



THE US CURRENT ACCOUNT DEFICITS AND THE DOLLAR STANDARD'S SUSTAINABILITY: A MONETARY APPROACH

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Introduction and overview: current account deficits forever?

Economists have failed rather dismally to construct convincing theoretical models of why the seemingly endless US current account deficits are sustained by a seemingly endless willingness of the rest of the world to acquire dollar assets. Reflecting this conceptual inadequacy, many see the continuation of such global “imbalances” to be unsustainable because foreigners – both governments and their private sectors – will eventually cease buying dollar assets, which will trigger a collapse in the dollar’s value in the foreign exchanges. Beginning with the infamous twin deficits of the Reagan presidency in the 1980s, such failed predictions have been commonplace for more than 20 years.

Throughout Asia, the Americas, and much of Africa, the dollar remains the dominant money as a vehicle for clearing international payments between banks, as a unit of account for international trade in goods and services, and as a reserve cum intervention currency for governments. True, the euro has become by far the most important regional currency spanning the smaller economies immediately east of the euro zone. There is a “euro standard” in Eastern Europe. But the euro is not yet important for transacting among non-European countries, whereas the dollar dominates transactions *not* involving the United States, e.g., when China trades with Malaysia or Brazil or Angola.

This resilience of the world dollar standard makes the dollar definitive international money. Alone

among nations, the United States has a virtually unlimited line of credit with the rest of the world to sustain its current account deficits because, *in extremis*, it could create the necessary international means of payment to repay debts to foreigners. Consequently the United States can borrow heavily in its own currency because creditors of the United States voluntarily build up dollar claims. This confounds the prognosticators of the dollar’s imminent collapse because they have seen less highly indebted countries in Asia and Latin America ultimately being forced to repay in crisis circumstances associated with devaluations and default.

What makes the position of the US dollar, and the borrowing capacity of the American economy, so different? Will the consequent large build-up of liquid dollar claims by foreigners eventually undermine the dollar standard, or can the world and the United States live with this dollar “overhang” indefinitely?

The monetary anchor approach

Rather than appealing to America’s military or commercial or political hegemony – past or present – to explain the dollar’s continued international predominance and increasing US indebtedness, I shall take a more purely monetary approach. It has two main facets.

First is the need for one common international money, really a natural monopoly, to facilitate complex multilateral exchanges in goods and capital flows. It is directly analogous to having a single money – as a medium of exchange, unit of account, and store of value – to facilitate purely domestic transacting within a purely national domain. If the dollar were not playing this invaluable role in today’s international economy, the markets would have chosen some other national money to be the world’s key currency. In McKinnon (2005a), I touch lightly on this literature emphasizing the importance of inertia in preserving the dollar’s domain in international exchange. Once a national money becomes

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predominant internationally, economies of scale and network effects make it hard to displace.

Second, going beyond the purely domestic monetary analogy, the dollar acts as a *monetary anchor* – sometimes called nominal anchor – for the macroeconomic policies and price levels of other countries. This anchoring role takes a strong form when countries opt to fix their exchange rates (typically within a narrow band) indefinitely against the dollar – as with many Western European economies (including Japan) in the 1950s and 1960s under the old Bretton Woods regime, or China from 1995 to 2005, or many small island economies which have dollar-based currency boards such as Hong Kong's. If the fixed nominal exchange rate is maintained long enough, and impediments to trade are absent, inflation rates in the prices of tradable goods in such countries converge to those prevailing in the United States.

More widespread at the present time, however, is a somewhat “weaker” form of the dollar's international role as a monetary anchor. Because prices of tradable goods and services, virtually all primary products and most manufactures (except for exports from industrial Europe) are set in dollars in international markets, central banks in emerging markets and less developed countries unofficially peg “softly” to the dollar – sometimes called Bretton Woods II – in order to better stabilize their own internal price levels. Although most developing countries no longer have official dollar parities, they intervene continually to smooth high frequency, i.e., day-to-day or week-to-week, fluctuations in their dollar exchange rates – and stand ready (with high dollar reserves) to prevent major fluctuations (Reinhart 2000; McKinnon 2005b). This has the added advantage of providing an informal hedge for importers and exporters against exchange rate risk when domestic financial markets are insufficiently developed, or ringed by capital controls, to allow an active market in forward exchange. Occasionally, even more developed economies, which nominally are floaters, will intervene. In 2003 into early 2004, the Bank of Japan intervened massively to buy dollars in order to prevent a sharp appreciation of the yen.

Instead of borrowing in its own currency, a debtor country on the dollar's (or euro's) periphery can only borrow on reasonable terms in foreign exchange – largely dollars (or euros) and so bears the exchange risk. Thus it must worry about fluctuations in the value of its currency against the dollar. A

devaluation will increase the servicing cost of its dollar-denominated debts forcing internal bankruptcies in the short run, and inflation in the longer run – as per Argentina's deep devaluation in 2002, or those of the five East Asian crisis economies ten years ago. Once a peripheral debtor country builds up significant foreign currency debts, it becomes vulnerable to an attack with capital flight that leaves it with insufficient dollars with which to repay its (dollar) debts. The resulting debt defaults, loss of access to foreign capital, and deep devaluation can then force a painful cutback in domestic expenditures and a fall of the government. The markets know this, so they limit how much any peripheral country can borrow in the first place – although perhaps not stringently enough.

However, in the new millennium, after more than 20 years of US current account deficits, most US trading partners have become dollar creditors – but creditors which also bear the foreign exchange risk because they cannot lend to the United States in their own currencies. Instead, they pile up dollar claims. Those with substantial holdings of dollar assets worry that a sharp appreciation of their currencies would lead to capital losses for the domestic holders of the dollar assets – as well as a decline in the mercantile competitiveness of their exporters. If prolonged, an appreciation would impose domestic deflation – as per the earlier experience of Japan in the 1980s into the mid-1990s.

Consequently, in order to avoid currency appreciation and deflation, surplus-saving countries in Asia, the Persian Gulf, and elsewhere, are now trapped into acquiring dollar assets from the saving-deficient United States. If purchases of dollar assets by their private sectors are insufficient to cover their current account surpluses, their central banks step in as residual buyers to prevent their currencies from appreciating. The upshot is the huge build-up of official exchange reserves, typically in the form of US Treasury bonds, by central banks in Asia, oil-producing countries, and emerging markets more generally. These *stocks* of official exchange reserves now far exceed any estimate of what is prudent or optimal. Instead, these “reserves” are largely the unwanted residue from their efforts at exchange rate stabilization in the face of ongoing *flow* imbalances – their current account surpluses.

The US current account (trade) deficit is the mechanism by which real resources are transferred from

the rest of the world: the counterpart of foreign net purchases of US financial and other assets. From its central position in the world's financial system, the United States alone can borrow in its own currency, i.e., issue dollar denominated debt. Because the United States is never going to run out of dollars, it can always avoid outright defaults on its government's debts – if only because the US Federal Reserve System can always step in to buy back the US Treasury bonds held by foreigners.

Although foreign creditors see no default risk in holding the US Treasury bonds, they would balk at a substantial loss in the dollar's real purchasing power – as with general inflation in the United States, or substantial devaluations of the dollar against several other currencies that reduce the dollar's purchasing power elsewhere. Then, foreign central banks would no longer be so anxious to stop their currencies from appreciating against the dollar, and would withdraw from being dominant buyers of the US Treasuries.

Consequently, the key to maintaining the dollar standard in its present form – and with it America's indefinitely long line of credit from the rest of the world – lies mainly with the US Federal Reserve Board's control over monetary policy, and not directly with the US Treasury's control over fiscal policy or the American saving rate more generally. *As long as the American price level remains stable, there is no well-defined ex-ante restraint on the amount the United States can borrow internationally.* That is, as long as the dollar's purchasing power over internationally tradable goods and services is stable, foreign central banks are loath to let their currencies appreciate against the dollar for fear of losing mercantile competitiveness in the short run, and facing deflationary stagnation in the longer run.

Is the Fed up to the job? As the center, or “nth”, country under the dollar standard, the US Federal Reserve normally does not intervene in the foreign exchanges and, in a dollar-based world, exchange rate changes do not strongly affect the US price level, i.e., pass-through is low. More easily than other central banks, the Fed can conduct a national monetary policy largely independent of events in the foreign exchange markets. Because of highly developed capital markets in the United States, it can focus directly on stabilizing the US price level by open-market operations targeting the federal funds rate of interest, while more or less ignoring exchange rate

fluctuations. Indeed, the proper role of the center country is to provide independently a stable price level which becomes the nominal anchor for the system as a whole – one that is particularly valuable for emerging markets on the dollar's periphery.

In contrast, other central banks cannot ignore how their exchange rates are moving against the dollar, and have to adjust to what the Fed is doing. In principle, therefore, the Fed can more easily commit itself to a policy of low inflation – although it has yet to name a definite low inflation target in the mode of the European Central Bank or the Bank of England. Nevertheless, the United States is the country where Taylor's Rule was born (Taylor 1993) – where my colleague John Taylor estimated the rule econometrically as if the Fed was targeting a rate of inflation of about 2 percent in the American CPI.

Although providing a stable monetary anchor is all well and good in normal times, America's monetary hegemony could still be undermined by calamitous “non-monetary” events. One is an outbreak of protectionism in the United States that forces other countries, such as China, to appreciate their currencies, i.e., depreciate the dollar, much like the Nixon shock in August 1971. The second is a downturn in the US economy, such as the current spreading housing crisis that essentially forces the Fed to abandon its goal of price stability and flood the economy with liquidity. In either case, the large overhang of liquid dollar assets owned by foreigners makes the Fed's management of the ensuing crisis more difficult – and threatens America with the loss of international monetary hegemony. Let us discuss each in turn.

Protectionism in the United States

Having the United States becoming more protectionist is a major threat to the dollar's pre-dominance as international money. Other than ever-present political populism in a globalizing world requiring continual industrial restructuring, is there a legitimate economic cause for concern that foreign competitive pressure on American industry is too great?

The large US current account deficit funded by foreigners buying dollar assets is helpful in averting a credit crunch in the saving-deficient American economy. However, the transfer of Asian savings to the

US in real terms shrinks the size of the US manufacturing sector, a shrinkage that is at the root of the protectionist upwelling in the American mid west and east coast – even though full employment in the country overall has been well maintained by the offsetting expansion of service industries.

Why is US manufacturing particularly affected? The principal Asian creditors – Japan, China, Korea, Taiwan – and the principal European creditor Germany, only export manufactures and are themselves major importers of services and raw materials including oil. Thus, their trade (saving) surpluses with the rest of the world, and bilaterally with the United States, are embodied in a surplus of manufactured goods exported to the United States – forcing a contraction in US manufacturing employment (McKinnon 2005c). Notice that because of more rapid technical change in manufacturing compared to other sectors of the economy, employment in manufacturing has been falling in all of the mature industrial countries. But it is falling relatively faster in the United States because the American saving deficiency necessitates net imports of manufactures from foreign industrial, or industrializing, countries.

So, American protectionism for manufacturing is not purely gratuitous politically. But unfortunately, the protectionists see it as an exchange rate problem rather than an international saving imbalance. Although this perception is false, it is no less of a threat to de-stabilizing the purchasing power of the dollar and igniting inflation in the United States.

The large trade and saving surpluses of the oil producing countries, such as those in the Persian Gulf, do not generate a similar protectionist response in the United States. Although Americans do not like the high price of oil, they need it. Moreover, oil is homogenous and relatively anonymous in its impact on American industries – and there is no “obvious” exchange rate or tariff measures that the United States could take to change the behavior of, say, Saudi Arabia.

Conflicted virtue

By threatening trade sanctions against imports from trade-surplus countries unless they appreciate their currencies, many politicians and economists in the United States hope to force widespread devaluations of the dollar against the yen, renminbi, and the cur-

rencies of other saving-surplus countries – much like the Nixon Shock of August 1971.

These threatened American trade sanctions thrust the surplus Asian countries onto the horns of a dilemma, which I call *conflicted virtue* (McKinnon 2005b). Trade-surplus countries are “virtuous” in the sense of being high savers, but this naturally generates a collective current account surplus in trade with the saving-deficient United States. American politicians and many economists then misinterpret these foreign trade surpluses, often accompanied by large build-ups of official dollar exchange reserves, as *per se* evidence of unfair currency manipulation to keep Asian currencies undervalued. So American politicians apply pressure to have the Asian currencies appreciated.

However, any individual Asian government knows that a substantial appreciation of its currency against the dollar would create domestic macroeconomic turmoil: exports, domestic investment, and spending more generally, would fall with slower economic growth. A sustained appreciation of its nominal exchange rate would eventually lead to deflation – as in Japan in the 1980s and 1990s after the yen had risen all the way from 360 to the dollar in August 1971 to touch 80 in April 1995. But if it fails to appreciate, the United States would apply trade sanctions on its exports. Thus, the foreign creditor country becomes “conflicted” – whence *conflicted virtue*.

In the worst case scenario, American political pressure takes a more general form. Beyond any individual foreign country, suppose most American trading partners were coerced into agreeing to appreciate. Most have trade surpluses of greater or lesser degrees as the counterpart of the huge US trade deficit. William Cline (2005) is a leading advocate of a more general devaluation of the dollar against 30 or more leading US trading partners. From the monetary approach to exchange rate determination, however, *a general nominal depreciation of the dollar could only be sustained if US monetary policy became more expansionary relative to its trading partners*, i.e., inflation at home and relative deflation abroad.

In sustaining such a general dollar devaluation, how the necessary monetary adjustment would be partitioned between inflation in the United States and deflation elsewhere is quite arbitrary. It depends on

the particular historical circumstances associated with such an economically cataclysmic event. For several years after the Nixon shock of August 1971, requiring the sharp appreciation of European currencies, the Japanese yen, and the Canadian and Australian dollars, high inflation in the United States (initially suppressed by wage-price controls) and more subdued inflation elsewhere was the mode of adjustment. For ten years after the Plaza Accord of 1985, when the major industrial countries agreed to have their currencies appreciate against the dollar, there was outright deflation in Japan whose currency appreciated the most, and suppressed deflation in Europe (then called “eurosclerosis”), and relatively modest inflation in the United States.

**The exchange rate and the trade balance:
the Phillips Curve déjà vu?**

The belief in the economics profession, and among fellow travelers, that countries with trade surpluses should appreciate their currencies to (help) reduce their surpluses is very widespread. It lends respectability to American, and even European, politicians who demand that the currencies of Asian creditor countries be appreciated. Although plausible (like the belief in the Phillips Curve trade-off between inflation and unemployment in the 1950s and 1960s), this belief in the desirability of exchange rate appreciation for trade surplus countries (or devaluation for deficit countries) is not generally valid for the highly open economies characteristic of today’s era of globalization.

Starting as an undergraduate, the average “economist in the street” is taught the elasticities model of the balance of trade. It is basically a microeconomic model where export and import functions are separable from the rest of the macro economy and from each other. With this separation, an appreciation should reduce a country’s trade surplus by raising the price of domestic exports as seen by foreign importers in their currencies, while the domestic-currency prices of imports increases. Thus, if these agents are at all price responsive, i.e., their price elasticities of demand are only moderately high, exports should decline and imports rise so that the net trade surplus is reduced.

Although this elasticities model is myopic because it ignores more complex macroeconomic repercussions from exchange rate changes, it is so seemingly

straight forward that it remains popular for teaching students about the relationship between the exchange rate and the trade balance. When explained to journalists, politicians, or even political scientists, it remains beautifully intuitive. “Sure, if appreciating the renminbi makes Chinese goods more expensive, we will buy less of them; and if American goods sold in China become cheaper, they will buy more of ours”. Whence its popularity.

What then are the macroeconomic repercussions that could invalidate the microeconomic myopia of the elasticities model? First, consider economies which are highly open to foreign trade *and* to capital flows (capital account transactions are not in the elasticities model). The location of investment by multinational firms, and even some more purely national ones, becomes quite sensitive to the real exchange rate. If the renminbi is sharply appreciated against the dollar, China suddenly looks like a much more expensive place in which to invest, while the United States becomes more attractive. As investment slumps in China, so does aggregate demand, including the demand for imports. The converse is true in the United States where increased investment stimulates aggregate demand. Although China’s export growth slows because of the higher renminbi, so does its import growth slow – leaving the net effect on China’s trade surplus indeterminate (McKinnon and Ohno 1997).

But renminbi appreciation has a further macroeconomic repercussion in the form of a wealth effect. Under the dollar standard, the Chinese hold large stocks of dollar assets from their past trade surpluses because they don’t (can’t) lend to the United States in renminbi. When the renminbi appreciates, Chinese owners of dollar assets suddenly feel poorer because their dollar assets are worth less in renminbi for spending in China. This negative wealth effect further reduces spending in China, including spending on imports, making it less likely that China’s trade surplus will be reduced as exports slow (Qiao 2007).

The earlier experience of Japan, under great American pressure to appreciate the yen, is instructive. The yen rose from 360 yen/dollar in August 1971 to touch 80 yen/dollar in April 1995 – an incredibly large nominal appreciation. Japan’s trade surplus did not decline but rose erratically from close to zero in the early 1970s to average about 3 percent of Japanese GDP in the 1980s and 1990s. With a slump in invest-

ment, the high yen caused deflation and a long period of economic stagnation from 1992 to 2002 (Japan's lost decade), but did not succeed in its primary objective of reducing Japan's trade surplus. The stagnating economy reduced the demand for imports even as export growth slowed as a result of the high yen. From the early 1970s through 2007, Japan's price level fell relative to America's thus causing its "real" exchange rate to depreciate back to where it was before the Nixon shock of forced dollar depreciation in 1971!

So, sharp currency appreciations can be economically disastrous while failing to reduce a trade surplus. However, the mainstream of the economics profession continues to believe that the exchange rate should be assigned to adjusting trade imbalances, i.e., the dollar should be devalued against Asian currencies in particular – a belief that could yet undermine the dollar standard.

The Phillips Curve fallacy, that moving to a higher rate of inflation will permanently reduce unemployment, provides an uncomfortable parallel to the fallacy that the "real" exchange rate can be manipulated to control the trade balance. Both are rooted in microeconomic myopia that fails to take longer-term macroeconomic repercussions into account.

In the case of the Phillips Curve for a purely national economy, it seems obvious that increasing aggregate demand, although somewhat inflationary, will increase employment. During the Bretton Woods period, this belief lay behind America's refusal to disinflate from the mild inflation of the late 1960s, which was making US industry less competitive under fixed exchange rates. Instead of disinflating the American economy, because of fear of increasing domestic unemployment, President Nixon opted to continue with an easy money policy and restore American competitiveness by forcing, in August 1971, other industrial countries to appreciate their currencies against the dollar. The result throughout the 1970s into the 1980s was high and variable inflation particularly in the United States, economic stagnation with higher unemployment, and no systematic change in the increasingly erratic US trade balance.

Thanks to Milton Friedman (1968), the world is no longer threatened by the Phillips Curve fallacy bringing on another bout of global inflation. But the exchange rate fallacy, that devaluing the dollar will

reduce the US trade surplus, is alive and well and could yet undermine the anchoring role of the dollar standard with highly inflationary consequences for the United States.

The transfer problem in reducing the US current account deficit

Rather than an exchange rate problem, correcting today's global trade imbalances is a form of the transfer problem: spending must be transferred from trade-deficit countries (mainly the United States) to trade-surplus countries in the rest of the World (ROW). Reducing the US current account deficit requires that net saving be increased in the United States and reduced abroad – particularly in Asia.

Consider the accounting identity

$$Y - A = CA = -CA^* = A^* - Y^*$$

where A is US domestic absorption (total spending), Y is output (GDP), CA is the current account surplus (negative in the American case), and the starred variables are the counterparts in the rest of the world (ROW).

Given full employment output at home and abroad, then clearly CA can only improve if $\Delta A < 0$, $\Delta A^* > 0$ and $\Delta A = -\Delta A^*$. To correct a trade imbalance for a large country like the United States., *absorption adjustment must be symmetric with the ROW.*

But contrary to most of the literature on the subject, exchange rates need not, and probably best not, be changed as part of the transfer process for improving the US trade balance (McKinnon 2007c.). To show why this is so, I draw on the older literature on the transfer problem associated with paying war reparations – particularly that by Ronald Jones (1975). Adjustment in absorption, i.e., aggregate spending, is two-sided because the loser (the transferor) must raise taxes to pay an indemnity to the winner (the transferee), which then spends it. But there is no presumption that the terms of trade must turn against the transferor. That is, the losing country, which is forced into running a trade surplus (or smaller deficit), need not depreciate its real exchange rate to effect the transfer.

The definition of the "real" exchange rate is important here. Unlike Jones' approach, in a more "standard" model each country produces just one good

which is, however, differentiated from the one-good output of its trading partner. Then in each country some of its own one-good output is consumed at home and the rest exported. Surprisingly, large-scale macroeconomic models – such as the Sigma model used by the U.S. Federal Reserve – typically still use this analytical simplification whereby all the economy's diverse outputs are combined into a single aggregate. In effect, each country's production (and consumption) of non-tradable goods and services is simply bundled (aggregated) with its production of exportables. With such aggregation, the terms of trade, the price of the home country's one good against that of the foreign country, say P_1/P_2 , is the only relative price that can change in response to a transfer of spending. It is usually defined as the "real" exchange rate.

In this oversimplified world of one-good economies, how do the terms of trade change in our hypothetical scenario where absorption falls in the United States but rises abroad? The increase in demand in ROW will be primarily for its own (export) good rather than imports, which are a relatively small share of its GDP. Similarly, the fall in absorption in the United States will be concentrated on its own (export) good rather than imports, which are also a small share of US GDP. Thus, relatively more of the US good is thrown on to world markets than ROW is willing to absorb at unchanged prices, so P_1/P_2 falls. That is, the terms of trade turn against the United States as an endogenous consequence of the transfer of spending. In addition to its primary burden of having to reduce A relative to Y , the United States would face a secondary burden from the adverse change in its terms of trade in the context of these "one-good" per country model specifications. For example, Paul Krugman (1991 and 2007) is one of many influential authors who (mis)use the one good assumption to conclude that the US real exchange rate must depreciate in the context of the necessary reduction in absorption.

But there is a better theoretical approach that relies on a more diversified production in each country. Jones (1975), and many other authors studying the transfer problem, specifies that each country produces a large body of non-tradable goods and services as well as exportables and import substitutes. So, when the fall in expenditures in the United States is paired with a rise in expenditures in Asia and elsewhere, the relative price of tradables versus non-tradables must increase in the United States

and fall abroad. How much is anybody's guess. However, with the necessary expenditure adjustments being spread out over some months or years, and modern technology continually eroding the distinction between tradables and non-tradables, this necessary relative price change could be surprisingly modest.

But in the Jones model there is no presumption as to which way the terms of trade need change – except that it may be a small second-order effect. That is, the fall in expenditures in the United States releases American exportables to world markets at about the same pace as the demand for them increases from the increased absorption in ROW. Therefore, in the short run with sticky nominal prices in each country's exportable sector, the safest strategy in the transition is to keep the nominal exchange rate stable so that there are no "false" changes in the real exchange rate, as defined by the terms of trade.

With no change in the dollar's nominal exchange rate so that the dollar prices of tradable goods worldwide remain unchanged on average, the dollar's anchoring role for price levels in peripheral emerging markets (as per the monetary approach) would be undisturbed even though the US trade balance improved from the transfer of spending.

Bretton Woods I and II: mercantilism unbound

Instead of the dollar's monetary anchoring role stressed in this paper, Michael Dooley, David Folkerts-Landau, and Peter Garber (2003) – henceforth DFG – present a mercantilist interpretation of why so many emerging markets have been "softly" pegging to the dollar since the early 1990s. DFG presume that emerging markets in general, but Asian countries in particular, are deliberately undervaluing their currencies to generate export surpluses – particularly to the United States. They see the trade surpluses of these emerging markets (including Japan?) to be sustainable because of compatible mutual interests. The United States needs external financial support to offset its low domestic saving and the emerging markets (including Japan apparently) want higher real growth through exports to promote development.

DFG are to be commended for coming up with a model that at least tries to come to grips with long-term global "imbalances" i.e., why the US current

account deficits have run on for such an unexpectedly long time. They are right to ridicule proponents of dollar devaluation as throwing red meat to the protectionists, and scathing of those who use faulty inter-temporal modeling of international capital flows to continually predict an imminent collapse of the dollar. However, my alternative monetary approach to explaining the willingness of Asian governments, and those in other emerging markets, to stabilize their dollar exchange rates differs from DFG's mercantilist approach in several dimensions.

In this overview, however, I focus just on the most essential difference: DFG's frequent and incorrect use of the word *undervaluation* to reflect the exchange rate policies of countries on the dollar's periphery. In effect, DFG still see the exchange rate as a control variable for the net trade balance in line with the elasticities model of the balance of trade. Whereas I see the exchange rate itself to have little or no predictive power for the net trade balance, which is dominated by saving-investment imbalances in the United States compared to its periphery, the dollar exchange rate is significant for price-level determination on the periphery.

In their original paper, DFG (2003) drew an intriguing parallel between Bretton Woods I from 1950 to 1971 – where the principal high-growth peripheral countries were those of Western Europe and Japan – and what we now call Bretton Woods II, where the high-growth peripheral countries are now in Asia with a scattering of emerging markets elsewhere. In DFG's view of the 1950s and 1960s, the Western European countries and Japan – under cover of the Bretton Woods parity arrangements – kept the dollar values of their currencies “undervalued” in order to promote more rapid export growth into the American market. The Americans tolerated this mercantilist behavior because, in the Cold War, they were anxious to promote recovery in Western Europe and Japan.

Under Bretton Woods II in the 1990s to the present, a large fringe of emerging markets – particularly in East Asia – intervene heavily to keep their dollar exchange rates “undervalued”, in order, according to DFG (2003), to generate export surpluses to better promote their economic development. They are willing to treat the resulting huge build-up of official exchange reserves, largely invested in low-yield US Treasuries, as an opportunity cost of more rapid

export growth. On the other hand, the United States has tolerated this mercantilist behavior of the Asian group because it needs cheap finance to cover its very low rate of saving. Because both sides benefit, DFG see the Bretton Woods II regime of high Asian trade surpluses and high US trade deficits to be sustainable. Whence the appeal of their model to explain ongoing global trade “imbalances”.

Under Bretton Woods II, the more mature industrial countries, particularly the euro zone in Europe but also countries like Canada and Australia, now simply float their currencies so that they are not consciously “undervalued”. In the accompanying box on “Rules of the Dollar Standard Game: Bretton Woods II”, I summarize current exchange rate arrangements worldwide. Under “Emerging Markets Outside of Eastern Europe”, there are two alternative Rule IIIs. To interpret dollar pegging, the first gives the monetary anchor motivation (the McKinnon Rule), and the second – Rule IIIB – gives the mercantilist undervaluation motivation (the DFG Rule). Japan, with its chronic deflation and sporadic, but sometimes quite massive, foreign exchange interventions against the dollar, is classified separately with its own four rules. The United States, as the normally passive center country, gets its own four operating rules.

Taking the monetary approach, when domestic capital markets are underdeveloped or in disarray for some other reason, then the central bank in a country on the periphery of a more stable valued central currency finds it much easier to peg to it as an external monetary anchor in its quest for domestic price-level stability. Consider some historical examples.

After World War II, the capital markets in both Western Europe and Japan were in great disarray with open and repressed inflation, multiple exchange rates, and government controls over both interest rates and bank lending. In 1948, with the advent of the Marshall Plan, individual European countries were encouraged to consolidate their finances, eliminate multiple exchange rates and balance of payments restrictions for current account transactions, curb inflation, and then each peg to the dollar at a unified exchange rate. The culmination of this process was the setting up of the European Payments Union (EPU) in 1950, backed by a US line of credit, to begin clearing international payments multilaterally by central banks at fixed dollar exchange rates –

Box 1

Rules of the Game: Bretton Woods II, 1992 to 2007

Emerging Markets outside of Eastern Europe

- I. Fix exchange rates, or smooth exchange rate fluctuations, against the U.S. dollar with or without declaring official dollar parities.
- II. Hold official exchange reserves mainly in US dollars.
- III. Adjust monetary policy to maintain dollar exchange rate as nominal anchor for domestic price level – as per the monetary approach of McKinnon (2005).
- IIIB. Alternative interpretation: keep dollar exchange rate undervalued to generate an export surplus to promote more efficient industrialization – as per the mercantilist approach of Dooley, Folkerts-Landau and Garber (2003).
- IV. Free currency convertibility on current account, but use capital controls when necessary.

Euro Zone and other Industrial Countries except Japan

- V. Float exchange rate freely but keep US dollars as a small precautionary reserve.
- VI. Pursue an independent monetary policy to target domestic inflation directly – as per Taylor's Rule.
- VII. No exchange controls on current or capital account.

Japan

- VIII. Intervene to prevent sporadic upward ratchets of the yen against the dollar and deflation.
- IX. No independent monetary policy in liquidity trap to stimulate domestic demand. Rely on export expansion.
- X. Hold large dollar exchange reserves.
- XI. No exchange controls on current or capital account.

The United States

- XII. Remain passive in the foreign exchange markets without a balance of payments or exchange rate target. Accept large current account deficits to compensate for short-fall in domestic saving (or saving glut abroad).
- XIII. Keep US capital markets, including custodial accounts, open for foreigners.
- XIV. Pursue an independent monetary policy to target domestic inflation directly – as per Taylor's Rule – and provide a nominal anchor for emerging markets as well as Japan.
- XV. Temporarily suspend Taylor's Rule if deemed necessary for countering the domestic business cycle.

not even with the one percent margins of variation in the Bretton Woods agreement itself. With some modifications, these central dollar parities for Western European currencies held for the better part of 20 years – although the one percent margins of variation around these central rates became common after 1958.

Japan's situation was similar. From 1945 through 1948, there was open and repressed inflation, there were multiple exchange rates, and all kinds of interest rate and balance-of-payments controls for allocating foreign exchange. Then in 1949, the Detroit banker Joseph Dodge was sent to Japan with an American line of credit and instructions to encourage the Japanese to consolidate fiscally and curb inflation, unify the exchange rate, and begin phasing out exchange controls on current account transactions. Because of the financial chaos before 1949, the Japanese had no idea (nor did the Americans) what an equilibrium number for the unified exchange rate should be that would end the inflation but keep the economy viable for exporting. So they just guessed. They picked 360 yen to the dollar to be the anchor, and then geared the Bank of Japan's monetary poli-

cy to maintaining this rate so that the economy would grow into it.

But they did not guess quite right. Inflation continued for a year or two before being phased out – and this left the yen somewhat overvalued in the sense that, in the early 1950s, Japanese companies were having difficulty exporting. But rather than give up their hard-won nominal anchor of 360 yen per dollar, they chose to disinflate further rather than directly help tradable goods producers by devaluing. It worked. By the mid-1950s, Japan settled on a high export-led growth path (much like China's today) with the domestic rate of WPI inflation in tradable goods converging to being virtually the same as that in the United States, the anchor country, until the Nixon shock of 1971 (McKinnon and Ohno 1997, and McKinnon 2007b).

Although probably more than enough historical background for most readers, the main point is that, in both Japan and Western Europe in the 1950s and 1960s, dollar exchange rates were set to anchor national price levels and stabilize domestic financial markets – as our monetary approach would have it. Unlike what DFG (2003) suggest, these rates were

not cunningly “undervalued” to promote export surpluses and secure a mercantile advantage over the United States. Indeed, the United States itself had an overall current account surplus during “Bretton Woods I”.

Since the early 1990s, under the looser dollar pegging called Bretton Woods II, the search for a monetary anchor also describes the behavior of Asian countries and emerging markets elsewhere better than DFG’s alleged mercantilist plot to deliberately “undervalue” their currencies to generate export surpluses. There are too many of these countries to do a historical analysis of each one.

However, consider just China. Before 1990, China’s currency was inconvertible with exchange controls and mandatory state trading companies for importing and exporting that (with the exception of special economic zones) insulated the domestic structure of relative prices from the international one: the so-called airlock system. In this early phase of China’s liberalization of its domestic markets, it would not have been possible to use the nominal exchange rate as a monetary anchor. Indeed, wherever the official exchange rate was set (beginning at one yuan per dollar in 1978) was quite arbitrary and made little difference to actual economic decision making within the country. And China did experience something of a roller coaster ride in domestic rates of inflation and real growth rates (McKinnon 2007a) into the early 1990s.

From 1993 to 1995, China suffered a major bout of inflation, peaking out at over 20 percent per year. In 1994, in a major move toward current account convertibility to satisfy the International Monetary Fund, China decided to unify its multiple “swap” exchange rates with the official exchange rate – including a net depreciation in the unified rate of about the same order of magnitude as the internal rate of inflation. Of course, nobody knew precisely what the new unified rate should be in “equilibrium”, but by 1995 the rate was pegged at 8.28 yuan per dollar and held there for ten years. The economy grew into this new monetary anchor and inflation converged down to the American level. Indeed, in 1997/98, there was net deflationary pressure in China from the Asian crisis when the surrounding smaller countries (and export competitors) – Korea, Indonesia, Malaysia, Philippines and Thailand – were forced into depreciating. Fortunately, China ignored the foreign advice to

depreciate with them (which would have made the regional calamity much worse), held on to its nominal anchor of 8.28 yuan/dollar, and engaged in a large internal fiscal expansion to overcome the deflationary pressure.

So, the China story in Bretton Woods II is similar to that of Japan’s and Western Europe’s in Bretton Woods I. Before securely pegging to the dollar, all of these countries had inflation, financial disorganization, and inconvertible currencies. The most efficient way out was to peg to the more stable central money, and then move toward greater currency convertibility so that the dollar peg became a more effective monetary anchor. What is clear, however, is that the nominal exchange rate cum future monetary policy in each case was chosen in a crisis situation to secure domestic financial stability. The dollar exchange rate was not deliberately, or even accidentally, undervalued so as to secure a mercantile advantage for exporting into the American market.

Using our monetary approach, the Bretton Woods II model in which peripheral countries continue to peg – albeit loosely – to the dollar as an anchor, is potentially more robust than DFG’s mercantilist model. The monetary model could survive a major re-balancing of trade flows associated with a rise in net saving in the United States accompanied by an equivalent fall in Asia – all with nominal exchange rates remaining unchanged as under our previous discussion of the transfer problem.

The US housing crisis, the trade balance, and the US Treasury

The necessary decline in overall spending in the United States must fall mainly on the household sector. The huge net spending deficit of American households, including residential construction, of the order of 4 percent of GDP in 2006 and earlier was without historical parallel. However, with the subprime crisis in home mortgages putting new restraint on mortgage lending, coupled with a fall in home prices, the American household spending deficit could reverse fairly quickly and become a normal surplus.

Should we worry about a deficiency in global aggregate demand when American households reduce their spending? In the longer run, the overdue righting of the financial imbalance in American house-

holds is both opportune and necessary to reduce the huge American current account deficit. But, in the near term, when American households are no longer “consumers of last resort”, how can this be accomplished without falling into a pit of deficient aggregate demand at the global level?

Instead of nattering about the dollar’s exchange rate, which is the wrong variable to adjust, the US Secretary of the Treasury should now approach his counterpart finance ministers in East Asian countries and possibly Germany to expand aggregate demand jointly. In China, for example, household consumption has been lagging behind the very rapid growth in GDP; and China’s recent success – not fully anticipated – in collecting taxes could be generating an as yet unrecognized fiscal surplus. Similarly, Japan has actually been running public sector surpluses over the past four years. So these governments, and Germany’s, can afford to be fiscally expansive over the next two years or so as part of a world-wide countercyclical policy. Apart from international altruism, each of these countries has an individual incentive to expand fiscally because their exports will decline as the American consumer is forced to retrench.

If foreign governments jointly become more expansionary, the United States can better avoid another unwise round of unduly easy monetary policy – like that following the collapse of the high-tech bubble in 2001. And further American fiscal expansion (government dissaving) is not desirable if the current account deficit is to be reduced. (This does not rule out a balanced-budget expansion such as a substantial increase in the federal gasoline tax to support a much needed rebuilding of roads and bridges.)

But how and with which incentives can US Treasury Secretary Henry Paulson orchestrate a collective fiscal expansion in Asia and Europe? In April 1995, his illustrious predecessor, Robert Rubin, announced a strong dollar policy and the end of two and a half unhappy decades of Japan-bashing to get the yen up and the dollar down, which severely damaged the Japanese economy. Circumstances are not quite the same in 2007/08. But today’s China-bashing to get the renminbi up has been going on for more than four years, with legislation in Congress threatening high tariffs on Chinese goods unless the renminbi is sharply appreciated. Somewhat surprisingly, Japan-bashing also returned earlier in 2007 when the

incoming Democratic committee chairmen – Levin, Rangel, Frank, and Dingel – wrote to Secretary Paulson to criticize the weak yen and unduly low interest rates in Japan (McKinnon 2007b).

At this critical juncture, with the fall in American consumer spending, the way forward is clear. Secretary Paulson should call a summit of Asian and European finance ministers to work out a joint program of fiscal expansion outside the United States. In return, he would reinstate Rubin’s strong dollar policy by ending the bashing of China and Japan to appreciate their currencies. Ideally, he could even promise to reform the notoriously arbitrary US anti-dumping laws and other protectionist legislation. And the Fed would forgo an unduly easy money policy that would otherwise weaken the dollar.

At the beginning of his term as Secretary of the Treasury, Henry Paulson announced his intention of getting the United States to engage China “constructively”. He judged that a smooth economic and political relationship between the two economic giants was key to their mutual prosperity in the new millennium. He was right.

But suppose, instead of this constructive engagement, the doctrinal battle on the exchange rate is lost. At the behest of American protectionists and many economists, suppose the US government moves toward a policy of forcing continual dollar devaluation on its trading partners until there is a substantial reduction in the US trade deficit. But because the supposed link between the relative price effects of exchange rate changes and the trade deficit is not there, the US trade deficit need not fall. In denial, the US government keeps pushing for further devaluation – as it did with continued forced appreciations of the yen in the 1970s through mid-1995.

Once foreigners see this happening on a world-wide scale, they will stop buying dollar assets – leaving the dollar in potential free fall and losing their monetary anchor. But the major damage would be to the United States itself. The cessation of foreign purchases of dollar assets and capital flight from the United States will shock the saving-deficient American economy with a sharp credit crunch and high interest rates. Domestic spending in general, and that for investment in particular, would fall sharply so as to compress imports and reduce the trade deficit. But such a reduction in the trade deficit would come

primarily from the catastrophic fall in domestic absorption and not from the relative price effects of the dollar devaluation, unlike the way the elasticities model would have it.

Thus, in depreciating the dollar and ending the dollar standard, be careful what you wish for!

Summary and conclusion

The sustainability of the huge US current account deficit depends on the continuance of the world dollar standard. If the United States as center country maintains a stable price level, countries with trade surpluses are loathe to let their currencies appreciate against the dollar for fear of losing mercantile competitiveness in the short run while risking deflation in the long run. If private capital inflows are insufficient to fund the US current account, then foreign central banks step in to buy dollar assets to prevent their currencies from appreciating. Thus, the deficit could continue indefinitely with no well defined upper bound on America's net international indebtedness.

However, this uneasy equilibrium could be upset if the Federal Reserve loses monetary control by some "accidental" domestic event, say, pumping too much liquidity into the economy to avoid a cyclical downturn – as might be the case with the current subprime mortgage crisis. Alternatively, if the US protectionists succeed with bashing China or Japan to force the dollar down, then foreign holders of liquid dollar assets would again become nervous. There could be a tipping point where investors in Asia or the Persian Gulf so fear the loss of the dollar's international purchasing power that they jettison their dollar holdings – despite the short-run pain of letting their own currencies appreciate. Such a deep and general dollar devaluation would then cause massive inflation in the United States itself.

More positively, as the old literature on the transfer problem would suggest, the United States can reduce its current account deficit without devaluing the dollar. If spending falls in the United States (the silver lining in the housing crisis?) matched by an increase in spending in trade-surplus countries, then the American trade deficit diminishes without a dollar devaluation turning the terms of trade against the United States.

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