



Currency Wars: What do effective exchange rates tell us?

Christophe Gouardo and Jean Pisani-Ferry, 25 November 2010¹

In November, South Korea joined the ranks of countries striving to limit the upwards pressure on their currency when two lawmakers submitted a parliamentary proposal to impose various taxes on foreign capital inflows and outflows. If any of these measures pushes through, South Korea would become the first (traditionally financially liberalised) OECD country to reinstate capital controls. This brings the list of countries intervening directly, indirectly or considering intervention to more than 23. This is unwelcome disturbing, but hardly surprising development: as policy rates in the US are at near-zero levels and monetary policy is geared towards managing the yield curve in order to meet domestic objectives, emerging countries throughout the world are scrambling to protect themselves from the negative spillovers in the form of massive capital inflows.

Unfortunately, the apparent legitimacy of these concerns ignores one fundamental element, namely the asymmetric nature of the shock that has hit the global economy: as private deleveraging remains incomplete, while public deleveraging has barely started, demand in industrialised countries is set to remain subdued in the years to come, while in the developing and emerging economies it remains on a strong growth track. Already output in most emerging countries is back to a level consistent with pre-crisis trends, whereas it remains significantly below in advanced countries. This fundamental asymmetry will need to be compensated for by some form of adjustment in relative prices: in order to compensate for the slack, industrialised countries will have to go through either a substantial depreciation of their currencies or a protracted period of deflation in order to reinstate relative competitiveness.

This adjustment in exchange rates is being resisted for understandable economic reasons. For an emerging country, the relevant policy variable is not just the bilateral exchange rate between itself and its trading partners in the advanced world, but a vector of exchange rates that also includes those of its competitors in the emerging and developing world. Individually, it thus makes sense for a country to lean against appreciation if it expects its trading partners and competitors to do the same. This highlights one of the coordination problems in today's currency jousting: appreciation of the emerging countries' currencies might be desirable on an aggregate basis, but it requires all of these currencies to appreciate simultaneously.

¹ This version updates and corrects a previous version, in which we reported that the index of emerging currencies was still below 2007 levels. This was due to an error in the weighting of countries. In fact, the index has recovered its losses. This does not, however, substantially change our views on the issue.

Box 1.1 Methodology

The two indicators computed here are simply equal to the weighted average, for each of the two blocs, of the individual REER of each country *vis-à-vis* the opposite bloc. Trade-weights are used both for computing the country REER and for averaging across countries of the same bloc. The methodology is identical to that used in Pisani-Ferry and Cohen-Setton (2008).

Formally, let I, J, K be three different regions. If $X_{i,j}$ is country i 's trade with partner j in region J , then

$$X_{i,\cdot} = \sum_{j \in J} X_{i,j}$$

is the total trade of i with region J .

Let $e_{i,j}$ be the bilateral exchange rate between i and j . Country i 's bilateral (real) exchange rate with country J is

$$E_{i,\cdot} = \sum_{j \in J} \frac{X_{i,j}}{X_{i,\cdot}} * e_{i,j}$$

Thus the effective exchange rate between region I and region J is

$$E_{I,J} = \sum_{i \in I} \frac{X_{i,J}}{X_{I,J}} * E_{i,\cdot}$$

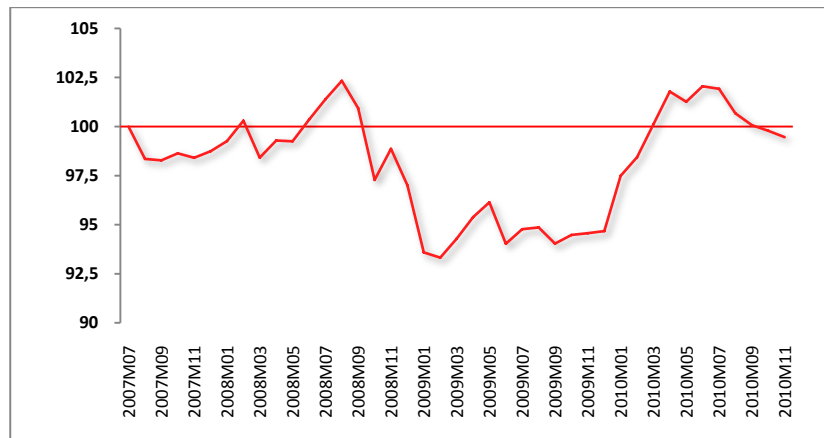
Simple weights (own calculations) are used, based on total bilateral trade flows in 2007. The sample is restricted to the top 20 countries in terms of world trade, plus the euro area. The CPI is used as the price index.

Getting a clear picture of the extent of this appreciation is in fact complex, owing to the fact that appreciating *vis-à-vis* the dollar – by far the most commonly cited yardstick of a country's currency stance – does not signify an across-the-board appreciation with respect to the advanced countries' group.

It is, however, possible to construct a simple summary indicator that helps monitor the evolution of exchange rates between advanced and emerging economies. It is common to compute trade-weighted real effective exchange rates for individual countries with respect to groups of other countries. A simple extension is to compute an effective exchange rate between two groups of countries (Box 1).

We construct the index between two blocs of countries, « advanced » and « emerging ». The sample is not comprehensive but it contains all major countries: it is comprised of the top 20 countries in terms of total trade (excluding euro-area countries), plus the euro area. In order to ensure a minimal degree of homogeneity with respect to the shock of the financial crisis, the group of industrialised countries includes only western countries plus Japan (countries such as Singapore, or South Korea, thus fall into the other group)².

Figure 1: Effective exchange rate of emerging countries vis-à-vis advanced countries



Source : IMF International Trade Statistics, IMF International Financial Statistics, Datastream, National Sources, authors' calculations.

Figure 1 gives the nominal effective exchange rate of the emerging-countries group vis-à-vis the advanced-countries group. Between July 2007 and September 2008 this index did not change much.

² Advanced countries (Australia, Canada, Euro Area, Japan, Switzerland, Sweden, United States, United Kingdom) and Emerging countries (Brazil, China, Hong Kong, India, Korea, Malaysia, Mexico, Poland, Russia, Saudi Arabia, Thailand, United Arab Emirates). Whilst an important trading partner, Taiwan was excluded from the index for lack of adequate data.

In the wake of the Lehman collapse it registered a sharp drop, consistent with the flight-to-quality episode that occurred in the turmoil of the financial crisis. This index remained stable throughout 2009, before appreciating at the beginning of 2010.

This result is in part unsurprising. In end-2008 most emerging market currencies depreciated largely as capital flew out in search of safer investments to store value. What is more striking, given the arguments presented above, is that despite an asymmetric shock of exceptional magnitude, emerging market currencies have not appreciated significantly against advanced economies and again seem to be heading downwards, something that is not immediately obvious if one looks solely at the bilateral USD rates (Figure 2). Looking individually at the countries that compose the index, it can be seen that some kind of dollar effect is at work : countries tightly pegged to the dollar, such as China, Hong Kong, the United Arab Emirates or Malaysia registered a decline vis-à-vis the advanced countries' group, whilst others have appreciated. Taking into account changes in the relative real value of currencies within the advanced group (i.e., looking at the computed real effective exchange rates individually) leads to Figure 3 below.

Figure 2 : Selected nominal USD exchange rates of emerging economies (July 2007 = 100)

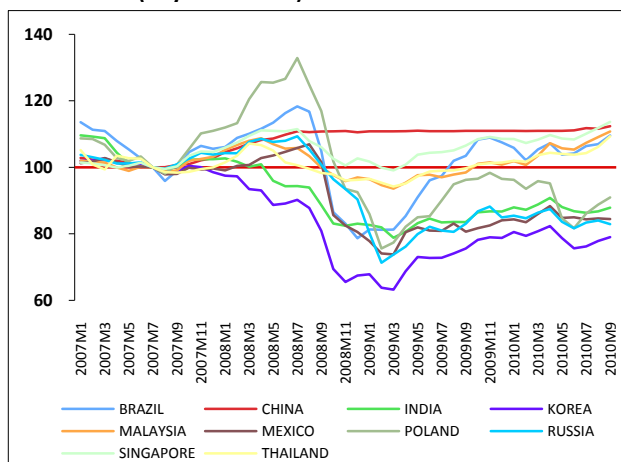
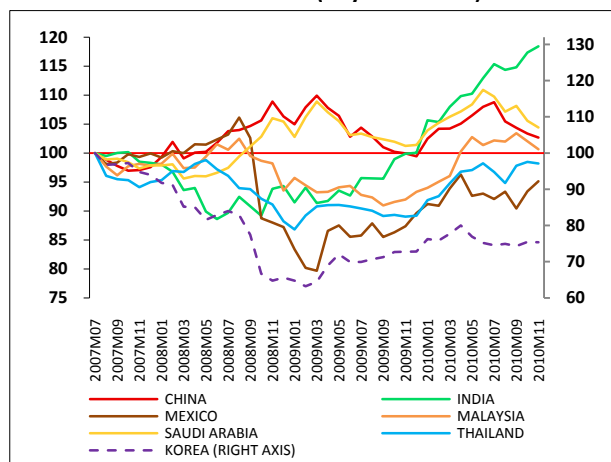


Figure 3 : Selected effective real exchange rates of emerging economies vis-a-vis advanced (July 2007 = 100)*



Source : Datastream, WM Reuters, Bruegel calculations

Note : in figure 3, the index value of Korea (dashed line) is read on the **right** axis for presentation purposes. In both graphs, countries are also selected solely to clarify presentation.

The above observations highlight the collective action dimension of the exchange-rate policy tensions the world is experiencing. Despite some form of appreciation since the lows of 2009, the currencies of emerging markets are on average not strong and are moreover subject to considerable volatility. Given the deeply asymmetric nature of the shock to advanced and emerging economies, a return of their effective exchange rate to the 2007 level is not likely to be sufficient, given the magnitude of the global rebalancing act that eventually needs to take place. There is therefore still considerable scope for appreciation. But no country will want to let its currency appreciate as long as other partners do not follow suit.

References :

Jean Pisani-Ferry (2010), "The G20 and the Currency War", Bruegel G20 Monitor (available on the Bruegel website at <http://www.bruegel.org/g20monitor.html>)
 Jean Pisani-Ferry & Jérémie Cohen-Setton (2008), "Asia-Europe: the third link", European Economy - Economic Papers 352, Directorate General Economic and Monetary Affairs, European Commission.