Effects of the U.S. Quantitative Easing on the Peruvian Economy

Discussion by

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Summary

- The effect of QE on small open economies.
- Effects on key macroeconomic variables for the Peruvian economy.
- Method: SVAR with block exogeneity
  - Estimate including period prior to QE policy
- "We find **small** but significant effect over inflation and output in the medium term."
  - QE shock produces positive GDP (and CPI?) response

Initial Setup

- Data from December 1998 – December 2013
- Why not start in January 2008?
  - **How are innovations in the M1 Money Stock prior to 2008 related to quantitative easing?**
  - Use approach of Gambacorta et al. rather than Pesaran and Smith.
- Could then drop federal funds rate.

Modeling the U.S.

- The U.S. Block:
  - Economic policy uncertainty
  - Term spread
  - M1 Money supply
  - Federal funds rate
  - CPI
  - Industrial production

- Identifying restrictions for QE shock:
  - Money supply = Positive
  - Term spread = Negative
  - Funds rate = Zero

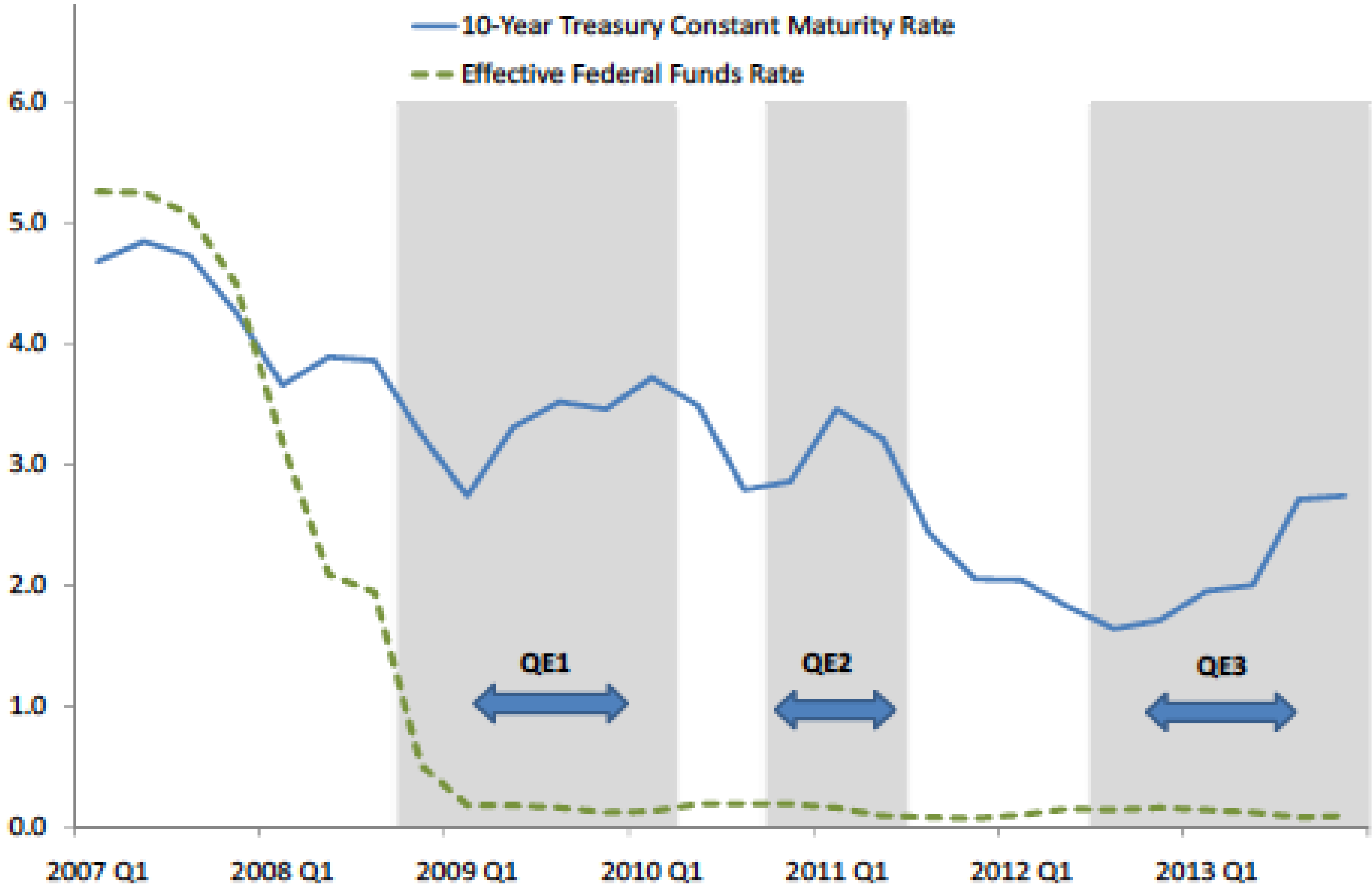
An Alternative

- Gambacorta, Hofman, Peersman (BIS 2012)
  - "An unconventional monetary policy shock is identified as an exogenous innovation to the central bank balance sheet."
- U.S. Block:
  - GDP
  - CPI
  - Federal reserve assets (FRA)
  - VIX
- Identifying assumptions (on impact and following month):
  - FRA increases
  - VIX decreases
  - FRA has lagged impact on GDP and CPI

Suggestions for U.S. Block

- Start in 2008
- Drop the federal funds rate
- Replace M1 Money Stock with securities on Federal Reserve balance sheet
- Replace economic policy uncertainty with measure of financial stress
  - VIX
  - Chicago Fed's National Financial Conditions Index (NFCI)
- Consider alternative identifying assumptions
  - Maybe negative effect on financial stress
  - Simplifying (e.g. dropping w) would allow for simpler solution.
  - Negative effect on term spread? Major "flight to quality" pushing yields up.

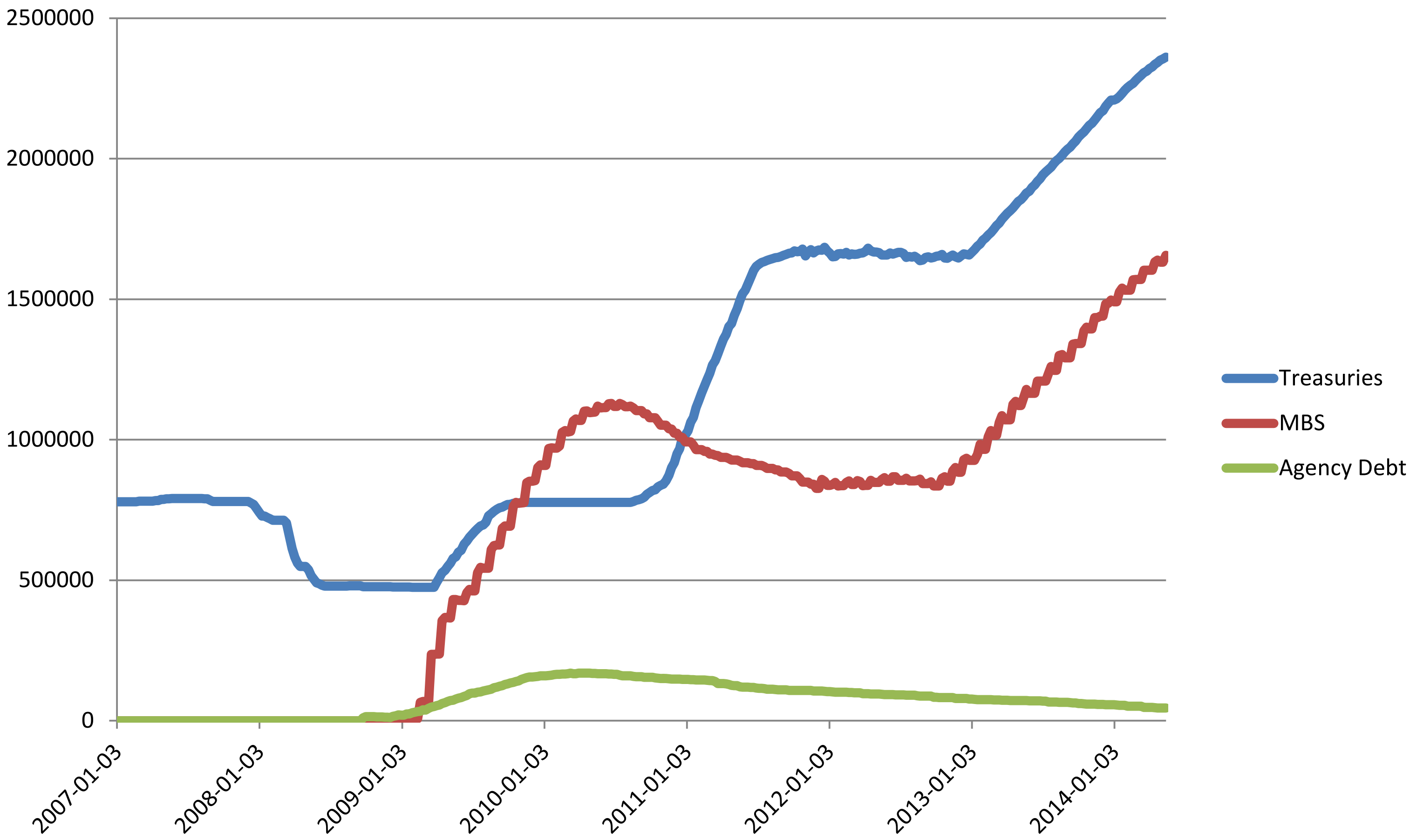
Fig 1: The U.S. 10 Year Yield



Does QE Composition Matter?

- QE1
  - Announced Nov 25, 2008
    - A program to purchase **agency debt and MBS**
    - “To provide greater support to mortgage lending and housing markets”
    - Up to $600 billion
  - Expanded Mar 18, 2009
    - An additional $850 billion of same securities
    - $300 billion in **long-term Treasuries** “to help improve conditions in private credit markets”

Federal Reserve Balance Sheet



The Domestic Block

- The Peru Block:
  - Terms of trade
  - Real exchange rate
  - Interbank interest rate
  - Aggregate Credit in Dollars
  - Aggregate Credit in Soles
  - CPI
  - Real GDP

Suggestions for Peru Block

- Simplify and include the **macroprudential** policies
  - Reserve requirements and FX intervention
  - Quispe and Rossini (2011)

- Alternative Peru Block:
  - GDP
  - CPI
  - Macroprudential Policies
  - QE Shocks

U.S. Block:
U.S. GDP
U.S. CPI
Federal reserve assets (FRA)
VIX

- Focus on the Peruvian response
  - Did the macroprudential policies **mitigate** the effect of QE shocks on Peruvian GDP and CPI?
  - Run the counterfactual on Peruvian policy.

Expanding the Analysis

- Include other countries
  - What about Japanese QE?
  - Effect on South American countries similar/different?

- Consider how QE should be measured
  - Purchases or announcements?
  - Look at “Kuttner” surprises (relative to 10 yr futures)?

- Try to differentiate QE from <u>forward guidance</u>
  - Expectations hypothesis: long rate is future short rate.

Look at QE Exit!

- “There has been widespread *concern* among policy-makers in emerging economies about the effects of quantitative easing…”

- What about exit from QE? (*negative QE shocks*)
  - This seems to be the more pressing question.

- QE may produce benefits and exit may bring costs.
- Could be a volatility issue due to foreign capital flows.

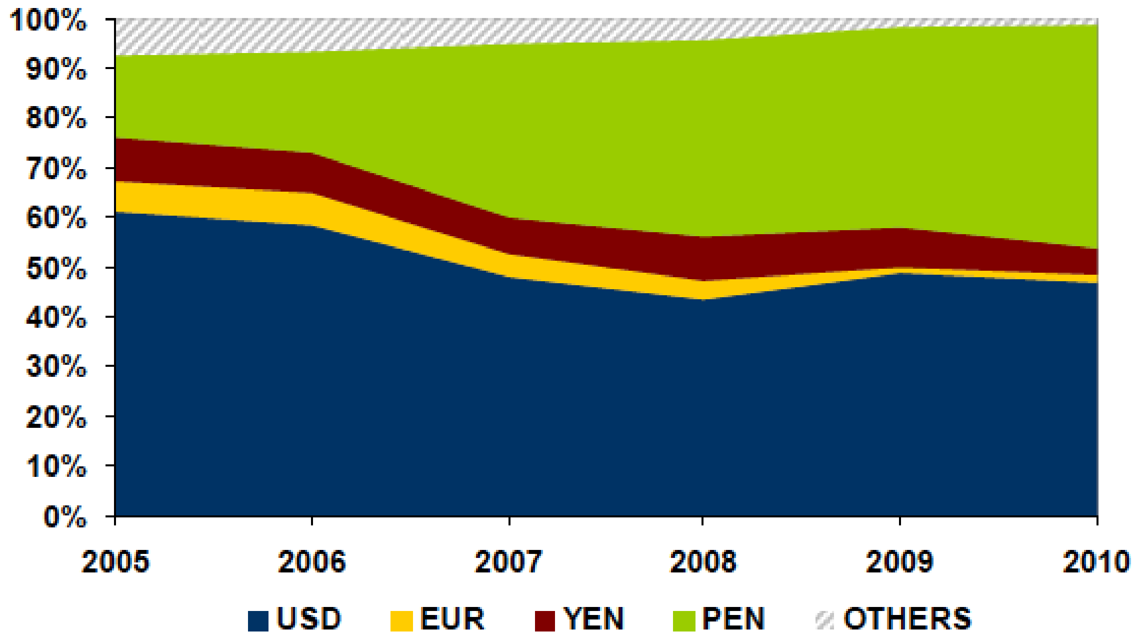
Global Monetary Policy Implications

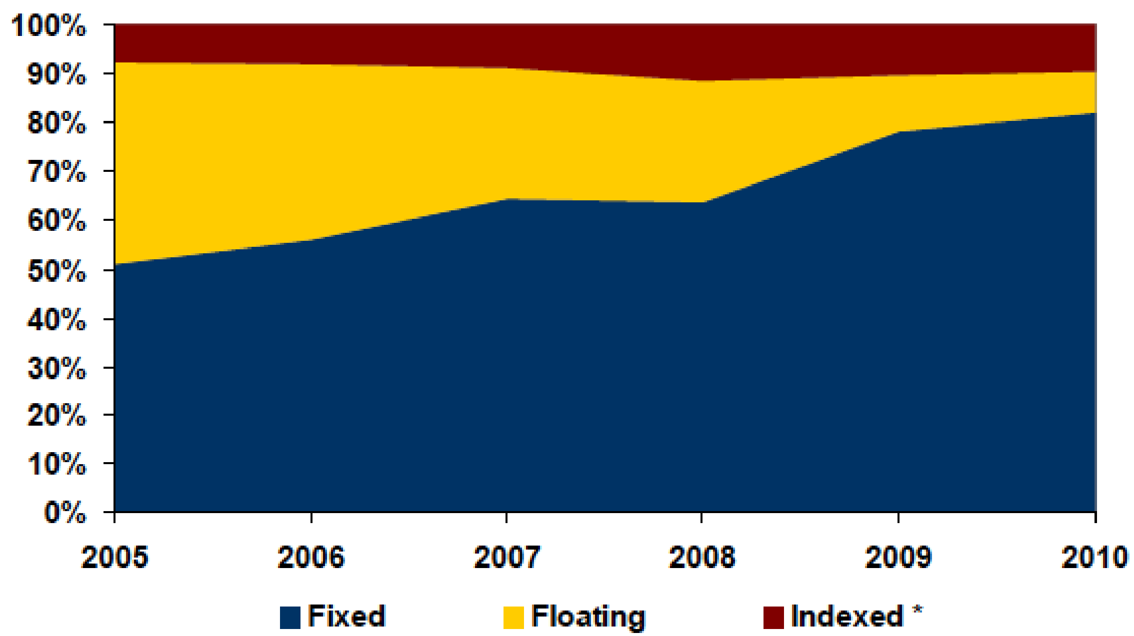
- Is there a feedback effect on the U.S.?
  – In the block model, the U.S. block is independent of the Peru block.
  – Is this true for emerging markets as a whole?

- Is there a need for policy coordination?
  – (Ragu Rajan, Reserve Bank of India)

Big Question

- The role of the dollar in the global economy
  - August 15, 1971. The U.S. went off the gold standard.
- The dollar is the **global reserve currency** in the post Bretton-Woods, post-gold-standard world.
- Does the U.S. have a responsibility for financial stability beyond U.S. borders?
- Is this another reason for Peru to *de-dollarize*?





Peru's Ministry of Economy and Finance

Annual Program of Public Indebtedness and Debt Management 2010

Minor Comments

- Be clearer about the components of y in the paper (not just the appendix)

- State the findings more clearly in the abstract.