



The International Circuit of
Key Currencies and the Global Crisis:
Is there Scope for Reform?

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The international circuit of key currencies and the global crisis.

Is there scope for reform?

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‘The problem lies... with the absurdities associated with the use of *national* currencies as
international reserves.’

(Robert Triffin, *Gold and the dollar crisis*, 1961, p. 10)

‘The problem of maintaining equilibrium in the balance of payments between countries has
never been solved, since methods of barter gave way to the use of money and bills of
exchange’ (Keynes, 1980, p. 21).

1. **Introduction.**

The causes of the global crisis are still hotly debated among economists, and for a good reason: the remedy crucially depends upon the diagnosis, and we still need a recipe to exit this crisis, which, in spite of early optimism, is still plaguing the world and Europe, with its sequel of financial disorder, sovereign risks and, above all, mass unemployment. Even more importantly, we need to devise methods by which global crises may be avoided in the future.

This paper contributes to this debate by exploring a possible causal link running from our international monetary system to global imbalances, and from these to the crisis.

The questions raised here are the following:

- (i) Did global imbalances contribute to the current crisis?
- (ii) Are these imbalances, in turn, favoured by, or rooted in, the current organization of the international monetary system?
- (iii) Would a monetary system reformed along Keynes's suggestions cut some of the causes of global crises at their roots, thus making their occurrence less likely in the future?

The answers provided here (three qualified yes) stem from an analysis of the international circuit of a 'key currency' (a national currency working as the international money), considered both in its 'physiology' and in its pathological consequences. The problem envisaged by Triffin in the sentence quoted in the epigraph is still with us, and those absurdities are one of the roots of the global crisis.

As argued in section 2, the circuit of a key currency basically differs from that of any purely national currency, both in its opening and in its closing stages, the differences concerning mainly the processes by which money is created and destroyed via the external channel. This basic asymmetry between 'key countries' (those issuing the key currency) and all other countries implies different constraints on their central banks, and different international adjustment mechanisms. Owing to the characters of the international circuit of the key currency (to-day, the international circuit of the dollar), our international monetary system is prone to produce imbalances which, in turn, contain the potential seeds of global crises.

This paper argues that this three-stage sequence (from the asymmetric international monetary system to global imbalances, and from global imbalances to crises) had indeed a powerful role to play in the genesis of the current crisis. True, as many commentators have

not failed to stress, and contrary to widespread fears nurtured in the past, the crisis was not in fact triggered by a disorderly unwinding of global imbalances via capital flow reversal, away from the USA (the ‘key country’, in our present terminology). But, as argued in section 3, global imbalances have been active as a causal force at a deeper level, by fuelling the ‘debt economy’ that directly triggered the crisis.

This leads us to the issues of possible remedies: building on Costabile (2006; 2009), section 4 stresses the enduring relevance of the Keynes Plan, which, both for its logic and for its technical devices, may still – at least conceptually- be of help in devising a more symmetric international monetary system. This, in turn, would reduce the potential for global crises in the future.

Section 5 concludes with a brief discussion of some alternative interpretations of the global crisis.

2. Key currencies: the international circuit.

2.1. The creation and destruction of monetary base.

Let us define a key country as the K country, and all other countries (merely issuing ‘own’ currencies) as J countries. For the sake of simplicity, it is assumed here that there is only one key country, although the monopolistic position of the US as the unique provider of international liquidity has been challenged by other countries or groups of countries, such as those participating in the European Monetary Union (ECB, 2008).

When a J country runs a balance of payment (BoP) surplus, its central bank meets the excess demand for the local currency by issuing reserve money (also called monetary base). Correspondingly, reserve money is destroyed when a J country runs a BoP deficit, as the country's central bank sells the foreign currency in excess demand, and absorbs liquidity in the process.

It may be useful to visualize these processes by imagining, for instance, a citizen of country J, say a Japanese seller, who is paid US dollars for her sale to a foreign buyer. As she converts these dollars into yens at her bank, and the bank holds them at the Bank of Japan, the monetary base (of which the foreign reserves are a component) increases. If in the whole economy sales abroad (of goods, services, real and financial assets) exceed purchases from the rest of the world, the monetary base and, consequently, the money supply in Japan rise. Conversely, there is a drain on reserves, reserve money is destroyed and the money supply reduced when the country runs a BoP deficit.

Thus, *in the absence of counteracting central bank policies*, the monetary stance is expansive for a J country running a BoP surplus (surplus for short), while it is contractionary for a J country running a BoP deficit (deficit for short).

By contrast, the circuit of the 'international money' is opened when the K country runs a BoP *deficit*, not a surplus. Indeed, a K country can only initiate the circuit of international money by paying for foreign goods, services and assets by means of its own national currency, which functions as the international money. Thus, when a citizen or institution in country K is involved in a transaction giving rise to a payment outward from the country,

the central bank ultimately pays with a claim on itself, which is accepted as the international money.

Thus, in the absence of counteracting central bank policies, the monetary stance is expansive for a K country in deficit, as the country's central bank finances this deficit by issuing the international currency.

2.2. Reserve accumulation.

Because central banks in J countries need to buy and sell the foreign currency as a consequence of surpluses and deficits, they need to accumulate foreign reserves. In practice, the foreign currency which they need is the K currency, because this is the currency working as the means of international payments (vehicle currency), the international store of value, the standard of deferred payments, and the intervention currency (for more details, Costabile and Scazzieri, 2008). In addition to this basic motivation, central banks may also keep reserves for other reasons, as when they engage in exchange rate policy for competitiveness reasons in the context of export-led growth; or for insurance reasons in an uncertain environment, because the K currency is the liquid international asset *par excellence*. This last motivation has played a strong role, for instance, since the 1997 crisis, as emerging Asian countries have engaged in the accumulation of huge amounts of international reserves as an insurance device against the

risk of sudden capital flow reversals. These additional motivations only reinforce the institutional need for reserve accumulation by central banks in J countries¹.

By contrast, there is no need for the central bank of the K country to accumulate foreign reserves, as the reserve currency is its own currency.

This asymmetry can also be seen from a different angle: the liquidity of the central bank of a J country (i.e. its ability to create money) is limited, as it can get into payment difficulties, because it needs to make some payments in foreign currencies, 'i. e. in a form of money

¹ An ideal system of perfectly flexible exchange rates would substitute market forces for central bank intervention in the determination of exchange rates. However, *pure* floating is more an abstraction than an accurate description of any existing exchange regime, even after the breakdown of the “Bretton Woods” system. As the central banks of most countries are unwilling to allow complete flexibility in their exchange rates, they keep large amounts of reserves, mostly in foreign exchange and, to a large extent, in dollars. Some countries, such as China, have been pegging their currencies to the US dollar, thus re-creating a fixed-exchange rate regime, although some degree of flexibility was introduced in 2006. Thus, even after considering the differences between the Bretton Woods system and the current one, it would be inaccurate to dismiss the role of foreign reserves and foreign exchange intervention. To give an idea of the order magnitudes involved: the reserves held by monetary authorities totalled 6.909.257 US dollars in 2008, equivalent to 11 percent of world output at market exchange rates in the same year (source: IMF, COFER, december 2009). The share of US denominated reserve holdings was 70 percent in 2001 (Galati and Wooldridge, 2006) but fell subsequently.

which it cannot create' (Schneider, 1962, p. 34); whence it follows their need to accumulate reserves. By contrast, the liquidity of the central bank of a K country is unlimited, because it makes external payments with claims on itself. In other words, there are no payments to be made by the central bank of the K country in a form of money which this central bank cannot create.

True, in a gold-exchange standard, the K country's central bank would be required to convert its own currency into gold on demand. In other words, it would have to pay gold for its debt (the international money). Consequently, the need would arise for it to hold reserves in gold. But in the 'fiat money' regime characterising the current international monetary system this need does not arise, as the key currency is inconvertible. According to some commentators, *de facto* inconvertibility was the rule even in the gold-exchange standard system under Bretton Woods, which was defined by Harrod as 'inconvertibility by gentlemen's agreement' (quoted by Triffin, 1965).

2.3. Sterilization and international adjustment in deficit countries.

In J countries, central banks wishing to avoid the contractionary consequences of a BoP deficit can 'sterilize' the corresponding reduction in base money (thus avoiding a restriction in the money supply) via open market operations, i.e. by purchasing Treasury securities. But sterilization cannot go on forever since, by so doing, the external deficit is perpetuated and foreign reserves are depleted.

Thus, a restraining impulse is ultimately imposed on a J economy by falling reserves and the corresponding decrease in the money supply, with re-equilibrating consequences on its BoP. International adjustment may occur via price and/or quantity effects: falling prices improve international competitiveness, higher interest rates attract capital flows, and a contraction in GDP reduces imports.

The essential point here is that the external constraint ‘bites’ on J countries, and makes their international adjustment costly both economically and socially, because competitiveness gains may require wage austerity, rising interest rates adversely affect economic activity, a contraction in GDP is normally related to lower employment levels, etc. Thus, international openness, in addition to obvious advantages, imposes a severe discipline on J countries via their BoP constraints.

By contrast, the external constraint is softer in K countries.

This difference arises from two related causes: firstly, as explained above, there is virtually no minimum to the amount of foreign reserves that K’s central bank may be willing to hold.

Secondly, K’s central bank does not need to engage in ‘sterilization’, as the central banks of J countries do the job: they buy K-Treasury securities with their dollar reserves, thus bringing the key currency back to the issuing country. Their behaviour is easy to explain: it is more convenient for them to keep their accumulated reserves in this form (which pays an interest, although normally a relatively small one) rather than keeping them idle.

This is the closing stage of the international circuit of a K currency. As dollars end up in foreign central banks, and are reinvested in US Treasury securities, the international circuit

of the dollar is closed. The US, consequently, does not experiment a reduction in its money supply. The external constraint does not bite in this respect.

This phenomenon, defined as ‘automatic sterilization’ by McKinnon (1974, p.16; 1996, pp.173-174) had already been noticed by other commentators, including Charles De Gaulle, who spoke of an American ‘deficit without the tears’, and his advisor, the economist Jacques Rueff (Rueff and Hirsh, 1965, p.3), who described the situation of a K country by means of the cute metaphor of the fortunate customer continuously receiving back from his tailor, as a loan, the money that he had just given to him in payment for his suits. For a more recent statement, it is worthwhile reproducing the description provided by the Fed itself, which is apparently well aware of automatic sterilization: ‘Most dollar purchases by foreign central banks are used to purchase dollar securities directly, and thus they do not need to be countered by U.S. open market operations to leave the supply of dollar balances at the Federal Reserve unchanged’ (FED, 2005, p. 55).

As this constraint is softened, deficits can be sustained for an indefinite length of time. Although alternative choices are available (as illustrated by the historical experience of other key countries, including England in the XIX century), in the post World War II period large current account deficits started in 1982 and have been a constant feature of the US economy since then (with the exception of 1991), hitting an all-time high of 6.5 per cent of GDP in 2006.

International adjustment is asymmetric between K and J countries with reference to its stock dimension too. A depreciation of country J’s currency would imply an increasing burden of this country’s external debt. By contrast, a depreciation of its currency benefits country K, by improving its net foreign position via ‘valuation effects’. The reason

underlying this asymmetry is that, because of the special international status of its currency, country K's debt is typically denominated in its own currency, while J suffers from the 'original sin' (Eichengreen et al., 2003) that its debt is typically denominated in country K's currency. This circumstance confers upon K countries the power to keep its debtors as hostages, for they would pay with self-induced capital losses any decision to reduce their holdings of K's financial assets.

2.4. Monetary sovereignty and macroeconomic policies.

The international circuit of the dollar may help explain some features of economic policies in the US.

Firstly, as TABLE 1 shows, in normal circumstances (e.g. before the crisis erupted in the summer/fall 2007), the FED creates monetary base mainly through purchases of government securities. As Bernanke (2009) stated, 'For decades [before the current crisis], the Federal Reserve's assets consisted almost exclusively of Treasury securities', while foreign reserves were (and still are) almost nil.

TABLE 1 about here

By contrast, in J-type countries the monetary base is created mainly against increases in foreign reserves, which are held in the form of US government securities. This happens for

instance in China, a J country which, overtaking Japan, has been the largest holder of foreign reserves in 2005. Also specularly to the FED, the People's Bank of China holds very few securities issued by China's own government. This asymmetry implies that while the K country can finalise its money creation to domestic objectives (if its government so wishes), in J countries substantial amounts of resources are diverted from domestic objectives, as they buy K-government securities (and the compensation for this type of saving may be curtailed by valuation effects).

Secondly, the reflux of dollars back to the issuing country via purchases of US Treasury securities exerts a downward pressure on interest rates, thus reducing the cost of deficit spending and the public debt. Thus, it helps to explain why the K country enjoys a considerable margin of freedom for expansionary fiscal policies, to an extent unknown to other countries, including the advanced economies joining in the EMU.

No doubt, differences in the institutional environment also exert a powerful influence on the monetary and fiscal stances of the US vs. EMU countries: in the latter, monetary policy is constrained by the institutional mandate of the European Central Bank to control inflation, while the FED statutorily also pursues the objectives of output stabilization and growth. Moreover, the fiscal authorities in the EMU countries are constrained by the Stability and Growth Pact. But, in addition to these institutional differences, the international role of the dollar contributes to make expansionary macroeconomic policies less costly in the US by: (i) softening or eliminating the external constraint; (ii) providing scope for the monetization of the public debt (as the FED creates monetary base by outright purchases of Treasury securities); and, finally, (iii) reducing the cost of government

borrowing². Consequently, it may also contribute to the willingness to co-ordinate fiscal and monetary policies that has been observed in the US (see Schnabl and Freitag, 2009 who, however, do not attribute policy co-ordination in the US to the dollar circuit, but only to the institutional factors mentioned above).

3. **The international circuit of the dollar and the current crisis.**

Thus far, we have considered the ‘physiology’ of the international circuit of the dollar. Benefits arise not just for the K country, but also for those J countries that enter in a symbiotic relationship with it (as China and other Eastern Asian Economies did in recent decades, and Europe did under the Bretton-Woods regime). The key role of its currency provides considerable leeway for the US to engage in expansionary monetary and fiscal policies, keeps interest rates low, stimulates income and employment and, by softening the external constraint, makes room for a sustained external deficit. At the same time, the international circuit of the dollar also provides international liquidity to the rest of the world and creates a large market for foreign countries, thus stimulating their export-led growth. In

² Bibow’s (2009) argument that a deflationary impulse is imparted on the US is difficult to reconcile with these facts, particularly with fact (iii). Different, and in my view totally correct, is the argument that a relaxed external constraint adversely affects export-oriented sectors.

other words, the US becomes the world's 'engine of growth' via its external deficit, which is mirrored in the surplus of other countries, such as China.

The necessary counterpart to these current account imbalances is the accumulation of US financial assets in foreign portfolios. According to some estimates (Warnock and Warnock, 2009), in 2005 foreigners held almost 25% of all US outstanding securities; 51,7% of total long-term US Treasury bonds (60% of these holdings were by foreign central banks); 14,1% of total US outstanding Agency Securities (such as Fannie Mae and Freddie Mac) (35% of these were by foreign central banks); and almost 20% of corporate bonds outstanding (see also Bardhan and Jaffee, 2007).

Before looking at their contribution to the global crisis, let us consider briefly the reasons motivating these huge capital inflows.

In the equilibrium interpretation proposed by Caballero, Farhi and Gourinchas (2006), economic rationality would pull investors towards US financial markets owing to their superior efficiency, breadth and deepness. But this interpretation does not seem to stand up to the facts: firstly, the crisis disproved this superior efficiency. Secondly, and most importantly, a large share of US securities was held by central banks rather than private agents. Thirdly, and as importantly, this interpretation is incompatible with the well-known spread between US foreign assets and liabilities: US liabilities are heavily weighted towards liquid, low-yield debt instruments (such as Treasury securities), while US assets are typically equities, offering higher yields (Gourinchas and Rey, 2005; Lane and Milesi-Ferretti, 2005). As is well known, in the last decade capital flew into the US even as the interest rate was low and the dollar depreciating.

The alternative interpretation suggested here is that, as foreign central banks invest their dollar reserves in Treasury securities in the normal flow of the dollar circuit, they also encourage private investors to move their capitals to the K country, by supporting the external value of the dollar³. Thus, the liquidity (i.e. the general acceptability) of the dollar and dollar assets is a self-reinforcing phenomenon, due to the behaviour of foreign central banks, one component of well-know network externalities in key currency systems.

The huge foreign demand for US financial assets, for Treasuries in particular, pushed their prices up and interest rates down, including mortgage rates (Warnock and Warnock, 2009). This influx of ‘repatriated’ (D’Arista, 2007) dollars also contributed to explain the “Greenspan conundrum”, by which long run interest rates remained low even as short-run ones went up.

The dollar inflow back to the K country contributed, through its impact on asset prices and interest rates, to fuel the ‘debt economy’, which acted as the proximate cause of the crisis. In particular, it contributed to the expansion of financial institutions’ balance sheets (Portes, 2009), and to the increase in borrowing by households since the middle of the nineties, and even more after the turn of the century. Rising leverage in the household sector was encouraged both by low interest rates, and by the practice of borrowing against property - valued at inflated prices- which was used as collateral (for a clear, early warning of the dangers stemming from this practice see Godley et al, 2005; for an analysis of household debt ‘as a substitute for wages’ see Barba and Pivetti, 2009).

³ Galati and Wooldridge (2006) discuss the direction of the causal links between foreign private and official holdings of dollar assets.

Did the effects of global imbalances interact with domestic institutions and policies in causing the current crisis? Yes.

Deregulation in financial markets and the ‘originate and distribute’ model thereby generated (which transferred risks outside the originating banking and financial institutions and, by so doing, created an incentive to make profits by generating debt) were powerful causal factors, which by no means should be neglected. Another factor was the policy of the monetary authorities, which refused to pierce the housing bubble. But this paper has argued that financial deregulation and monetary management, if taken in isolation, were not sufficient causes for the global crisis which erupted in 2007. This is so because much of the fuel for the financial euphoria and the credit boom, as well as the incentive for the excesses of the deregulated US financial system, were provided by the liquidity coming back via the channel of the international dollar circuit, and by the global imbalances produced by the key currency system.

Re-regulation of financial markets is necessary, and so is a serious rethinking of monetary policy, in order to lay the foundations for non-speculative (hence non fragile) growth. However, while reforming the US financial system is an absolute necessity, so is the cutting of the roots of global crises identified in this paper. It would be unwise to limit reforms inside the door of the US without addressing the roots of financial instability in the asymmetries of an international payments system based on the dollar as the key currency.

4. Remedies.

The basic features of a possible solution to this long-lived problem are still to be found in the Keynes Plan, i.e. the Plan that Keynes proposed at the end of world war II, in order to

remedy the situation that he described in the sentence quoted in the epigraph. This section will briefly describe the reasons for its enduring relevance, referring the interested reader to my previous articles for a more complete argument.

The fundamental idea of the Keynes Plan is that no national currency should work as the international money. Two consequences follow.

Firstly, no central bank could settle its country's international payments by simply issuing a claim on itself. Consequently, all central banks would stand on a par in their international status, and the typical dilemma of key currency systems could not materialize. This dilemma, as Triffin explained, implies that either the K country runs into BoP deficits and international liquidity is provided to the world, or, in the absence of such a deficit, the source of international liquidity dries up.

Secondly, the external constraint would be symmetric across all countries, both in its flow dimension (concerning their deficits and surpluses) and in the dimension of stocks (concerning their external debts). Consequently, also the process of international adjustment would be symmetric across countries.

Lacking a K currency, and a K central bank, how would international liquidity be provided to the world economy?

The world's central bank would be a supranational institution, which Keynes called the International Clearing Bank (ICB). The international money would be the liability of the ICB, not of any individual nation. Consequently, countries would not become indebted to each other, but only to the ICB; there would be no demand for a 'key currency' as the means for international payments and as a reserve asset in central banks' portfolios.

Actually, the need for holding official reserves would disappear altogether, as the ICB

would merely work, as its name clarifies, as a clearing institution ('central banks would buy and sell their own currencies amongst themselves only against debits and credits to their accounts to the Clearing Bank, designated Clearing accounts', Keynes, 1980, p.34).

Keynes considered The Banking Principle as the underlying principle of his Plan: 'This principle is the necessary equality of credits and debits, of assets and liabilities. If no credits can be removed outside the banking system but only transferred within it, the bank itself can never be in difficulties. It can with safety make what advances it wishes to any of its customers with the assurance that the proceeds can only be transferred to the bank account of another customer' (Keynes, 1980, p.44). From this principle two consequences follow. Firstly, the *whole* of international liquidity would be created as an overdraft facility, and it would accommodate the needs of trade: overdraft quotas would be proportional to each country's total trade.

Secondly, quotas would not be related to the collateral provided, or reserves owned, by the individual countries, which implies that no country could exert an asymmetric political influence thanks to its economic power as a shareholder.

Would international disequilibria disappear under the provisions of the Keynes Plan? Of course not. The purpose of the Plan is to put a brake on *systematic* disequilibria, via the establishment of an international monetary system which would not, contrary to the current one, generate them almost automatically via the operation of the international circuit of a key currency. The Plan would cut this important root of global imbalances via the establishment of a supernational, credit money as a substitute for the dollar. It would also promote international equilibrium via a system of incentives and penalties, to be imposed on both deficit and surplus countries, meant to discourage those disequilibria that would

arise in the world economy even under a reformed, symmetric monetary system.

Conclusions.

Our answers to the questions raised in the Introduction to this paper are three qualified yes.

In short: firstly, global imbalances were a powerful cause of the global crisis, although they operated in conjunction with other causes, namely financial deregulation and monetary management in the US. Secondly: although even a reformed international monetary system could not probably suppress international disequilibria completely, the existing, *asymmetric* ‘key currency’ system is at the roots of *current* global imbalances. Thirdly, the basic principles of the Keynes Plan would cut these asymmetries at their roots, as a *supranational* money would be substituted for a *national* currency as the means of international payments. There is a *political* qualification to this third answer, and it will be briefly addressed at the end of this section.

Before doing that, and in order to clarify some aspects of my interpretation, it may be useful to reconsider briefly the chains of causality proposed here (from the international monetary system to global imbalances, and from global imbalances to the current crisis) in the light the opinions of some other economists.

As for the first link in the chain of my argument, let me notice that my interpretation differs from the ‘Bretton Woods II’ hypothesis (Dooley et al. 2003) as well as from the ‘saving glut’ hypothesis (Bernanke, 2005) in establishing a link between the international monetary system and global imbalances, the direction of causality running from the former to the latter. Consequently, while these authors regard global imbalances as arising from

mercantilist policies and/or excess saving in emerging Asian economies, this paper argues that they arise out of the asymmetries of the international monetary system, and more specifically out of the ‘exorbitant privilege’ of a softened external constraint conferred upon the K country.

As for the second ring in the chain of the argument proposed here, namely the one linking the current crisis to global imbalances: some authors (e.g. Winkler, 2009), while stressing the general importance of global imbalances, deny their role as a causal factor because, contrary to widespread fears, the crisis was not triggered by their ‘disorderly unwinding’ via capital flow reversal away from the US (Blanchard and Milesi-Ferretti, 2009). This paper has argued that, although the crisis erupted in the absence of any such reversal, global imbalances worked as a causal factor at a deeper level, as they fuelled the ‘debt economy’ that more directly generated the crisis.

Other authors (Davidson, 2009) regard global imbalances as a mere vehicle of contagion for a crisis that was, in essence, generated domestically, namely, in the United States. I agree that the role of domestic institutions and policies in the US were very important co-operating factors, and that contagion was spread through the channels of interdependent financial markets. However, in my interpretation global imbalances were a fundamental co-operating cause, via the effects of liquidity flows from emerging countries on interest rates, asset prices and credit conditions in the United States. This does not mean that the US were not the generating country, both because this country is the Prime Mover of the dollar circuit, and because of the irresponsible way in which deregulated US financial institutions dealt with repatriated dollars.

For these reasons, reforming the international monetary system is as important and urgent as re-regulating the US financial and banking system. The incentive for financial mismanagement would not be weakened, if the ‘key currency’ system were left untouched, and we know that ‘financial innovation’ responds to incentives.

This leads us to the last issue: the political feasibility of an international monetary system reformed on the basis of Keynes’s principles. Keynes himself defined his Plan as ‘perhaps Utopian, in the sense not that it is impracticable, but that it assumes a higher degree of understanding, of the spirit of bold innovation, and of international co-operation and trust than it is safe or reasonable to assume’ (Keynes, 1980, p.33). And certainly these virtues are still in scarce supply.

Nevertheless, the crisis itself has shaken old certainties and opened new space for debate: witness what even Dominique Strauss-Kahn, the IMF’s Managing Director, had to say recently, reversing a position held until a few months ago: ‘On the longer-term question of whether a new globally-issued reserve asset was needed, the Managing Director stated that “it is intellectually healthy to explore these kinds of ideas now—with a view to what the global system might need at some time in the future.” ’ (IMF, 2010).

Although skepticism is sometimes a useful mental attitude, excessive conservatism in these issues may not be advisable for progressive economists.

References.

Barba A. and M. Pivetti (2009), “Rising household debt: Its causes and macroeconomic implications—a long-period analysis”, *Cambridge Journal of Economics*, vol. 33, 113–137

Bardhan, A.D., D.M.Jaffee, Dwight M. (7/1/2007), “Global Capital Flows, Foreign Financing and US Interest Rates”, Fisher Center Working Papers, UC Berkeley, Institute of Business and Economic Research, Permalink:

<http://escholarship.org/uc/item/9rd107b3>

Bernanke, B.S. (2005), “The Global Saving Glut and the US Current Account Deficit”, Remarks made at the Sandridge Lecture, Virginia Association of Economics, Richmond, Virginia, March 10. Online at:

<http://www.federalreserve.gov/boarddocs/speeches/2005/200503102/default.htm>.

Bernanke, B. S. (2009), “The Federal Reserve's Balance Sheet. An Update”, Speech delivered at the Federal Reserve Board Conference on Key Developments in Monetary Policy, Washington, D.C., October 8, 2009. Online at:

<http://www.federalreserve.gov/newsevents/speech/bernanke20091008a.htm>

Bibow, J. (2010), “The Global Crisis and the Future of the Dollar: Toward Bretton Woods III?”, W. P. No. 584 by Levy Economics Institute of Bard College and Skidmore College, February

Blanchard and Milesi Ferretti (2009), "Global Imbalances: in Midstream?" *IMF Staff Position Note*, December 22, SPN/09/29

Caballero, R.J., E. Farhi, P.O. Gourinchas (2006), "An Equilibrium Model of 'Global Imbalances' and Low Interest Rates", NBER WP 11996.

Costabile, L. (2006), Current Global Imbalances and the Keynes Plan, WP, Dipartimento di Economia, Università di Napoli Federico II, Napoli.

Costabile L., R. Scazzieri (2008a), "Social models, growth, and key currencies", in L. Costabile (ed), 2008, pp. 126-151.

Costabile L. (2008b), *Institutions for Social Well-Being. Alternatives for Europe*, Basingstoke and New York, Palgrave Macmillan.

Costabile L. (2009), "Current Global Imbalances and the Keynes Plan. A Keynesian Approach for Reforming the International Monetary System", *Structural Change and Economic Dynamics* 20, pp. 79–89.

D'Arista, J. (2007), "US Debt and Global Imbalances", *International Journal of Political Economy*, vol. 36, no. 4, Winter 2007–8, pp. 12–35.

Davidson, P. (2009) “Interview with Paul Davidson, Regarding the Crisis”, online at:

<http://www.mecpoc.org/2009/04/interview-with-paul-davidson-regarding-the-crisis/>

Dooley, M.P., D. Folkerts-Landau, P. Garber (2003), “An Essay on the Revived Bretton-Woods System”, *NBER Working Paper No. 9971*, September.

ECB (2008), *Review of the International Role of the Euro*, Frankfurt.

Eichengreen B., R.Hausmann and U.Panizza (2003), “Currency mismatches, debt intolerance and original sin: why they are not the same and why it matters”, *NBER*, Working Paper n.10036.

FED (2005), *The Federal Reserve System. Purposes And Function*, Board of Governors of the Federal Reserve System, Washington, D.C.

Galati G., P. Wooldridge (2006), “The euro as a reserve currency: a challenge to the pre-eminence of the US dollar” , *BIS WP n. 218*, October

Godley, W. D. B. Papadimitriou, C.H. Dos Santos, G. Zezza (2005), “The United States And Her Creditors: Can The Symbiosis Last?”, The Levy Economics Institute of Bard College, *Strategic Analysis*, September.

Gourinchas P.O. and H. Rey (2005), “International financial adjustment”, *NBER*, Working Paper No. 11155

IMF COFER (2009) (Currency Composition of Official Foreign Exchange Reserves), last updated 30 December 2009. Online at:

<http://www.imf.org/external/np/sta/cofer/eng/>

IMF (2010), “IMF Managing Director Dominique Strauss-Kahn Sets Out Renewed Vision for the IMF in the Post-Crisis World”, Press Release No. 10/62, February 26

Keynes, J.M. (1980) vol. 25, Activities 1940-1944: Shaping the Post-war World: the Clearing Union, in D.E. Moggridge ed.), *The Collected Writings of J.M. Keynes*, volumes I to XXX (1971-1989), London, Macmillan.

Lane, P.R., G.M. Milesi-Ferretti (2005), “A Global Perspective on External Positions”, IMF W.P. 05/161.

McKinnon, R.I. (1974). *A New Tripartite Monetary Agreement or a Limping Dollar Standard?* Essay in International Finance N. 106. Princeton, N.J.: Princeton University Press.

McKinnon, R. I. (1996). *The Rules of the Game*. Cambridge, Mass.: The MIT Press.

Portes, R. (2009), «Global imbalances», CEPR, online at:

http://www.cepr.org/MEETS/LTM/2399/Portes-Global_Imbalances.pdf

Rueff J., F. Hirsch (1965) *The role and rule of gold. An argument*, Princeton
Essays on International Finance, n. 47, June.

Schnabl G. and Freitag, S. (2009), “An asymmetry matrix in global current accounts”,
« Universität Leipzig Working Paper No. 76, Leipzig, Online at:
<http://ssrn.com/abstract=1340946>

Schneider E. (1962), *Money, Income and Employment*, London, Unwin University Books.

Triffin R. 1961, *Gold and the dollar crisis*, New Haven: Yale University Press.

Triffin, R., 1965, “Updating the Triffin Plan”, Speech delivered at the Federal Trust,
London, on May 24, 1965, and published as a special issue of *Moorgate and Wall Street*
(London, Summer 1965); reprinted in R. Triffin, *The World Money Maze. National*
Currencies and International Payments, New Haven and London, Yale University Press,
pp. 346–373.

Winkler, A. (2009), “Unbalanced but Converging –The Pre-crisis Growth Process and its
Implications for the Post-crisis Recovery”, Online (as seen on line 3 March, 2010) at:
http://library.fes.de/pdf-files/ipg/ipg-2010-1/04_winkler_us.pdf

Warnock F.E. and V. Warnock (2009), “International capital flows and U.S. interest rates”, [Journal of International Money and Finance, Volume 28, Issue 6](#), October 2009, Pages 903-919.

TABLE 1.

Federal Reserve Balance Sheet

(Billions of dollars)

	6/27/07
Total assets	869
Securities holdings	791
<i>Treasury securities</i>	<i>791</i>
Other assets (such as foreign exchange, bank premises)	78
Total liabilities	836
Federal Reserve notes	775
Reserve balances	16
Treasury deposits	4
Other (such as foreign official deposits)	41

Source: Adapted from Bernanke, 2009