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## Global Economic Insight

### The Future of the US Dollar as a Reserve Currency

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#### **Introduction**

*Will the US dollar lose its role as an international reserve currency within a few years? What might replace it? In order to comment sensibly on the prospects for the US currency in its international reserve role and to answer the question about what might replace it, we need first to understand the essential characteristics of an international reserve currency. This short paper will first review the historical process by which the US dollar emerged as the pre-eminent international reserve currency, drawing from that a list of the pre-requisites for such status. Having established those necessary conditions, we can then proceed to ask which existing national currencies could replace the US dollar, and whether a synthetic currency could fulfil those conditions. Finally the paper will look at the conditions that the Chinese RMB must fulfil in order to become a candidate for an international reserve currency status before concluding.*

#### **The Decline of Sterling, and the Rise of the US Dollar as the Leading Reserve Currency**

During the 19<sup>th</sup> century under the gold standard and into the early years of the 20<sup>th</sup> century, sterling was the pre-eminent international currency. Its key role is illustrated by the tendency of traders and financiers all over the world to denominate and finance transactions - which may not even have involved a British counterparty - in sterling. For example, textiles exported from Japan to the United States were often financed by means of bills drawn on British banks in London. This role in the financing of private transactions did not automatically make sterling an international reserve currency. Gold being the primary international reserve, and the Bank of England being at the centre of the gold standard, credits on London were thought to be as good as gold. The fact that Britain was the largest economy in the world and also a major creditor nation were undoubtedly underlying contributory reasons. However, during the early decades of the 20<sup>th</sup> century several factors caused sterling to lose its dominance.

First and foremost, between roughly 1890 and 1920 the US economy gradually began to replace the UK as the leading global economy (in terms of GDP, trade volumes etc). Importantly, the Federal Reserve was created in 1913, and by the 1920s Bills or Acceptances on New York (in US dollars) as a means of financing international trade were as important as Bills or Acceptances on London (in sterling) had been before the First World War. Second, the UK ceased to be a creditor nation due to the financial burden of two world wars (1914-18 and 1939-45). Third, when the post-war monetary system was planned at Bretton Woods in 1944, and launched with the IMF and the World Bank as its core institutions, the system was built around the US dollar - not the pound sterling - as the key currency of the system, with the dollar convertible to gold at fixed price. Moreover, sterling's reputation suffered significantly from the 30% devaluation of 1949 (although a number of other nations also devalued in line with Britain), and the subsequent restrictions imposed within the so-called Sterling Area. Years of dismal economic performance, characterised by the Stop-Go policies of the post-war years and the devaluations of 1967 and 1972, did nothing to restore Britain's pre-1914 pre-eminence.

Consequently, in the post-World War 2 era, most currencies - with some exceptions such as those of the remaining British, French and Belgian colonies - were pegged to the US dollar. The dollar therefore became the key "intervention" currency of most nations, and in turn the main currency in which other economies held their reserves.

#### **Why did the USD become the dominant currency?**

From this brief historical sketch we can derive the essential characteristics of domestic and international currencies. The classical requirements for domestic money are that it should fulfil three functions:

1. Unit of account
2. Medium of exchange
3. Store of value

But clearly, an international money that is used outside its domestic market (e.g. for trade invoicing, capital remittances, reserve holdings, or as an exchange rate anchor for other currencies etc) must do more than this. The attributes necessary to enable a currency to perform these functions can be grouped under six headings (4-9 below).

**4. Economic Size.** The size and international role of the economy of the currency concerned plays a key role because a large economy will inevitably have a large number of transactions with other economies, both current and capital. The emergence of the US dollar and its replacement of the pound sterling were closely associated with the growth of the US economy, as it gradually approached and overtook the UK in terms of GDP. As a corollary, it would seem unlikely that there would ever be more than a handful of major international reserve currencies, and that in general these select few would normally comprise the currencies of the leading economies. For example, today there are four major reserve currencies, namely the US dollar, the euro, the Japanese yen and the pound sterling, all representing economies respectively the first three and the fifth largest economies or economic zones in the world when ranked by 2008 GDP. The country missing from this list, and fourth largest, is China.<sup>1</sup>

**5. Creditor Status.** The British economy gradually lost its position as the major creditor nation after World War 1. Britain's deteriorating credit status significantly contributed to the displacement of the pound sterling and its replacement by the USD.

**6. Developed Financial System.** Partly by virtue of the size of its economy and its advanced state of development, the US has a sophisticated and well-developed financial system. Consequently the US dollar benefits from a large market in low risk and highly liquid securities, with foreign central banks focusing primarily on US Treasury bonds and bills. The liquidity in US dollar instruments benefits from network externalities (see 7 below). It is easy to hold; there are minimal restrictions; and easy to transact, even on a large scale. In short, it is highly convenient for individual, corporate and government users around the world. As a result, most of the world's foreign exchange transactions directly involve the US dollar on one side of the transaction.

**7. Network Effects.** As mentioned earlier the US dollar did not start out as the world's reserve currency. It did not even become the world's leading reserve currency by design. In the same way that the English language did not become the leading global language by intent, the supremacy of both the English language and the dollar are both the gradual result of habit and experience. Like a common language, the US dollar enjoys what economists call "network externalities" - the greater the number of people who transact using dollars, the more beneficial this is to users, and the more dominant it becomes. To undermine

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<sup>1</sup> World Bank

<http://siteresources.worldbank.org/DATASTATISTICS/Resource/s/GDP.pdf>



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these network effects and simultaneously create a truly viable alternative reserve currency would therefore require both a dramatic shock to the dollar, and the ready availability of a realistic alternative.

### International Currency and International Reserve Currency Status

At this stage it is worth asking whether there is any important distinction to be drawn between an international currency and an international reserve currency. In order for a currency to be an international currency it must clearly fulfil the three basic requirements of any domestic money. To be an international reserve currency it probably needs to meet two further conditions which are implicit in the discussion above, but need to be made explicit:

**8. Available beyond the borders of the home economy.** This means more than simply being available for small transactions (e.g. conversions by tourists or travelling businessmen). It requires that the currency can be deposited, loaned, and be widely acceptable in transactions such as remittances, trade and capital movements beyond local borders – in the same way that sterling was used in the 19<sup>th</sup> century by traders and investors not connected to Britain.

**9. Full convertibility.** An international reserve currency must be convertible for both current and capital account transactions, and in addition it is desirable (though not imperative, as can be seen from the case of sterling before exchange control was abolished in 1979) that there are no restrictions – explicit or implicit – on such activity.

To highlight the difference between an international currency and a reserve currency, consider the Hong Kong dollar and the Singapore dollar. Both are used outside of their own domestic economies, but neither qualifies as a currency having status as an international reserve currency (although it is true that the Hong Kong dollar is the currency to which the Macau Pataca is pegged, and the Singapore dollar is the currency to which the Brunei currency is pegged). These two currencies meet conditions 8 and 9, but these conditions are clearly not sufficient for international reserve status. We may therefore conclude that conditions 1-7 are the necessary and sufficient conditions for international reserve status.

A major deviation from any of these nine conditions (unit of account, medium of exchange, store of value, economic size, creditor status, developed financial system, network externalities, availability beyond home borders, or full convertibility) could over time undermine confidence in the US dollar, threatening its role as a currency for international transactions and/or as a reserve currency although the two functions are not identical and need not develop in strict parallel.

### Feasible Alternatives to the US dollar

Having established by this process the nine desiderata that an international reserve currency must fulfil, we may now proceed to ask, what alternatives there might be to the US dollar, either now or in the medium-term future.

Two broad categories are possible: (1) another existing national currency in widespread use, such as the euro, the Japanese yen, the British pound, or even (as we shall discuss) the Chinese RMB; and (2) a synthetic currency designed for the purpose, of which the SDR would currently be the leading candidate, as

hinted at in March 2009 by Governor Zhou of the Peoples Bank of China.<sup>2</sup>

I will discuss each of the alternative options in turn.

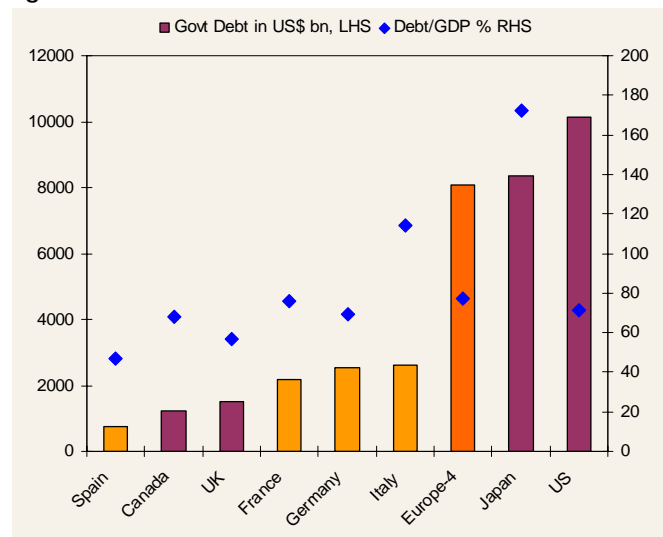
### Existing National Currencies

The euro has been available for payments and deposits since 1999, and has been in circulation as a physical currency since 2002. It has now replaced national currencies in sixteen countries. It is also widely used in European Union economies that have not yet formally adopted the euro, but are likely to do so. It is also used in a number of intending members of the European Union (such as the Scandinavian economies, and the Eastern European and Balkan states).

The euro, despite its youth, meets most of the conditions 1-9. Nevertheless, despite the rapid evolution and the large size of the eurozone economy (around 300 million people), the euro capital market is still fragmented. Depending on the particular instrument, liquidity varies widely. This is important because holders of international reserves cannot simply hold euros (i.e. deposits at private commercial banks); they need to hold highly liquid, euro-denominated securities.

As shown in Figure 1 below, the largest single issuer of euro-denominated government securities is the Italian government, with \$2.61 trillion outstanding in 2008. Many central banks would hesitate to hold such securities, since Italian public debt is 114.5% of GDP, the Italian population is ageing rapidly (which implies its pension and health-care obligations are rising rapidly), and the Italian government lacks a reputation for budgetary discipline.

Figure 1



Source: OECD

Next comes the \$2.54 trillion in German government debt outstanding. But German government debt is predominantly long-term debt, with only about 10% of the outstanding stock having maturities of less than one year. In addition, German institutional buyers tend to hold to maturity, so the secondary market is much less developed than its counterparts in the US or the UK, which means that German bonds are less liquid than US Treasuries or UK gilts.

<sup>2</sup> <http://www.pbc.gov.cn/english/detail.asp?col=6500&id=178>



The chart also shows the smaller amounts of euro-denominated government debt issued by France (\$2.18 trillion) and Spain (\$0.75 trillion), the two next largest issuers. While the total outstanding euro-denominated government debt for the "Europe-4" (Germany, France, Italy and Spain) is \$8.08 trillion, in practice the market is more fragmented and much less liquid than the market in US government securities - essentially because there is no federal European government issuing substantially all the sovereign debt for the area. In contrast to the \$8 trillion for the Europe-4, in 2008 US government debt totaled \$10.1 trillion, including about \$2 trillion of short-term debt (20%).

Japan has a very large government debt, at \$8.4 trillion, only slightly less than the US, of which about one third is short-term debt. However, there are several problems with Japanese securities as a basis for the leading international reserve currency.

First, yields have been exceptionally low since the mid-1990s. Second, the tendency of the Ministry of Finance to engage in "guidance" of the Japanese currency and debt markets substantially detracts from the otherwise sound characteristics of its market in public debt. Foreigners are as a result minority holders of Japanese government debt, accounting for only 5-6% of outstanding issues. Third, Japanese gross government debt is approaching 200% of GDP, the highest among the OECD economies (see figure 2). So far Japan has avoided any financing problems due to the low level of interest rates in Japan, the high national savings ratio, and the low demand for credit. However, foreign official holders of yen securities would wish to be confident about the future, and the slow growth rate of the Japanese economy combined with the rapid ageing of Japanese society could be distinct negatives in any assessment of the attractiveness of Japanese government securities.

Finally, the total outstanding debt of the UK government, though growing rapidly in the past year, amounted to only some \$1.5 trillion in 2008, significantly smaller than that of the larger eurozone countries, and less than the current size of China's foreign exchange reserves. However, the secondary market in UK government bonds (gilts) is much better developed and more liquid than in the eurozone or Japan. Nevertheless, another problem for sterling is that it has tended to be viewed as a volatile currency (or unreliable as a store of value).

An interim conclusion, therefore, is that despite the recent depreciation in the US unit - which may lead to some temporary diversification of reserves away from the US dollar - there is no other major national currency that is currently in a position to be able to dislodge the US dollar from its pre-eminent role as an international reserve currency.

### **Synthetic Currency: SDR or other "basket"**

The leading candidate in this area is the SDR, a synthetic basket of currencies comprised of four existing currencies: the USD, JPY, EUR and GBP.

However, there are many problems with the use of a composite currency of this kind as an international reserve currency, problems which apply to the SDR or any "basket" arrangement: (1) In international trade and financial transactions, settlement or payment is normally specified in an existing single, mutually agreed currency, not in a synthetic currency. Few sellers will want or agree to receive payment in a bundle of currencies, and few buyers will find it convenient to assemble all the component currencies. Normally they will settle in (say) dollars or euros

converted at the appropriate rate against the composite/basket currency. In that case, why not just stick with the preferred currency and hedge the value of the transaction in the forward foreign exchange markets?

(2) Baskets are invariably subject to changes in composition (changing weights, changing methods of computation etc), or even manipulation

(3) Interest rates are hard to compute in synthetic currencies because they must be computed from all the constituent currencies at all the relevant maturities.

(4) Consequently futures markets in the composite currency (or commodities such as oil priced in synthetic currencies) will not be as efficient because the interest rates that permit arbitrage between spot and future values will themselves be a composite of interest rates in all the constituent currencies. (This is a major reason why Hong Kong adopted a peg to the US dollar rather than pegging to a basket of currencies.)

Ultimately, participants in international trade and financial transactions will prefer to transact in a single, convertible, widely traded currency with deep and active domestic money markets, in preference to a synthetic currency. For these reasons I suspect that proposals like People's Bank of China Governor Zhou Xiaochuan's in March 2009 to replace the US dollar with the SDR will simply run into the sand.

### **Specific problems with the SDR**

Who would control the issue of SDRs? At the end of 2008 there was SDR 21 billion outstanding, issued by the IMF, but with US and European Union having an effective veto on new issues through their voting rights in the IMF. However, in 2009 the G-20 agreed to authorize a general issue of SDR 161.2 billion, and a special issue of 21.5 billion was also approved. These issues involved distribution to new members such as China and Russia, as well as existing members such as Brazil, India, and South Korea.

The SDR is currently only used by national monetary authorities and the IMF, the World Bank and the Bank for International Settlements. Most transactions in SDRs are in fact between national monetary authorities and the IMF itself. In order to become a meaningful international currency, the SDR needs to be widely used by private sector firms and individuals.

Figure 2



Source: OECD. 2010\* - forecast



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The SDR is priced daily<sup>3</sup>, and could be priced continuously, but the fact that it is not used widely suggests that there are good reasons not to use a synthetic currency. Most holdings of US dollars outside the US are by private parties, and financial markets are operated by and largely for private parties, with governments and central banks taking advantage of market arrangements. If the SDR were to become a truly international currency, it would need to become a vehicle of choice by private parties.

#### **The RMB as a Potential International Reserve Currency**

Turning to consider future possible reserve currencies, in particular the Chinese RMB, what would have to happen for the RMB to emerge as an international reserve currency?

Viewed in terms of our nine criteria for an international reserve currency, China and the RMB currently only meet the first five (unit of account, medium of exchange, store of value, economic size, and creditor status), while the remaining four have yet to be met (developed financial system, network externalities, availability beyond home borders, or full convertibility). In terms of its government debt market, China's government and central bank bond market combined is relatively small with approximately \$1.4 trillion outstanding in 2008, of which about half (mainly the central bank's sterilization issuance) was short term. Fiscal policy has generally been conservative, and the debt to GDP ratio is low. But the Chinese capital markets are very under-developed, including those for government securities. Liquidity amongst domestic holders is limited as most purchasers hold until maturity. Foreigners are currently not entitled to purchase Chinese government securities at all. Other than for tourists' needs the RMB is only available on a limited basis for deposits in Hong Kong, and it is not convertible for capital account transactions. Thus the RMB does not meet the criteria for becoming an international reserve currency.

However, much could change in the next decade or two. The Chinese authorities are clearly intending to build a more robust financial system with deeper capital markets, the logical conclusion to which would be a fully convertible, floating currency. However, China's financial system requires many basic, infra-structural improvements to enhance the role of interest rates as the main drivers of capital flows rather than administrative controls or official guidance before the authorities could contemplate either the abolition of capital controls or any shift to a floating currency.

Based on the earlier analysis, we can conclude that in order for the RMB to become an international reserve currency, the currency would need first to become an international currency and then to acquire international reserve status. Ultimately this would entail fulfilling the six conditions enumerated above for international or international reserve currencies. First the RMB would need to become an international money i.e. used outside its domestic market (e.g. for trade invoicing, or international capital transactions). Next it would need to progress to international reserve status by virtue of foreign central banks being permitted and being willing to hold a portion of their foreign exchange reserves in RMB, and the Chinese authorities being willing to allow the RMB to be used as an exchange rate anchor for other currencies.

Experiments are currently under way with China arranging bilateral swaps, reciprocal invoicing, bond issues (in Hong Kong), and RMB deposit facilities for local residents (in Hong Kong). But these are only the first tentative steps by an authority whose whole approach has been one of governmental control and restriction, rather than allowing private sector exploration of what might be feasible. In order for the RMB to compete with, let alone replace the US dollar as the world's international reserve currency, it is clear that the Chinese authorities still have a mountain to climb.

#### **Conclusion**

The first conclusion is that none of the other leading currencies in the world today are ready to replace the US dollar in its international role. The international role of the euro is likely to increase in the coming decade as non-eurozone members of the European Union and aspiring candidates increasingly use euros in their transactions with EU countries, for invoicing, for payment, and for holding international balances. But this increasing use of the euro is not likely to displace the dollar at the global level. In a growing world economy, there is room for the euro to increase its share in reserve holdings even while the value of dollar holdings continues to rise.

The second conclusion is that synthetic currencies or basket arrangements such as the SDR will not displace individual, national currencies due to all the inherent problems of pricing and trading in composite currencies.

The third conclusion is that, notwithstanding the current phase of weakness in the value of the US unit, the RMB and the Chinese authorities have a mountain to climb before there is any possibility of the RMB becoming an international currency, let alone an international reserve currency on a par with the US dollar.

For all these reasons, the dollar is not likely to be seriously threatened, assuming the US continues to manage its monetary and fiscal affairs in a reasonable fashion, and assuming US capital markets remains open.

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#### **Important information**

Source: Invesco Perpetual. Data as of 11/30/09 unless stated otherwise. Where John Greenwood has expressed views and opinions, these may change and are not necessarily representative of Invesco views. This material is provided for information purposes and is not an offer to buy or sell any security. All material is compiled from sources believed to be reliable and current but accuracy cannot be guaranteed. The opinions expressed herein are based on current market conditions and are subject to change. It is not our intention to state, indicate or imply that current or past results are indicative of future performance.

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<sup>3</sup> <http://www.imf.org/external/data.htm> Similarly, the SDR interest rate is determined weekly and is based on a weighted average of representative interest rates on short-term debt in the money markets of the SDR basket currencies.