**"Spillovers to Emerging Markets"**

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1. US financial conditions are a dominant determinant of financial conditions in Emerging Markets (EMs),
    a. alternating periods of "risk on" and "risk off."
    b. The VIX is a good measure of this. [See Figure 1.]
    c. Example: Transmission of 2008-09 GFC ("North Atlantic financial crisis") to EMs.
2. More specifically, changes in US monetary policy have historically often contributed to major EM swings.
    a. Low real interest rates in the US appear to have contributed to waves of EM capital flows in the late 1970s, early 1990s, 2003-06, and 2010-11.
    b. Increases in US interest rates helped precipitate the International Debt Crisis in 1982 and the Mexican peso crisis in 1994 (as Calvo, Leiderman and Reinhart, 1993, had predicted).
3. For the last 1 ½ years, at least, markets have been bracing for the anticipated Fed tightening.
    The Temper Tantrum hit EMs in May-June 2013 [Figures 2 & 3],
        i. whether measured by EM capital flows, sovereign debt prices, equity markets, or exchange rates;
        ii. especially the "Fragile Five," distinguished by current account deficits and inflation [Figs. 4 & 5].
4. Although EMs fared relatively well in the GFC shock (exc. Eastern Europe), they are more vulnerable this time.
    a. As of 2008, many EMs had strengthened their defenses, having learned from the 1990s crises [as Bill Dudley noted in his excellent UAE speech of Nov.13]: more flexible exchange rates, higher reserves, strong current accounts, and relatively strong budgets. Also a historic shift away from dollar-denominated debt after 2000.
    b. During the post-2009 renewal of capital flows, however, some major EMs have relapsed into budget deficits, inflation, current account deficits, and – on the corporate side – dollar-denominated debt. [Figure 6 shows recent back-sliding on the denomination of private debt, for the case of Peru.]
    c. Adding to the vulnerability of developing countries in 2014, dollar commodity prices are coming down.
        i. This factor is likely to worsen with any Fed tightening,
        ii. as happened in 1980-1982, when higher US interest rates hit Latin American debt/export ratios in both the numerator and the denominator.
5. Some G-20 officials criticize the US for failing to take into account the interests of EMs.
    a. In 2010, at the start of QE2, Guido Mantega, Brazilian Finance Minister, famously criticized American monetary easing as "Currency War" aggression.
    b. Early this year, when new speculation of Fed tightening again hit EMs, Raghuram Rajan, Governor of the Reserve Bank of India, criticized the US authorities for failing to take EM interests into account:
        i. "International monetary cooperation has broken down… The U.S. should worry about the effects of its policies on the rest of the world," 1/30/14.
        ii. "Central banks should assess spillover effects from their own actions… For example, this would mean that while exiting from unconventional policies, central banks would pay attention to conditions in emerging markets… [T]he Fed policy statement in January 2014, with no mention of concern about the emerging market situation, and with no

indication Fed policy would be sensitive to conditions in those markets sent the probably unintended message that those markets were on their own." 4/10/2014 (Brookings)

   c. With respect to global governance, the EMs have a valid complaint: It is scandalous that the US Congress continues to block the IMF reform bill that would move their quota shares in the direction of what would be justified by their economic weight (and especially incomprehensible because it is the Europeans who would have to give up voting share, not the US).
   d. But I don't fully buy the Mantega and Rajan criticisms.

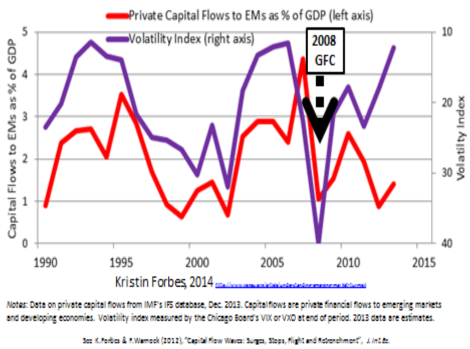
6. One obvious line of defense is that these critiques seem to contradict each other:
   a. the currency wars critique is a complaint about the US lowering interest rates and the Rajan critique is a complaint about the US raising interest rates.
   b. The critics could plausibly argue that the complete EM cycle (inflows and outflows) is the problem, given financial frictions (the recently discovered "pecuniary externalities").
   c. One possible line of response open to the Fed is that financial frictions should be addressed directly, by the much-discussed macro-prudential regulation.
      i. E.g., EMEs should continue to move away from forex denominated debt (public and private)
         1. They should require banks to hold high reserves against any dollar liabilities.
         2. Hungarians should never have been allowed to take out mortgages in Swiss francs.
      ii. To commodity-exporting countries, I recommend borrowing in terms linked to the commodity price, rather than in either dollars *or* local currencies.
      iii. But it would be too much to claim that macro-pru gives EM policymakers enough instruments to solve all their problems.
7. Two more possible lines of defense open to US authorities:
   a. On the one hand, under its mandate the Fed's job is to pursue the interests of American citizens, not those of other countries (and the same is true for other central banks).
   b. On the other hand, the Fed arguably has on occasion in fact responded to EM financial crises. I am thinking of the eruption of the international debt crisis in August 1982 and the global spread of currency crises in August 1998, both of which helped prompt Fed easing.
   c. The contradiction can be reconciled by pointing out that curtailing EM financial crises is in the interest of American citizens.
8. The Currency Wars critique seems to misunderstand how floating rates are supposed to work:
   a. Floating allows countries to pursue the monetary policies appropriate to their conditions.
   b. If US recession calls for low interest rates at the same time that Brazilian overheating calls for high interest rates, as in 2010, it is entirely appropriate that capital flows from the US to Brazil and the Brazilian *real* appreciates against the dollar.
      i. The strong *real* helps keep Brazilian inflation down.
      ii. Brazilian export interests will complain; but if the Brazilian authorities raise interest rates to fight inflation, there is no reason why the tradable goods sectors should be spared, at the expense of the construction sector.
   c. Of course, if everybody wants stimulus at the same time (say, 2008-09), it is impossible for everybody to devalue against everyone else.
      i. But even then, the right answer is US monetary ease matched by commensurate easing in other countries, leaving exchange rates unchanged,

        ii. by analogy with the original "competitive devaluations" of the 1930s, which revisionist historians have convincingly argued succeeded after all in raising the price of gold and thereby the real money supply globally (Eichengreen and Sachs, 1985).

   d. If an EM country wants to float purely, it is not even clear in which direction US monetary ease moves the current accounts of the two countries: the effect of higher US income on imports goes the opposite direction from the effect of dollar depreciation on the trade balance.
   e. Whereas dollar depreciation was just a (likely) side-effect of US monetary easing in 2010, some other countries that deliberately moved to weaken their currencies were somewhat more vulnerable to the currency wars charge.
        i. E.g., Japan was at first foolishly explicit that weakening the yen was a goal of Abenomics, immediately following the December 2012 election.
        ii. Stronger examples are the many countries that intervene directly in the foreign exchange market to keep the values of their currencies down, especially EM countries (but some others as well, including Switzerland).
        iii. The Chinese authorities have in the past of course resisted appreciation of the renminbi.
   f. This is not to say that there are no spillover effects or externalities under floating exchange rates.
        i. For example, in 2009, countries had a common interest in agreeing to joint reflation.
        ii. This is why we have the G-20 (and, before that, the G-7).
            1. With appropriate representation of the big EM countries.
            2. Arguably the London Summit of 2009 was a successful example of coordinated stimulus.
        iii. Beyond coordinated stimulus, many other situations may arise where the Nash cooperative equilibrium beats the non-cooperative equilibrium.
        iv. One example is international financial reform, via Basel or the IMF, to try to moderate the EM boom-bust cycle and minimize financial crises.

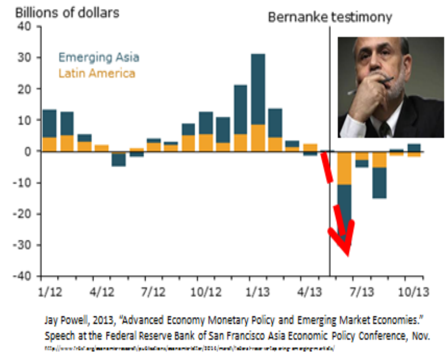
9. What about the ECB & BOJ loosening at the same time that the US interest rates go up?
   a. A weak yen (vs. dollar) affects Asian countries; they tend to be tied to the dollar and so might feel pressure to "devalue" to stay competitive vis-a-vis Japan.
   b. And a weak euro affects countries in Eastern European (and Africa/Mideast); those that are more tied to the euro should feel a competitiveness boost.
   c. Overall, I don't see that if the ECB and BoJ were to loosen (while the FRB tightened), that this would "pressure [the EMEs] to pursue a tighter monetary stance."
   d. It is probably too much to say that the FRB and ECB moves will cancel out. As Bill Dudley points out, big asymmetry remains between Fed power and ECB power, in that the dollar is still the world's number one reserve currency. Fed tightening in 2015 may indeed lead some major EMs to follow suit, especially those with inflation worries.
   e. Dudley's response seems reasonable: "…we are mindful of the global effects of Fed policy, given the central place of U.S. markets in the global financial system and the dollar's status as the global reserve currency. Accordingly, we seek to conduct policy transparently… It is clear, in retrospect, that our attempts in the spring of 2013 to provide guidance about the potential timing and pace of tapering confused market participants. Market participants seemed to conflate the prospective tapering of asset purchases with monetary policy tightening…Lately, we seem to have done better..."

When implicit volatility is high (↓ in graph), capital flows to EMs fall: "Risk off"




1.

After Fed "taper talk" in May 2013, capital flows to Emerging Markets reversed again.



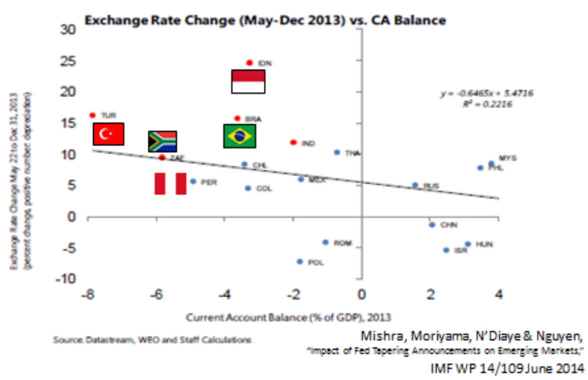

2.

EM stocks fell on fears of higher US interest rates in both May-June 2013 & January 2014


3

## Which countries got hit in the taper tantrum?

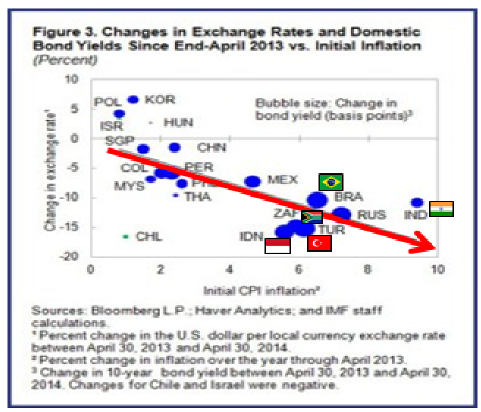
Countries with worse current accounts were hit by greater currency depreciation after May 2013.




4.

Countries with high inflation rates suffered depreciation & bond yield increases, in the year starting May 2013.

5.

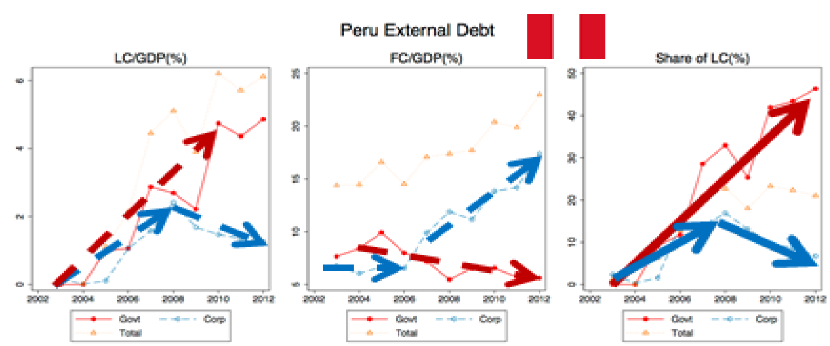



A.Klemm, A.Meier & S.Sosa, IMF, May 2014

**Taper Tantrum or Tedium: How U.S. Interest Rates Affect Financial Markets in Emerging Economies**

## Warning sign: Currency composition,

has continued to shift from fx-denomination to local currency in the case of public debt, but has reversed in the case of corporate debt, in some EMs.




Wenxin Du & Jesse Schreger, Harvard U., Sept.17, 2014, "Sovereign Risk, Currency Risk, & Corporate Balance Sheets" p.11 Country-Level Currency Composition of External Debt Figure 10: Currency Compositions of External Debt by Country, percentage

6.