Beyond Bancor

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To a remarkable degree, the framework for modern economic debate about international monetary alternatives was set long ago in the 1944 debate at Bretton Woods between Keynes (for the UK) and White (for the US). Ever since, whenever anyone is unhappy with the prescriptions of the IMF (the legacy of White) they reliably invoke Keynes and his alternative Bancor Plan as intellectual authority for resistance. In what follows I will suggest that it is long past time to break out of this frame, which has limited modern debate unnecessarily and also unhelpfully. The world that Keynes and White were dealing with in 1944 is not the world we are dealing with seventy years later, and we need a different frame in order to engage our own reality effectively.

Interestingly, Keynes himself suggests just such a possible different frame, in his earlier work on international monetary arrangements written at a time when sterling was the international lingua franca of a globally integrated trading and financial system. In Indian Currency and Finance (1913), Keynes wrote in appreciation of the Indian gold-exchange standard that used sterling bills as much as gold as its monetary reserve, and he identified the role of currency arbitrage as the driver of exchange rate fluctuation within the so-called gold points. Ten years later, writing after WWI in A Tract on Monetary Reform (1923), Keynes went further to urge a system of international money management organized around central bank forward exchange operations in which the forward premium buy-sell spread offered by central banks would provide a stable corridor within which currency arbitrage could operate.

Today, the emerging network of central bank swap lines, created initially to fight the global financial crisis of 2007-2009 but subsequently made permanent, can be understood as an institutional innovation that goes one step beyond the 1923 Keynes. The major six central banks have established unlimited swap lines with one another which seem capable of providing the corridors for currency arbitrage that Keynes was looking for, but also a mechanism for elastic expansion and contraction of the global supply of world reserve currencies as needed.

It's not the Bancor Plan, but it is definitely Keynes. In 1913 and 1923, Keynes was dealing with a financially globalized world, and he therefore based his proposals on commercial principles of currency arbitrage, so-called forward interest parity (in 1923) and uncovered interest parity (in 1913). In 1944, Keynes was dealing with a world in which private credit markets were everywhere subordinated to the exigencies of war finance, and he therefore based his proposals more on political principles of Westphalian state sovereignty and equality. Which of these two Keynes's is more relevant for modern institutional arrangements? The question answers itself—modern financial globalization makes the Keynes of 1913/1923 the more relevant source of inspiration for today.

Interest Parity under a Sterling-Gold Exchange Standard

In the field of monetary economics, Keynes cut his eyeteeth on the practical problems of Indian Currency and Finance (1913) in a gold standard world centered on the British pound. Almost immediately after his book was published, that world collapsed never to be seen again. But the lessons that Keynes drew from those first researches provided the intellectual foundation for his subsequent engagement with the practical problems of war finance and reconstruction in A Tract on Monetary Reform (1923). Crucially, in both of these early texts, the state was not the sole supplier of liquidity, as it would be in his 1936 General Theory. Keynes knew well that private financial markets, and more specifically the City of London, were historically enormously significant suppliers of liquidity, not only domestically but also internationally. Indeed, as a sometime commodity and currency speculator, he knew these markets intimately. All of his early proposals for reform seek to work with, not substitute for, these markets.

In his very first book on money, Keynes painted a picture of the Indian monetary situation quite similar to that in the United States before the establishment of the Federal Reserve System. Both India and the United States were very large countries, at a time when physical distance mattered a lot for the movement of funds. Both also were largely agricultural countries, and so faced regular cyclical fluctuation in the demand for funds to move the crops. And both, for historical reasons, faced a largely inelastic supply of money-proper and did not benefit from very much countervailing elasticity in bank money. In both countries, the consequence was annual fluctuation in bank discount rates that had to be strong enough to attract needed funds from international money markets, meaning London.

In the case of India, the fluctuation of discount rates had to be especially large because foreign exchange dealers (speculators) had to be compensated not only for the cost of moving funds both ways, but also for any fluctuation of exchange within the gold points. It is this latter consideration that led Keynes to formulate the relationship we now know as Uncovered Interest Parity. According to Keynes, the difference between the interest rates in two different countries must be equal to the expected change in the exchange rate plus a risk premium (Chapter 8, "The Indian Rate of Discount").

The risk premium is key. In most modern formulations, Uncovered Interest Parity is expressed as the idea that the interest differential is (or should be) an unbiased forecast of future exchange movements or, equivalently, as the idea that the implied forward exchange rate is an unbiased forecast of the future spot exchange rate. But Keynes himself always added a risk premium, a wedge between forward and expected spot, as a necessary inducement for speculators. Significantly, his main concern, with respect to India, was not so much with using the central bank to eliminate the risk premium as it was with increasing the elasticity of domestic note issue to eliminate the cyclical fluctuation.

Indeed, he considered a policy of tightening up the gold points, only to reject it. If government stood ready to exchange sterling for rupees at a fixed price, in either direction, then the interest rate in India could not deviate from the interest rate in London. But the cost of achieving that stabilization would be a government balance sheet expanded large enough to absorb swings back and forth from London, replacing the private speculators at the cost of holding enormous exchange reserves sufficient to absorb the entire funding swing in each annual crop cycle.

Better, Keynes argued, to work on improving the elasticity of money supply within India itself. If you can handle the annual crop cycle by an expansion and contraction of domestic money then not only do you avoid the volatility of discount rates but also you avoid paying the risk premium to speculators. Basically Keynes was trying to achieve for India what the Federal Reserve System was achieving for the United States at just about the same time. The idea in both cases was to improve domestic banking institutions in order to reduce the social cost of banking, while leaving the gold points intact to provide a corridor within which speculators make foreign exchange markets.

This encounter with the Indian foreign exchange system clearly informed Keynes' thinking about redesign of the international monetary system after WWI. During the war, the exigencies of war finance had driven most countries to abandon gold convertibility, so that after the war the gold points no longer provided bounds for currency fluctuation. The result, Keynes observed, was that the speculative risk involved in absorbing fluctuations in international payments was also much larger, so that the risk premium required to attract speculators was much larger as well. As in 1913, Keynes identifies the analytical relationship at stake as uncovered interest parity, but in 1923 his focus shifts to getting the risk premium down to a more reasonable level.

In 1923, Keynes starts with the institutional fact that private agents themselves have created a forward exchange market in order to facilitate the hedging needed for foreign trade. To explain the forward price in that market, Keynes formulates what we now recognize as Forward Interest Parity (or covered interest parity). He says: "forward quotations for the purchase of the currency of the dearer money market tend to be cheaper than spot quotations by a percentage per month equal to the excess of the interest which can be earned in a month in the dearer market over what can be earned in the cheaper" (p. 124). Interestingly, he warns that hedging demand can sometimes distort even this riskless arbitrage condition, driving the market forward rate away from the implied forward rate in order to attract the scarce speculator's capital. But his main purpose is to suggest how central banks might make use of these private forward markets in order to stabilize exchange markets.

Concretely, he proposes that central banks post buy and sell prices for the forward premium (not forward exchange outright). "The Bank of Italy might offer to sell spot sterling and buy forward sterling at a premium of 1/8 per cent per month for the former over the latter, and to buy spot sterling and sell forward sterling at par" (p. 134). This mechanism for tying together the lira and sterling in a sterling-exchange system is recognizably a variant on the gold-point mechanism that tied together the rupee and gold in the gold-exchange system circa 1913.

So much for the lira, what about the pound? Keynes famously urged that "the gold standard is already a barbarous relic" (p. 172), but this lovely trope has distracted readers from his main purpose which was to make room for the dollar. His hope was that a dollar-based gold exchange standard could grow up alongside a sterling-based gold exchange standard modelled on the pre-war Indian system. The dollar and sterling would be tied together by having both central banks quote buy-sell prices for gold, both spot and forward, every week (p. 190). Here again we see Keynes looking to use the apparatus of the state not to eliminate private speculative activity, but rather to create a corridor within which that activity could be channeled to operate more effectively for the social good.

Sovereignty Parity under the Bretton Woods System

Fast forward twenty years, during which the best hopes of 1923 were dashed, as the failure of international monetary reconstruction led to worldwide Depression and a second World War. As WWII came to a close, the financially globalized world of 1913 seemed a much more distant goal than it had in 1923; indeed, in 1944 there were no functioning private markets that Keynes could use as part of any international monetary reform plan. As a consequence of Depression and War, economic relations between nation states proceeded not on a commercial basis but on a political basis, and that state of affairs seemed likely to continue for some time during the reconstruction that would follow the war. From this perspective, the purpose of the Bretton Woods meeting was not so much to create from whole cloth the international monetary architecture of the postwar world, but only to create the supranational political institutions to support continuing economic relations until such a day that relations could be put on a commercial basis.

In preparation for the Bretton Woods meeting, Keynes put forward his famous Bancor Plan for a clearing union, while White put forward his alternative stabilization fund. Standard histories record that Bretton Woods followed White (and the rising US) not Keynes (the declining UK), so that White's fund idea is the origin of the modern International Monetary Fund. At one level, the difference between the two proposals boils down to what happens when the external payments of one country to the rest of the world exceed the payments of the rest of the world to that country. The Keynes plan operates on the banking or "elasticity" principle, which involves expanding the balance sheet of the clearing union in order to absorb temporary imbalances. The White Plan operates on the currency or "discipline" principle, which involves keeping the total quantity of international reserves constant by debiting the deficit country account while crediting the surplus country account. (Once the deficit country account is zero, the discipline principle switches to the asset side of the IMF, which lends to the deficit country from Fund holdings of surplus country currency.)

Keynes International Clearing Union / White International Stabilization Fund

Assets	Liabilities	Assets	Liabilities
+due from deficit country	+due to surplus country		+surplus country account -deficit country account

Both Plans contained provisions to discourage too-large borrowing, basically escalating costs with the size of debt up to a fixed limit, though Keynes set those limits considerably higher than did White. The more significant difference was that the Keynes Plan contained also provisions to discourage too-large lending, by charging interest (not paying interest) on positive balances, whereas the White Plan contained no such discouragement on the creditor side. In the language of the time, which has been retained in discussions of this key difference ever since, the Keynes Plan sought to "correct" the asymmetry that forces borrowers to adjust, by requiring that creditors also face a similar stricture (Skidelsky 2000).

The issue, so historians have repeatedly recounted, was the deflationary bias involved in requiring deficit countries to adjust (by cutting their spending), without at the same time requiring creditor countries to adjust (by increasing their spending). According to the income flow analysis pioneered by Keynes himself, that bias is bad for the deficit countries because it stifles their own aggregate income and employment. And it is also bad for the world because reduced spending on imports reduces income and employment abroad. Correcting the asymmetry of the international payments system therefore seemed like a key pillar of an anti-Depression policy for the post war world. From this point of view, the victory of the White Plan over the Keynes Plan has been interpreted as a defeat of the Keynesian theoretical framework in favor of classical laissez faire orthodoxy, or some such. A near-contemporaneous interpretation to that effect is United Nations (1949).

But it is not at all clear that Keynes himself viewed matters that way. Gardner (1956) has emphasized the goal of restoring multilateralism in trade as common ground shared by both White and Keynes, and as the essential context for understanding their proposals for the postwar monetary institutional framework. For White the goal of multilateralism was official policy, advocated with great force by Secretary of State Cordell Hull who saw free trade as the basis for peace. But for Keynes, the same goal was more of a personal aspiration, the ambition of a lifelong liberal to restore an international order sadly eroded by the bilateralist policies to which Britain had been forced to resort in the interwar period. Importantly, these bilateralist policies retained considerable support within British official circles among those, on both the left and the right, who were concerned about a post-war return to the exigencies of pre-war. But as chief architect of the essential principles of that new semi-autarkic faith, in his 1936 General Theory, Keynes had the bona fides to urge his countrymen to embrace a larger vision, and he threw himself fully into the task (Skidelsky 2000).

Both Keynes and White appreciated that their shared goal was achievable only in the long run. In the short run, the exigencies of postwar reconstruction would drive foreign economic policy relations. And even in the long run, global growth prospects would obviously depend mainly on channeling international capital flows to fund the development prospects of what we now call the Third World (Helleiner 2014). Nevertheless, and putting all that aside, it was also clear to both men that the question of appropriate monetary infrastructure would inevitably arise, and it seemed better to deal with it as part of post-war planning rather than wait for the moment of actual need.

A key sticking point, which again both men recognized, was that the ability of sterling to serve as international currency had been seriously degraded even before the war, even more by the exigencies of war, and that it could be expected to be degraded further after the war by the end of empire and the associated end of imperial preference in trade. By contrast, the dollar had an obvious future as an international currency. The problem was to manage the transition from sterling, and at the center of that problem was the matter of so-called blocked sterling balances. The balances were blocked because any attempt to spend them outside the sterling area would immediately deplete scarce British reserves, and force the implementation of restrictions that would halt the move toward multilateralism.

In principle, the US could have facilitated transition by providing a massive conversion loan, taking on the blocked balances as its own liabilities in dollars and adding the sum to the accounts owed by Britain. But both sides recognized the political impossibility of such, on both sides of the Atlantic.

That is why both Keynes and White envisioned sterling retaining some of its pre-war monetary role, even as new arrangements recognized the rise of the dollar; the problem of sterling balance overhang more or less required it. Notwithstanding the ambition of multilateralism, bilateral sterling-dollar diplomacy was required because of the legacy of past sterling dominance and the prospect of future dollar dominance. Quite apart from the problem of reconstruction and restarting global growth, there was a monetary transition to be managed.

As an aside, note that in this interpretation Keynes and White were not perhaps so far as it seemed from the key currency proposal of John Williams, which emphasized the special role of sterling and the dollar on account of the sophisticated banking apparatus in London and New York. "Only in New York, and in London, do we find the great banks and the rest of the machinery for financing the world's trade. This indeed is why trade is financed in key currencies" (Williams 1947, lxxiii). The difference was that Williams was looking ten or twenty years down the road, to a time after the reestablishment of private banking on commercial principles. Keynes and White were looking at the immediate challenge in front of them, and realizing that political, not commercial, means would be required to tackle it.

Had Keynes and White survived to see postwar evolution, it is entirely possible that they would have embraced the key currency idea. Indeed, Keynes' willingness at Bretton Woods to accept White's discipline principle very likely anticipated the eventual operation of the elasticity principle in the operation of private banking. After all, that is exactly what happened in Britain after Peel's Act of 1844 established a largely inelastic note issue, and Keynes knew it. Keynes (1913) makes clear that evolution of banking practice in Britain after 1844 had largely overcome the problems associated with that inelasticity by creating an elastic deposit currency; that's the path he was urging for India. But neither Keynes nor White lived to see that postwar evolution. Keynes was dead at 62 in 1946 and White at 55 in 1948. With the principals gone from the scene, everyone else was left only with their last words, and in subsequent years those words have tended to ossify and freeze economic discussion. A debate that was really mainly about sterling balances got interpreted as being about something more fundamental. It is time to put that debate to rest. To do that, we first have to understand what it was actually about.

At one level the sterling balances problem was simply the legacy of empire. In essence, India's accumulation of sterling balances had financed Britain's deficit with the rest of the world. The stylized balance sheet below explains how this worked.

United States		Great Britain		India	
Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
-US goods +Indian goods		+ US goods -dollars		-Indian goods +dollars	
		+ dollars	+ sterling balances	-dollars +sterling balances	
		+ sterling bonds	+ sterling balances	+sterling balances	+sterling bonds

The first line shows the typical trade deficits of Britain and trade surpluses of India (standing in for the rest of the sterling area), relative to the United States (standing in for the non-sterling area). The second line shows Great Britain acquiring from India the dollars it needed in return for providing sterling balances that India could use for trade within the sterling area; this is how Britain settled accounts with the rest of the world. The third line shows Britain lending long term to India and making payment by creating more sterling balances that India could use for trade within the sterling area; this is Britain acting as bank of the (sterling) world, providing liquid balances by borrowing short term even as it provided capital funding by lending long term.

This is the world that Keynes knew in 1913, a sterling-gold exchange system. It was also the world he was trying to reconstruct in 1923, while making room for a parallel dollar-gold exchange system. In 1923, he did not worry about sterling balances because he assumed that empire would continue, meaning that sterling balances would be spent in the sterling area. World War II however swept away that assumption, opening up the possibility for India (and the rest of the sterling area) to accumulate dollar balances instead of sterling balances, and (even worse) to attempt to convert their existing sterling balances into dollar balances. From this point of view, the essential vulnerability of the post WWII system came from the fact that there would necessarily be two different key currencies. When holders of sterling balances shifted to holding dollar balances, the consequence would be gold flows from London to New York that, if not controlled in some way, would force restrictions that would prevent multilateral trade.

The legacy of war made everything harder, since war expenditures had involved Britain selling off its holding of foreign assets, and borrowing heavily both from inside and outside the sterling area. The balance sheet below shows how all this worked.

United States		Great Britain		India	
Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
-war goods US +gold and foreign assets		+war goods US -gold and foreign assets			
-war good US +war debt		+war goods US +war goods IND	+war debt +sterling balances	-war goods IND +sterling balances	

The first line is the liquidation of foreign assets, and the second line is borrowing from the US in the form of war debt and from India in the form of additional sterling balances. Even supposing that the US cancelled British war debt, as it largely did, any attempt by holders of sterling balances to shift them into dollars or (which is the same thing) to use them to buy goods outside the sterling area would cause an immediate gold outflow.

From this point of view, all the talk at Bretton Woods about ICU versus IMF was largely about whether these sterling balances would be multilateralized or not. Under the Keynes Plan, any attempt by India to shift its sterling balances into dollars would be absorbed not by gold flows from the Britain to the US but rather by an expansion of clearing house credit, borrowing from the US and lending to Britain, elastically without limit. Under the White Plan, the same shift would also involve the IMF lending to Britain, but the lending capacity of the IMF was limited by its holding of gold and dollars. The decision to go with the IMF rather than the ICU thus ensured that the blocked sterling balances would have to remain blocked for a considerable period after the war, as indeed they did. As a consequence, return to commercial principles in economic relations between nation states was pushed off farther into the future, and in the meanwhile remained subject to political principles. The US, not the ICU, decided to whom and how much to lend.

Just so, Kindleberger (1950) makes the case that the essential problem in the immediate postwar world was a dollar shortage in the rest of the world, and that the United States could help the rest of the world most by expanding its spending on imports. Indeed, he argued that, given the shortage of dollars, it was entirely possible that expanded US imports would wind up financing an equal or even greater quantity of US exports (Kindleberger 1949). Kindleberger (1951) emphasizes the interventionist role of the US in the pound crisis (British loan 1945-6), then the Marshall Plan, then the establishment of the European payments union, and points out the negligible role of the IMF in each of these cases. Political principle, not commercial principle, guided all these interventions (which is perhaps why they remain controversial to this day).

But that was the immediate postwar only. In time private capital markets began slowly to rebuild, and to innovate ways around the strictures of Bretton Woods. In time the political gave way to the commercial, first at home in the US and then abroad.

Interest Parity Under the Dollar Standard

Indeed it was less than a decade after the war that the era of dollar shortage gave way to a perceived era of dollar glut, a shift driven largely by the aforementioned recovery of private banking. Unfortunately this recovery took place at exactly the same time that the US trade surplus shifted into deficit, leading to the well-known Triffin analysis that emphasized the role of those deficits in supplying dollar reserves to the rest of the world (Triffin 1960). Not so, argued Depres et al (1966). Much like Britain had done in a previous age, the US was serving as bank of the world, providing liquid balances by borrowing short term even as it provided capital funding by lending long term.

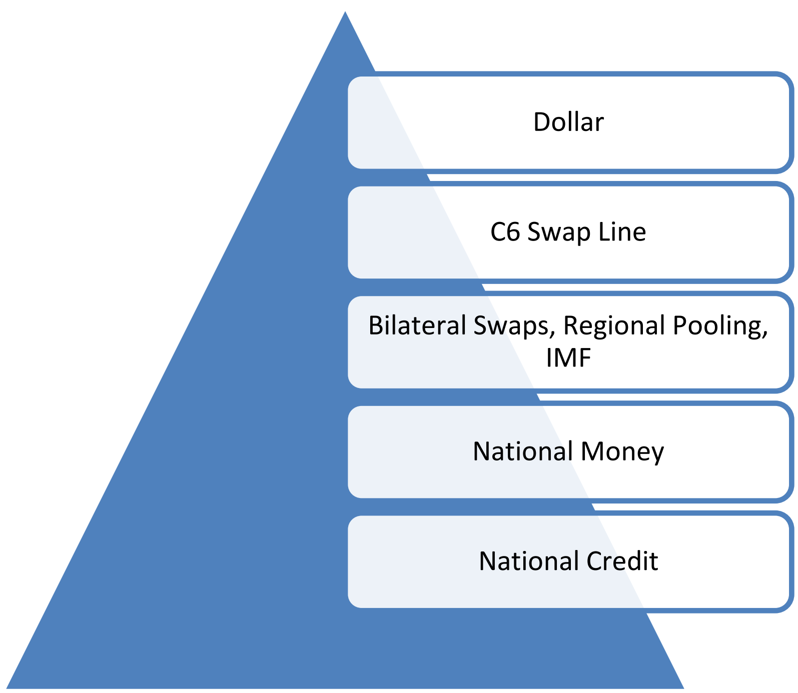
In the event, it was the analysis of Triffin and others like him that captured the imagination of policymakers. As a consequence, the "bank of the world" function, which could very easily and naturally have grown up with its center in New York, grew up instead largely in Europe with its center in London. This is the so-called Eurodollar system that grew up after the collapse of Bretton Woods in 1971, a system built outside New York but reliant on bankers balances in New York as reserves. Today London remains the center of the world dollar funding system, notwithstanding the global financial crisis of 2007-2009 that provided a near-fatal stress test of the new system. Under stress, the private bankers balance backstop proved woefully inadequate (Baba et al 2008). From this point of view, arguably the most important institutional innovation arising out of that stress test has been the establishment of permanent and unlimited swap lines linking the top six central banks: the Fed, Bank of England, European Central Bank, Swiss National Bank, Bank of Japan, and Bank of Canada (Jones 2013). This is the mechanism that now knits the most important currencies into a resilient web at the center of the international monetary system. How resilient it is, time will tell.

In historical perspective, this network of swap lines can be understood as going the next step beyond what Keynes proposed in 1923. Like Keynes' proposed forward exchange arrangements, the swap lines provide a corridor within which private foreign exchange arbitrage can make markets in order to absorb fluctuations in international payments. Unlike Keynes' proposal the central banks are not trading directly with markets but the result is the same, to prevent hedging demand from overwhelming private capacity as it did during the crisis. Like Keynes' proposed forward exchange arrangements, the swap lines allow exchange rates to change which means that price absorbs some of the impact of payment imbalances. But unlike Keynes' proposal, the effect of tapping the swap lines is to expand the quantity of world reserves, which means that quantity is available to absorb the rest of the impact.

The central point to appreciate is that the global financial crisis was not just a test of the emerging market-based credit system (so-called shadow banking), though it certainly was that (Mehrling

2011). It was also a test of the Eurodollar-based international funding system that had grown up after the collapse of Bretton Woods. In the wake of the crisis, the international monetary system is being remade. As at Bretton Woods, states push and pull in official negotiations. But also, as after Bretton Woods, private banking can be expected to develop organically. The transition from war finance to commercial principles after World War II took at least a decade; exit from the extraordinary war-finance-like quantitative easing of the major central banks may well take considerable time as well. Nevertheless, even before the return of commercial principles, the outlines of a possible future international monetary system can be seen.

As of this writing, the system that seems to be emerging has the dollar remaining at the top, the C6 below that, and everyone else below that. This is the system that the next crisis will test.



The emerging system is not without its challenges, to be sure. Looking forward, the issue is not the transition from sterling to the dollar, but rather from the dollar to something else, perhaps the renminbi (Jenkins et al 2014). But that is likely decades away—China is perhaps now where the US was immediately after WWI, not WWII--and is anyway no threat to the dollar since there is no stranded dollar balance problem. Quite the reverse, the enormous dollar reserve balances of the People's Bank of China have in effect swept up any and all stranded dollar balances and converted them into RMB already. The evolution of RMB into a key currency awaits the development of a banking apparatus equal to the tasks currently undertaken in London and New York.

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