

# Discussion of “Global Footprint of Fiscal Policy” by S. Y. Kim

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# The Global Financial Cycle

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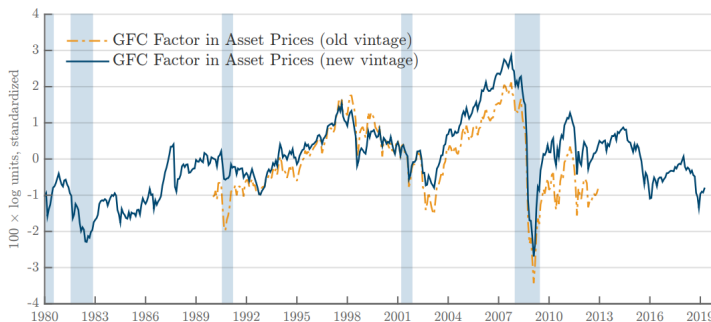
Helene Rey's 2013 Jackson Hole address:

- There is a GFC in capital flows, asset prices, and credit growth
- One common factor that drives these variables for countries with open capital accounts
- When the GFC is positive, global risk appetite is high and risk premia are low
- Open capital account countries experience inflows, asset price appreciation and credit growth
- This naturally has real effects in these countries, affecting their business cycle

# The Global Financial Cycle

- Miranda-Agrippino & Rey (2020) argue that US monetary policy is central to the GFC

FIGURE 1: GLOBAL FACTOR IN RISKY ASSET PRICES



*Notes:* Common factor in world risky asset prices. Original vintage in [Miranda-Agrippino and Rey \(2020b\)](#), sample 1990:2012 (dashed line), updated vintage in [Miranda-Agrippino, Nenova and Rey \(2019\)](#), sample 1980:2019 (solid line).

# This Paper: Summary

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- What if instead of US monetary policy, the GFC is driven by US fiscal policy?
- **Main Hypothesis:** US fiscal policy stance, proxied by the US surplus-debt ratio  $S/B$  drives the GFC
- This paper:
  1. presents suggestive empirical evidence for this hypothesis
  2. develops a DSGE model that rationalizes this fact
  3. validates the model mechanism by empirically testing some of its predictions

# Motivating Empirics

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Show that  $\Delta_{t,t-4}(S/B)^{US}$  has an impact on changes in log dividend yields and market excess returns across countries

- $(S/B)^{US} \downarrow \Rightarrow r^i \downarrow$
- Holds when controlling for local  $S/B$ , changes in risk-free rates, other global factors...
- Also holds for each country individually
- Mostly driven by changes in *tax revenue*, not govt spending

# Model: Description

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- Neoclassical endogenous growth model with  $N$  countries and a “central country” (US)
- Production employs intangible capital that can be produced domestically (“innovation”) or imported (“adoption”)
- US is different in two respects:
  1. it only innovates; does not adopt foreign technology
  2. other countries have a bias towards US technology
- Fiscal policy: GBC subject to spending shocks, financed with debt and distortionary taxes on intermediate goods producers and intangible capital producers

# Model: Mechanism

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Negative fiscal shock in the US

- Financed with a mix of debt and corporate taxes
- Rising corporate income taxes distort/reduce incentives for US innovation
- This negatively impacts foreign economies due to the central role of US innovation, triggering local fiscal responses

Negative fiscal shock in the US  $\Rightarrow$  deterioration of real, financial, and fiscal conditions abroad

# Model Validation

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Model produces a series of testable hypotheses, which the author tests:

1. **US is central to Global Innovation:** US R&D growth predicts R&D growth across countries
2. **US fiscal shocks predict lower domestic and global innovation:**  $(S/B)^{US}$  predicts global GDP growth forecasts as well as R&D growth across countries
3. **US fiscal policy leads the global fiscal cycle:**  $(S/B)^{US}$  predicts surplus-debt ratios across countries



# Assessment

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- Very thought-provoking findings
- Author does a lot of work, both in the motivating and validation empirics
- Even if one does not buy the dismissal of monetary policy as the main driver of the GFC, this paper definitely establishes fiscal policy as a separate force that is relevant for the GFC

# Main Comments

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1. Empirics: Identification of fiscal policy shocks
2. Empirics: the role of revenue vs. spending
3. Model: Is innovation special?

# Main Comment I: Identification of Fiscal Policy Shocks

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- Fiscal policy/stance is endogenous!
- Governments spend more in recessions, either due to automatic stabilizers or discretionary policies
- Bad growth prospects may trigger discretionary responses  $\Rightarrow$  fiscal policy predicts the cycle!
- This is a well-known problem in the fiscal multiplier literature (Blanchard & Perotti 2002, Mountford & Uhlig 2009, Ramey 2011)
- Progressivity/nonlinearity of stabilizers and “lumpiness” of discretionary policy imply that including measures of the business cycle as a control is not enough
- **Suggestion:** use series of identified fiscal policy shocks (recursive, narrative, etc.) as instruments for  $(S/B)$

# Main Comment II: It's all about revenue

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- Most series of identified fiscal policy shocks focus on *spending* (i.e., Ramey's defense shocks)
- One of the most interesting findings of this paper is that **revenue** is the component of  $S/B$  that matters for the GFC
- This raises a conceptual issue, since truly exogenous changes to fiscal policy predominantly occur in the spending, not the revenue side
- **Suggestion I:** event studies around plausibly exogenous changes to the structure of US fiscal revenue, i.e. 2017 TCJA
- **Suggestion II:** recursive identification of shocks to US revenue

# Recursive Identification of Revenue Shocks

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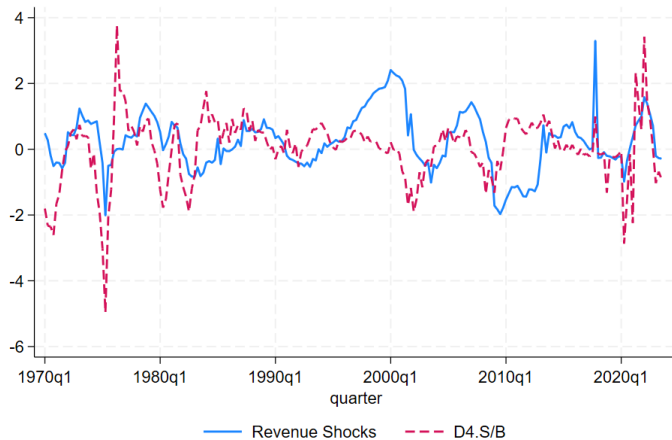
- Ramey & Zubairy (2018): can extract recursively identified shocks from

$$(t/y)_t = \sum_{i=1}^4 \beta_i (t/y)_{t-i} + \sum_{i=1}^4 \alpha_i (g/y)_{t-i} + \sum_{i=1}^4 \gamma_i \hat{y}_{t-i} + u_t$$

where  $(t/y)$ ,  $(g/y)$  are revenue and expenditure normalized by potential GDP and  $\hat{y}$  is the output gap

- Note: potential GDP extracted as the prediction of real GDP on a quartic trend
- First-stage regression of  $\Delta_{t,t-4}(S/B)^{US}$  on  $\hat{u}_t$  has a F-stat  $> 20$

# Fiscal Shocks and $\Delta_{t,t-4}(S/B)^{US}$



# Main Comment III: Is innovation special?

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- Author makes a convincing case that US fiscal policy matters for the GFC, beyond other factors (subject to the previous caveats)
- I was less convinced by the explanation for why this is the case
- Is innovation special, relative to other sectors (i.e. finance)?
- My reading is that a stationary version of the model (w/o growth) where US is central in some relevant sector would deliver very similar insights
- US fiscal shocks lead to future distortionary taxes, which reduces investment in the production of central commodity, triggers global recession and fiscal response by other countries
- Could such model deliver the same implications for risk premia, etc? Probably not  $\Rightarrow$  author should emphasize that

# Minor Comments

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- Paper refers to the FTPL: this is a purely real model, I do not think that it has anything to do with the FTPL. It is just about intertemporal GBCs and transversality conditions.
- It would be nice to see the responses to a bad fiscal shock abroad in the model. Are they substantially different than the responses to a bad US fiscal shock?
- The model has many non-standard parameters: a more thorough discussion of their calibration/identification would be welcome.



# Conclusion

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- Thought-provoking exploration of the determinants of the GFC
- Very complete paper, with a lot of convincing results
- Author convinced me that US fiscal policy is important for the GFC
- I'm still skeptical of the “specialness” of innovation