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## Bretton Woods 2 is dead, long live Bretton Woods 3?

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## **Working Paper No. 597**

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### **Bretton Woods 2 Is Dead, Long Live Bretton Woods 3?**

By

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**May 2010**

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## **ABSTRACT**

This paper sets out to investigate the forces and conditions that led to the emergence of global imbalances preceding the worldwide crisis of 2007–09, and both the likelihood and the potential sustainability of reemerging global imbalances as the world economy recovers from that crisis. The “Bretton Woods 2” hypothesis of sustainable global imbalances featuring a quasi-permanent U.S. current account deficit overlooked that the domestic counterpart to the United States’ external deficit—soaring household indebtedness—was based not on safe debts but rather toxic ones. We critique the “global saving glut” hypothesis, and propose the “global dollar glut” hypothesis in its stead. With the U.S. private sector in retrenchment mode, the question arises whether fiscal expansion might not only succeed in filling the gap in U.S. domestic demand but also restart global arrangements along BW2 lines, albeit this time based on public debt—call it “Bretton Woods 3.” This paper explores the chances of a BW3 regime, highlighting the role of “dollar leveraging” in sustaining U.S. trade deficits. Longer-term prospects for a postdollar standard are discussed in the light of John Maynard Keynes’s “bancor” plan.

**Keywords:** Reserve Currency; Global Monetary Order; Global Saving Glut; Global Dollar Glut; Global Crisis

**JEL Classifications:** E12, E58, E65, F33

## I. INTRODUCTION

This paper sets out to investigate the forces and conditions that led to the emergence of global imbalances preceding the global crisis of 2007–09, and the likelihood as well as the potential sustainability of reemerging global imbalances as the world economy recovers from that crisis. Dooley, Folkerts-Landau, and Garber (2003) propagated the idea of sustainable global imbalances featuring a quasi-permanent U.S. current account deficit, a position known as the “Bretton Woods (BW) 2” hypothesis. According to BW2, global current account imbalances reflected a *symbiosis of interests* among deficit (United States) and surplus (developing world) countries that would support their supposedly long life expectancy. The global crisis of 2007–09 has brought an important oversight afflicting BW2 to the surface: the domestic counterpart to the U.S.’s external deficit, which, it turned out, was based not on safe but rather toxic debts.

As to the future, with the U.S. private sector in retrenchment mode, the question arises whether the U.S. fiscal expansion might not only succeed in filling the gap in U.S. domestic demand, but thereby also restart global arrangements along BW2 lines, albeit this time based on public debt—call it: “Bretton Woods 3” (BW3).

The analysis proceeds as follows. Section 2 discusses and critiques the BW2 hypothesis. Section 3 rejects the “global saving glut” hypothesis and proposes the “global dollar glut” hypothesis in its stead. Section 4 outlines the emerging contours of a possible BW3 regime based on U.S. public debt, while section 5 investigates the potential sustainability, both internally and externally, of such an arrangement. The role of financial globalization and “dollar leveraging” in sustaining U.S. trade deficits are then further explored in section 6. We find that unfettered global finance seems to have both increased the demand for defensive macro policies in the rest of the world and the extraction of rent available from meeting that demand. Section 7 offers some thoughts on longer-term prospects for a post-dollar standard, with Keynes’s “bancor plan” or the early 1940s providing relevant guidance. Section 8 concludes.

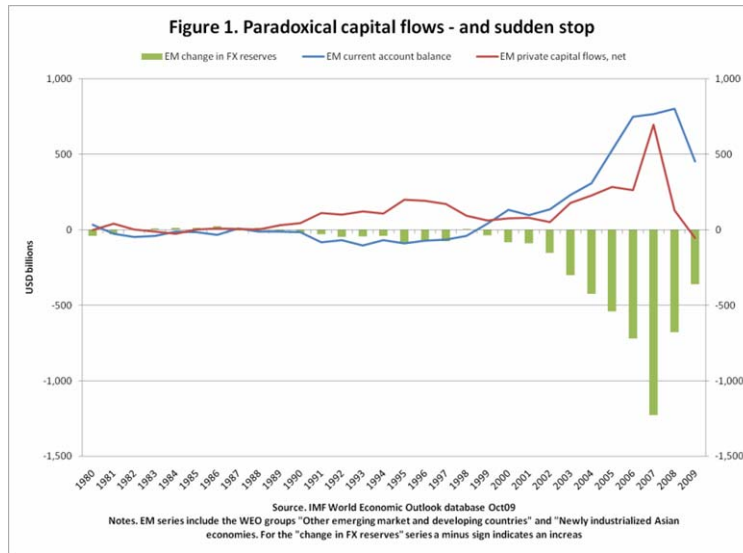
## II. THE BRETTON WOODS 2 HYPOTHESIS AND A CRITIQUE

Dooley, Folkerts-Landau, and Garber (2003) hypothesize in their influential “Bretton Woods (BW) 2” essay that global imbalances featuring a quasi-permanent U.S. current account deficit may be *sustainable* (a position reasserted in Dooley, Folkerts-Landau, and Garber [2008 and 2009]). On their view global current account imbalances reflect a *symbiosis of interests* among deficit (United States) and surplus (developing world) countries. The developing world’s interest is to sell its products into the large U.S. market as a way of stimulating employment growth and development. The U.S. economy, on the other hand, is flexible enough to tolerate the resulting quasi-permanent drag on U.S. income growth thereby arising, it would seem, given its comparative advantage in creating safe assets which provide the collateral for the FDI stock needed in the developing world to complement its vast cheap labor resources in export production

The chosen title “revived Bretton Woods system” signals that Dooley, Folkerts-Landau, and Garber (2003) see a lot of continuity in postwar monetary arrangements, despite the fact that the world has moved away from the original system of pegged exchange rates in the 1970s. They suggest that while the U.S. again acts as the center of global arrangements, a new periphery of Asian emerging markets (China in particular) has replaced the meanwhile-matured former periphery of western Europe and Japan in relying on export-led growth strategies by pegging to the U.S. dollar. The pattern of capital flows rationalized by the BW2 hypothesis neatly fits what Larry Summers (2006) dubbed the “global capital flows paradox,” featuring a “self-insurance” boom among emerging markets through accumulation of dollar reserves. Figure 1 shows that the surge in reserve holdings of emerging market economies since the late 1990s was sourced both from current account surpluses and net private capital inflows. It also reveals the abrupt shrinkage or drying up of both sources since the mid-2008 in the context of the global financial crisis and Great Recession.<sup>1</sup>

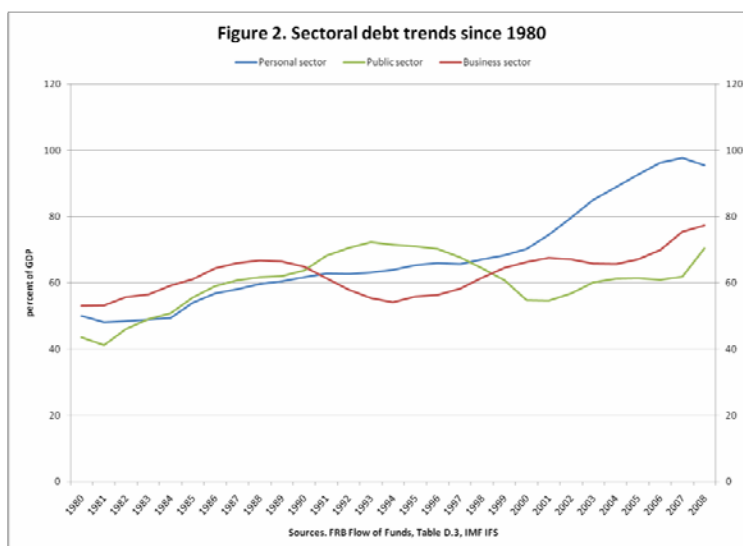
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<sup>1</sup> Global foreign reserves peaked at just over 7 trillion dollars in mid-2008, fell nearly 5 percent in the second half of the year, to then rise again and reach 7.5 trillion in the third quarter of 2009. See IMF COFER database.



The crisis has brought an important element of logic to the fore that was overlooked in the BW2 hypothesis: rising external imbalances must have their internal counterpart. Contrary to widespread concerns prior to the crisis about global imbalances and related fears of an imminent dollar crash, in the event, it was U.S. internal imbalances that proved unsustainable—while the U.S. dollar surged at the peak of the crisis confirming its key reserve currency status. The BW2 hypothesis misses the crucial point that while official authorities in countries such as China may have largely accumulated safe U.S. Treasuries, U.S. spending in excess of income growth was not actually fired by those safe public debts, but by private debts. Correspondingly, as foreign official sectors acquired a rising share of the outstanding stock of Treasuries—range-bound around 60 percent of GDP since the mid-1980s—the trajectory of U.S. private sector debt relative to GDP was sharply upwards.<sup>2</sup> Certain U.S. private debts then proved to be so lethally “toxic” as to end the global boom and cause a global crisis instead.

<sup>2</sup> Prominent warnings generally focused on the U.S.’s supposed external vulnerability (see Roubini and Setser [2005], for instance). By contrast, the Levy Institute’s regularly published “Strategic Analysis,” based on the path-breaking research of Wynne Godley, correctly identified the unsustainability of internal trends. The Strategic Analysis issue of November 2007 was even accurate with respect to the onset of the crisis and implosion of internal imbalances. See Godley (1999) and Godley et al. (2007).



More specifically, while the 1980s and 1990s featured corporate debt cycles with only a mild upward trend, figure 2 shows personal sector debt on an upward trend since the mid-1980s, a trend that sharply accelerated in the 2000s driven by home mortgages. The rise in household indebtedness saw the U.S. personal saving rate decline from about 10 percent in the 1980s to little more than zero by 2007. For long falling interest rates helped keeping households’ “debt burden” in check so that ever-rising indebtedness and leverage seemed fine as long as asset prices and net worth kept on climbing, too. Skepticism regarding soaring household indebtedness and the implications for the solvency of lenders ended the party when underlying collateral values stopped rising in 2006. The trend reversal in house prices since has seen private debts turning toxic on a large scale. In 2007, the long-established upward trend in household indebtedness peaked at close to 100 percent of GDP and has reversed direction since.

### **III. CRITIQUE OF THE GLOBAL SAVING GLUT HYPOTHESIS—THE GLOBAL DOLLAR GLUT HYPOTHESIS**

The previous section argued that trends in global current account imbalances depicted in BW2 as sustainable were bound to end in crisis since the—ignored—U.S. internal counterpart, rising household indebtedness, was unsustainable. This section further investigates the forces behind those trends approaching the matter from the angle of the “global saving glut” hypothesis due to Ben Bernanke. Bernanke (2005) argues that “over the past decade a combination of diverse

forces has created a significant increase in the global supply of saving—a global saving glut—which helps to explain both the increase in the U.S. current account deficit and the relatively low level of real long-term interest rates in the world today.” Much in line with Summer’s (2006) “global capital flows paradox” Bernanke then singles out “the recent metamorphosis of the developing world from a net user to a net supplier of funds to international capital markets” as an important source behind the rise in the global supply of saving, referring to the “series of financial crises those countries experienced” as a “key reason” for this conspicuous change.

One is bound to ask here, precisely in what ways and through which channels could the diagnosed rise in the global supply of saving originating in the developing world end up sponsoring rising U.S. household debt. Bernanke asserts that “in practice, these countries increased reserves through the expedient of issuing debt to their citizens, thereby mobilizing domestic saving, *and then* using the proceeds to buy U.S. Treasury securities and other assets. Effectively, governments have acted as financial intermediaries, channeling domestic saving away from local uses and into international capital markets” (Bernanke 2005; italics added). This statement clearly reveals loanable funds theory as the theory of interest behind Bernanke’s conjectures about a perceived global saving glut. Following the classical vision of saving as leading and somehow financing investment, Bernanke’s saving glut idea presumes that those “excess savings” in the developing world are already there, waiting to be collected (through national debt issuance) *and then* invested (in U.S. Treasuries), with developing world governments as intermediaries channeling the saving from poor to rich through international capital markets.

Unfortunately, outside classical “corn economies” the saving-first vision and related neoclassical loanable funds theory of interest are deeply flawed (Keynes 1936, 1937; Bibow 2009). Simply put, in the context of monetary production economies the supposed excess saving (or: saving glut) can only arise together with the corresponding excess spending being done by someone else, somewhere. Just as spending in general presupposes money to be effectuated, any spending in excess of income in particular requires advance “financing,” too (financing in the sense of “command over money,” not saving, that is). In this particular case, U.S. spending in excess of income required dollar liquidity to be effectuated, dollar liquidity which may then perhaps partly “spill out” of the United States, only to “return” in the form of Treasury purchases (as foreign monetary authorities use the excess dollars collected from their exporters to purchase



U.S. Treasuries while issuing national debt instruments to mop up the liquidity thereby created). So it is not any “saving glut,” but dollar liquidity, in the first instance, which allows spending to go ahead, and global spending (and saving or current account) imbalances to arise in the process. The idea of a global saving glut depressing interest rates in global capital markets and thereby stimulating a U.S. housing boom is not a sound one.

Bernanke’s intuition about the relevance of foreign policies in inducing certain developments in the United States is not altogether wrong. We just need to get clear on exactly how certain market mechanisms and policy adjustments come into play. Bernanke singled out a series of financial crises as inducing the observed shift in developing world current account positions and related spurt in reserve accumulation. In practice, the said policy shift meant that crisis countries following currency depreciation made it their priority to *maintain* a competitive exchange rate vis-à-vis the U.S. dollar, paired with an eagerness to add to their depleted dollar reserves as precaution or “self-insurance.” For the United States as trade counterparty such behavior and the corresponding upward pressure on the U.S. dollar it gives rise to produces strong deflationary forces in the domestic economy: weakness in U.S. labor markets and downward pressures on wages and prices in general arise. The mechanism delivering lower interest rates is that labor market slack will normally induce an expansionary macro policy response from U.S. authorities.

Except for the recessions of the early 1990s and early 2000s, when fiscal policy played an important part, too, the lead role in U.S. stabilization policy in the last few decades was reserved for the Federal Reserve. Note that given the Federal Reserve’s dual mandate of price stability and maximum employment deflationary pressures in U.S. product and labor markets quite naturally trigger monetary easing. Monetary policy stimulates domestic demand by lowering interest rates, easing credit, and boosting asset prices. If part of U.S. domestic demand enticed thereby actually enhances incomes and employment in other exporting nations rather than at home, U.S. monetary policymakers will have to be correspondingly more aggressive to achieve internal balance and fulfill their mandate. With the rest of the world relying on exports for their growth and accumulating reserves for their safety, the reserve currency issuers’ “benign neglect” of its external imbalance is what keeps the global economy afloat.

The essential point is that it is not any saving glut that depresses interest rates in any imaginary (classical) capital market, but deficient demand in *U.S. product and labor markets*—

arising from other countries' export-oriented (cum self-insurance) growth strategies—that triggers “easy money” from the key global reserve currency issuer. From a liquidity preference theoretical perspective, low U.S. interest rates resulted from the Federal Reserve's expansionary policy stance and financial markets that went along with it, rightly perceiving vastly expanded global supply potential and a lack of inflationary pressures in labor markets. Amplified by private capital outflows an easy U.S. monetary stance got transmitted globally through the resulting *global dollar glut*, reflecting other countries choice to maintain a competitive exchange rate and accumulate dollars rather than allowing more balanced global aggregate demand.

Here we should add that much more than changed behavior on the part of developing countries following the Asian crises was involved. In particular, an exclusive focus on China is much displaced. For whereas China's current account surplus really only gained global significance after 2003, the emergence of the U.S. current account deficit can be dated back to the early 1990s (with an earlier similar episode in the 1980s). Japan in the early 1990s was the first calamity in the world economy that created forces for overspending in the U.S. Stuck in protracted domestic demand stagnation, Japan has become wholly reliant on exports for its meager GDP growth. Germany came next following the Bundesbank-provoked recession in response to the country's unification. Ever since 1993, Germany, too, has relied on its export engine only. Worse, the Maastricht Treaty on Economic and Monetary Union effectively committed Europe to Germany's mercantilistic model of growth, with the detrimental effects of the spreading of the “German disease” becoming most visible in the eurozone. Domestic demand weakness characterized much of the 1990s and in September 2002 the IMF observed that “external imbalances across the main industrial country regions widened steadily during the 1990s ..., [with these imbalances being] dominated by the euro area and Japan, respectively” (IMF 2002, pp. 65–67). As to the 2000s, too, Martin Wolf (2007) vigilantly observed that “between 2001 and 2005, the eurozone was the sick giant of the world economy.” As a key destination of U.S. exports, the eurozone's notoriously weak domestic demand growth is unlikely to have helped containing U.S. current account deficits. The euro's rise forestalled the emergence of even larger current account surpluses.

Note thus the part played by the “old periphery” in the emergence of global imbalances, industrialized competitors of the United States, which, according to BW2, should have long matured and no longer be part of any export-led growth “periphery.” A new periphery really only

came to emerge in the aftermath of the 1997–98 Asian crises, events which according to Bernanke convinced the developing world at large to seek safety in pursuing current account surplus rather than deficit positions. China, which had already pegged to the dollar in 1994 and maintained a competitive exchange rate ever since, represents one prominent example in this group, but as already noted China's current account surplus has really only soared much more recently.

Does it matter whether any supposed saving glut directly depressed interest rates in capital markets or whether foreign-induced slack in U.S. labor markets triggered the Federal Reserve response that brought down interest rates in financial markets? Beyond pure theory it does indeed also matter for reasons of highlighting the role of the U.S. dollar as key global reserve currency and Federal Reserve policy in setting the benchmark for global monetary conditions. Global preference for holding U.S. dollar assets as reserves and the flexibility (and responsibility) this bestows upon the Federal Reserve in managing U.S. domestic demand to meet U.S. and global requirements are the two sides of the dollar key reserve currency coin. BW2 correctly stresses the relevance of the global monetary and financial order in understanding global current account imbalances and the center role of the U.S. dollar in all this. But our analysis served to identify how the world monetary and financial order nurtured the U.S. consumer in its role as “borrower and spender of last resort,” the true engine of growth behind the BW2 system. With BW2 dead and out, what is next?

#### **IV. THE EMERGING CONTOURS OF BRETTON WOODS 3?**

The Lehman crisis has triggered important policy responses across the globe. In the winter of 2008–09 the world economy and world trade experienced a freefall comparable to the Great Depression of the 1930s. In contrast to that earlier episode, governments around the world initiated sizeable fiscal stimulus programs. In early 2010, the rebound from the trough looks strongest in Emerging Asia, led by China. Due to notoriously stagnant domestic demand, Europe is once again the laggard despite benefiting strongly from the revival in global trade. GDP growth is somewhat stronger in the United States owing to a larger fiscal expansion. As the private sector brutally retrenched and internal imbalances imploded, driven by the housing bust and deleveraging, the public sector had to step in bravely. With monetary policy short on

ammunition and important parts of the financial system remaining dysfunctional, the only way to support domestic demand is to cut taxes in support of private incomes and spending or to boost public spending itself. Fiscal policy is back!

The U.S. current account deficit shrank from its peak of 6 percent of GDP in 2006 to below 3 percent in the first half of 2009. A key question is whether the current unwinding of global imbalances and apparent rebalancing of global demand will continue for much longer, or turn out to be merely a temporary episode and largely a reflection of the slump in global trade. Will the consumer in emerging markets come forward as the new engine of global growth? Likewise, will the United States be able to shrink its current account deficit to zero or even turn into a surplus, swapping its consumption-based growth model for an export-oriented one, as some seem to hope? The above analysis suggests that such a U.S. policy shift would only be possible if the rest of the world simultaneously changed course in the opposite direction. While some important countries have enacted sizeable measures to stimulate domestic demand in their economies, I see few indications that the rest of the world might really be ready to wean itself off export-oriented growth strategies, the viability of which is ultimately sponsored by the United States. If this turns out to be the case, U.S.—and global!—growth is likely to remain dependent on U.S. fiscal policy for longer than is currently assumed.

In fact, a new “Bretton Woods 3” regime may be in the process of emerging. Under BW3 public debt replaces private debt together with a change of guards in U.S. macroeconomic policy in underwriting domestic demand. Currently fiscal policy is viewed as providing no more than a temporary emergency boost to restart private spending. BW3 would actually imply a more lasting role for U.S. fiscal policy in *sustaining* domestic demand, too. If the rest of the world resumes its previous policy patterns of aspiring current account surplus positions and dollar reserve accumulation, the real choice facing the United States as key reserve currency issuer is to take recourse to fiscal policy and public debt rather than trying to rekindle the emergence of private sector imbalances. If monetary policy were relied upon again to bring forth the needed excess private spending, as has been the case hitherto, new challenges are bound to reemerge in the form of rising private indebtedness and financial fragility—inevitably ending in tears at some point. Feasible or not, this route looks decisively undesirable. Effectively, then, for the United States to continue to play its role as key reserve currency issuer, fiscal policy may be the only option.

To be sure, the budget deficit will shrink from its current level as the private sector rebalances over the next few years. But even beyond this short-term rebalancing, more permanent sizeable budget deficits may be needed if the rest of the world were to resume previous policies. National income accounting implies that if the private sector's financial balance were not to become seriously unbalanced again, any U.S. current account deficit would require a corresponding public sector deficit. One upshot is that in contrast to BW2 the safe assets acquired by foreign official authorities would also be the very assets that actually sponsor U.S. spending in excess of income: public debts rather than private debts.

## **V. SUSTAINABILITY OF BRETTON WOODS 3?**

I argued above that BW2 was doomed to fail as it set U.S. internal imbalances on an unsustainable trajectory. The previous section assumed that we are unlikely to see a resumption of previous patterns of behavior featuring a continuous decline in the personal sector saving rate. If the personal sector saving rate reverts to its 5–10 percent historical range, the global economy will have to do without its key growth engine of recent decades and fiscal expansion will have to continue for longer than is currently appreciated to avoid U.S. stagnation and fill the likely global void, too. Are we currently observing the emerging contours of BW3? If yes, the question is whether BW3—featuring reliance on public rather than private debt—may be any more sustainable than BW2 has turned out to be. Two aspects may be distinguished here. The first concerns the internal sustainability of rising public debt in underwriting U.S. domestic demand. The second concerns the sustainability of rising U.S. external debt under BW3, pertaining to the dollar's role as key global reserve currency and the United States as sponsor of global growth.

Starting with the internal debt sustainability question it must be acknowledged that fears of the public debt are widespread, concerns which are closely related to the idea that rising public debt implies rising taxes to service the debt (not to mention debt repayment), which moralists are quick to claim would unfairly burden our grandchildren. Of course, what our grandchildren really inherit is the accumulated capital stock and quality of environment that we pass on to them, while any internally held public debt merely concerns the distribution of income between future taxpayers (with public debt being rolled over rather than ever repaid anyway). So

the real issues are how our policies affect investment and growth in general and whether tax rates in particular may become detrimental in that regard due to a rising debt (interest) burden.

Evsey Domar's (1944) seminal essay on the "burden of the debt" established the fundamental relationship between an economy's growth rate and its deficit(-to-GDP) and debt(-to-GDP) ratios. Domar showed that if an economy grew at a constant rate,  $g$ , and a government borrowed a constant proportion of GDP,  $bd$ , year after year, then the debt ratio,  $d$ , will not explode but gradually approach a constant of size:  $bd/g$ .

$$d = bd/g \quad (1)$$

Nor may tax increases be required to service a rising debt, but remain similarly constant as a share of GDP despite ongoing public borrowing. In fact, in a growing economy, the higher the GDP growth rate, the lighter the burden of debt. Domar (1944: 822) concluded that the "problem of the debt burden is essentially a problem of achieving a growing national income."

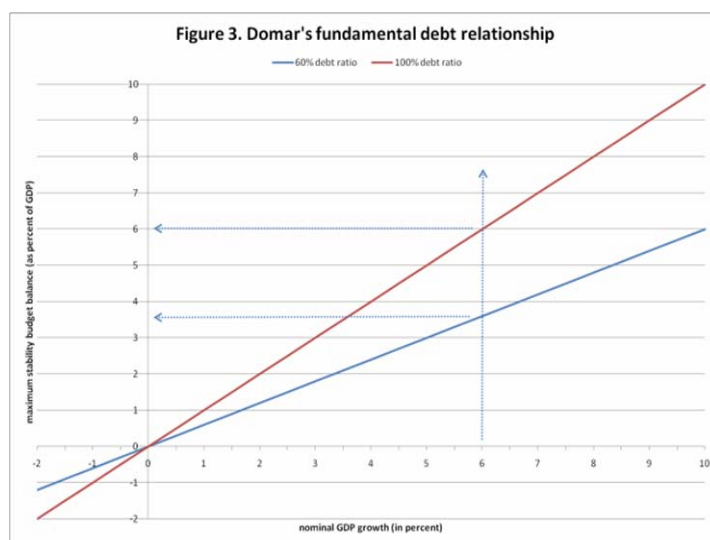


Figure 3 illustrates the basic Domar relationship between deficit and debt ratios and GDP growth. While deficits (flows) no doubt feed the debt outstanding (stock), only a stagnant economy requires a balanced budget to keep its debt ratio from rising. Recall that U.S. public debt stayed range-bound around 60 percent of GDP in recent decades until the crisis hit (see figure 2). At 6 percent steady state nominal GDP growth the relationship implies a maximum "sustainable" budget deficit of 3.6 percent of GDP, sustainable in the sense of a nonrising (60

percent) debt ratio.<sup>3</sup> In the context of the current crisis, with huge amounts of private debts morphing into public debt and record budget deficits in the 10 percent of GDP ballpark, the public debt ratio is sharply increasing and looks set to reach a level around 100 percent in coming years. This public debt surge more than anything else underlines the risks that private sector debt fragilities and severe GDP growth disruptions pose to public finances. However, assuming that U.S. policy will meet Domar's essential challenge of steering the economy back onto a 6 percent nominal GDP (steady state) growth path, a new, say, 100 percent debt ratio would imply a sustainable budget deficit of 6 percent of GDP. What would be the implications for the tax rate with respect to the burden of the debt? Answering this question requires bringing the rate of interest paid on the debt into the picture.

Domar's analysis also revealed that in a growing economy the tax rate,  $\tau$ , required to service the debt will approach a constant in magnitude:  $i \cdot bd/g$ , where  $i$  is the rate of interest paid on the public debt (which for the sake of simplicity is assumed to be tax-exempt).

$$\tau = i \cdot bd/g \quad (2)$$

While equation (1) singled out GDP growth as one crucial variable, equation (2) highlights the other key variable in the play: the rate of interest. Note here that if the interest rate equals the GDP growth rate, the tax revenue required to service the debt in steady state exactly equals the budget deficit or new borrowing (both expressed either in absolute dollar amounts or as shares of GDP). Here it is useful to split up the budget deficit into the "primary deficit,"  $pbd$ , (i.e., exclusive of interest payments) and the "interest burden,"  $id$  (all expressed relative to GDP).

$$bd = pbd + id \quad (3)$$

Expressed dynamically, the differential between the nominal interest rate paid on the public debt and the nominal GDP growth rate emerges as a key driver behind debt dynamics.

$$\partial d / \partial t = pbd + (i-g) d \quad (4)$$

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<sup>3</sup> For practical purposes a nonrising debt ratio suggests itself as a suitable way of making the sustainability concept operational. See Aspromourgos, Rees, and White (2009).

Moreover, setting  $\partial d/\partial t$  equal to zero gives an inverse relation between the “interest-growth differential” and the sustainable primary budget balance. Specifically, the more the interest rate paid on public debt exceeds the growth rate of nominal GDP, the larger the primary surplus (as a share of GDP) needed to keep any given debt ratio stable.

$$-pbd = (i-g) d \quad (5)$$

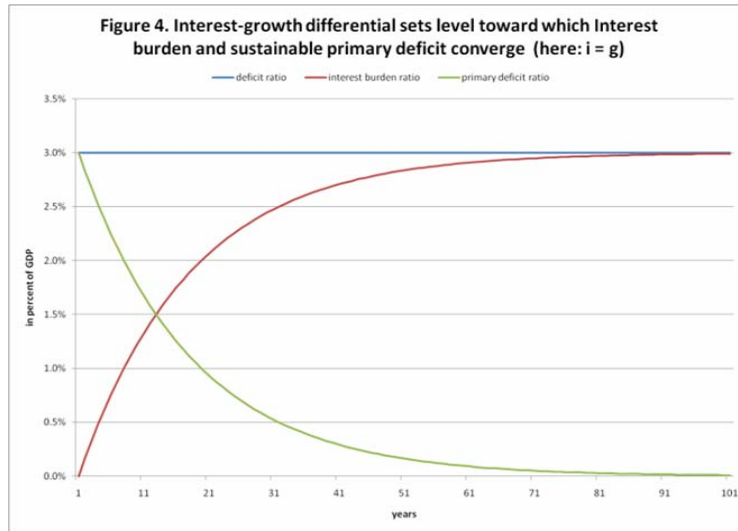
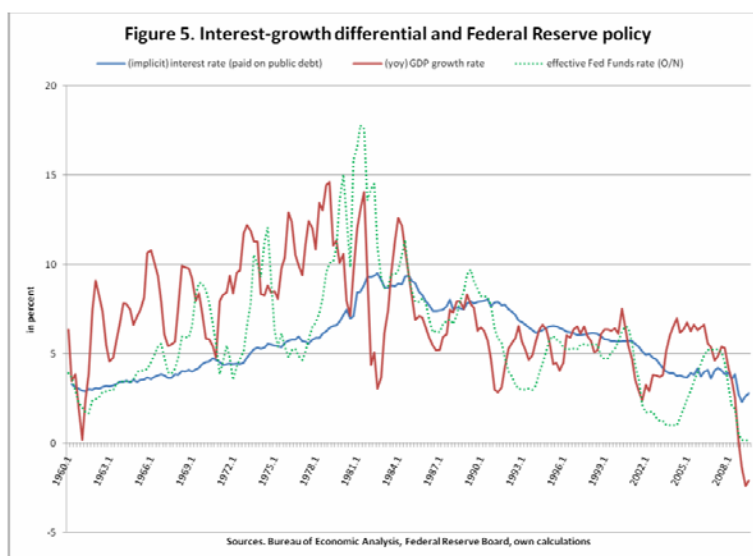


Figure 4 shows that even with an interest rate paid on the public debt that is equal to the growth rate of nominal GDP, the sustainable primary budget balance converges to zero in steady state. In this case, the new borrowing exactly covers the interest burden (or, if primary expenditure is to be maintained on its initial trajectory and not “crowded out” by the rising interest burden, the tax rate needed to service the debt will converge to the deficit ratio at this point). In short, a sustainable *permanent* primary deficit (without any tax hike) is only possible when the rate of interest paid on public debt stays generally below the GDP growth rate.

As figure 5 shows, this requirement was generally met in the United States until the early 1980s (Darby 1984). In the aftermath of the early 1980s tight money episode (“Volcker shock”), the situation then turned less favorable and stayed so until the mid-1990s. In line with an increasingly more accommodative Fed policy stance, the interest rate paid on the public debt has been on a downward trend since the early 1990s and the interest-growth differential has generally become more favorable again, too. Note here again the damage to public finances



inflicted by the current crisis. Compared to the 2001 recession, the United States is currently burdened with a more adverse interest-growth differential despite stronger Fed support and lower government bond yields.



Clearly, reigniting GDP growth will be most critical in *reestablishing* a favorable interest-growth differential. Apart from accommodative Federal Reserve policy *sustaining* a favorable interest-growth differential, even as the U.S. public debt ratio surges from 60 toward 100 percent, this will also require that the rise in relative supplies of Treasury securities meets corresponding portfolio demands by investors, both domestic and international (see below).<sup>4</sup> At least so far in early 2010, there are no indications that this might not be the case. A back-of-the-envelope calculation suggests that the ongoing surge in public indebtedness and corresponding rise in the interest burden may eventually require an additional tax yield of roughly 1.5 percent of GDP. Reducing the budget deficit from the assumed 6 percent of GDP to 3.6 percent would see the debt ratio converge back to the previous 60 percent level over a period of 50 years, or faster if reduced below 3.6 percent (and similarly so for the tax rate needed to look after the debt burden).<sup>5</sup> This concludes the analysis concerning the internal sustainability of rising public debt

<sup>4</sup> Sargent and Wallace (1981: 2) asserted that “the demand for bonds places an upper limit on the stock of bonds relative to the size of the economy.”

<sup>5</sup> Successful deficit reduction and return to a lower debt ratio presumes that nominal GDP growth is maintained. Japan may offer the most alarming modern example of deteriorating public finances when nominal (and real) GDP

in underwriting U.S. domestic demand growth. If history is any guide, the United States will likely be able to run permanent primary budget deficits beyond the aftermath of the current crisis even as the debt ratio stabilizes around 100 percent in the medium term.

The fact that an important source of demand for U.S. public debt (Treasury and Agency securities) is coming from international investors, both private and official, directs the attention toward the second issue: the U.S.'s role as key global reserve currency issuer and the sustainability of rising external indebtedness under BW3. Domar's approach to public debt may be suitably adapted and applied to the issue of the sustainability of external imbalances and indebtedness, assuming that the United States will not repay, but roll-over, its foreign debts held as foreign reserves or safe liquidity for at least as long as the dollar retains its status as key global reserve currency. Again, the growth rate of nominal GDP and the interest rate paid on external liabilities turn out to be of vital importance in assessing—here: external—debt sustainability. In principle, if an economy grew at a constant rate,  $g$ , while running a persistent current account deficit as a share of GDP,  $ca$ , year after year, then its net international investment position relative to GDP,  $niip$ , will gradually approach a constant of size:  $ca/g$ .

$$niip = ca/g \quad (6)$$

Another basic relationship similar to the one shown in figure 3, above, thus exists between the current account and net international investment position (NIIP) (as shares of GDP) and the GDP growth rate. For instance, again assuming a 6 percent steady state growth rate of nominal GDP, a NIIP of (negative) 100 percent of GDP would imply a maximum “sustainable” current account deficit of 6 percent of GDP (sustainable in the sense of a nondeteriorating NIIP as a share of GDP). Similarly, a NIIP of (negative) 50 percent of GDP would be compatible with a persistent current account deficit of 3 percent of GDP.

Splitting the current account balance into the trade balance,  $nx$ , and the income balance,  $ib$ , and turning to the “tax rate” required to service the external debt, or, rather, the ratio of GDP toward which the income balance on the current account will converge in steady state, this is

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growth collapses. Germany's experimentation with balancing the budget “no matter what” since unification provides another sad case of how to wreck rather than consolidate public finances (see Bibow [2003, 2004, and 2005]).

found to be equal to the value of:  $i \cdot ca/g$ , where  $i$  is the rate of interest paid on the external debt (assumed to be tax-exempt and equal to the rate paid on public debt).

$$ib = i \cdot ca/g \quad (7)$$

If the interest rate equals the growth rate, the income balance on current account exactly equals the overall current account balance or new external borrowing in the long run (both either expressed in absolute dollar amounts or as shares of GDP). Expressed dynamically, the interest-growth differential is seen as key driver behind external debt dynamics.

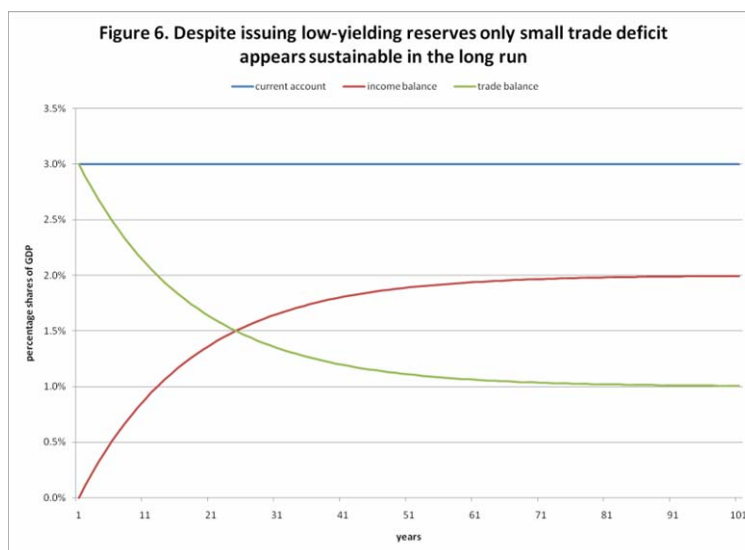
$$\partial niip / \partial t = nx + (i-g) niip \quad (8)$$

And setting  $\partial niip / \partial t$  equal to zero gives an inverse relation between the interest-growth differential and the sustainable trade balance.

$$-nx = (i-g) niip \quad (9)$$

Considering the fact that the United States has historically enjoyed favorable financing conditions on public debt for most of the time and assuming that this will continue to be the case for as long as the U.S. dollar retains its status as key global reserve currency, there still appears to be only limited scope for the United States to run a persistent *trade* deficit.

For instance, taking the case of a net international investment position of (negative) 50 percent and assuming a two-percentage-point interest-growth differential, say 4 percent interest rate and 6 percent nominal GDP growth rate, the sustainable current account deficit of 3 percent of GDP would still end up largely consisting of a negative income balance in steady state. As shown in figure 6, over time, a rising negative income balance “crowds out” ever more of the initial trade deficit of 3 percent of GDP, approaching just 1 percent of GDP in the long run.

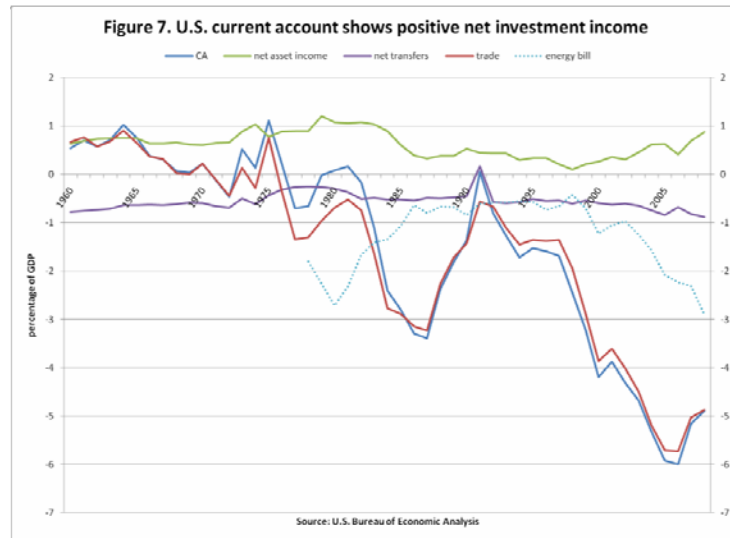


Alternatively, if a trade deficit of 3 percent of GDP were maintained forever, a rising negative income balance would seem to set the current account deficit and international investment position on deteriorating trajectories (as shares of GDP)—which might scare international investors sufficiently to stop them from holding rising proportions of dollar reserves in their portfolios. By implication, if the global economy really required a sizeable persistent U.S. trade deficit as its growth engine, delivering on global stimulus in a sustainable fashion appears to be a nontrivial challenge, even to a debtor country enjoying very favorable external financing conditions due to its key global reserve currency status.<sup>6</sup> Is there any solution to this apparent inconsistency in global finance?

## VI. LEVERAGING THE DOLLAR UNDER UNFETTERED GLOBAL FINANCE

Even as BW3 may be unlikely to encounter difficulties of internal sustainability, contrasting favorably with BW2, the previous section has raised some doubt regarding the scope of any externally sustainable BW3 system in providing global demand stimuli through permanent U.S. trade deficits. Further factors need to be considered. In assessing the viability of BW3 one relevant fact is that the U.S.'s net income balance (dominated by net asset income) has actually remained *positive* despite the U.S.'s *negative* net foreign asset position that emerged in the late 1980s, and even improving in recent years, as figure 7 shows (Heath 2007).

<sup>6</sup> Kregel (2004) analyzes the much greater challenges faced in this regard by developing country debtors.



Explaining this puzzle requires shifting the focus of analysis toward the *gross* assets and liabilities on the U.S. external balance sheet rather than its *net* debtor position. While gross positions are much larger than the negative net position, the point is that the United States appears to enjoy a persistent income yield advantage on its external assets over its external liabilities. Note here that a country benefiting from an “income yield advantage” on external assets can partly or fully offset any income drain resulting from its net debtor position by leveraging up its external position. For instance, assume that a country enjoys a two-percentage-point income yield advantage and recall the example in the previous section of a country running a 3 percent of GDP current account deficit (implying a steady state NIIP of minus 50 percent of GDP) and a 2 percent of GDP negative income balance. Under these conditions the negative net asset income arising from the country’s net debtor position can be fully offset by buying foreign assets of the equivalent of 100 percent of GDP. This would require selling additional liabilities to foreigners in the same amount, thereby tripling net debt of 50 percent of GDP to assume gross debt of 150 percent of GDP, or a “leverage factor” of 3.

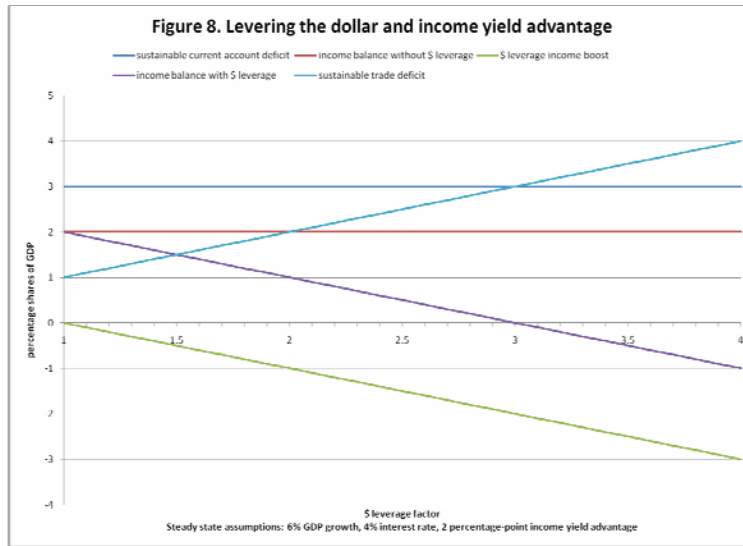
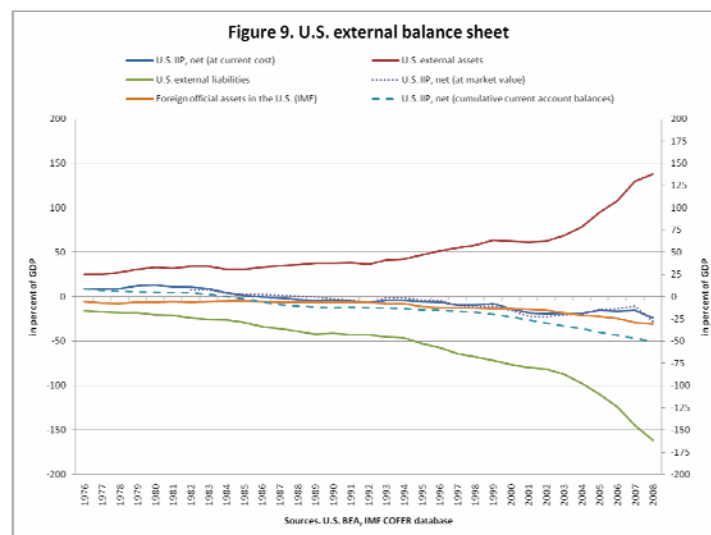


Figure 8 illustrates this case. Similarly, in case of a four-percentage-point income yield advantage, purchasing foreign assets of the equivalent of 50 percent of GDP would suffice, implying gross foreign debt of 100 percent of GDP and a leverage factor of 2. An inverse relationship exists between the two critical variables: income yield advantage,  $yd$ , and leverage factor,  $lf$ . The requirement for a sustainable trade balance (i.e., stable NIIP ratio) in equation (9) may also be amended accordingly.

$$-nx = (i - g - yd \cdot (lf - 1)) niip \quad (9)'$$



A closer look at the U.S. external balance sheets reveals further relevant facts. Figure 9 exhibits sharply rising foreign assets and liabilities (relative to GDP) since the 1990s (see Lane and Milesi-Ferretti [2006] and D'Arista [2007–08]). Following a pause around the time of the dot.com boom and bust, U.S. foreign asset holdings surged even faster since 2002. In 2007, gross liabilities exceeded the U.S. NIIP by a (leverage) factor of 10! Also featuring is a rising share of foreign official assets in the United States among U.S. liabilities since 2001.<sup>7</sup> Most remarkably, however, the U.S. NIIP has stayed surprisingly low and stable around 20 percent of GDP, even improving between 2004 and 2007 (when estimates of foreign direct investment [FDI] at market value are used), despite huge and soaring current account deficits. This outcome compares rather favorably with a hypothetical NIIP of (negative) 50 percent of GDP calculated on the basis of cumulative current account balances. For one thing, this also implies that more than a plain income yield advantage (as analyzed above) must be involved. In addition, “valuation effects” appear to have played a prominent role in driving a sizeable “total rate of return advantage” in the U.S.’s favor.

Gourinchas and Rey (2005) offer an illuminating analysis of the evolution of U.S. external assets and liabilities and find strong evidence of a sizeable “excess return” on gross assets over gross liabilities. Their analysis distinguishes a “return effect,” stemming from higher total returns within each asset class, and a “composition effect” stemming from an asymmetric balance sheet structure, featuring positive net positions of higher-yielding FDI and portfolio equity holdings and negative net positions of lower-yielding portfolio debt holdings (including U.S. public debt securities, in particular), bank loans, and trade credit. Gourinchas and Rey (2005: 15) observe that over time the United States has moved away from merely acting as the world banker, providing global liquidity by lending long while borrowing short, to becoming a “bold world venture capitalist” as well. In particular, over the entire period valuation effects played an important part in stabilizing the U.S. NIIP. Valuation effects, or the capital gains component in the U.S. total rate of return advantage, can arise from two sources. First, valuation gains arise as market values of U.S. external assets appreciate more (or depreciate less) than market values of U.S. liabilities. Second, valuation gains also arise from dollar depreciation given that U.S. liabilities are largely dollar denominated whereas U.S. assets are predominantly

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<sup>7</sup> IMF rather than BEA data on official reserve assets in the United States are used here as the latter understate offshore holdings and custodial relationships. See Higgins and Klitgaard (2004) and McCauley (2005).

denominated in foreign currencies (a “short dollar” position). Perhaps their most interesting finding is that the U.S.’s “exorbitant privilege” increased strongly in the post-Bretton Woods era, with annual excess returns in U.S. favor estimated at 3.32 percent for the period 1973–2004.<sup>8</sup>

It is important to realize here how the analysis of the U.S. external position in this section complements the earlier analysis of the BW2 and global saving glut hypotheses in sections 2 and 3, above. I argued there that tendencies in the rest of the world to rely on exports for growth while accumulating FX reserves—inspired by neo-mercantilistic and self-insurance motives—causes weakness in U.S. labor and product markets. Given its mandate—and contrasting favorably with the inelastic supply of global liquidity under the gold standard—the Federal Reserve can be expected to respond to economic slack and downward pressures on wages and prices in general by easing its policy stance. The domestic impact of lower interest rates, easier credit, and rising asset prices is to boost domestic demand. In the aftermath of the dot.com (corporate) bust, the boost arose primarily through consumer spending driven by mortgage debt—with a good part of the U.S. domestic demand expansion leaking abroad through U.S. current account deficits.

Another more immediate external impact of monetary policy easing in the lead country of the global monetary system, which also influences the size of demand leakages from the center, arises through capital outflows from the United States and downward pressures on the dollar exchange rate. Other countries then have to choose whether to follow suit or not. In general, countries that ease policy less aggressively will tend to experience currency appreciation, as seen in Euroland’s case since 2002. In principle, however, countries that wish to maintain a competitive exchange rate while perhaps not easing quite as aggressively as the Fed may also resort to FX interventions (and/or capital account management), as seen in much of the developing world since 2002. It is precisely in this way that monetary stance as set by the lead country is transmitted throughout the global monetary and financial system.<sup>9</sup> Note how tendencies for more defensive policies in the periphery shift the onus of promoting stimulus for

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<sup>8</sup> Curcuru, Thomas, and Warnock (2008) challenge the “exorbitant privilege” hypothesis or, rather, the magnitude of the privilege involved, asserting that calculations by Gourinchas and Rey (2005) (and similar ones by Higgins, Kiltgaard, and Tille [2007], for instance) are derived from unreliable data, giving rise to a strong upward bias in valuation gains in particular.

<sup>9</sup> I disagree with D’Arista’s (2008–09) position depicting capital flows into the United States as the driver of imbalances (in line with Bernanke [2005]), capital inflows which are supposed to get recycled as outflows from the United States.



global expansion to the lead country, the issuer of the global reserve currency, sponsoring a “global dollar glut” in the process.

Doing so is not only a responsibility denial of which would see the global economy sink into stagnation or worse. There *is* an “exorbitant privilege” involved, too. Apart from U.S. consumers enjoying cheap imports, U.S. banks, nonbank financial institutions, and corporate financial players also share the benefit of being able to finance their foreign asset acquisitions in terms of the international currency issued by their home country, offering lower-yielding securities traded in deep financial markets to foreign holders of U.S. dollars, serving as global liquidity acquired from current account surpluses and/or private capital inflows. Essentially, what shows up as positive investment income and valuation gains in U.S. external accounts arises from setting up a grand scale “carry trade” (short dollar) position by these players, driving foreign asset prices up and the dollar down—unless foreign official sectors resist dollar depreciation, which may limit currency valuation gains, at least temporarily, though not other elements in the excess return equation.

Clearly, then, the U.S.’s comparative advantage in producing low-yielding safe assets featuring in the BW2 hypothesis is important, indeed. In particular, under BW2 Federal Reserve policy played the lead role in enticing sufficient private spending fired by private debts. Under BW3 Federal Reserve policy would still be important in keeping interest rates and U.S. external financing costs low. Dollar leveraging, too, will likely continue to play a crucial part in keeping the U.S. income balance and net foreign asset position in check, but under BW3 U.S. fiscal policy would take on the lead role in maintaining U.S. domestic demand growth—sponsored by public rather than private debt. In principle, this change of guards in U.S. macroeconomic policy should leave BW3 more sustainable than BW2.<sup>10</sup> Dollar hegemony is unlikely to last forever though.

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<sup>10</sup> This position runs counter to the view (see Frankel [2006] and Bergsten [2009], for instance) that “twin deficits” are inevitably a problem for the dollar (and much else), a view which notoriously ignores the risks involved in the buildup of private sector imbalances.

## VII. LONGER-TERM PROSPECTS

For the time being, as under BW2, the *need and scope* for BW3 “imbalances” (i.e., the size of the “equilibrium” U.S. current account deficit) will largely depend on macro policies in the rest of the world. If, finally, Japan and Germany were *really* to mature from the mercantilistic periphery and generate domestic demand-led growth this would take important pressure off the U.S.’s shoulders. If the developing world at large decided that globalization has become safer, say, in view of reforms to global finance and the IMF with greater provision of “collective insurance,” this would have the same effect. Finally, if China in particular learned from its own ongoing rebalancing to rely on domestic rather than external demand to a greater extent this too would reduce the need and scope for BW3 accordingly.

As seen in the previous section, support for the sustainability of BW3 arises from several factors. In particular, by offering the advantages of safety and liquidity to holders, U.S. public debt securities bear low financing costs. Moreover, if spent wisely, with a strong focus on upgrading U.S. infrastructure suggesting itself, public-debt-sponsored spending may also boost the *sustainable* GDP growth rate (Heintz, Pollin, and Garrett-Peltier 2009). In short, favorable debt dynamics are more likely to arise under BW3 than BW2. On the external sustainability front, dollar leveraging based on low-yielding U.S. public debt is instrumental in keeping the U.S. income balance and net foreign asset position in check, making room for persistent U.S. trade deficits as global stimulus. We may add here that investing in energy security is an attractive option for keeping the U.S. energy bill at bay (see figure 7, above).

Yet the exorbitant privilege extractable in this way is surely not unlimited and may prove volatile, too. Purchasing foreign assets, on top of any current account deficit, presupposes willing holders of dollar assets. With GDP growth and financial deepening in the developing world outpacing U.S. trends, saturation point of dollar assets in foreign portfolios may be quite some way off (Higgins and Klitgaard 2007), especially with very elastic demand on the part of some important official sectors. Note however that to the extent that dollar leveraging depreciates the dollar this will both boost currency valuation gains in the short term and also tend to reduce the current account source of dollar reserves in the longer term. The same is true more generally if other countries do not like the prospect of continuous U.S. budget deficits. They can let their exchange rates appreciate, wean themselves off U.S.-sponsored export growth and adopt

domestic demand-led growth on their own. This is the real choice countries such as China are facing.

It seems of course odd that global growth should depend on continuous trade deficits on the part of the country issuing the global reserve currency. Compared to the gold standard, with gold rather than any national currency serving as international currency, the dollar standard does at least offer the advantages of deliberate management and elastic supply of global liquidity. The deliberate management is not applied to any proper global currency though, but takes its cue from the state of the U.S. economy. Other countries only have an indirect “say” in policy to the extent their national policies and conditions influence the U.S. situation.

It is of some interest that under the initial Bretton Woods system of pegged exchange rates, gold convertibility of the dollar, and controlled global finance (“Bretton Woods 1”), other countries’ demands for dollar reserves and reliance on trade surpluses was overall more limited than in more recent times. The Triffin dilemma quickly undermined the dollar-gold link as U.S. trade deficits and capital outflows soared. With the dollar cut off gold, the international system of currency pegs abandoned, and the forces of global finance unfettered, defensive macro policies became increasingly fashionable. Defensive policies take the form of neomercantilist and self-insurance strategies. To be effective, their indirect influence on U.S. monetary conditions has to provoke U.S. overspending, opening the dollar floodgates. Under BW2 the overspending took the form of private overspending based on private debts, an unsustainable system which hit the wall big time in the global crisis. By contrast, BW3 would be based on public debt and preferably a good part of the spending would take productive forms (infrastructure).

In its simplest and purest version U.S. trade deficits would be “financed” by banknotes. Barren of any monetary yield, no pressure on the trade deficit would arise from an increasingly adverse investment income balance. Beyond this hypothetical case, greenbacks, an estimated value of \$380bn of which are held abroad, in practice primarily finance the global cocaine trade, while the bulk of U.S. external liabilities do pay interest. Hence even the issuer of the key global reserve currency has to face the ordinary debtor’s sustainability quest. Apart from plain vanilla seigniorage, venture capitalistic dollar leveraging appears to be the avenue through which room for persistent trade deficits can be maintained. Gourinchas and Rey (2005) found an increased “exorbitant privilege” in the post-BW1 era. Ironically, unfettered global finance seems to have

both increased the demand for defensive policies in the rest of the world and the extraction of rent available from meeting that demand. If this is meant to be a symbiosis of interest of all parties concerned, it is peculiarly a symbiosis of interest under conditions of unfettered global finance.<sup>11</sup> One should think that the world can do better than this.

With a world government, global monetary and fiscal policy stances would surely be determined in more equitable and efficient ways than is the case today. Yet absent uniform economic conditions around the globe at all times there would still be a need to fine-tune local policies in line with local requirements. Keynes' original plans for the Bretton Woods order envisioned some role for international financial institutions in coordinating global monetary conditions and in financing development. Yet the core ideas behind his "Bretton Woods 0" system were attuned to the fact that it would continue to be for national governments to determine national policies. For Keynes the real quest was to establish a new order that allowed for sufficient room for national policymaking while assuring their global compatibility. Keynes' "bancor plan" of the early 1940s aimed at establishing an international monetary order that would disable countries from pursuing mercantilist strategies while enabling them to systematically attain domestic demand-led growth through deliberate management of their economies instead. Capital account management was assigned a key role in creating sufficient national policy space. Rules for exchange rate adjustments were foreseen to exert *symmetric* adjustment pressures on both deficit and surplus countries, designed to hold the parts of the system together and prevent persistent imbalances. Global liquidity would be under supranational control, elastic in supply, and expressed in bancor rather than any national currency unit. Financing of temporary imbalances would be automatic through bancor overdraft facilities. As we know, BW0 never came to be, as the actual BW1 order was dollar-centered from the beginning (see Bibow [2009]).

The global crisis of 2007–09 has prompted some renewed calls for reform of the global monetary and financial order (Zhou [2009], for instance). Even without any official "new Bretton Woods" agreement, market evolution and policy adaptation in key countries might lead to alternative arrangements as China, India, and perhaps even Europe mature to a more equal

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<sup>11</sup> Just as domestic money and finance are not neutral, international money and finance are not neutral either. As counterpart to export-led industrialization in developing countries, etc., the structural and distributional consequences for the U.S. economy fall under the broad theme of "financialization" (see Epstein [2005] and Crotty [2007], for instance).

global status. At some point in the future, all major regions and players might mature and pursue domestic demand-led growth while exchange rates are adjusted so as to keep global trade in balance. The future order is conceivable without any key reserve currency playing that crucial role currently occupied by the dollar if international liquidity were organized as a concerted effort by the global community.

Whatever shape it might take, a post-dollar standard is not a near-term prospect. For the time being, a dollar crisis seems decidedly unlikely for lack of any serious alternative.<sup>12</sup> So the evolution toward any “Bretton Woods 4” would have to be gradual. And even then the rest of the world would be unlikely to shun U.S. assets altogether. Rather, as portfolio compositions adjust, the exorbitant privilege that currently comes in so handy in sustaining sizeable trade deficits will largely dissipate, too. In the interim period BW3 might provide a more sustainable regime than BW2 could have ever become.

## VIII. CONCLUSIONS

As the U.S. and global economies are emerging from deep crisis, the question arises whether a quick return to precrisis trends—featuring global imbalances—may be expected. The analysis here suggests that this is unlikely as far as U.S. internal precrisis trends are concerned, specifically rising household indebtedness and a declining personal saving rate. In this regard we pinpoint a vital oversight in the BW2 hypothesis: the buildup of unsustainable internal imbalances. Regarding external imbalances we reject the global saving glut hypothesis which suggests that excess saving flows from the developing world were channeled into U.S. mortgage markets so as to cause the housing boom and bust. Instead we emphasize the role of the U.S. dollar as key global reserve currency and explain how defensive macro policies in much of the rest of the world prompted expansionary Federal Reserve policies and a global dollar glut.

While rising global imbalances may soon make a reappearance, BW2, featuring private debt-financed consumer spending as the counterpart to the U.S.’s external deficit, is dead and cannot easily be revived. Instead a BW3 regime may come to take its place: again featuring continued U.S. current account deficits, albeit this time driven by public spending and public

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<sup>12</sup> Chinn and Frankel (2008) view the euro as a challenger of dollar hegemony. See Bibow and Terzi (2007) for the counterargument that without fundamental, but currently unlikely, institutional reform the dollar’s shoes remain far too big for the euro to fill. See also Cooper (2005 and 2009).

debt. In contrast to BW2, the safe assets accumulated by the periphery's official authorities would also be the very assets actually sponsoring U.S. spending in excess of income.

Policy choices in the rest of the world would determine the *need and scope* for the United States to operate along BW3 arrangements for as long as the U.S. dollar remains the world's key reserve currency. Our sustainability analysis suggests that, in principle, BW3 might be blessed with a longer life than BW2 and also end without a catastrophic blowup. Alternative arrangements under which the U.S. dollar would lose its special status as other key countries mature are of course conceivable—Keynes's ideas of the early 1940s continue to offer guidance, but absent any such official agreement, a post-dollar standard may still take decades to come about by evolution.

Let me add that my assessment of BW3 is deliberately optimistic in abstracting from issues such as demographic aging, global warming, peak oil, and other formidable challenges that are bound to complicate policies for sustainable economic growth in future. A worsening of the critical interest-growth differential makes a debtor's life all the harder. Yet, this applies to any debtor. The point is that for the foreseeable future, U.S. public debt will likely continue to enjoy the current special status that leaves U.S. public debt dynamics potentially more favorable than in other cases, thereby granting the United States, as global debtor, extra leeway. For the United States to lose this privilege, a real alternative to the dollar has to appear on the scene (or the world has to learn to live without a key reserve currency). One thing is for sure, the euro is not it.

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