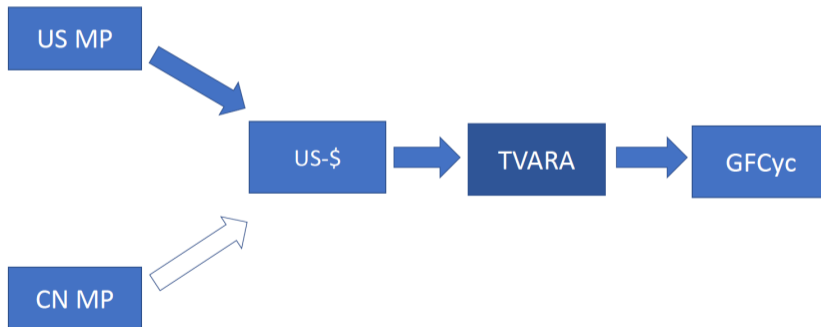


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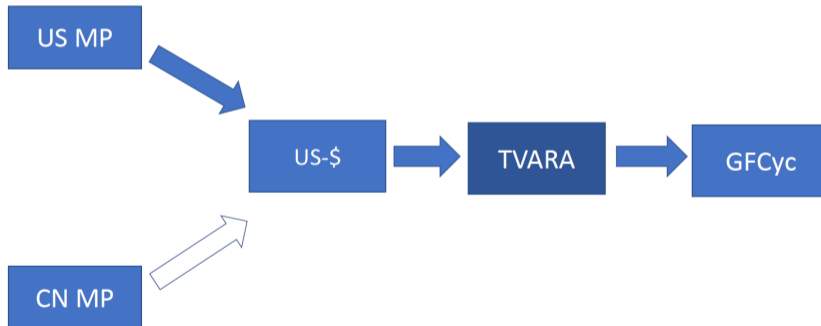


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# Summary

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- ▶ Is a great read and adds to a long line of research on spillovers and the GFC
- ▶ Extends existing estimates of global factors in asset prices (thanks!!)
- ▶ **NEW:** Provides estimates of global factors in capital flows (thanks!!)
- ▶ **NEW:** Estimates the effect of **CN** monetary policy shocks and compares to **US** counterpart

## This discussion argues that

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- ▶ Comparison of **CN** vs **US** MP could be improved by aligning estimation and identification
- ▶ Findings could be framed as reconfirming outstanding role of US-\$

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Jonas E Arias, Dario Caldara, and Juan F Rubio-Ramirez. The systematic component of monetary policy in svars: An agnostic identification procedure. *Journal of Monetary Economics*, 101:1–13, 2019.

Silvia Miranda-Agrippino and H elene Rey. Us monetary policy and the global financial cycle. *The Review of Economic Studies*, 87(6):2754–2776, 2020.