Discussion of Miranda-Agrippino and Rey "US Monetary Policy and the Global Financial Cycle"

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Main Points of the Paper (1)

- There is common variation in risky asset prices around the world: a "global financial cycle".
  - Some of this is proportional to realized equity volatility, but most is orthogonal to volatility and interpreted as common variation in "global risk aversion".
- US monetary policy is an important driver of this global financial cycle.
  - Thus the Fed's influence goes far beyond the Fed funds rate (the policy rate at the short end of the safe term structure).

Main Points of the Paper (2)

- Bayesian VAR analysis suggests that a contractionary shock to the Fed funds rate
  - contracts credit provision in the US and globally
  - reduces leverage of US broker-dealers and non-US G-SIBs
  - reduces risky asset prices globally and increases "global risk aversion"
  - induces ECB and BoE to raise their policy rates also.
- An intermediary-based asset pricing model implies that US monetary policy can affect risky asset prices globally if it alters the risk appetite of large banks that fund in dollars.
- This effect cannot be undone by foreign central banks' control of their own short rates ("dilemma not trilemma").

My Discussion

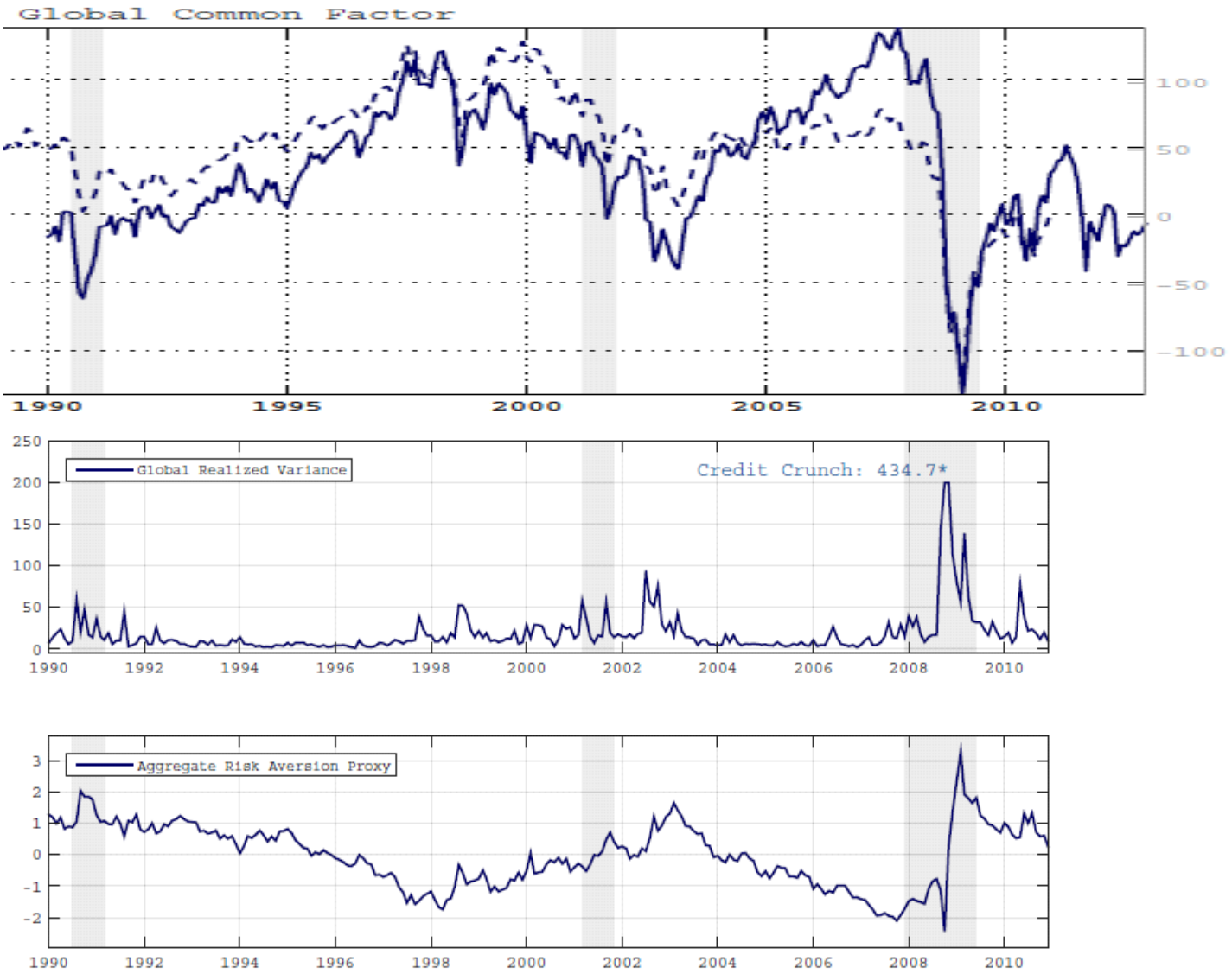
- I believe that global risk aversion does vary, but measuring this is tricky and needs to be done more carefully.
- We already know that the Fed is special among central banks, and the US dollar is special among currencies.
- But how exactly does control of the Fed funds rate allow the Fed to alter global risk aversion?
- And what does this imply for the policy independence of other central banks?

How This Paper Measures Global Risk Aversion (1)

1. Extract a global common factor from risky asset prices (many of them equities).
2. Measure monthly realized volatility of MSCI global equity index.
3. Regress global factor on volatility, take the residual, flip the sign.

Result is similar to the global common factor in risky asset prices, with the sign flipped.

How This Paper Measures Global Risk Aversion (2)



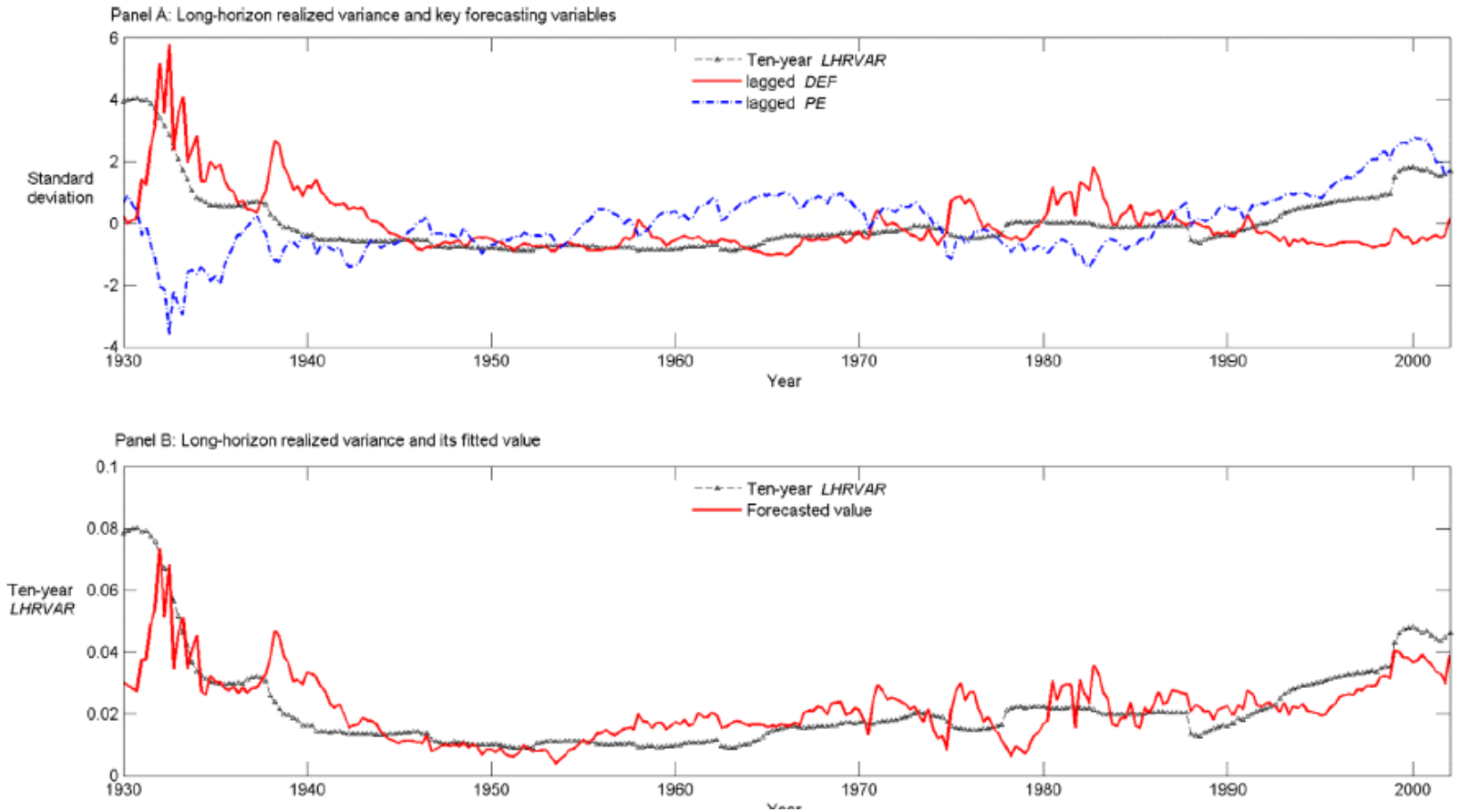
Measuring Risk Aversion is Harder Than This (1)

- The prices of equities and other risky assets reflect
  - Expected future cash flows
  - Discount rates, which in turn reflect
    - ★ Riskless interest rates
    - ★ Quantity of risk (volatility)
    - ★ Price of risk (risk aversion).
- To extract the risk aversion component, we need to control for **cash-flow forecasts** and **riskless interest rates** as well as volatility.

Measuring Risk Aversion is Harder Than This (2)

- Equities and other risky assets are **long-term** assets so the controls have to be measured over a **long horizon**:
  - Long-term earnings growth forecasts, not quarterly earnings forecasts.
  - TIPS yields not short-term real interest rates.
  - Long-term volatility forecasts not this month's realized volatility.
- Campbell, Giglio, Polk, and Turley (CGPT 2018) argue that long-term equity volatility is forecastable from the corporate credit spread orthogonalized to the CAPE ratio.
  - Plausibly this reflects the pricing of the long-term default options that corporate bondholders write to equityholders.
  - The long-term volatility forecast looks completely different from one month's realized volatility.

Long-Term Volatility Forecast from CGPT (2018)

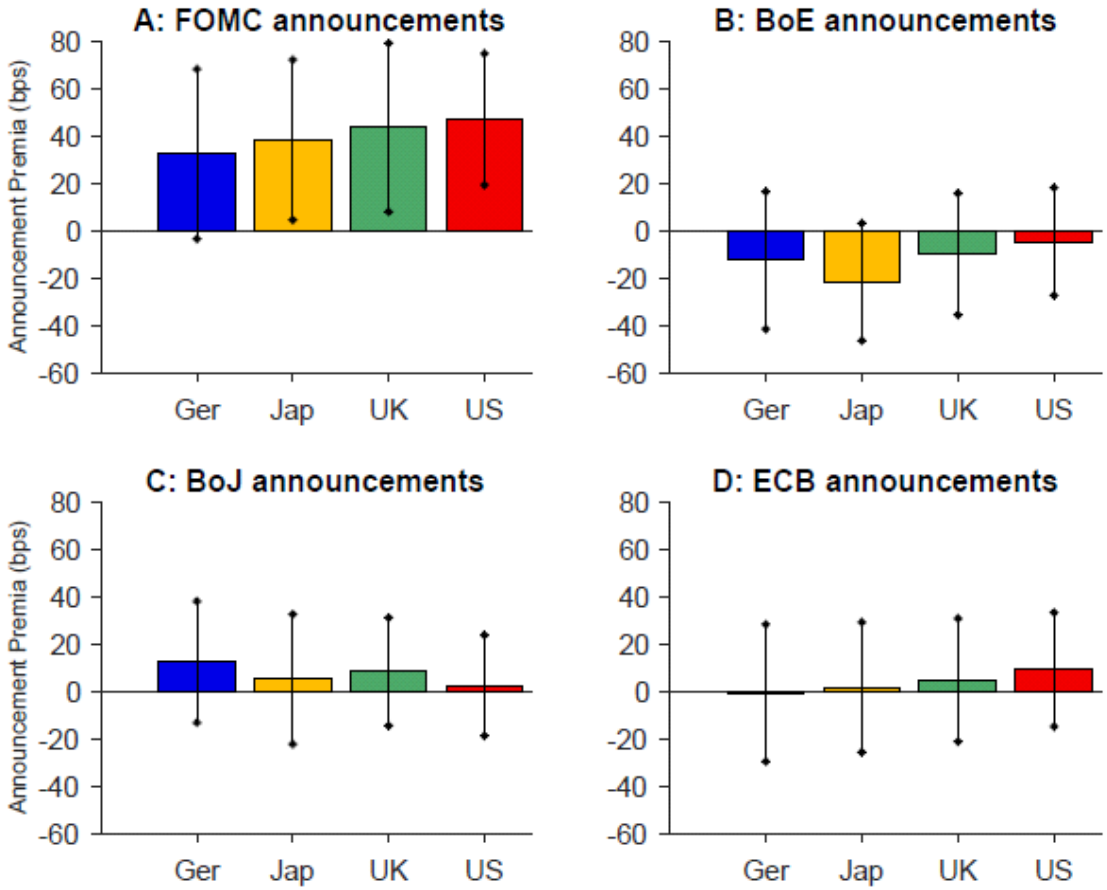


Measuring Risk Aversion is Harder Than This (3)

- If all of the above is too hard, one could instead measure **near-term risk aversion** using option prices:
  - Variance risk premium (Bollerslev, Tauchen, and Zhou 2009, Drechsler and Yaron 2011)
  - Martin (2017) option-based expected market return together with near-term realized volatility.

We Already Know the Fed is Special

- Brusa, Savor, and Wilson "One Central Bank to Rule Them All" (2018) shows an announcement premium in stock returns for FOMC announcements, but not for BoE, BoJ, or ECB announcements.



We Already Know the Fed is Special

- Nihar Shah (Harvard PhD 2018) shows that only Fed announcements have asymmetric effects on FX markets, moving the bilateral exchange rates between other countries, and on international bond markets.

Figure 4: Currency Responses to US Monetary Shocks

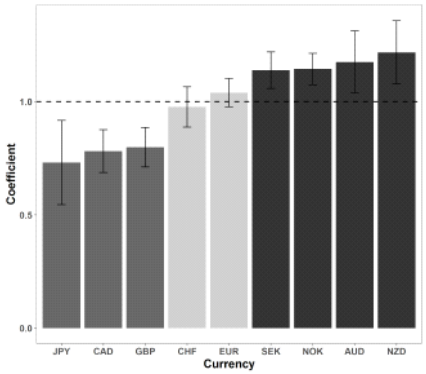


Figure 5: Bond Responses to US Monetary Shocks

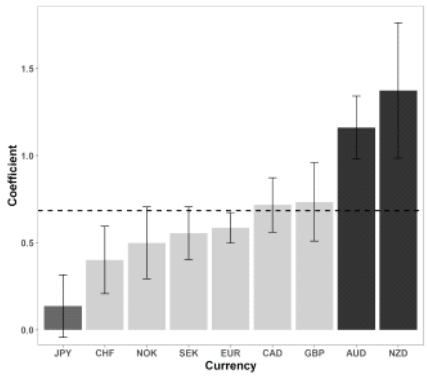
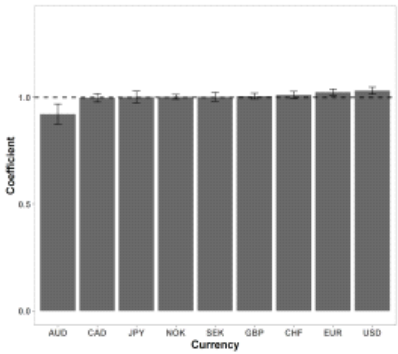
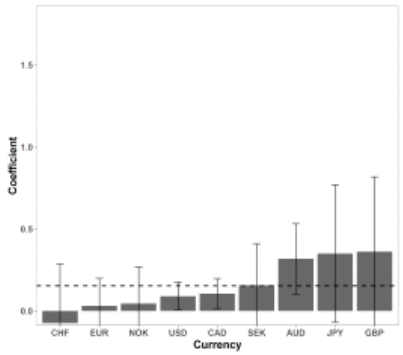


Figure 6: Market Reactions to NZ Monetary Shocks

(a) Currency Responses



(b) Bond Responses



We Already Know the US Dollar is Special

- The USD is the predominant currency for official reserve holdings.
- The USD is attractive to global equity investors because it hedges equity risk (Campbell, Serfaty-de-Medeiros, and Viceira 2010).
- Global bond investors prefer bonds denominated either in their own currency, or in USD (Maggiori, Neiman, and Schreger 2017).
- There is a priced USD factor in the cross-section of FX rates (Verdelhan 2018).
- The USD plays a special role in global invoicing (many papers by Gopinath and coauthors).

But How Can the Fed Affect Risky Asset Prices?

- **Direct discount-rate channel**: safe rates rise, discount rates rise for both safe and risky assets, long-term asset prices fall.
  - Strengthened by tendency of other central banks to follow the Fed.
- **Indirect channels** are likely to be more important:
  - **Cash-flow channel**: economy weakens, expected profits fall.
  - **Real-economy discount-rate channel**: economy weakens, risk aversion increases, risky discount rates rise, risky long-term asset prices fall (Campbell and Cochrane 1999).
  - **Financial-intermediation discount-rate channel**: Fed tightens the VaR constraints of risk-tolerant financial intermediaries, increasing their effective risk aversion.
- This paper emphasizes the last channel, but more details are needed on the mechanism.
  - Capital losses on bank assets erode bank equity?
  - Regulation synchronized with Fed policy rate?
  - Not clear otherwise why a higher policy rate should raise risky discount rates more than safe rates.

What Does this Imply for Other Central Banks?

- Is the Mundellian trilemma dead?
  - "The reports of my death are greatly exaggerated" – Mark Twain.
- The Mundellian trilemma allows other central banks to choose a different policy rate than the Fed, even in a world of free capital flows, so long as they accept the exchange rate consequences.
- The fact that they choose not to exercise this option does not imply that they do not have it.
- And the Mundellian trilemma does not say that other central banks can neutralize all the Fed's effects on their countries.
  - If the Fed causes a US recession, this alters the policy tradeoff for other central banks, just like any real shock in the world economy. This does not contradict the Mundellian trilemma.
  - If the Fed alters the risk appetite of large financial institutions, this again alters the policy tradeoff for other central banks. But this does not contradict the Mundellian trilemma either.