

# Discussion of Barraso et al. "Quantitative easing and capital flows in Brazil..."

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#### The Plan

The paper's main question...and its answers.

Methodology

A few reasonably constructive questions

Some thoughts on x (the foreign policy variable) and QE v. RA.



### 1. The Paper's Main Question...and Its Answer

- Qu: What are the spillovers from the Fed's QE policies to the Brazilian economy?
- Ans: "evidence...consistent with the view of emerging market policy makers...strong spillover effects on the Brazilian economy...excessive capital inflows, exchange rate appreciation, stock market price increases and a credit boom..."
  - Capital inflows are most important transmission channel. Therefore
    - Though QE policies supported domestic economic activity, "share of the positive effects…not associated with collateral destabilizing consequences in credit and asset markets is relatively small."
    - Role for capital inflow regulation.



### 2. Methodology

- Focus on QE rounds from Dec 2008 to June 2012
- Attempts to estimate the effects of QE on Brazilian macro aggregates under the assumption that QE was exogenous.
- Strategy: Compare forecasts after QE to forecasts prior to QE (equations 3 through 5). To do so, forecast domestic variables conditional on the past and on future paths of policy variables. Then compute an *interim policy effect* that is the difference between forecasts under the actual variables and forecasts under counterfactuals for the policy variables.



### 2. Methodology

- QE is measured by the change in US 10yr-3mth spread.
- Effects in Brazil are measured by Brazilian price level, economic activity, gross capital inflow, policy rate, and exchange rate.
- Global variables include raw materials/mfg\_goods price, global trade volume, EMBI+ spread
- And, to be specific, define
  - *interim policy effect* as expected given actual paths for QE and global variables minus expected given counterfactual paths
  - *ex post policy effect* as actual minus expected given counterfactuals or forecast error + interim effect



## 2. Methodology

• Assume DGPs under actual and counterfactual are identical (ie policy shocks unanticipated), drop the variables into a VAR, compute *h*-step ahead forecasts of domestic variables given actual and counterfactual, call the marginal channel effects the measure of quantitative significance of the transmission to domestic variables.



# 3. A few reasonably constructive questions\*

- Why we should view QE implementation as exogenous? Or, more directly, why does any anticipation have negligible effect on forecasts? See <u>Cashin and Unayama</u> for a nice example of how to at least discuss exogeneity of policy implementation.
- More justification for the counterfactual policy variables? Perhaps use professional forecasts, or forward rates, to get a better sense of market expectations.
- Why a structural VAR? And how is the Choleski decomposition justified? Why do you need orthogonal forecast errors? If you aren't interested in identifying a full set of structural shocks, this all seems unnecessary and overly restrictive.
  - If you do need orthogonal shocks, a more agnostic approach would be to rotate through different identification matrices and report average effects across the rotations.



## 3. A few reasonably constructive questions

- The monthly VAR has only two lags (p 13)? Seems incredibly short to capture the dynamics.
- Normality tests are rejected. Important? At a minimum suggests standard errors should be bootstrapped.
- Formal break tests suggest breaks at the beginning of QE (page 13)? If so, would this invalidate the VAR?
- QE had deflationary effects (p25-26)? The authors suggest that this may be due to strong global activity. What is the channel from strong global activity to deflation?



#### 4. Some Additional Thoughts

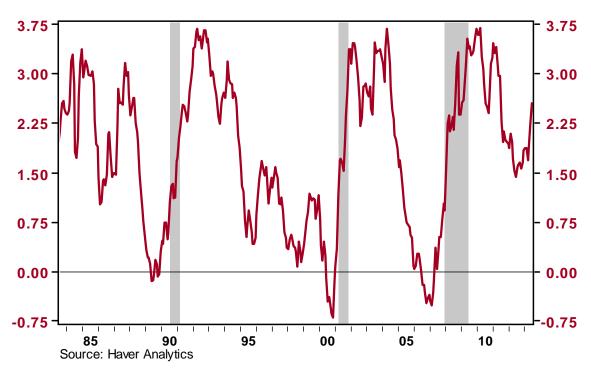
- Any and all movement in the term spread is attributed to QE.
  - "...the estimation sample must be selected so that the term spread has been driven mostly by liquidity considerations..."
  - This rings of "if you believe QE is the dominant force behind changes in the term spread, then I'll proceed to tell you how important QE is"
  - Working assumption is that QE reduced the US term spread by 75 to 225 bps, with "point experiments" at 150 bps. Seems quite large.
- Quite a bit of ad hoc decisions
  - Tried to restrict to QE1, but the model didn't perform well so results not shown.
  - Start the sample pre crisis how much prior to the crisis? Not sure…let's choose Jan 2006.
  - Add variables one at a time and when results diverge, drop that additional variable. Suggests order matters. Does it?



# If so interested in changes in slope of US yield curve, why not run the exercise on the 2004-2007 period? Might argue that that preceded QE, but...

Slope of the US Yield Curve

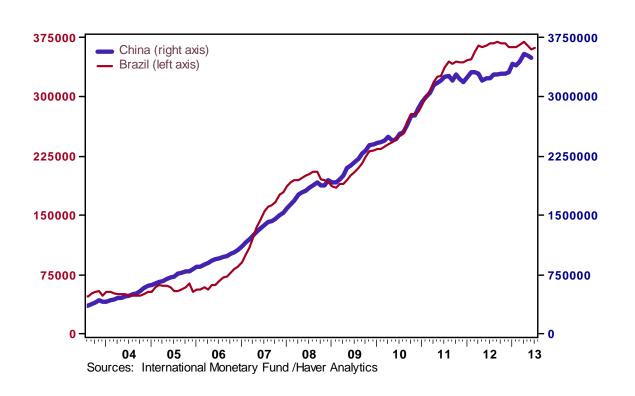
10yr Treasury Rate less 3mth Treasury Rate





#### ...perhaps a period of unconventional monetary policy?

#### China and Brazil: FX Reserves Mil.US\$



#### With Spillovers?

"...large net capital inflows may be the result of an explicit policy of reserves accumulation rather than a capital inflows push..."

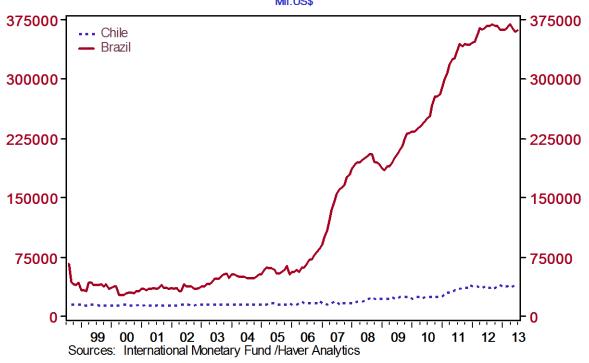
Jose de Gregorio (2012)



#### Not all countries engaged in such UMP

Brazil: Foreign Exchange Reserves
Mil.US\$

Chile: Foreign Exchange Reserves
Mil.US\$



#### With Spillovers?

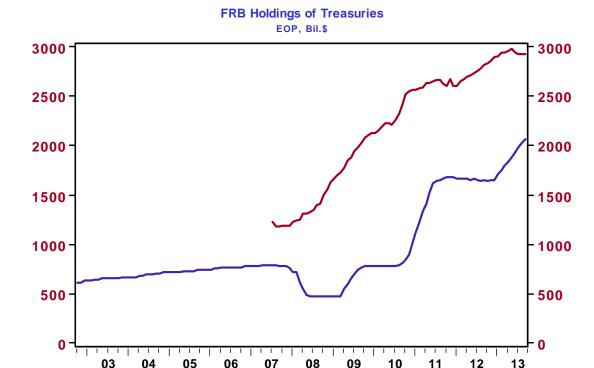
"...large net capital inflows may be the result of an explicit policy of reserves accumulation rather than a capital inflows push..."

Jose de Gregorio (2012)



# QE is an interesting story. But while the spotlight is out, let's shine it on the much larger UMP: Treasury holdings from Reserve Accumulation.

Foreign Official Holdings of Treasuries only those held at the FRBNY EOP, Bil.US\$



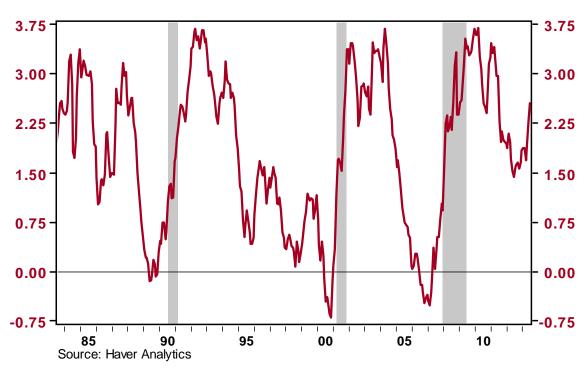
Sources: Federal Reserve Board / Haver Analytics



# Again, if the focus is on the US term spread, there are other interesting UMP episodes that need to be examined.

#### Slope of the US Yield Curve

10yr Treasury Rate less 3mth Treasury Rate





#### **Last Slide**

- The paper assesses the spillovers from the Fed's QE policies to the Brazilian economy.
- It finds evidence consistent with the view of emerging market policy makers.
- I really like the exercise.





Thanks!

