The Global Transmission of U.S. Monetary Policy
Riccardo Degasperi, Simon Seokki Hong, and Giovanni Ricco
University of Warwick

Research Question
How is US monetary policy affecting macroeconomic conditions around the world? The literature identifies various channels of transmission:
- Demand Channel – demand-augmenting effect
- Exchange Rate Channel – expenditure-switching effect
- Financial Channels – ‘risk taking’ channel, ‘credit’ channel

However, the magnitude of the spillover effects and the relative importance of the various channels are still a matter of debate.

Implications both for theory and policy:
- Dilemma vs Trilemma / Monetary Sovereignty
  (Ply 2013, Clotfelter 2015, Ravid-Dinar 2019)
- Policy spillovers / Policy Coordination / Dominant Currencies
  (Giavazzi et al. 2015, Gourinchas and Rey 2007, Maggiori 2017, Gennaioli et al. 2020)

Challenges & Approach
Need to distinguish the policy action from the information effect of Fed policy announcements:
- We use a high-frequency identification for conventional monetary policy shocks
- Exploiting the reaction of financial markets to FOMC announcements
- Controlling for the information channel of monetary policy (Miranda-Agrippino & Ricco, 2021)
- We obtain an instrument to identify the shocks (Stock & Watson, 2012; Mertens & Riet 2013)

Large heterogeneity across countries (e.g. cyclical position, financial conditions, structural features...): we build a monthly dataset covering a rich set of global aggregates, 15 Advanced Economies, and 15 Emerging Economies (over 150,000 data-points)
- We use efficient big data techniques (bilateral large Bayesian VARs)

Need for high-frequency data on leverage, risk appetite, and capital flows
- We use a monthly dataset of financial conditions indexes (CBC Global Liquidity dataset)
- And IMF Balance of Payment data

Methodology
We estimate the magnitude of the spillovers in a wealth of monthly models:
- A US-global VAR incorporating 31 variables: 15 global and 16 US indicators
- 30 bilateral US-Foreign country VARs, aggregated to obtain median-group responses

Accounting exercise to assess the relative importance of the channels of transmission:
1. Zero out the transmission coefficients of the structural VAR for some variables capturing a channel
2. Compare the responses from the unrestricted and restricted models

We study how the transmission depends on observables:
1. Divide countries based on the characteristic of interest (e.g. income or exchange rate regimes)
2. Estimate median-group responses for each category and compare responses

Results
What are the effects of a tightening in US monetary policy on the global economy?

Channels of Transmission
What is the relative importance of the various channels of transmission?

‘Fragile’ Emerging Economies
Do ‘fragile’ EMs respond differently to US monetary tightenings and loosenings?
1. Divide instrument into positive (tightening) and negative (loosening) parts
2. Identify the shock using them as separate external instruments
3. All responses are normalised to induce a 100bp increase in the US 1 year rate

Exchange Rate Regimes
How do exchange rate regimes affect the propagation of the shock?

Three groups: floaters, managed floaters, and crawling peggers:
- US spillovers affect all regimes: IP, CPI, stock prices, and risk appetite contract
- But the recessionary effects are smaller for floaters