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The Wide Angle

Are We Entering a Post Dollar World?

Summary

- The ongoing financial crisis and the relative economic decline of the United States have led many economists and policy-makers to question the US dollar's position as the world's anchor currency. Suggested alternatives range from a global reserve system to even a return to gold. Perhaps recent efforts to internationalize the CNY have also added to the sense that we are about to experience a shift in the international monetary system.
- The long history of world currencies shows that the global economic system has very often been characterized by an asymmetric relationship where the anchor economy has run persistent current account deficits even as it has provided liquidity to the rest of the world. Known as Triffin's Dilemma, this has often led to economic distortions, indebtedness and inflation. Nonetheless, we found that international monetary systems are far more resilient than is generally believed. This is why Roman coins, Spanish "pieces of eight" and the British sterling remained global anchor currencies long after the issuing countries had been superseded.
- Despite all the pain caused by the Great Recession, there is no sign that the world is forsaking the dollar. The world is still willing to finance the US at very low interest rates and the nominal trade-weighted index of the dollar has not collapsed. History shows that once an anchor currency has established itself, it can be very resilient and often outlasts the economic and geo-political dominance of the country of origin. It is possible (albeit not certain) that China will replace the US as the world's largest economy within a decade but, we feel that US dollar will remain the dominant global currency for a long time afterwards.

Periodical

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Background

The ongoing economic crisis has called into question many of the fundamentals of the world economic system. Not surprisingly, there has been growing talk of how the US dollar will be or should be replaced as the world's anchor currency. Governor Zhou Xiaochuan of the People's Bank of China published an essay stating "The crisis again calls for creative reform of the existing international monetary system towards an international reserve currency with a stable, rule based issuance and manageable supply, so as to achieve the objective of safeguarding global economic and financial stability". Many prominent economists and policy-makers have since expressed a similar sentiment. A UN panel headed by Nobel Laureate Joseph Stiglitz recommended a "Global Reserve System"(essentially an expanded version of the IMF's Statutory Drawing Rights arrangement)) to replace the dollar's hegemony[1].

It should be clear by now that the ongoing financial crisis is not an ordinary cyclical downturn but is it due to a fundamental breakdown in the dollar-based international monetary system? While these systemic shifts happen infrequently, they are by no means rare in history. Over the last century, we have witnessed the demise of the Gold Standard and the collapse of the Bretton Woods system. But, what causes the demise of a global monetary anchor?

One of the common characteristics of most periods of global economic expansion is the willingness of a major economy, usually the pre-eminent power of that time, to trade its credibility to provide the world with a monetary anchor. This leads to a symbiotic relationship between anchor country and the rest of the world where the anchor country gets cheap financing and the rest of the world gets the monetary liquidity needed to lubricate economic activity. Unfortunately, this symbiotic relationship eventually breaks down because of the underlying asymmetry in the relationship. The anchor country needs to run continuous current account deficits in order to provide more and more liquidity needed by an expanding world economy but this makes anchor country increasingly indebted over time. In turn, this undermines the very credibility on which the monetary system is based. Eventually the problem causes the arrangement to rupture and the credibility of the anchor currency suffers.

The above problem was first described in the 1950s by the Belgian-American economist Robert Triffin who pointed out a fundamental flaw in the Bretton Woods system set up after World War Two. It is therefore known as Triffin's Dilemma.

Triffin's writings were focused on the specific problems of the original Bretton Woods system but, as we shall see, it is a generic problem that has plagued the global economic system since ancient times. What does history tell us about the impact of Triffin's problem on anchor currencies? Does the relative economic and/or geo-political decline of the United States necessarily imply the decline of the US dollar as a world currency?

A Short History of Anchor Currencies and Triffin's Dilemma

It is generally assumed that the Triffin's Dilemma is a problem pertaining to the modern world and specifically to the Bretton Woods arrangement. However, various manifestations of this problem have existed since ancient times. During the Roman times, for instance, the world economic system was underpinned by booming trade between the Roman empire and India, the export champion of the ancient world. Merchant ships sailed down the Red Sea or the Persian Gulf and then took advantage of the monsoon winds to cross the Arabian Sea to India. A mariner's manual called "Periplus Maris Erythraei" has survived from that time and gives detailed instructions on how to sail to Indian ports. In recent decades, archeologists have uncovered the remains of many ports along these trade routes including the Greco-Egyptian port of Berenike on the Red Sea, the submerged remains of ancient Alexandria on the

[1] http://www.un.org/apps/news/story.asp?NewsID=32020&Cr=financial+crisis&Cr1=

Mediterranean, and the port of Caeseria Maritima built by King Herod. In India, archeologists have recently identified the location of the great port of Muzeris (or Muchheripatanam) in Kerela, just north of modern Kochi. As a result of this history of trade relations, India's western coast is still home to the oldest community of Jews in the world, the last remnants of the Zoroastrian tradition as well as some of the most ancient Christian groups.

The problem with Indo-Roman trade, however, was that India ran a large trade surplus with the empire. As Pliny (23-79 AD) wrote: "Not a year passed in which India did not take fifty million sesterces away from Rome"[2]. The trade deficit meant that there was a continuous drain in gold and silver coins that in turn created shortages of these metals in Rome. Expressed in modern terms, this meant that the Romans were constantly facing a monetary squeeze. Matters were made worse by the fact that the empire frequently ran fiscal deficits due to external and internal wars. Roman emperors tried to deal with the twin deficits in various ways. Emperor Vespasian tried unsuccessfully to impose restrictions on imports from India in the 1st century AD. However, the more common response to the problem was the debasement of imperial coins by reducing the gold/silver content (the ancient equivalent of printing money). Not surprisingly, the real value of the coins declined and the Romans experienced inflation. It is estimated that the price of a military uniform rose 166 times between 138 AD and 301 AD[3]. The price of wheat rose more than 200-fold during this period. This should dispel another common belief that inflation is a modern invention.

The Romans tried many things to stabilize prices, including Emperor Diocletian's famous edict to fix prices. None of these efforts worked in the face of a continuous trade deficit with India, persistent fiscal deficits and the consequent debasement of coinage. Ultimately, inflation led to serious distortions in the economy. It is said that soldier's pay was so diminished in real worth that a full year's pay could barely buy eight week's worth of bread. This was one of the pressures that eventually eroded Roman credibility even as the empire went into terminal decline. Yet, frequent findings of Roman coins in India suggest that Roman coinage continued to be accepted for a long time after it must have been obvious that the gold/silver content had fallen. Indian merchants would almost certainly have asked for a suitable discount to adjust for falling gold content but they still held these coins in enough regard that they imitated the Roman style on their own coins and even produced forgeries! It appears that the prestige of Rome lingered in its coins even when it was clearly in decline.

For a thousand years after the decline of Rome, Europe played a relatively small role in the global economy even as trade boomed between the Arabs, Indians, Chinese and the kingdoms of South East Asia. Columbus' discovery of the Americas and Vasco da Gama's discovery of the sea route to India changed this. Spain now became a super-power and its financial strength was bolstered by its access to silver from New World. Between 1501 and 1600, 17mn kg of pure silver and 181,000kg of pure gold flowed to Spain. However, Spain spent its wealth on expensive wars in the Netherlands and elsewhere. As a result, it constantly ran trade deficits with the rest of Europe and paid for it in silver coins. This injection of monetary liquidity, in turn, caused an economic boom in the rest of Europe and helped spread the spirit of the Renaissance.

Nonetheless, the increase in the supply of precious metals also caused a sustained bout of inflation. Prices rose at least four-fold in Spain over the course of the sixteenth century. Soon Triffin's problem came to haunt the system. Despite its access to New World silver, Spain became increasingly unable to service its war debts. Spain's supplies of gold and silver were often pledged years in advance to Genoese bankers[4]. Eventually, Spain repeatedly defaulted on

[2] "The Indian Renaissance: India's Rise After a Thousand Years of Decline", Sanjeev Sanyal, Penguin 2008.

[3] "An Analysis and History of Inflation" Don Paarlberg, Praeger 1993.

[4] "A History of Interest Rates", Sidney Homer & Richard Sylla, John Wiley 2005 (4th edition).

sovereign debts (1607, 1627 and 1649) and went into geo-political decline. Italian bankers such as the Fuggers were ruined by the defaults.

The political and economic center of gravity now shifted north to Holland, France and Britain. They would by turns come to dominate world trade in the seventeenth, eighteenth and nineteenth centuries. Despite this shift, Spanish silver coins (known as "pieces of eight" or Spanish dollars) continued to be the key currency used in world trade right up to the American Revolutionary War. In fact, they remained legal tender in the US till 1857 – long after Spain itself had ceased to be a major power.

It was only in the nineteenth century, following the defeat of Napoleon, that Britain was finally able to impose a system that affirmed its role as the world's anchor economy and, for a while, held at bay Triffin's problem. This system is known to historians as "triangular trade" between Britain, India and China. Under this arrangement, the British sold manufactured goods to the Indians and purchased raw cotton and opium. The opium was then sold to the Chinese in exchange for goods such as tea and porcelain. These were then sold back in Europe to fund the manufacture of exports to India. In this way, Britain did not bleed gold in order to keep the system flowing. Note that this global trade system was stable in the sense that it did not suffer from Triffin's Dilemma but it functioned because the East India Company was militarily able to impose its will. The imports of British-made industrial goods devastated India's large artisan-based manufacturing sector. At the same time, Chinese attempts to close down the opium trade resulted in the Opium Wars of 1839-42 and 1856-60. In other words, Triffin's dilemma was circumvented through war, colonization and drug-running.

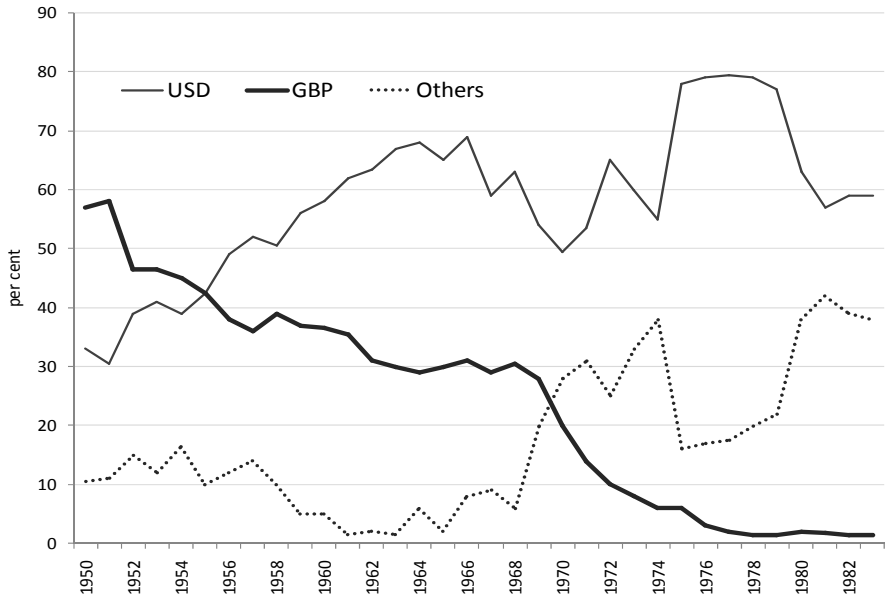
By the middle of the nineteenth century, the world was functioning on a bi-metallic system based on gold and silver. However, following the British example, most major countries shifted to a gold-standard by the 1870s. The Bank of England stood ready to convert a pound sterling into an ounce of (11/122 fine) gold on demand. The US Treasury was similarly committed to convert an ounce of gold at $4.86[5]. Notice how, in turn, this locked the USD/GBP exchange rate. This underlying monetary system anchored a great age of expansion in global trade and economic activity. Nevertheless, its success was underpinned by a lucky coincidence - a succession of gold discoveries in California, Australia and South Africa that allowed the world's gold supplies to expand roughly in line with economic activity. It helped that many of these discoveries were conveniently in British control. These factors held Triffin's Dilemma at bay by supplying liquidity for the world economy. Even then, it was not an age without its problems. There were periods of inflation as well as periods of deflation. A succession of "panics" affected the global financial system. There were worries that excessive gold supplies would lead to sustained inflation.

The system was finally disrupted by World War One but by this time Britain had long ceased to be the world's most powerful economy. Britain was overtaken by the US around 1890 and then by Germany in the 1900s. After the war, harsh terms were imposed on Germany by the victorious allies. With no other resources available, the German authorities resorted to printing ever greater amounts of paper money till the process went out of control. By November 1923, a kilogram of bread cost 428 billion marks, a kilogram of butter 5600 billion marks, a newspaper 200 billion marks and a tram ticket 150 billion marks. This experience remains imprinted in German memory. Meanwhile, the British tried to reestablish the pre-war global order by going back to a gold standard in 1925. There were also attempts to create a mercantile system of "Imperial Preference" within the British Empire that would have served the same purpose as nineteenth-century triangular trade. The world, however, had changed and Britain's position was no longer credible. With the Great Depression taking hold, the Bank of England was forced

[5] "The Gold Standard in Theory & History", Barry Eichengreen and Marc Flandreau, Routledge 1985.

to choose between providing liquidity to the banks and honoring the gold peg. It opted for the former on 20th September 1931.

Figure 1: Distribution of Foreign Exchange Reserves 1950 to 1983



Source: The Retirement of Sterling as a Reserve Currency after 1945: Lessons for the US Dollar? By Catherine R. Schenk

The decline of the GBP's role as anchor currency does not mean that the US dollar (or anyone else) rushed in to fill the gap. The problem in 1930s was of competitive devaluations as no one was keen on taking on the job. Thus, the pound sterling continued to be a major world currency till well after World War Two and remained the dollar's main competitor. Even in 1950, 55% of foreign exchange reserves were held in sterling and many countries continued to peg themselves to it. Note that that this was more than half a century after the US had replaced Britain as the world's largest industrial power. As Barry Eichengreen has pointed out in his recent book, the GBP finally lost the race during the Suez Crisis of October 1956[6]. The British not only had to withdraw militarily from the Suez but were forced to ask the IMF for help by December of that year. Even then, the GBP remained a major world currency and accounted for 30% of world reserves till the beginning of 1970.

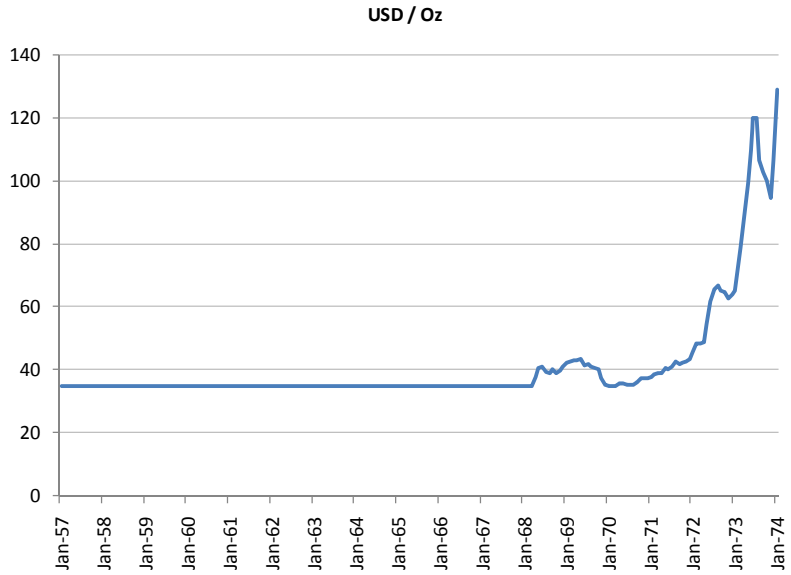
Three things should be clear to the reader by now. First, a global monetary system based on precious metals does not resolve Triffin's Dilemma – the fundamental imbalances of the system remain unless circumvented by some deliberate means (such as nineteenth-century triangular trade). Second, precious metals do not even resolve the problem of inflation. The Romans suffered from scarcities of gold and silver while the Spanish had too much. In both cases we saw sustained inflation. Finally, and most importantly, Triffin's dilemma may cause indebtedness in the anchor country but the anchor currency and the underlying eco-system of world trade will often outlive the geo-political decline of the anchor country. As long as the anchor currency maintains some semblance of credibility in maintaining its value – even allowing for some inflation – other participants in the global trading system will not rush to forsake it. To some extent this is human and institutional inertia but more likely, it is due to the fact that economic participants have too much invested in the pre-existing system to want a sudden disruption. As documented by Catherine Schenk, there were a series of international

[6] "Exorbitant Privilege", Barry Eichengreen, OUP 2011

agreements in the 1960s and 1970s to retard the switch away from the sterling[7]. Moreover, many features of the old systems persist for a long time in the new arrangements.

A new economic order was established after World War Two with the United States as the anchor country. Dubbed the Bretton Woods system, it involved the US dollar being linked to gold at USD35/ounce and with other currencies being linked to the dollar (although allowed occasionally to make adjustments). Despite all the fuss, notice that the Bretton Woods system was not completely different from the gold standard since everyone was indirectly still linked to gold. Robert Triffin pointed out a fundamental flaw in the system almost as soon as it was established. He argued that this system would underpin global economic expansion only so long as the US was willing to provide dollars by running up deficits but these same deficits would eventually undermine the ability of the US to maintain the USD35/ounce gold price.

Figure 2: Gold Prices During the Breakdown of Bretton Woods One



Source: DB Global Markets Research (Commodities), IMF, Bloomberg

In the late 1940s, this seemed like a distant problem to policy makers dealing with severe dollar shortages in the devastated economies of Europe and Japan but, by the early 1960s, it was beginning to bite. The first response was to create a "Gold Pool" that obliged other countries to reimburse the US for half of its gold losses[8]. Very soon this began to breed discontent. Valerie Giscard d'Estaing, then the French finance minister, called it America's "exorbitant privilege". France left the Gold Pool in 1967 and the Bretton Woods system collapsed by 1971. Or did it?

The link between the USD and gold was certainly broken but note the attitude of the two countries that benefitted most from the Bretton Woods system – West Germany and Japan. Unlike the French, the Germans stayed in the system till the end and tried to support it as long as their fear of inflation could bear it. The Japanese appear to have decided that the credibility of the US dollar was good enough even without the backing of gold. They continued to discourage the international use of the JPY till forced into it by the Plaza Accord of 1985. Note how neither country was pleased to let go of the existing arrangement.

[7] "The Retirement of Sterling as a Reserve Currency after 1945: Lessons for the US Dollar", Catherine Schenk, University of Glasgow, 2009

[8] "The Exorbitant Privilege", Barry Eichengreen, OUP, 2011

Despite the problems of the 1970s, the USD remained the world's dominant currency and arguably rebuilt its credibility due to Fed Governor Volker's anti-inflation policies in the 1980s and then as the world's sole super-power after 1990. Perhaps not surprisingly, a new generation of Asian countries – most notably China – pegged themselves to the US dollar and began to use an export oriented strategy to grow. Deutsche Bank's David Folkerts- Landau, Peter Garber and Michael Dooley famously dubbed the resulting relationship as Bretton Woods Two[9]. In common with its older version, the system allowed the peripheral economy (China) to grow very rapidly even as the anchor economy (United States) enjoyed cheap financing. Note how the relative rise of China did not diminish the role of the US dollar and may even have enhanced it. Indeed, like the Japanese during their period of high growth, the Chinese resisted the internationalization of the CNY till very recently and even now are proceeding very cautiously. Thus, one could perhaps argue that the Bretton Woods system did not really die in 1971 but merely changed orientation from the Atlantic to the Pacific.

The Economics of Persistent Imbalance

The ongoing crisis, variously named the Great Contraction and the Great Recession, is often interpreted as a crisis of the world monetary system triggered by indebtedness and a loss of credibility (essentially a manifestation of Triffin's Dilemma). The Governor of the People's Bank of China, no less, invoked Triffin's Dilemma to explain the fundamental problem with the international monetary system[10]. Many experts have argued for "reform" of the global monetary system. There have been many suggestions ranging from a return to gold, a greater role for the IMF's Statutory Drawings Rights (SDR) or a completely new world currency.

The idea of a world currency is not new. In the 1940s, John Maynard Keynes had mooted the idea of creating a system of international lines of credit denominated in a book-keeping unit called the "Bancor". `However, in our view, none of these suggestions are likely to succeed. As we have seen, the use of precious metals does not really solve Triffin's Dilemma. The failure of the SDR to become a world currency suggests that the Bancor too would not really have solved anything. The world's anchor currency is a public good and, as the Euro has recently illustrated, would suffer from the "tragedy-of-the-commons" that plagues all public goods. A full discussion of the Eurozone's problems is beyond the scope of this report but it should be clear that a world currency would not escape the same internal stresses (including the possible need for some form of fiscal union that may be implicit in such an arrangement).

In short, Triffin's problem is insurmountable if we are seeking to keep the world to some "equilibrium". The good news is that the world economy is not a mechanical weighing scale that needs to be quickly corrected whenever an imbalance appears but an evolving ecosystem that may never quite be at equilibrium at any point in time.

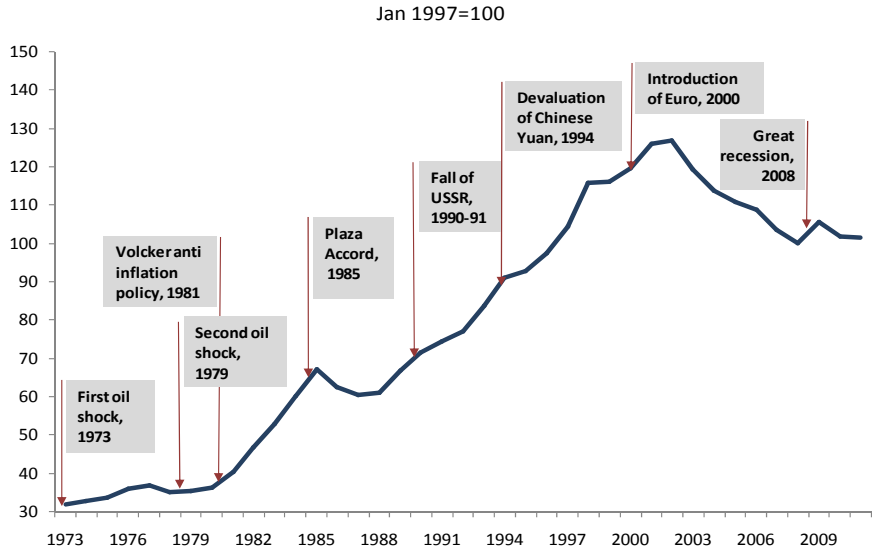
If history is any guide, the world economic system has only ever been in "balance" by lucky coincidence or when there has been a hegemonic country who can impose its will (as with Britain under the triangular trade system). We are not suggesting that Triffin's Dilemma is not a real problem but merely that the world lives with its distortions for most of the time and economic participants are often willing to pay the price for perpetuating a functioning global arrangement as long as the price does not become prohibitive. Thus, ancient Indians were willing to accept debased Roman coins just as modern central banks and economic participants are willing to hold US dollars despite private/public indebtedness, political wrangling and even a sovereign ratings downgrade. This is not because economic participants cannot see the problem of an asymmetric arrangement but due a willingness to pay a price for keeping the

[9] "An Essay on the Revived Bretton Woods System", Michael Dooley, David Folkerts-Landau and Peter Garber, NBER Working Paper, September 2003.
[10] "Reform of the International Monetary System", Governor Zhou, People's Bank of China, April 2009

world economic system liquid. One could interpret this as the "seigniorage" or "exorbitant privilege" of the anchor currency.

The best sign of the resilience of the dollar-based system is to look at what has happened to the trade weighted index of the US dollar since the crisis. As illustrated in the chart, the USD has been through very large swings since the end of Bretton Woods One, including a large decline in the years immediately preceding the Great Recession. Yet, the trade weighted index has been stable since the crisis began – hardly a sign that the dollar is being abandoned. Far from it, the world appears to be willing to finance the United States at very low interest rates.

Figure 3: US Dollar Nominal Trade Weighted Index

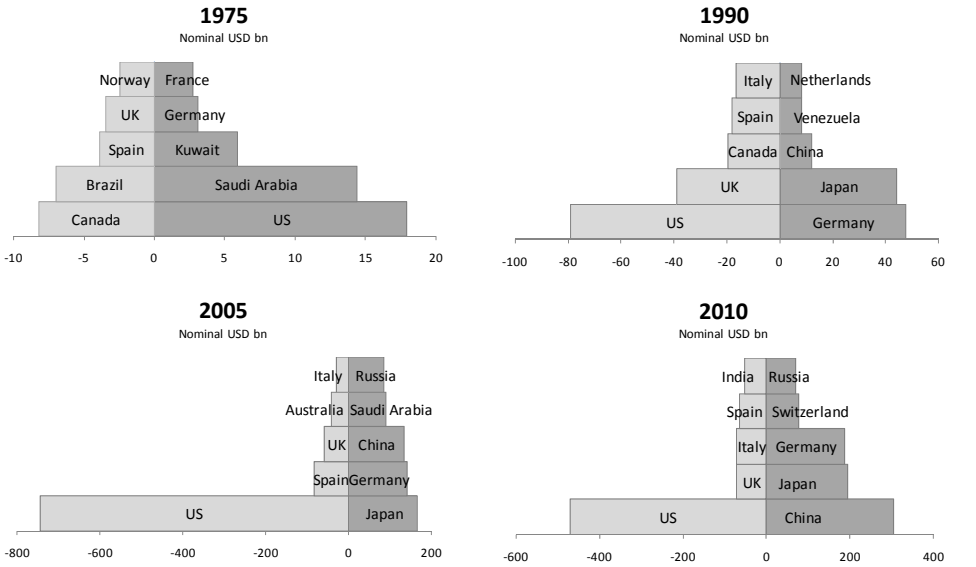


Source: Haver, Federal Reserve

The continued resilience of the dollar-based system does not mean that the deficits and indebtedness caused by Triffin's problem are not issues of concern. However, the point is that one cannot escape Triffin's problem by simply blaming the dollar. As shown in the charts below, the US did briefly run a current account surplus in the mid-1970s but we do not remember the seventies as a period of stability and growth but one of stagflation and uncertainly. In contrast, the US has subsequently run deficits through prolonged periods of prosperity and low inflation. The world is a closed economy and for some countries to run a surplus, someone else must run a deficit. If the world truly wants to leave the dollar and its distortions, it needs to find a country (or perhaps a combination of countries) who is both willing to run persistent deficits and is still able to maintain the credibility of an anchor currency. This is not an easy job. Japan has a strengthening exchange rate but it is not ready to take the pain that would be needed to turn its persistent current account surplus into a deficit. Hence, it continues to intervene in currency markets and, thereby, to supply cheap capital to the US.

Thus, the emergence of a couple of alternative currencies does not necessarily mean that the dollar anchored system dissolves. There is a Ricardian equivalence at work as long as central banks worry about their exchange rate vis-à-vis the dollar. So when the Chinese diversify their reserves from the USD to another currency, the issuing central bank of that currency is forced to buy USD in order to stop its own exchange rate appreciating too much. Such a system remains dollar anchored.

Figure 4: Top Current Account Surplus and Deficit Countries



Source: Haver, IMF, OECD, Deutsche Bank estimates

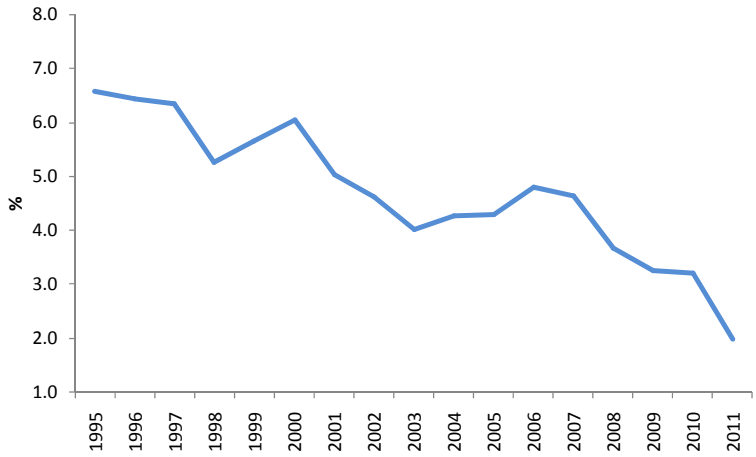
Implications for the International Monetary System

Historical experience shows that no system – based on precious metals or otherwise – fundamentally resolves Triffin's Dilemma. Even a "world currency" will not solve this. As the Euro has recently illustrated, a world currency will not automatically correct imbalances between countries. An anchor currency is a public good and will suffer from the "tragedy of commons" that plagues all public goods unless it is "owned" by someone. The only time that Triffin's Dilemma can be resolved is when some hegemonic power is able to impose its will and deliberately balance the books. One example was the British-run triangular trade system in the nineteenth century but we know that it came at a great cost to all parties. The Plaza Accord of 1985 could also be seen as an attempt by the US to do the same although it did not really succeed in getting rid of either Japan's current account surplus or America's deficit.

The good news is that the world economy has functioned for long periods of times despite the distortions caused by Triffin's problem. Indeed, for all the criticism of the Bretton Woods Two ecosystem, the essential structure of the system has survived the financial crisis. The Chinese continue to run large current account surpluses and to accumulate foreign exchange reserves. The Americans still run large deficits and receive cheap financing[11]. We are not making a value judgment about whether or not this is desirable, but merely pointing out that such ecosystems can be strong enough to survive serious shocks despite the asymmetry. In fact, as shown in the graph, the yield on US treasuries has continued to decline despite the prolonged crisis and even a sovereign downgrade by rating agency Standard & Poor's.

[11] "Bretton Woods II Still Defines The International Monetary System", Michael Dooley, David Folkerts-Landau & Peter Garber, NBER February 2009

Figure 5: US 10 Years Treasury Yields



Source: Haver

Overall, our study suggests that once an anchor currency has established itself, it can be very resilient and often outlasts the economic and geo-political dominance of the country of origin. We saw this with the Spanish pieces-of-eight as well as with the British pound. Moreover, new entrants do not rush in to take their place. The US was reluctant in the 1930s, the Japanese were reluctant to internationalize the Yen till the 1980s and the Chinese are now moving very cautiously on the CNY. It is possible (albeit not certain) that China will replace the US as the world's largest economy within a decade but, we feel that US dollar will remain the dominant global currency for a long time afterwards. Even when a shift does occur, it is likely to be prolonged affair with many elements of the old system surviving into the new arrangement.

Appendix 1

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