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Welcome to the

CURRENCY WAR SCORECARD

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Charting potential winners and losers.

Country	Cumulated current account	Increase in reserves	Over/ Under-valuation of the currency	Loss/gain of competi-tiveness	Interest rate differential	Portfolio inflows	Capital controls
Singapore	23.3%	37.6%	28.5%	-17.5%	0.1%	1.5%	2.44
Norway	13.0%	64.0%	1.5%	-10.7%	1.4%	7.7%	2.44
Switzerland	12.0%	73.9%	5.5%	-7.2%	0.1%	4.0%	2.44
Malaysia	9.5%	20.8%	10.2%	-6.7%	2.9%	10.2%	-1.17
Sweden	7.0%	0.4%	14.4%	-14.3%	0.9%	15.0%	2.44
Russia	4.6%	5.5%	0.4%	-17.8%	8.1%	1.0%	0.68
Hong Kong SAR	4.3%	28.7%	12.9%	3.1%	0.4%	10.2%	2.44
Philippines	3.5%	20.3%	4.5%	-14.8%	3.4%	2.6%	-1.17
China	3.1%	18.3%	5.9%	-10.5%	3.1%	0.5%	-1.17
South Korea	3.0%	6.2%	2.4%	-15.0%	1.1%	4.1%	0.94
Japan	2.2%	3.9%	2.4%	27.4%	0.2%	3.7%	2.44
Thailand	1.9%	14.2%	3.0%	-10.2%	2.6%	3.8%	-1.17
Israel	1.7%	7.7%	0.8%	-4.6%	1.6%	2.7%	2.44
Euro Area	1.0%	0.2%	0.4%	10.7%	1.4%	3.6%	2.44
Argentina	0.1%	-2.0%	-0.2%	24.6%	10.4%	1.9%	-0.81
Mexico	-0.6%	6.7%	0.5%	-15.4%	4.4%	4.2%	1.12
Indonesia	-0.6%	8.4%	4.7%	-14.8%	5.6%	2.1%	-0.11
Chile	-1.1%	9.2%	0.8%	-17.1%	4.9%	3.8%	1.38
Brazil	-2.2%	8.0%	-0.4%	-20.8%	7.0%	2.2%	-0.11
United Kingdom	-2.5%	1.2%	0.5%	-7.7%	0.4%	6.9%	2.44
Australia	-3.0%	0.5%	-6.8%	-34.4%	2.9%	8.4%	1.12
United States	-3.1%	0.0%	0.0%	9.5%	0.0%	3.6%	2.44
Canada	-3.4%	0.9%	0.4%	-13.0%	1.1%	5.9%	2.44
India	-3.9%	0.2%	1.4%	-4.8%	8.9%	1.8%	-1.17
South Africa	-4.2%	3.1%	-3.8%	-14.2%	4.9%	4.6%	-1.17
Poland	-4.5%	6.2%	-1.4%	-2.1%	3.6%	4.6%	0.06
Turkey	-7.3%	4.7%	-21.9%	-5.0%	13.4%	2.9%	0.06

Depending on who you are speaking to, currency wars are everywhere or nowhere. In his Stavros Niarchos Foundation lecture in May, Fred Bergsten, former director of the Peterson Institute, declared "war on the currency wars," characterizing them as the biggest threat to the international monetary system. Conversely, Philipp Hildebrand, former chairman of the Swiss National Bank, titled his op-ed in the *Financial Times* in February "No such thing as a global currency war." Coined in September 2010 by Guido Mantega, Brazil's finance minister, the term seems to be looking for a definition. Some would point to recent monetary events: the Bank of Japan's aggressive new framework, and the surprise interest rate cuts in Israel, Turkey, or Australia. But who is "attacking" and who is "defending"? What exactly is the war being fought?

Fundamentally, currency wars are about the desynchronization of international business cycles. Developed countries have reached the zero lower bound in monetary policy and have started taking unconventional measures to stimulate growth and inflation, while emerging markets have experienced (with some important differences among countries) a rapid return to growth with inflationary pressures. In this situation, emerging markets feel threatened by capital flows stemming from the easy monetary conditions set by the United States, Japan, and (to a lesser extent) the eurozone. In turn, they feel the need to accumulate foreign exchange reserves to avoid an appreciation of their currency and a loss of competitiveness. Conversely, the United States and the eurozone protest the setting of a non-cooperative exchange rate policy which drains their liquidity and hurts their net exports.

The figures presented here are an attempt to provide a simple but telling picture of the facts through those two lenses. To do so, we selected seven variables which we separated in two groups. The first describes the extent to which countries might engage and benefit from currency manipulation, and the second the vulnerability to other countries' potential manipulation. By applying those variables to twenty-seven major countries (fifteen emerging and twelve advanced), we ranked each on both scales to assess and map the currency wars.

In the first group, the variables are:

- **Current account balance:** Averaged over 2010–2012, shows the extent to which the country benefits from a competitiveness advantage.
- **Foreign exchange reserve accumulation (2010 to end of 2012)**: The main tool of currency intervention.
- **Over- or under-valuation compared to the fundamental equilibrium exchange rate (FEER):** We used numbers provided by Bill Cline and John Williamson of the Peterson Institute. The number presented is the needed depreciation/appreciation to reach a balanced current account.

In the second group:

- **Loss/gain of competitiveness:** The variation of the real exchange rate from 2010 to 2013: countries losing competitiveness suffer more from currency wars.
- **Policy interest rate differential (with the dollar):** Countries with high interest rates have less control of their money supply when the Fed's policy is very accommodative.
- **Portfolio inflows (over GDP):** They show the extent to which "hot money flows" destabilize financial markets in receiving countries.
- **Capital controls index:** Countries open to capital flows are more affected by changes in other countries.

While we present the results in a chart, there are many caveats to state. All the variables are imperfect measures. In particular, there are many debates on the right criterion to use to assess whether a currency is over- or under-valued. Similarly, while portfolio inflows are an accepted measure of pressures created by "hot money flows," one might argue that attracting capital is a positive outcome. Beyond the choice of variables, there is the issue of causality. It is not always clear that foreign asset purchases (an increase in foreign assets) cause the current account balance to rise, or if the effect is reversed. In those two indexes, we mixed both, neutralizing (but also potentially confusing) those important questions.

The figure on the next page shows four groups of countries. While there are many differences within groups, the similarities revealed by the map are interesting:

- **Low vulnerability, high currency activism:** In the upper left quadrant are countries which have not allowed their currency to appreciate and have resisted either by maintaining a relatively closed capital account, or have not received destabilizing portfolio inflows, but have amassed a high level of reserves and/or current account. It corresponds to countries that have been attacked most recently for pegging their currencies at low rates, such as China and Switzerland.
- **High vulnerability, high currency activism:** In the upper right, one finds small countries and commodity exporters that have had to cope with strong headwinds. Norway and Sweden, which have received large capital inflows fleeing the euro crisis, have nevertheless not seen much appreciation of their currency or reduction of their current account.
- **High vulnerability, low currency activism:** At the lower right, one finds countries that have suffered from other countries' monetary policy without accumulating reserves or maintaining an under-valued exchange rate. Typically, the Australian dollar is known for its sensitivity to capital flows looking for a substitute to commodities. Affected to a lesser extent, Brazil and Mexico also belong to this group.
- **Low vulnerability, low currency activism:** Finally, in the lower left, are countries which both maintain low interest rates but do not intervene in foreign exchange markets and have maintained a trade balance in deficit or an undervalued currency.

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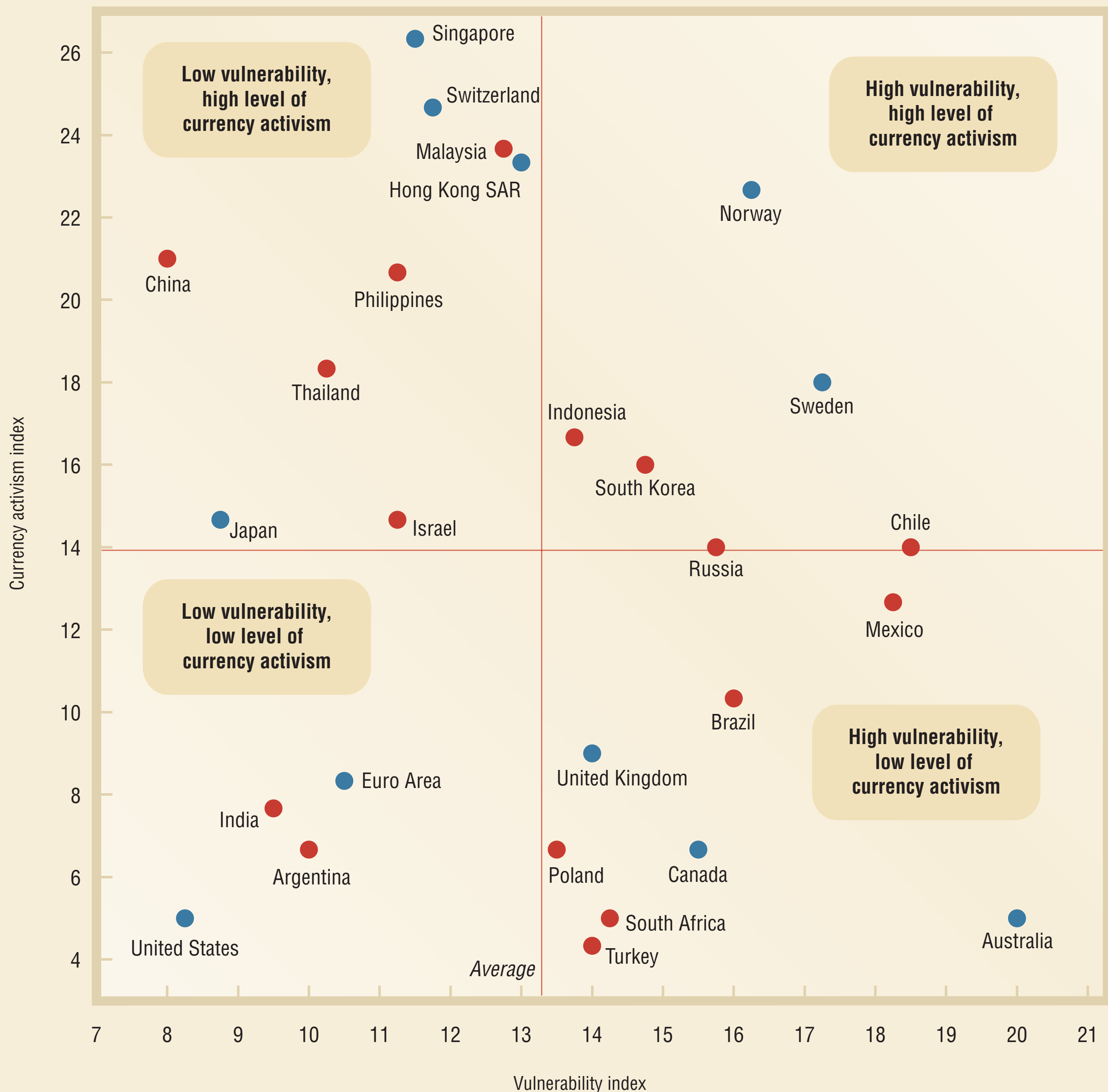

SOURCES AND NOTES

Current Account: *World Economic Outlook* (International Monetary Fund).

Reserves: International Financial Statistics (International Monetary Fund). The increase is computed over 2009–2012. For Norway, we added the size of its sovereign wealth fund.

Over/Undervaluation: B. Cline and J. Williamson (2012) "Estimates of Fundamental Equilibrium Exchange Rates," May 2012, Peterson Institute Working Paper.

Competitiveness: Real Effective Exchange Rate, broad index (monthly) from the Bank for International Settlements, January 2010–March 2013.

Interest rate differential: Discount rate, International Financial Statistics (International Monetary Fund). (For Argentina, money market rate.)

Portfolio inflows: International Financial Statistics (International Monetary Fund). This is the average over 2010–2012 of quarterly gross inflows divided by GDP.

Capital controls: Chinn-Ito index.

The two indices are computed by averaging the rank of each countries for each variable, with equal weighting.