

U.S. Tapering and East Asian Exchange Rate Policy

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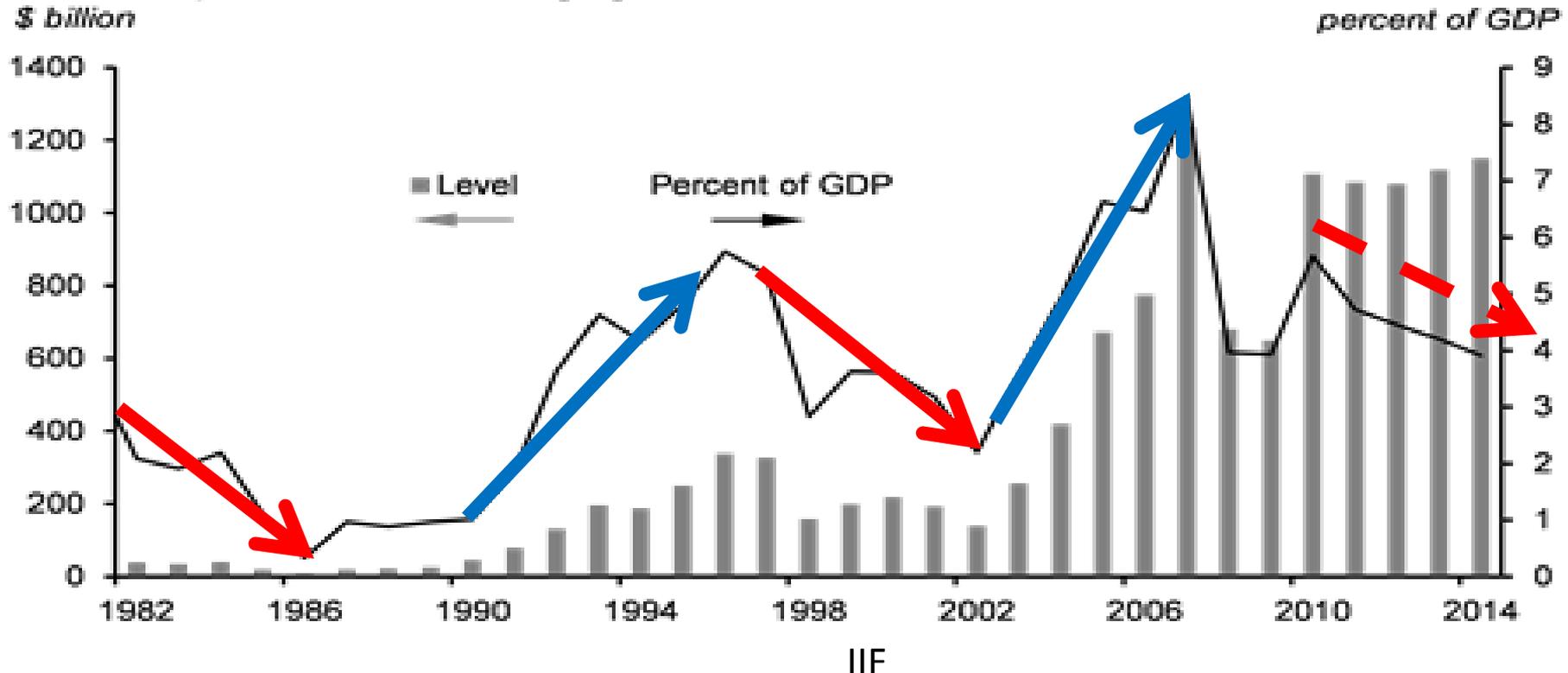


Korea Economic Association
Korea Institute of Finance, Seoul,
May 26, 2014

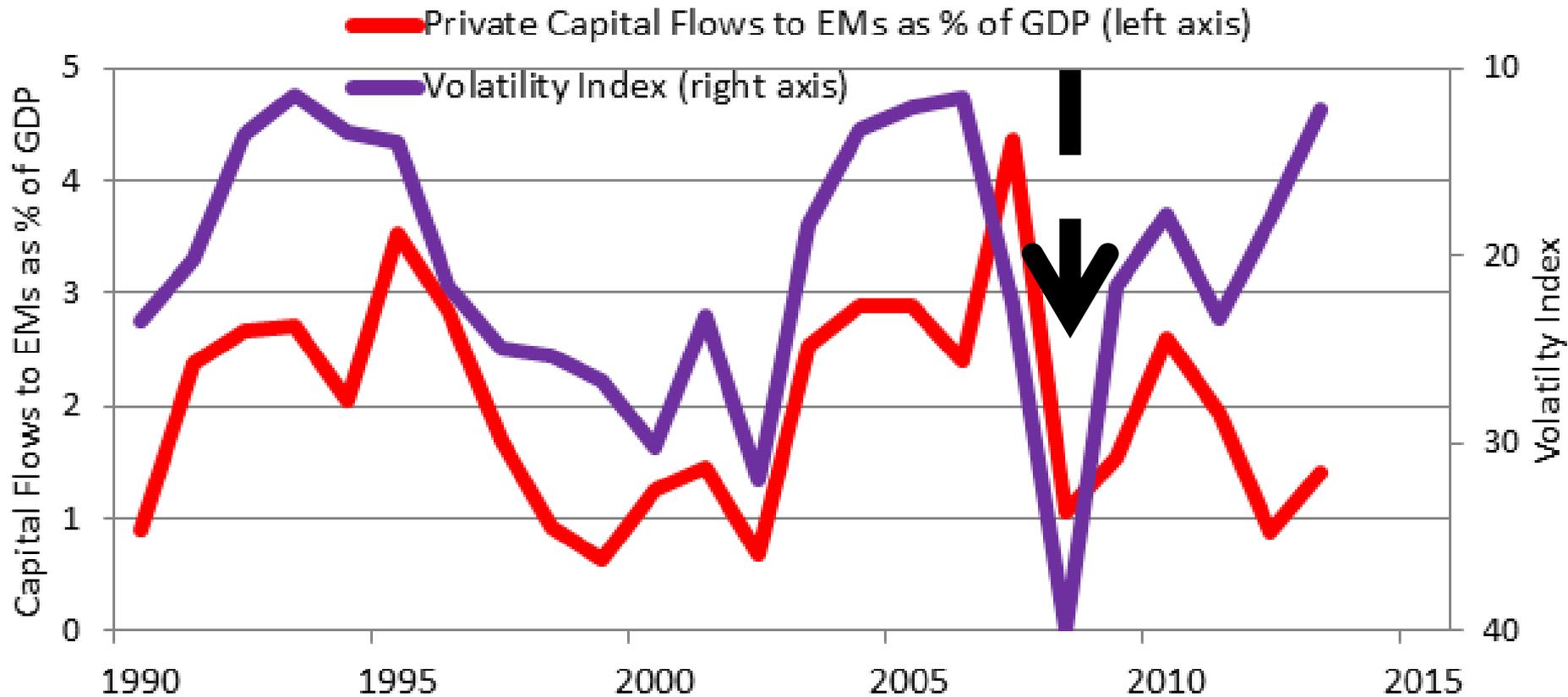
3 waves of capital flows to Emerging Markets:

- late 1970s, ended in the intl. debt crisis of 1982-89;
- 1990-97, ended in East Asia crisis of 1997-98;
- and 2003-2008, ended in __?

Private Capital Inflows to Emerging Market Economies
\$ billion



When implicit volatility is high (↓ in graph), capital flows to EMs fall: “Risk off” (e.g., 2009 GFC)



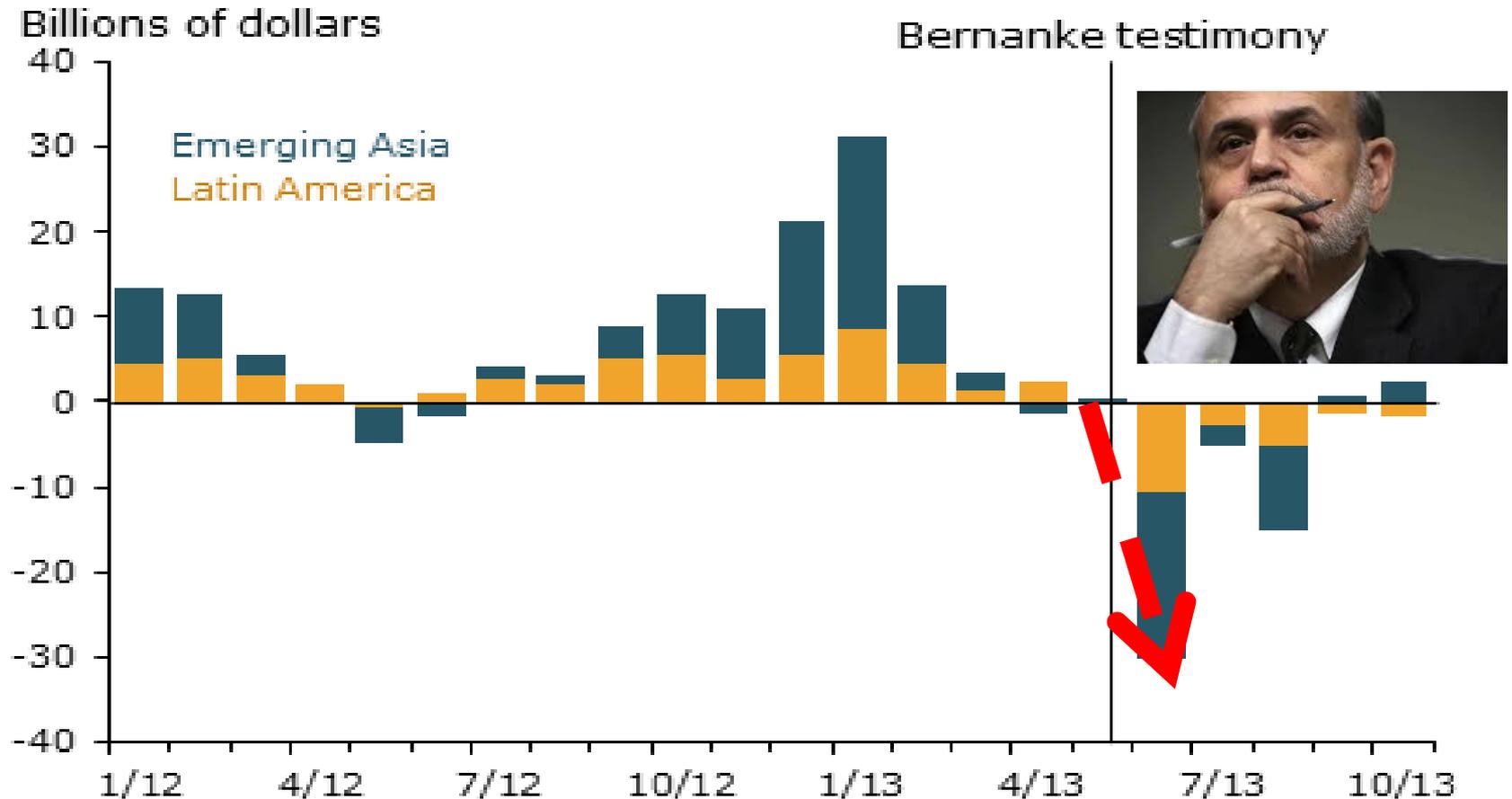
Kristin Forbes, 2014 <http://www.voxeu.org/article/understanding-emerging-market-turmoil>

Notes: Data on private capital flows from IMF's IFS database, Dec. 2013. Capital flows are private financial flows to emerging markets and developing economies. Volatility index measured by the Chicago Board's VIX or VXO at end of period. 2013 data are estimates.

The role of US monetary policy

- Low US real interest rates contributed to EM flows in late 1970s, early 1990s, and early 2000s.
- The Volcker tightening of 1980-82 precipitated the international debt crisis of 1982.
- The Fed tightening of 1994 helped precipitate the Mexican peso crisis of that year.
- But the correlation is not always there.

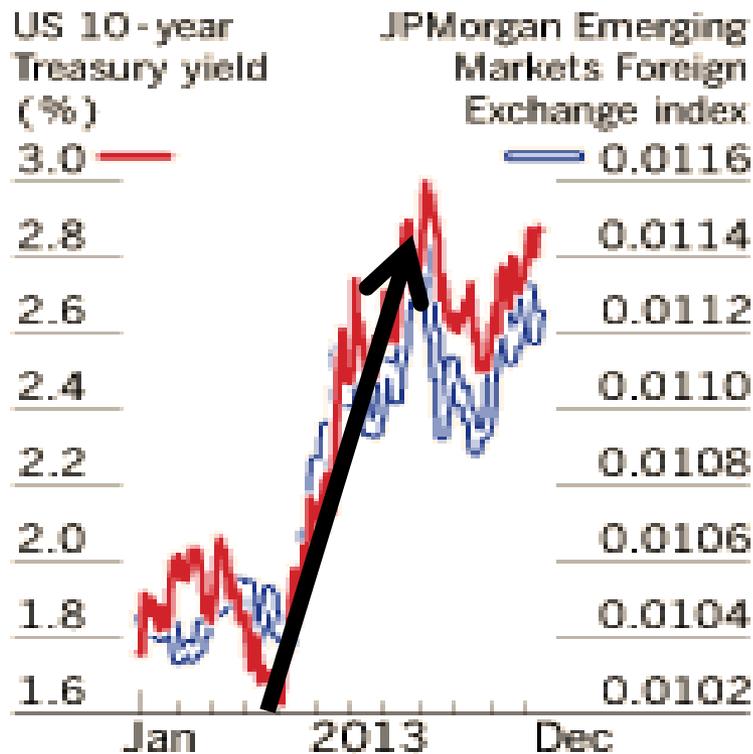
After Fed “taper talk” in May 2013, capital flows to Emerging Markets reversed again.



Powell, Jerome. 2013. “Advanced Economy Monetary Policy and Emerging Market Economies.”
Speech at the Federal Reserve Bank of San Francisco Asia Economic Policy Conference, November .

<http://www.frbsf.org/economic-research/publications/economic-letter/2014/march/federal-reserve-tapering-emerging-markets/>

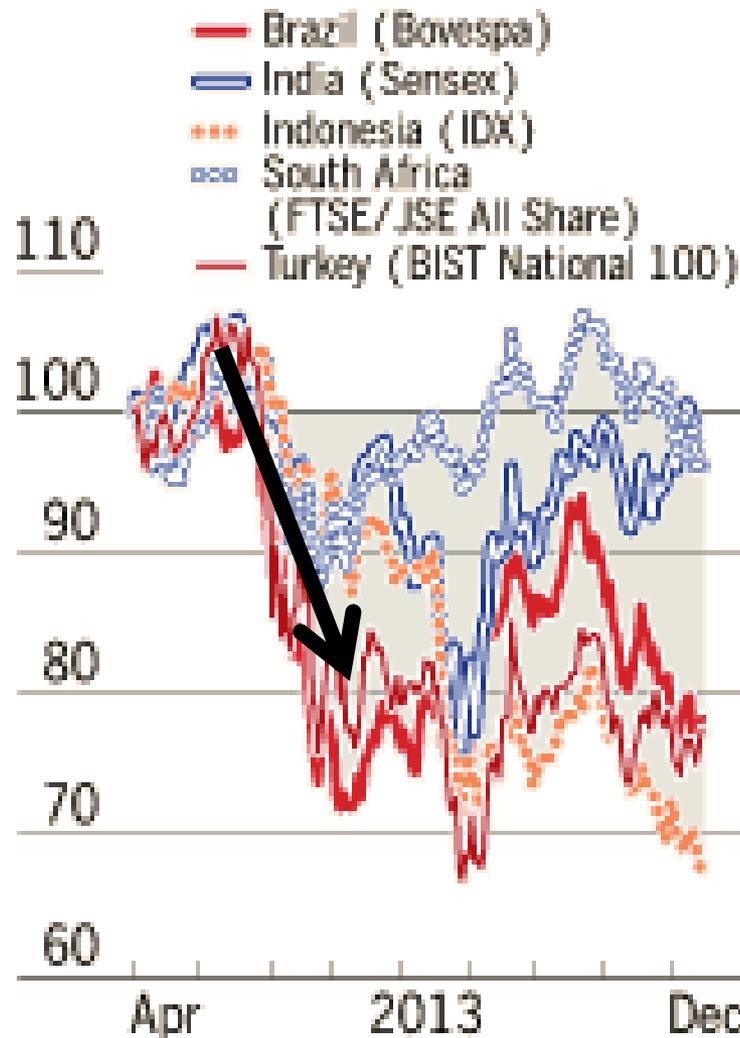
When Ben Bernanke warned of tapering QE in May/June 2013, US interest rates rose, and EMs fell.



Source: Bloomberg

Emerging markets stocks

Indices rebased (in \$ terms)



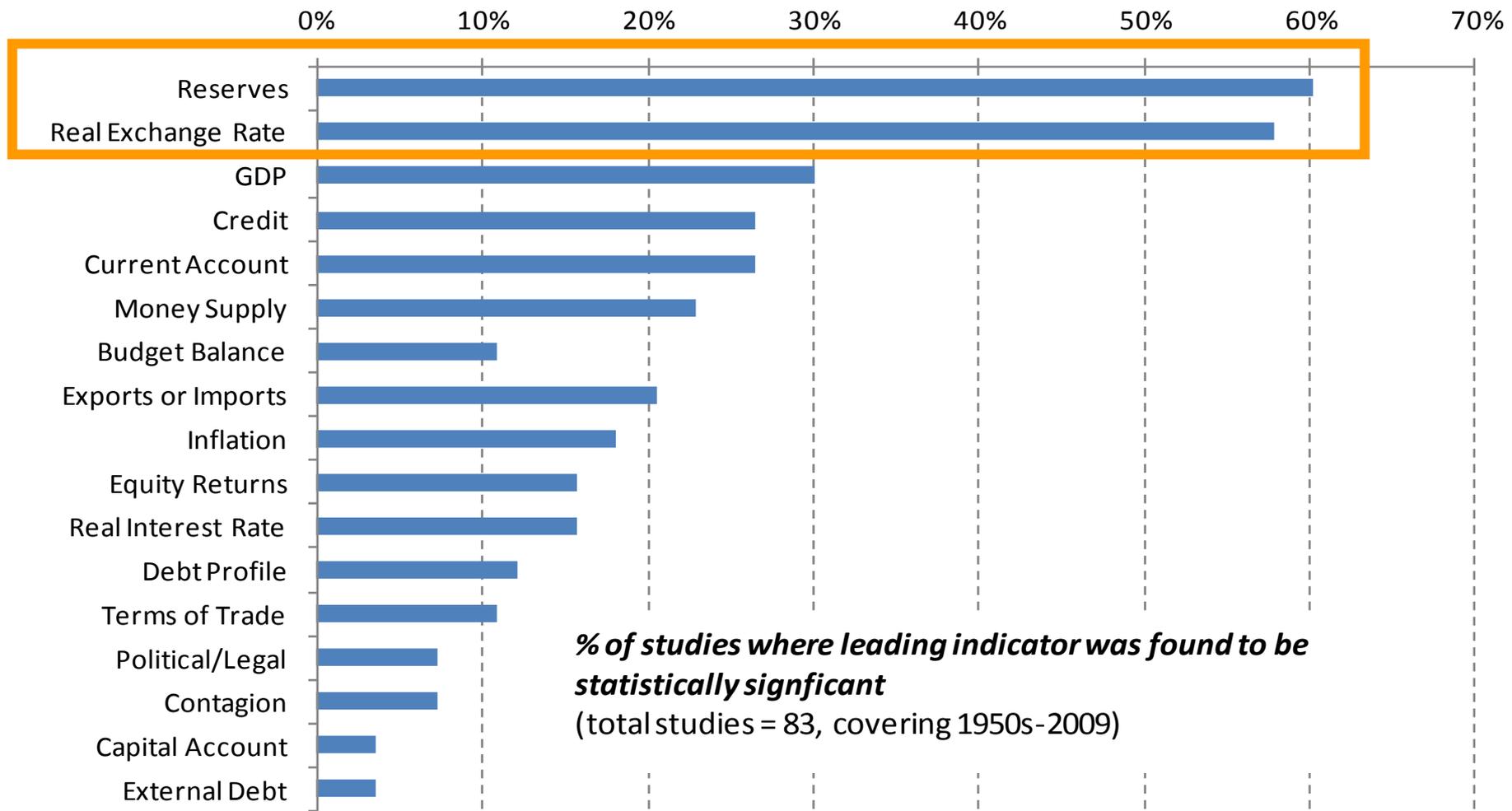
Source: Thomson Reuters Datastream

Which EM countries are hit the hardest?

- For past studies of past crises, such as 1997-98,
- Early Warning Indicators that worked well include:
 - Foreign exchange reserves
 - especially relative to short-term debt;
 - Currency overvaluation;
 - Current account deficits.
- E.g.,
 - J. Frankel & A. Rose (1996) _____
 - G. Kaminsky, & Carmen Reinhart (1999)
 - J. Frankel & G. Saravelos (2012) _____

The variables that show up as the strongest predictors of country crises in the past are:

(i) reserves and (ii) currency overvaluation



% of studies where leading indicator was found to be statistically significant
(total studies = 83, covering 1950s-2009)

Source: Frankel & Saravelos (2012)

Many EM countries learned lessons from the crises of the 1990s, which better-prepared them to withstand the Global Financial Crisis of 2008-09

- More-flexible exchange rates
- Higher reserve holdings
- Less dollar-denominated debt
 - More local-currency debt
 - More equity & FDI
- Fewer Current Account deficits
- Stronger government budgets

Foreign exchange reserves are useful

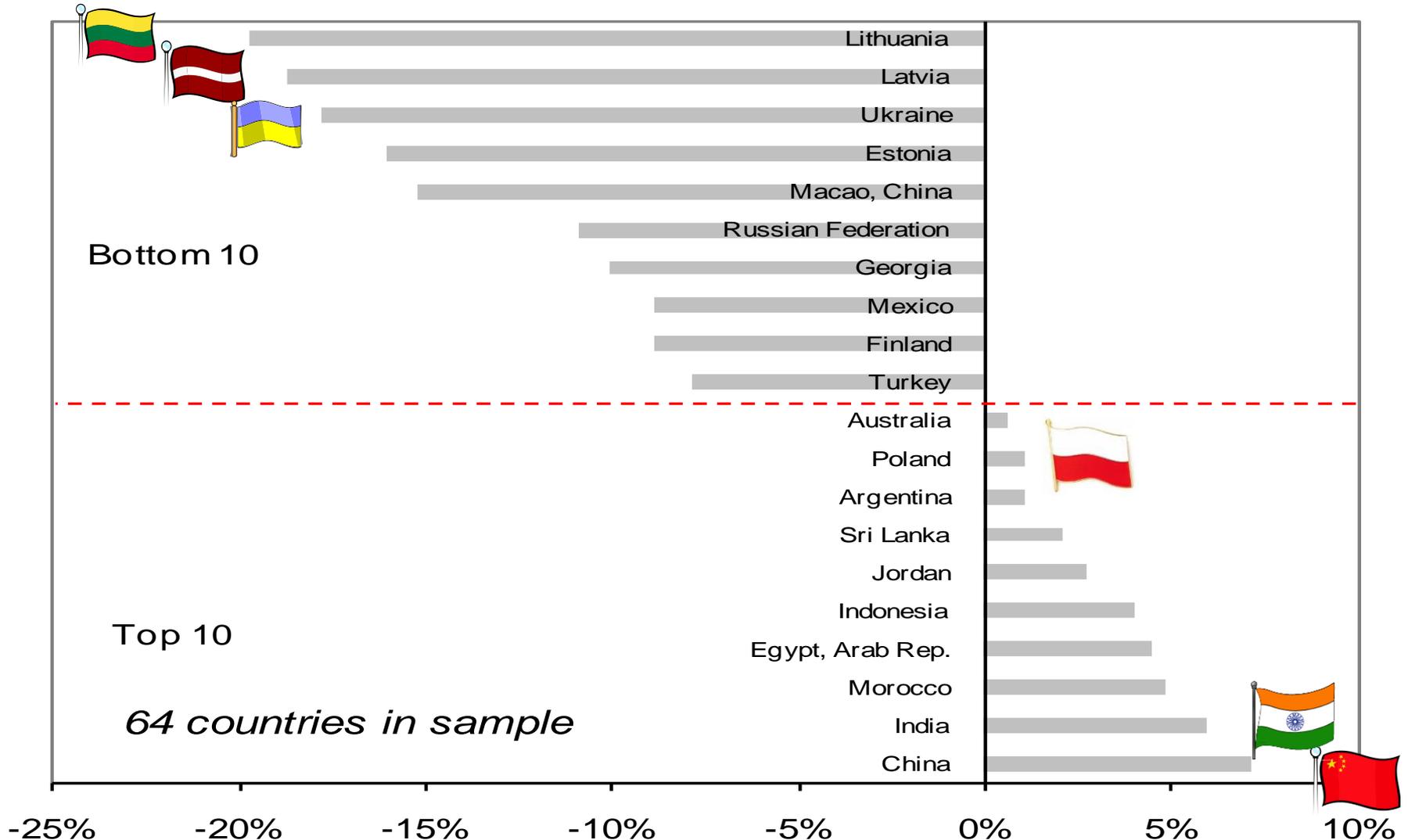


- One purpose is dampening appreciation,
 - thus limiting current account deficits.
- Another is the precautionary motive.
- The best predictor of who got hit in the 2008 Global Financial Crisis was reserves
 - Frankel & Saravelos (2012).
 - Dominguez & Ito.
 - This was the same Warning Indicator that also had worked in the most studies of earlier crises.

Best and Worst Performing Countries in Global Financial Crisis of 2008-09

-- F&S (2010), Appendix 4

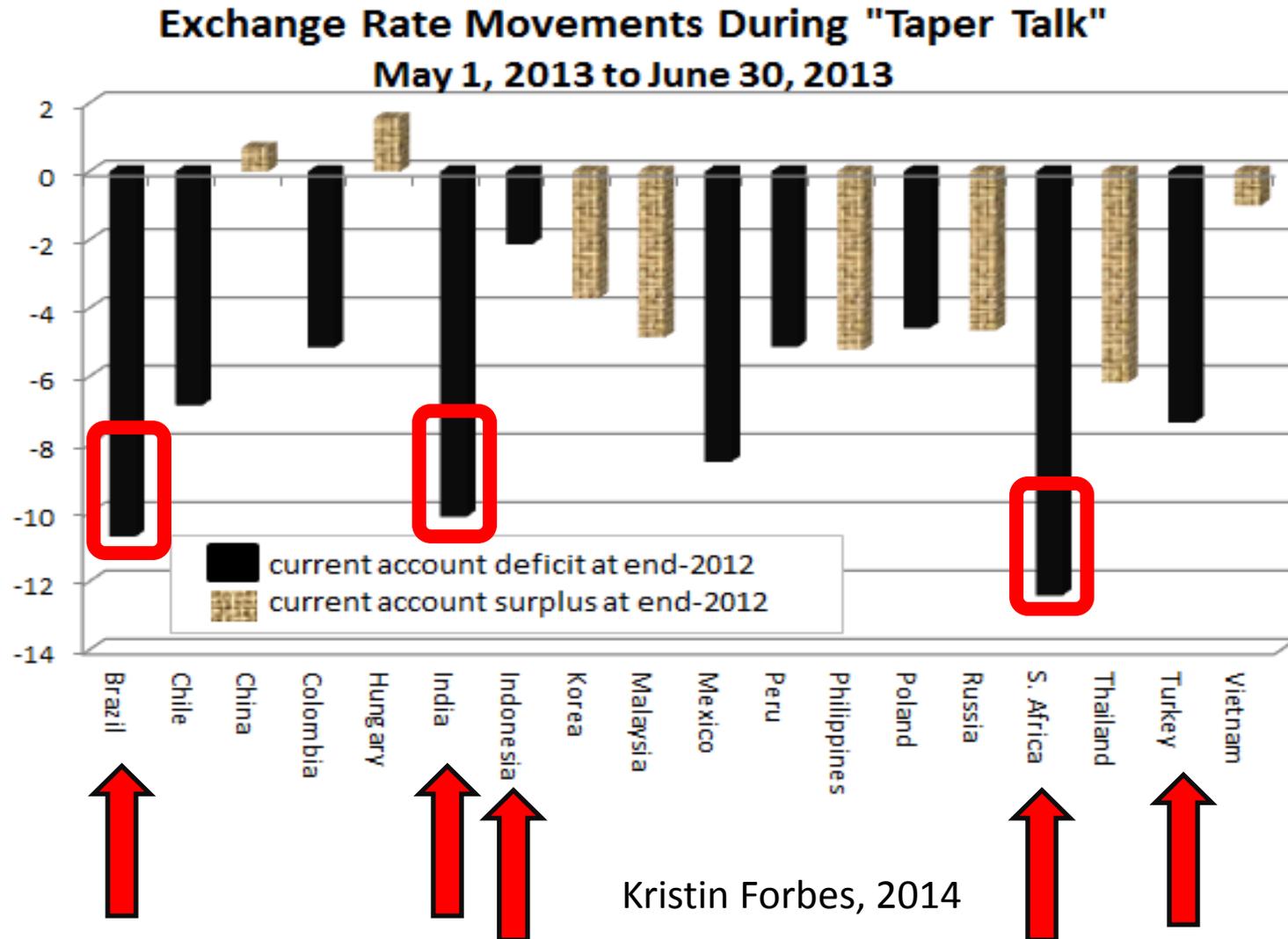
GDP Change, Q2 2008 to Q2 2009



Which EM countries were hit the hardest by the “taper tantrum” of May-June 2013?

- Those with big current account deficits,
- or with exchange rate overvaluation.
- Reserves did not seem to help this time.
- E.g.,
 - B. Eichengreen and P. Gupta (2013) _____
 - Jon Hill (2014) _____

Countries with current account deficits were hit in June 2013.

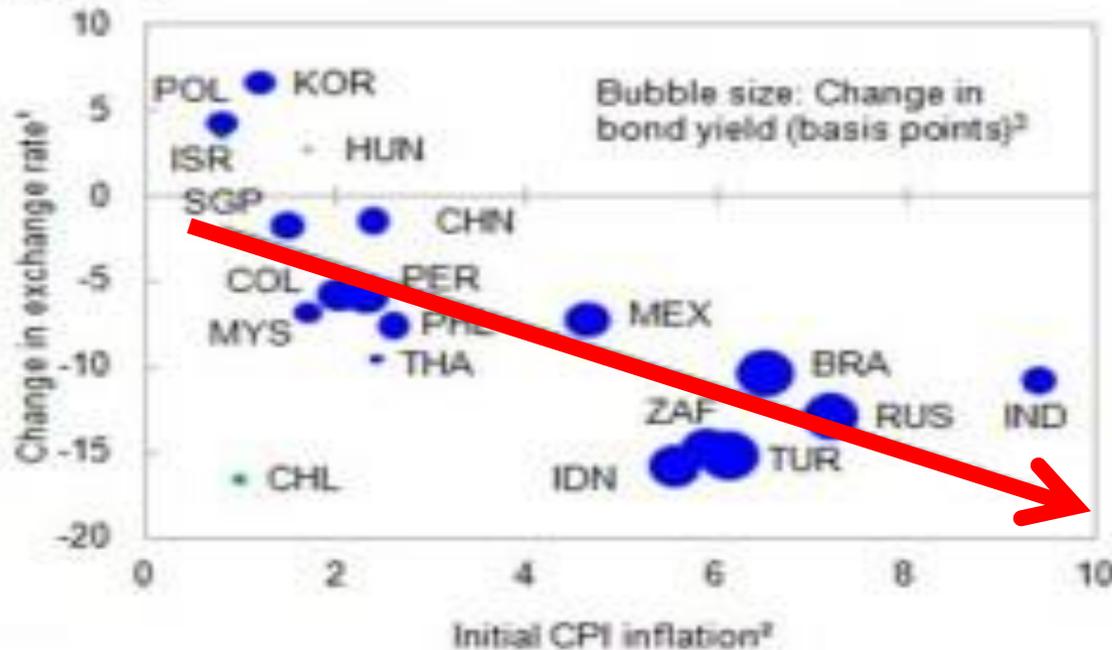


Kristin Forbes, 2014

The
"Fragile
Five"

Countries with high inflation rates were also hit in the year since May 2013.

Figure 3. Changes in Exchange Rates and Domestic Bond Yields Since End-April 2013 vs. Initial Inflation (Percent)



Sources: Bloomberg L.P.; Haver Analytics; and IMF staff calculations.

¹ Percent change in the U.S. dollar per local currency exchange rate between April 30, 2013 and April 30, 2014.

² Percent change in inflation over the year through April 2013.

³ Change in 10-year bond yield between April 30, 2013 and April 30, 2014. Changes for Chile and Israel were negative.

[A.Klemm, A.Meier & S.Sosa, IMF, May 22, 2014](#)

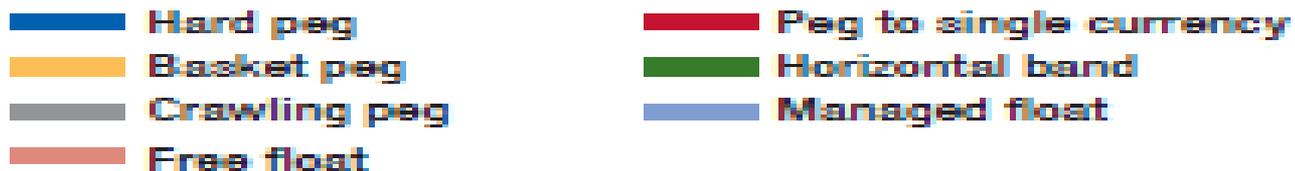
[Taper Tantrum or Tedium: How U.S. Interest Rates Affect Financial Markets in Emerging Economies](#)

What is the desirable exchange rate regime?

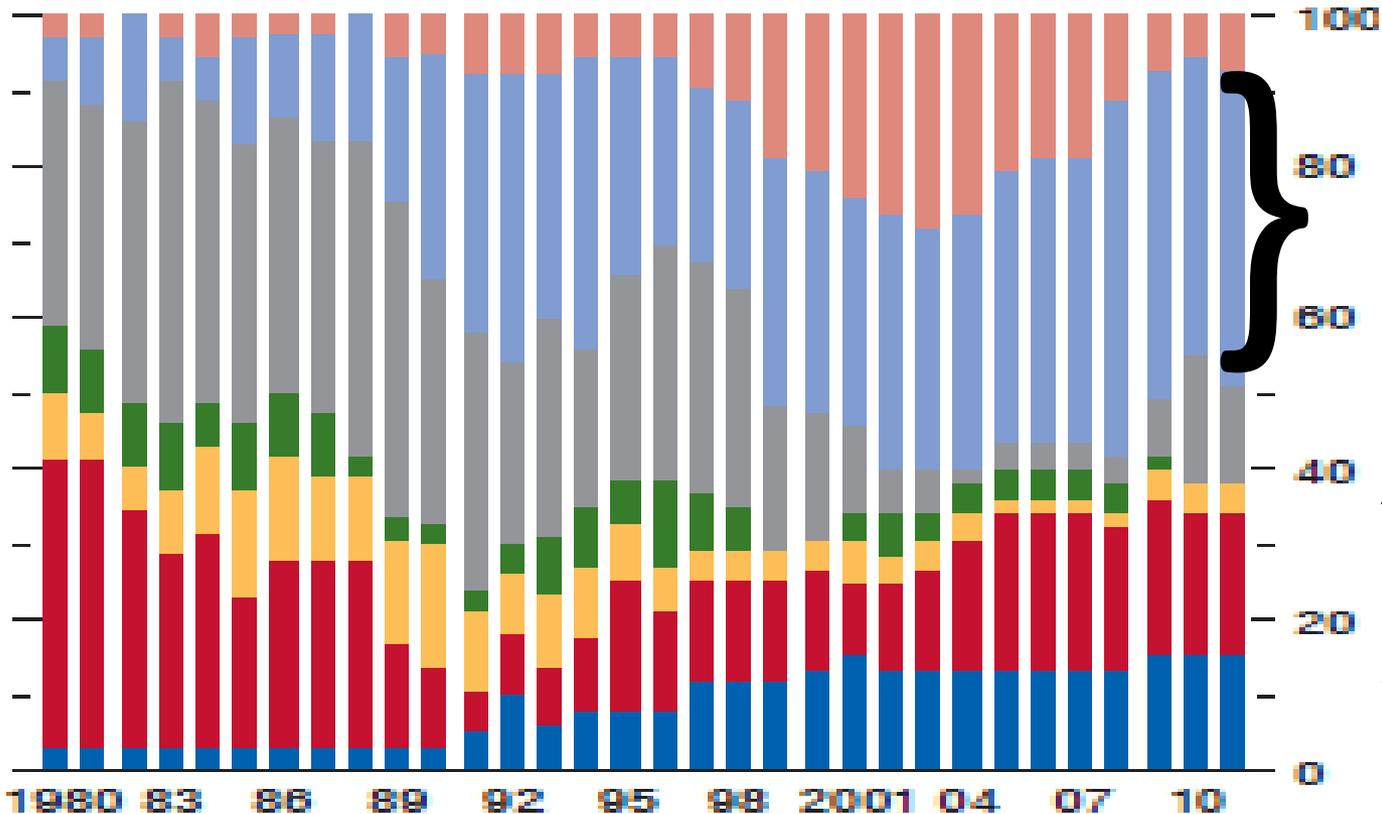
- Very small, very open, economies will continue to want to fix their exchange rates, in most cases.
- Most countries are in between,
 - particularly middle-sized middle-income countries.
- Most of these countries should have intermediate exchange rate regimes,
 - neither firm fixing nor free floating.
 - They include band & basket arrangements.

Distribution of EM exchange rate regimes

The biggest rise is in the “managed float” category



Distribution of Exchange Rate Regimes in Emerging Markets, 1980-2011 (percent of total)



Atish Rex Ghosh, Jonathan Ostry & Mahvash Qureshi, 2013, "Exchange Rate Management and Crisis Susceptibility: A Reassessment," International Monetary Fund Annual Research Conference, Nov..

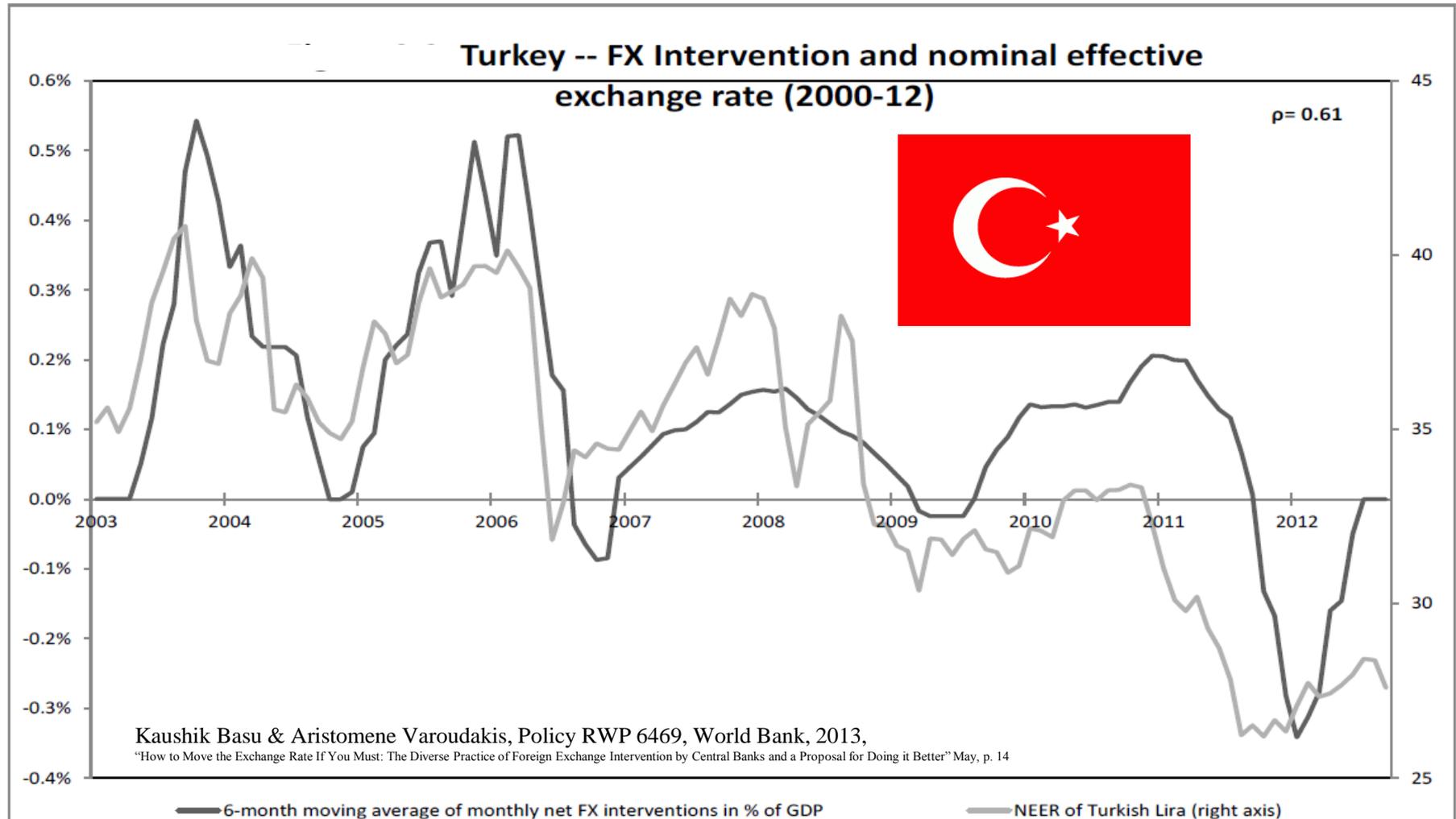
So I reject the Corners Hypothesis.



- But Stan Fischer has a good point: giving speculators a target to shoot at it is often a losing proposition ,
 - such as the boundary of a declared band.
- A particular intermediate regime could be useful, a systematic sort of managed floating:
- A rule could say that for every 1% of Exchange Market Pressure, the central bank takes x % as an appreciation of the currency and $(1-x)$ % as an increase in reserves (relative to the monetary base).
 - This arrangement, though rather obvious, has seldom been formalized.
 - The parameter x calibrates exchange rate flexibility,
 - and can range from 0 (fixing) to close to 1 (full flexibility).
 - Thus one can have $\frac{1}{2}$ monetary independence + $\frac{1}{2}$ exchange rate stability.

Systematic managed float (“leaning against the wind”):

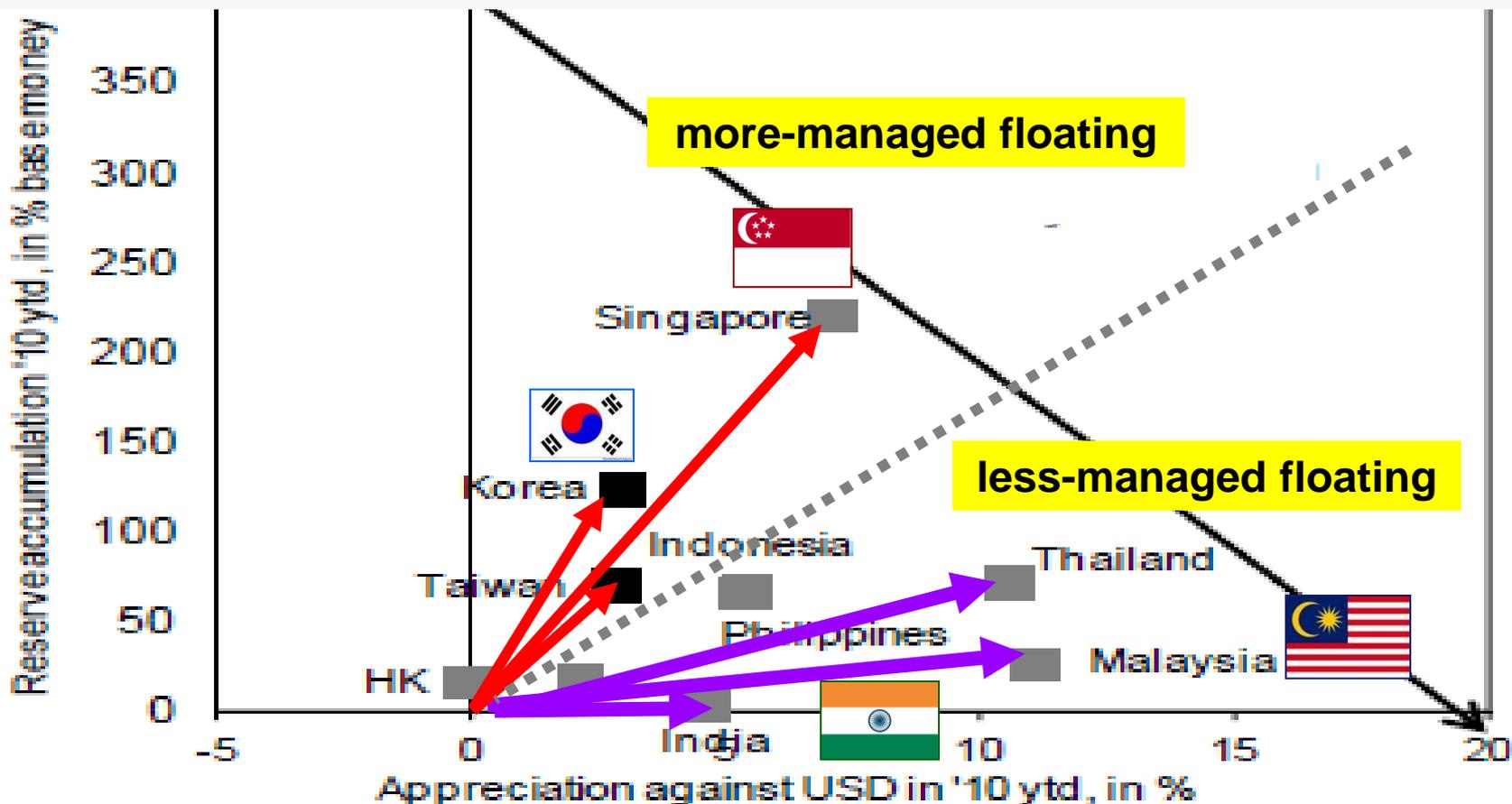
Turkey’s central bank buys lira when it depreciates, and sells when it is appreciates.



Sources: IMF World Economic Outlook, Central Bank of the Republic of Turkey, and WB Global Economic Monitor.

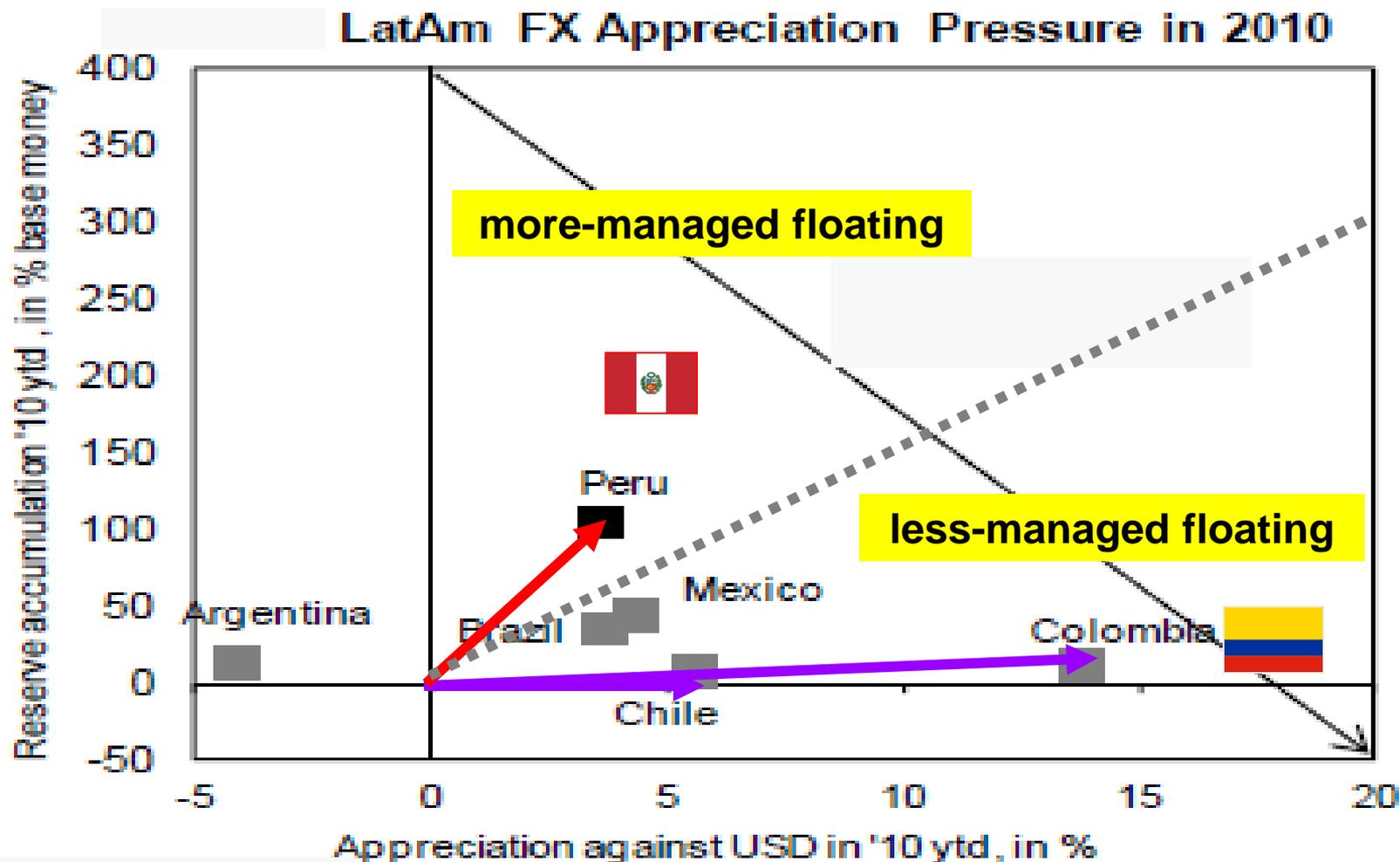
Example: Renewed capital inflows to Asia in 2010

Korea & Singapore took them mostly in the form of reserves, while **India & Malaysia** took them mostly in the form of currency appreciation.



Renewed inflows in 2010 in Latin America

were reflected mostly as reserve accumulation in Peru,
but as appreciation in Chile & Colombia.



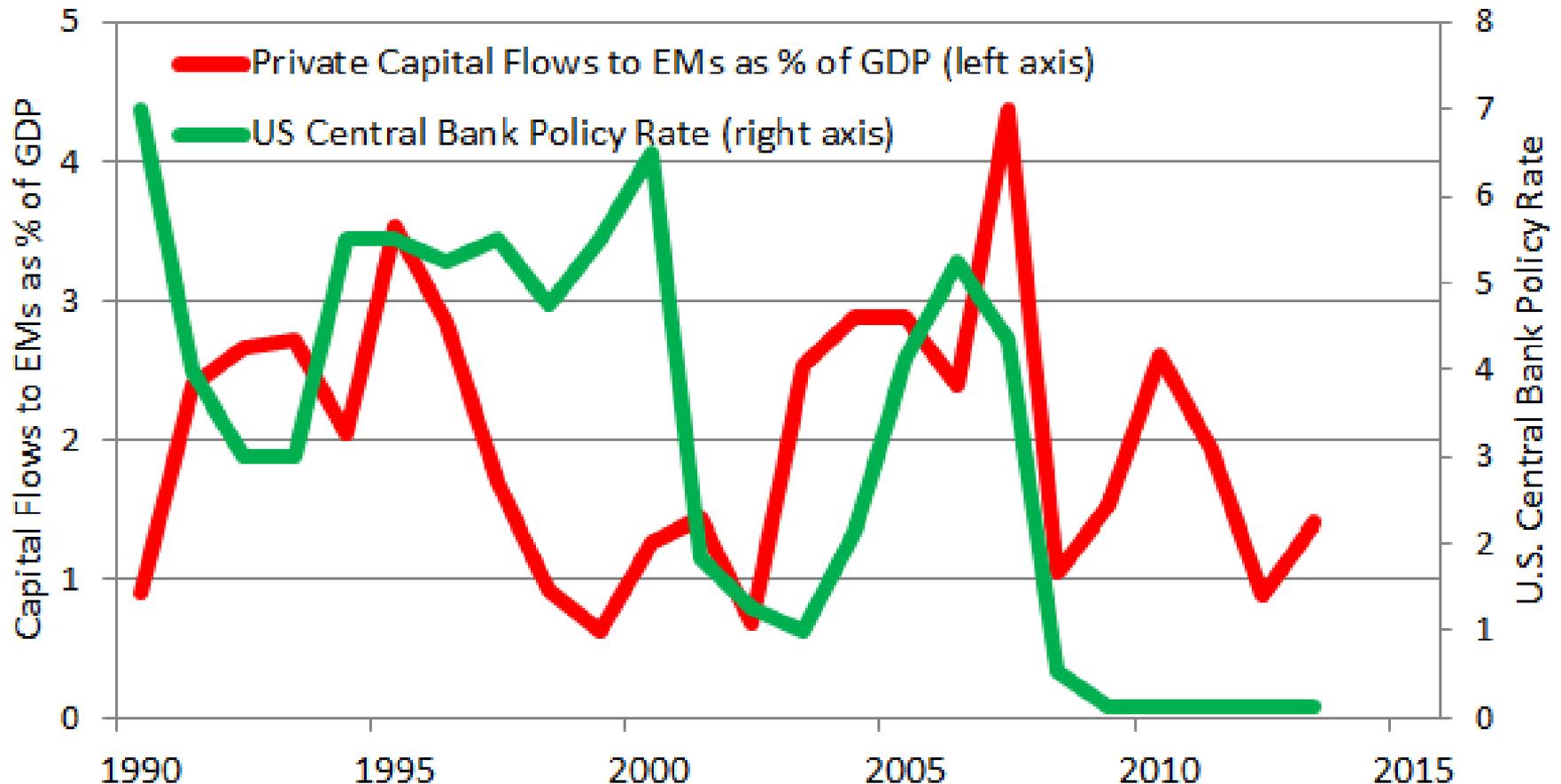
Systematic managed floating



- refutes the corners hypothesis,
 - but without violating the Impossible Trinity,
 - without capital flow management measures,
 - and even without giving speculators a line to shoot at.
- \approx what some central banks do anyway.
 - Attempts at econometric estimation
 - Gustavo Adler & Camilo E. Tovar, 2011, “Foreign Exchange Intervention: A Shield Against Appreciation Winds?” IMF WP 11/165.
 - Jeffrey Frankel & Daniel Xie, 2010, “Estimation of De Facto Flexibility Parameter and Basket Weights in Evolving Exchange Rate Regimes,” *Amer.Econ.Rev.*, May.



The relationship between the Fed's interest rate and EM capital flows does not always hold.



Kristin Forbes, 2014 <http://www.voxeu.org/article/understanding-emerging-market-turmoil>

Notes: Data on private capital flows and policy rates from IMF's IFS database, Dec. 2013 version. Capital flows are private financial flows to emerging markets and developing economies. Policy rates measured at end of period. Data for 2013 are estimates.

Appendix I: Should all central banks care about the exchange rate?

- Yes.
 - That includes inflation targeters.
 - It even includes large countries.
- But it's different for different countries:
 - No single regime is right for all.

Large economies like the US, euroland & Japan

- should float freely most of the time.
- But even they should occasionally worry about the exchange rate if it has gotten too far out line,
 - perhaps once a decade or so:
 - \$ in 1985 (too high),
 - ¥ in 1995 (too high), and
 - € in 2002 (too low).
 - Analogous to those rare times when asset markets get far out of line.
 - In such cases intervention can help set the markets back on the right track.



If I were running the ECB, as of 2014...

- I would pursue QE
- by buying US bonds, not € bonds.
- Why?
 - (1) If the ECB buys € government bonds, Germany's Constitutional court may say it exceeded its legal mandate.
 - (2) The likely side-effect, depreciating the euro, would help adjustment in the euro periphery.
- I realize some others might fear reigniting “currency wars,” i.e., competitive depreciation.



Appendix II: If the exchange rate is not to be the anchor for monetary policy, what is?

- The need for an alternative anchor for monetary policy led many countries to Inflation Targeting (IT),
 - after the currency crises of the late 1990s pushed them away from exchange rate targets.



- IT was in many ways successful.

- One problem with IT: exogenous supply & trade shocks.

- Remember the textbook maxim that the exchange rate should accommodate terms of trade shocks.
- If IT is interpreted in terms of the CPI, in theory it doesn't allow the exchange rate to rise & fall with the terms of trade.
- For oil importers, when the world price of oil goes up, a literal CPI target says to *tighten* monetary policy enough to *appreciate* the currency,
 - the opposite direction from accommodating the adverse trade shock.



A case for Nominal GDP Targeting

- NGDPT is more robust with respect to supply shocks & terms of trade shocks.
 - That is, compared to the alternative of IT.
 - If the alternative is a money target, NGDPT is more robust with respect to velocity shocks.
 - If the alternative for a threshold is the unemployment rate, NGDPT is more robust with respect to
 - shocks to the labor force participation rate,
 - as the Fed faced last year, and
 - shocks to labor productivity,
 - as the Bank of England has faced.

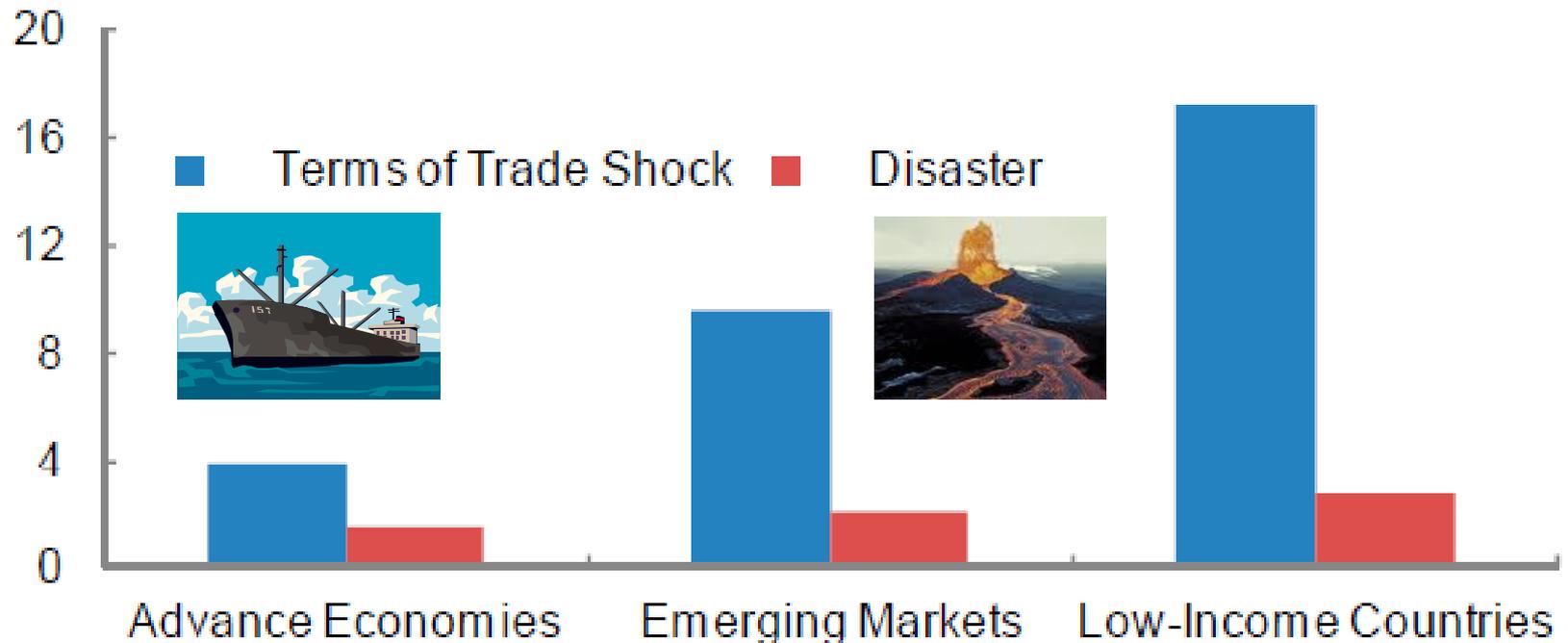


NGDPT

- Last point. The proponents of Nominal GDP Targets have focused on the biggest countries.
- But middle-size, middle-income countries are better candidates.
- Why? They suffer bigger supply shocks & trade shocks.
- NGDPT should be considered as a serious alternative to IT & exchange rate targeting.

Trade & Supply Shocks are More Common in Emerging Markets & Low-Income Countries

Probability of Shocks, 1970-2007
(In percent of country years)



Sources: IMF(2011a): Managing Volatility: A Vulnerability Exercise for LICs.