

Paper

Currency Wars

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The rules of global trade forbid countries from artificially boosting exports and curbing imports by manipulating the exchange rates of their currencies. But for many reasons, policymakers have been wary (more wary than presidential candidates, anyway) of pressing cases against abuses. That reluctance may be coming to an end, however, as the global recession slouches on and the shadow of chronic unemployment looms over industrialized economies.

What explains that traditional reluctance to pursue currency abuses? For one thing, more is typically at stake in bilateral relations than commerce. For another, some groups in the “losing” countries benefit from currency manipulation—Country A’s exporters’ unfair advantage translates into lower prices for consumers and higher profits for retailers in Country B.

Besides, economists argue, currency manipulation may determine which industries flourish, but it should not have much effect on the total number of unemployed in the long run. Last but not least, policymakers sympathize with some motives for currency manipulation—in particular, for building nest eggs of foreign currency to protect against economic (and military) shocks and for providing income for future generations when nonrenewable resources are depleted.

However, the politics and economics of what is appropriately dubbed “currency aggression” have been changing. Jobs do not seem to come back as quickly in the wake of economic downturns—and when they do come back, they leave a trail of economic and social dislocation. As the biggest nonaggressor, the United States is plainly suffering. I estimate that in 2011, currency aggression cost Americans more than two million jobs.

The Mechanics

I know what you’re thinking, but you’re wrong. This isn’t just a problem with China. The policy took off in a big way early in the past decade, with roughly two dozen countries getting in on the act. They included advanced economies (Japan and Switzerland); newly industrialized economies (Israel, Singapore, and Taiwan); developing Asian countries (Malaysia, Thailand and, of course, China); and oil exporters (Norway, Russia, and Saudi Arabia).

To push down the exchange value of its currency, a government purchases foreign currency with its own (which any country can do because governments create their own money). The government must hold the foreign currency in the form of a financial asset, typically a bond or a bank deposit. Most, but not all, of these assets are recorded in official statistics as foreign-exchange reserves. A government purchase of foreign assets is called an “official financial outflow,” while a sale is an official financial inflow. The

magnitude of currency manipulation can thus be quantified as the difference between official outflows and official inflows, or net official financial flows.

Sometimes, governments amass foreign currency to achieve quite different objectives. For example, a government may borrow on international markets to finance a development project or to finance a budget deficit.

But regardless of the government's intent, cross-border official flows also have effects on the exchange rate. (Of course, other factors, like the trade balance and expectations about the exchange rate in the future, also affect those rates.)

The impact of official flows on the exchange rate depends on the ability and willingness of private investors to adjust the mix of currencies in their own their portfolios. In order for a government to sell domestic currency for foreign currency, it must induce private investors to sell the foreign currency. As in any market, an increase in supply pushes down the price—here the exchange rate. If financial markets are deep and liquid (as is the case with US dollars, euros, British pounds, and Japanese yen), the resulting depreciation will be small relative to the size of the transaction. However, if legal barriers prevent some investors from buying the domestic currency—for example, foreigners need permission to buy Chinese renminbi—depreciation will be greater. But even when markets are highly liquid, the impact of large net official flows on the exchange rate and trade balance can be quite large.

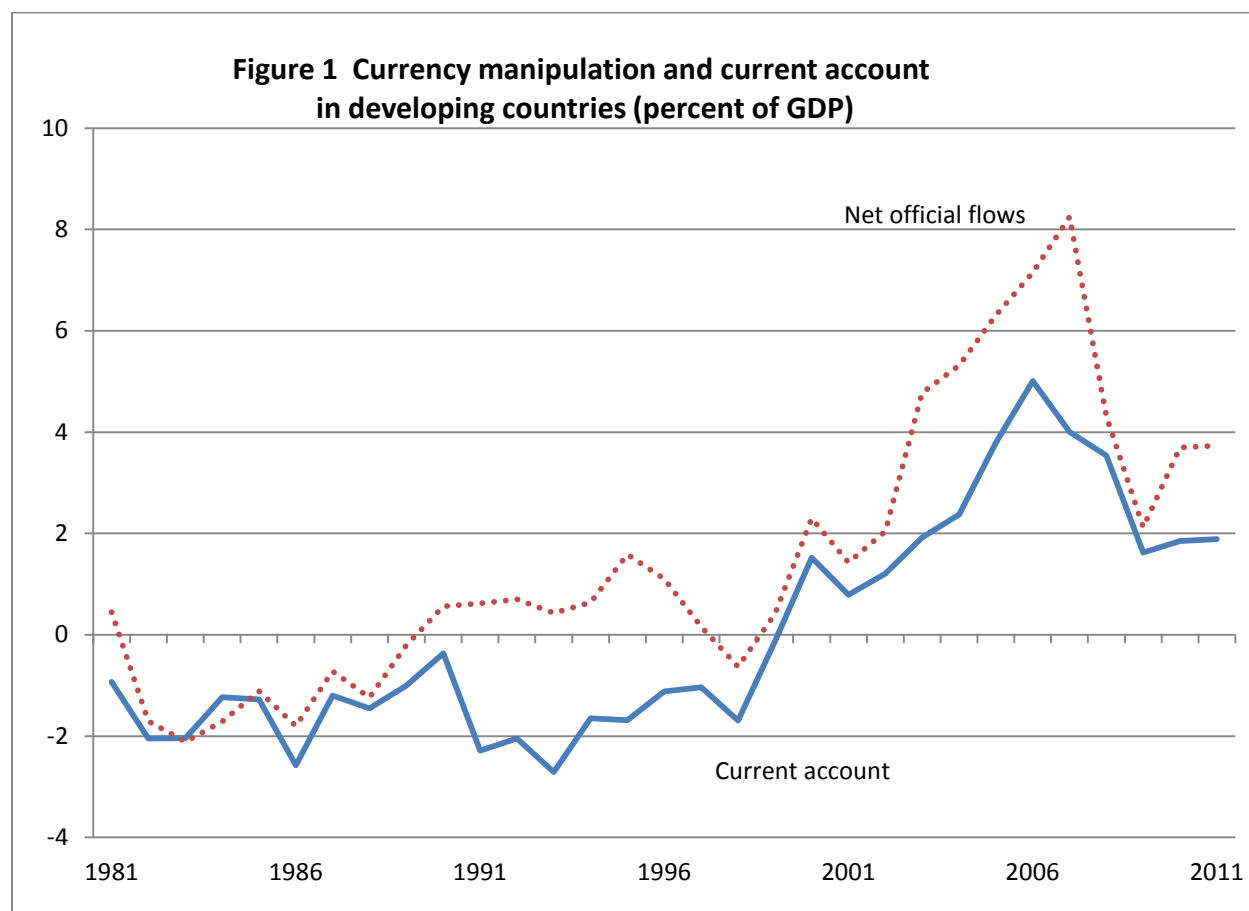
The Fruits of Aggression

So why do governments manipulate currencies? To improve their balance of trade. When a currency falls in exchange value, exports become cheaper to foreigners (who then buy more), while imports become more expensive to a nation's own residents (who then buy less). The net result is an improvement in the balance of trade. The higher trade balance supports more employment and adds to economic growth through expansion of industries that export as well as industries that face less competition from imports. This expansion is matched by economic contraction in its trade partners, who now export less and import more. In other words, currency aggression is roughly a zero-sum game, shifting production (and jobs) from one country to another without changing total employment or output, at least in the short run. With time, the effects on employment in each country usually wear off, as monetary policy in the aggressor countries must tighten to prevent inflation and monetary policy in the nonaggressor countries must loosen to encourage employment in other industries. But these adjustments are moving very slowly right now.

There is another, very important, aspect to this game. A country with a trade surplus is lending to the rest of the world—a reality reflected in increased ownership (by the government or private investors) of foreign financial assets (bonds, bank loans, and stocks). And, of course, creditors' increased foreign assets in surplus economies are matched by added liabilities in economies with trade deficits.

In some cases, temporary trade surpluses (matched, of course, by deficits elsewhere) may serve the interests of all parties, creating demand in economies operating at less than full capacity and bleeding off excess demand in overheated ones. But in order to achieve global economic balance in the long run, the pattern of surpluses and deficits should follow from differences in the returns on investments. Industrialized countries (where returns on new productive facilities are relatively low) should thus be lending to developing countries (where expected returns are high). Accordingly, industrialized countries should run trade surpluses, while developing ones should run deficits.

But over the past decade or so, this pattern has been turned on its head by currency aggression on the part of poor countries fueling growth through exports. The developing world has been lending to the industrialized world to sustain more competitive exchange rates (and export-led growth), thereby running a huge collective surplus. Figure 1 shows the current account balance (a broader measure of the trade balance that includes income on foreign investments) for developing countries as a group. It also shows the magnitude of currency manipulation in these countries, as measured by their net official financial flows. In both cases, they are shown as a percentage of GDP.



Source: IMF World Economic Outlook database.

Note that after two decades of a small but generally negative trade balance—about what one would expect if exchange rates were largely driven by market forces—developing countries began to run large current-account surpluses after the year 2000. This change coincided with a marked upturn in currency manipulation.

Developing countries turned to currency manipulation as a means of resuming growth after the 1990s financial crises in Latin America and Asia. They were also motivated by the wish to build larger stockpiles of foreign exchange reserves to protect themselves from the rising volatility of global financial markets. In practice, however, these reserves have not been very helpful in managing risk.

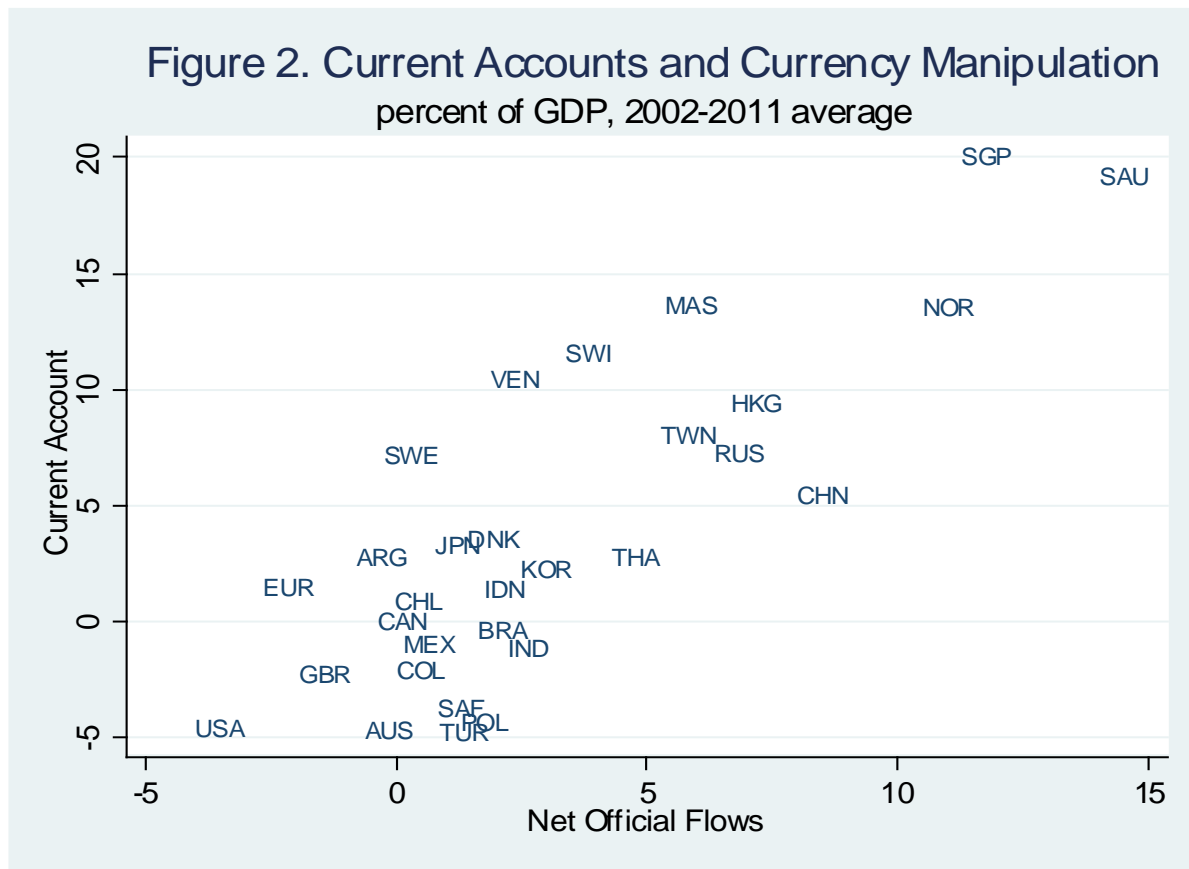
In many cases, currency aggression was not associated with a depreciation of the domestic currency but the prevention of appreciation. Normally, the currency of a country with rapidly growing productivity

would appreciate, reflecting falling production costs in export markets; this enables the country to enjoy more imported goods at lower prices. China is the most dramatic example of a country that has resisted normal currency appreciation.

Currency Aggression Is Big

In my own research I found that, over the past 30 years, currency manipulation has been the main driver of changes in trade surpluses and deficits. Fiscal policy (budget deficits) is a distant second. My analysis suggests that the current-account balance increases by about 65 cents for every dollar spent on currency manipulation; by no coincidence, between 1982 and 2011, the current accounts of developing countries increased about two-thirds as much as the increase in net official flows.

Figure 2 illustrates that relationship: Countries that have larger net official outflows have higher current-account balances. In 2011, net official flows of all countries that were net purchasers of official assets totaled about \$1.1 trillion. Adding in purchases by sovereign wealth funds (mostly by oil exporters) brings the total to \$1.4 trillion.



Note: Countries are Argentina (ARG), Australia (AUS), Brazil (BRA), Canada (CAN), Chile (CHL), China (CHN), Colombia (COL), Denmark (DNK), euro area (EUR), Hong Kong (HKG), India (IND), Indonesia (IDN), Japan (JPN), Korea (KOR), Malaysia (MAS), Mexico (MEX), Norway (NOR), Poland (POL), Russia (RUS), Saudi Arabia (SAU), Singapore (SGP), South Africa (SAF), Sweden (SWE), Switzerland (SWI), Taiwan (TWN), Thailand (THA), Turkey (TUR), United Kingdom (GBR), United States (USA), and Venezuela (VEN).

Sources: IMF International Financial Statistics; IMF Currency Composition of Official Foreign Exchange Reserves; Finance Ministries of Norway and Singapore; and Central Bank of the Republic of China (Taiwan).

Global currency manipulation has been running at roughly this rate since 2006. According to the latest data and International Monetary Fund (IMF) projections, it declined by about 20 percent in 2012, but remains near historically high levels.

About \$100 billion of these net official flows reflected repayments of loans, which I do not consider to be aggressive behavior. Also, it is widely accepted that developing countries, particularly those vulnerable to natural disasters or that face military threats, need to hold foreign assets as a form of insurance. And it is only prudent for countries that are dependent on exports of non-renewable resources, like oil, to invest some of their export revenue abroad, rather than consuming or investing it all at home.

I made the educated guess that justifiable accumulation of reserves and other foreign assets in 2011 was roughly \$300 billion, most of which reflects savings of oil exporters beyond what could be prudently invested in their own economies. Altogether then, excessive global currency manipulation (currency aggression) was reflected in roughly \$1 trillion in net flows in 2011.

Accordingly, the trade balances of currency aggressors in 2011 were very likely elevated by \$650 billion as a result of their purchases of official assets (and the trade balances of the remaining countries were correspondingly depressed). We do not know with any precision how much the US trade balance was affected by currency manipulation. However, since the American economy constitutes about one-third of the global economy (excluding currency aggressors), a first guess is that the US current-account balance in 2011 was some \$200 billion lower than it would have otherwise been.

Actually, it might have been considerably more: The United States is more strongly affected by currency manipulation than other countries, because about 60 percent of foreign-exchange reserves held by governments worldwide are held in dollars. If the net effect of currency aggression in 2011 was to lower the US current-account balance by \$300 billion rather than \$200 billion, the resulting reduction in domestic demand for goods and services made in the United States would imply a loss of two to three million jobs.

To be sure, in normal times one cannot draw a direct link between the trade balance and employment, because monetary policy in the United States and most other industrialized economies can be (and is) used to offset trade effects on employment. However, in 2011, the Federal Reserve was still struggling with the consequences of the Great Recession, and had stretched its capacity to expand financial liquidity to the political limits. Hence, it simply didn't have the firepower to offset the jobs lost through trade.

In any event, currency aggression has serious costs even when countries are at full employment. The resulting unsustainable trade imbalances distort the pattern of economic activity in ways that reduce long-run economic welfare. For example, during the peak years of currency aggression in the mid-2000s, the Federal Reserve maintained full employment by keeping interest rates low. But low rates encouraged vast overinvestment in the US housing market, from which we are still suffering the consequences.

Identifying the Scofflaws

Table 1 lists countries that were currency aggressors over the 10-year-period through 2011, along with their accumulated holdings of foreign-exchange reserves. To be included on my list, countries must meet *all* of these criteria:

- They must have foreign-exchange reserves greater than the value of six months of goods and services imports.
- They must have an average current account balance from 2002 through 2011 that is greater than zero.
- They must have increased their official foreign assets relative to their GDP over the past decade.

Low-income countries, defined by the World Bank as those with per capita incomes of less than \$1,025 in terms of purchasing power, are excluded on the principle that they should be allowed greater latitude than other countries in their economic policies.

As a share of GDP, foreign-exchange reserves are largest among the industrialized economy and Middle Eastern aggressors. (The number for Libya is distorted by the drop in GDP in 2011 associated with the regime change. In 2010, Libya's reserves equaled 119 percent of GDP.)

The most striking revelation is the large number of Asian countries—both industrialized and developing—on the list. Some economists have argued that the Asian currency aggressors are motivated by a desire to build large war chests in order to avoid a repetition of their experience during the Asian financial crisis of 1997–98, when they lacked sufficient foreign exchange to counter private outflows. That may have been appropriate in the early part of the last decade, but these countries long ago passed the level of reserves that might be needed for this purpose.

Moreover, Asia's relatively good economic performance during and after the recent global financial crisis of 2008–09 is mainly the result of a reduction in foreign-currency borrowing and an

Table 1 Foreign exchange reserves of currency aggressors, 2011		
Country	Billions of US dollars	Percent of GDP
Advanced countries		
Denmark	78	24
Hong Kong	286	118
Israel	73	30
Japan	1225	21
Korea*	335	30
Norway*	547	113
Singapore**	560	216
Switzerland	272	43
Taiwan	386	83
Latin America		
Bolivia	10	39
Developing Asia		
China*	3262	45
Malaysia	129	46
Philippines	66	31
Thailand	166	48
Sub-Saharan Africa		
Angola	28	28
Middle East and North Africa		
Algeria	181	95
Kuwait*	235	133
Libya	97	264
Qatar*	101	58
Saudi Arabia	527	91
U. A. E.*	779	216
Eastern Europe and former Soviet Union		
Azerbaijan*	33	53
Kazakhstan*	64	36
Russia	443	24
*Includes 2010 estimated foreign assets of sovereign wealth funds.		
**Gross financial assets of Government of Singapore (may include some domestic assets).		
Sources: IMF <i>International Financial Statistics</i> ; Edwin Truman, <i>Sovereign Wealth Funds: Is Asia Different?</i> (2011); Singapore Ministry of Finance; and Central Bank of the Republic of China (Taiwan).		

improvement in macroeconomic- policy frameworks. It is not clear that the reserve buildup helped much; central banks in Asia spent very little of their reserves in 2008 or 2009. A more plausible explanation for why Asian governments continue to add to their stocks of foreign reserves is that exporters are politically powerful and that maintaining a current-account surplus is viewed as a time-tested way to maintain steady growth.

The table does not account for net foreign saving by oil-exporter nations and other countries facing serious security threats, like Israel and Taiwan. It is possible that these considerations would also lead one to exclude Angola, Kazakhstan, and Russia from the list. But the other countries affected by security issues or depleting oil reserves all have foreign assets in excess of 50 percent of GDP—and in many cases, in excess of 100 percent. That is more than can be justified by these concerns.

Fighting Currency Aggression

Under the IMF Articles of Agreement, Fund members agree to “avoid manipulating exchange rates or the international monetary system in order to prevent effective balance of payments adjustment or to gain an unfair competitive advantage over other members.” But since the adoption of the language on currency manipulation in 1978, the IMF has never publicly declared a member to be in breach. In any event, the IMF has no sanctions with which to enforce this prohibition, short of expelling the offending country.

Unlike the IMF, the World Trade Organization (WTO) does provide a framework for countries to lodge complaints and to impose sanctions on others that violate its rules. Article XV of the agreements that underlie the WTO states that “contracting parties shall not, by exchange action, frustrate the intent of the provisions of this Agreement.”

However, this provision was likely intended to bar countries from imposing exchange controls to offset the trade impact of negotiated cuts in tariffs. It has not been tested as a tool against currency aggression. Moreover, the WTO is required to defer to the IMF on matters related to currencies and foreign-exchange reserves, and—as discussed earlier—the IMF has been unwilling to designate countries as aggressors. The best possible approach would be for the WTO to work with the IMF to restrict currency aggression. Countries that believe they are harmed by such aggression should be able to file formal complaints with the WTO. It would ask the IMF to rule on the existence and magnitude of currency manipulation. If the IMF agreed that the target country was manipulating its currency to gain an unfair competitive advantage, the WTO would authorize the complainants to impose countervailing tariffs against imports from the offending country in proportion to the implied currency undervaluation.

The question then arises as to how to get members of the IMF and the WTO to agree to this new procedure. Changes in the WTO agreements require unanimity, while changes in the IMF articles require 85 percent of voting shares. And since currency aggressors would have no incentive to cooperate, victims of currency aggression would need to find carrots and sticks to bring them to the bargaining table.

There are some proverbial carrots: The United States and the European Union could offer to increase the representation and voting shares of developing countries in the IMF and to increase the size of emergency credit lines provided by the IMF as an alternative to amassing larger foreign-exchange reserves. One stick: Victims could fight fire with fire—that is, buy up quantities of the aggressor’s

currency to prevent depreciation. But this would expose their own taxpayers to the risks of holding foreign assets. Besides, it would not work against countries that have small or closed financial markets.

Alternatively, victims could unilaterally prohibit purchases of their financial assets by currency aggressors—or, perhaps, tax them. Such selective regulation is permissible under international law, and the threat of imposition would give currency aggressors a powerful incentive to bargain. A comprehensive deal might create a procedure within the IMF and WTO to impose sanctions against aggressors while limiting the ability of all countries to impose discriminatory taxes or controls on their own financial assets.

Of course, any approach to containing currency aggression needs to be implemented in the broader context of managing political and economic relationships. Far more is at stake in these relationships—everything from human rights to nuclear proliferation to climate change—than jobs or profits. This points to the desirability, where possible, of discouraging currency aggression by nonconfrontational means.

First, it is generally expedient to use multilateral forums in which limits on currency manipulation can be negotiated without risking the breakdown of bilateral agreements on unrelated issues. Second, every effort should be made to put the issue in the context of general economic welfare rather than specific exporters' welfare. Thus, it may not be in the interest of Chinese exporters of machinery or solar panels or automobiles to allow the appreciation of the renminbi, but it is very much in the interest of the Chinese people to redirect productive capacity from exports to the myriad products and services—like health care, higher education, and transportation infrastructure—that are in short supply at home.

Sooner or later (preferably sooner) the global financial imbalances created by currency aggression must be corrected. The trick will be to get from here to there with minimal disruption of the global order.