THE ROLE OF THE DOLLAR AS AN INTERNATIONAL CURRENCY

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There is much talk these days about the current or prospective decline of the dollar as an international reserve currency. But much of this talk is remarkably undisciplined by facts. What do we know about the dollar's role as the linchpin of international transactions, and what do we not know? Is it really declining? And what are the implications of such a decline for the United States?

Before you measure a phenomenon, you must define it. But there is no clear definition of what it means to be the world's central international currency. I would suggest that the tacit working definition is a blend of four characteristics which, among them, encompass the three classic roles of money as a store of value, medium of exchange, and unit of account:

1. An international currency should constitute a preponderant share of the *official reserves* of central banks. This, of course, is the narrow definition of an international *reserve* currency.
2. The currency should be used extensively as *hand-to hand currency* in foreign countries.
3. It should be used to denominate a disproportionate share of *international trade*.
4. It should have a dominant role as the currency-of-choice in *international financial markets*.

Note that the last three characteristics are the results of millions of private economic decisions — about what currency to hold, about how to invoice trade, and about the currency denomination of securities. The first characteristic results from government decisions. But these are, in turn, probably guided by underlying market realities.

On all four counts, there is really only one serious contender for the title of principal international currency today: the U.S. dollar. But is the dollar's role declining? As we shall see, the answer is: probably yes, but slowly.

Before getting enmeshed in the facts, a bit of historical perspective may be useful. A glance back over the centuries suggests that the international use of a country's currency is strongly linked to the centrality of that country in world trade. International trade in Europe initially was centered on regional fairs where merchants and local buyers gathered. By the 12th century, Italian bankers were playing a pivotal role in serving these merchants with coins, credit, and what we would now call a payments mechanism. Later, especially after the discovery of the New World, the Spanish joined in.

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However, it would be stretch to claim that Italian or Spanish cities provided the first international currency. That honor probably belongs to the Dutch guilder. As commercial activity and trade shifted northward in Europe in the 17th century, deposits at and notes issued by the Bank of Amsterdam — denominated in guilders — became the means of payment for much trade in the western world. This dominance lasted until the end of the 18th century, when Napoleon's army occupied Amsterdam — an event which, I imagine, caused some severe disruptions to the guilder payments system!

The action then shifted to Paris and, especially, to London as Britain (a) went on the gold standard in 1816 and (b) became the world's biggest exporter of manufactured goods and biggest importer of raw materials. British banks and financial institutions came to dominate the financing not only of intra-European trade, but also of trade with the Orient. Soon foreign banks began settling transactions in pounds.

The outbreak of World War I knocked Britain off the gold standard and somewhat diminished London's role as the world's preeminent financial center. Its upstart rival, of course, was New York. From 1914 to 1931 the dollar gradually gained on sterling as the principal international currency — a process that was greatly accelerated when Britain suspended convertibility in 1931 and then war ravaged Europe. But sterling continued to play a large international role for years after Bretton Woods, and London remains a major international financial center to this day. There is a good deal of inertia in these matters.

The period of dollar dominance probably began with World War II. The question, of course, is when and how it will end. History suggests that the honor of being the world's premier currency moves around the globe as patterns of trade change. But it also suggests that these things evolve slowly, although major events like wars can certainly hurry things along or even change their direction. The guilder dominated world markets for almost two centuries; the pound for about a century. The dollar has now had a run of about a half-century. Are our days numbered?

Don't count the dollar out too soon. Part of the reason is the institutional inertia that I have just mentioned. Another part is the fact that the successor currency is far from clear. By most measures, the Deutsche mark is in second place now and is gaining on us. But with monetary union somewhere on the European horizon, the long-run future of the mark itself is in question. Will the Euro become the next international reserve currency? The only other rival at present appears to be the Japanese yen; and the nexus of world trade does indeed seem to be shifting toward Asia. But, as we shall see, the yen's international role is quite limited now; and, if we peer into the distant future, one may legitimately wonder whether Asia's dominant trading nation will be Japan or China.

FACTS: THE DOLLAR AS OFFICIAL RESERVE CURRENCY

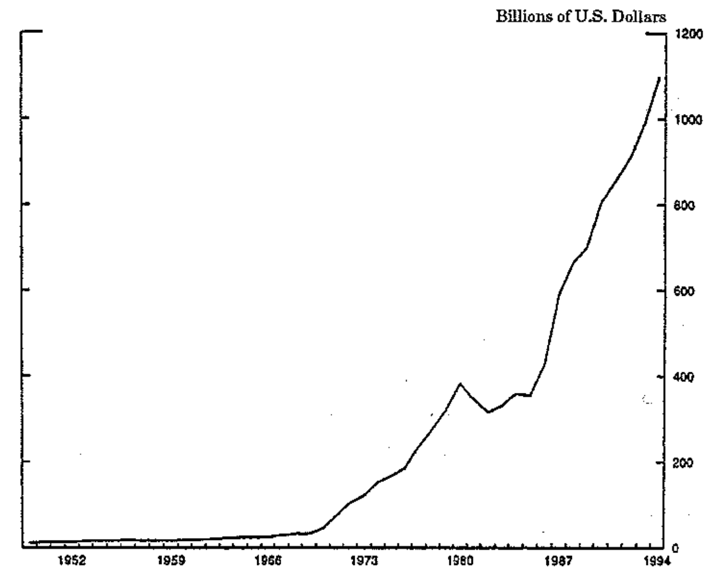
Let me now turn to some facts, beginning with the dollar's role in official reserve holdings.

The number of dollars held as official reserves has grown rapidly, and with minimal interruptions, since the collapse of the Bretton Woods system. Since 1986 alone, dollar reserves have roughly tripled. (See Figure 1.) But, of course, official reserves in other currencies have also risen. The dollar's share of total reserves rose irregularly from about 55 percent in the mid 1960s to nearly 80 percent in the mid-to-late 1970s, and then declined in stages back to about 56 percent in 1990. Since then, however, it has risen again to about 63 percent. (Figure 2.) Focusing on the last 15 years, for which we have the best data, the total net decline in the dollar's share is only about 7 percentage points. That's something, but not much.

Which countries gained at the dollar's expense? The unsurprising part of the answer is: the yen, which rose from 4.3 percent of reserves in 1980 to 8.5 percent in 1994. The surprising part of the answer is that the share of the Deutsche mark in world reserves has not increased. It has instead fluctuated in the 12-19 percent range since 1980 without much trend.

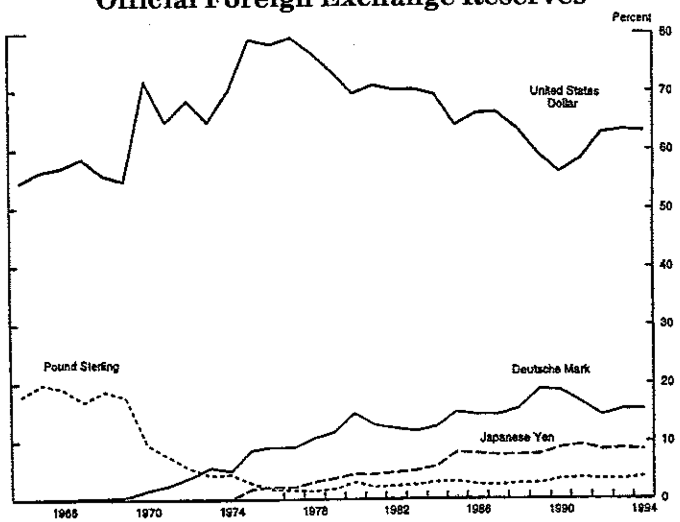
There are occasional scare stories in the media about central banks, especially Asian central banks, diversifying away from the dollar. Allegedly, this is one factor weighing on the value of the dollar. But it appears that these rumors are mostly unfounded. For the region as a whole, the share of the dollar in official foreign exchange holdings has been quite stable at around 60 percent. It is true that some nations, like Taiwan, have reduced their dollar share in recent years; but others, like Hong Kong, have raised theirs.

FIGURE 1
International Reserves
(Foreign Exchange)



Source: International Monetary Fund

FIGURE 2
Currency Composition of
Official Foreign Exchange Reserves



The figures through 1974 are not comparable with those since 1975, since currency specification is available for a much larger portion of the total in the later period. If rough allowance is made for the difference in coverage, the percentage in the U.S. dollar would be close to 80 starting in 1970, when there was a large replacement of sterling by dollars in reserves, and remain around that level until 1977.

Source: International Monetary Fund.

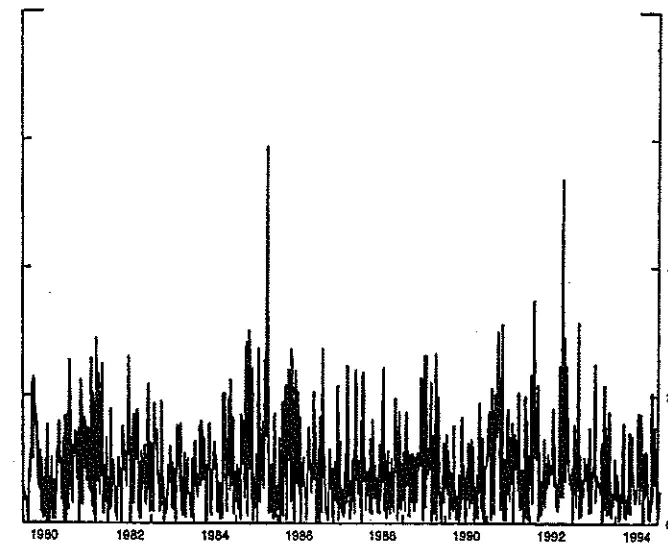
To the extent that the dollar's share in central bank portfolios has declined, what is the reason? One argument is that the increased volatility of our exchange rate has diminished the dollar's attractiveness as a reserve currency. Here we should start and can finish the debate with George Stigler's old question: Is this fact in fact a fact? The answer is no: volatility has not increased in recent years (Figure 3). I am more inclined toward a simpler hypothesis: the share of world trade and finance denominated in dollars has declined (more on this below), and central banks are just adjusting to a changing reality.

FACTS: THE DOLLAR AS HAND-TO-HAND CURRENCY

The statistical basis becomes a good deal thinner when we turn to the next aspect of the dollar's international role: as a medium of exchange for cash transactions in foreign countries. An almost overwhelming collection of casual observations and anecdotes tells us that the dollar is the currency of choice in Latin America, Asia, Russia, the Middle East, and elsewhere. But accurate, or even systematic, data are not available.

Federal Reserve staff estimate that 50-70 percent of U.S. currency — a total now of $185-$260 billion — is held outside the United States. The methods they use are, of necessity, indirect; for example, one technique is based on shipments of $100 bills

FIGURE 3
Volatility in the Exchange Rate*
(Absolute Values of Weekly Percent Changes)



*G-10 multilateral trade weights
Source: Federal Reserve

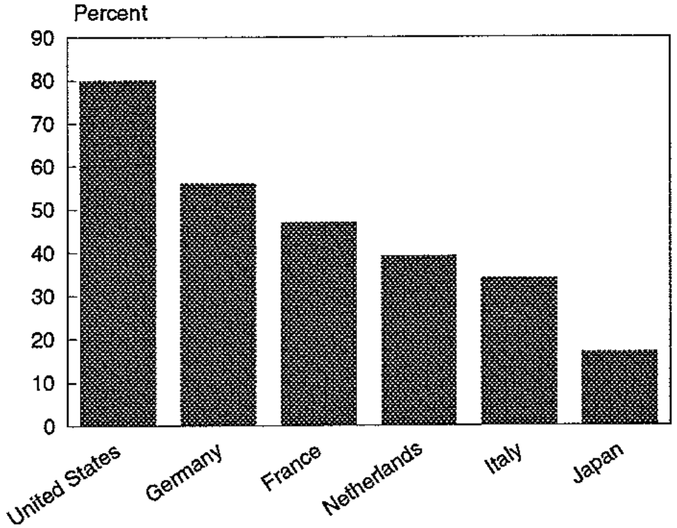
by the Federal Reserve Bank of New York. But the fact that different methods, using different data, all point toward the same range gives us some confidence in the estimate — which is, of course, a pretty rough one.

Seignorage earnings on these foreign-held dollars are not trivial. Using the current interest rate on Treasury securities of maturity equal to the average of the Fed's portfolio to impute interest, they amount to a hefty $11-15 billion per year. That is a considerable fraction of the Fed's total earnings.

Is this highly-profitable role of the dollar diminishing? We know that currency shipments abroad are growing faster in the 1990s than they did in the 1980s. And we believe that the share of new currency flowing abroad exceeds the share of the stock, meaning that the share of our currency held abroad appears to be rising. But what about the dollar's share in the burgeoning market for paper money circulating in foreign countries?

Anecdotal evidence says that the yen's share is quite small, but the Deutsche mark's share is not. One recent German study estimates that 30-40 percent of German currency is held outside Germany. If correct, that would amount to roughly $35-$55 billion — a large sum, but less than 20 percent of the volume of dollars circulating abroad. Overall, it seems safe to assume that the dollar comprises the lion's share of foreign currencies in hand-to-hand circulation outside their native lands. But we know literally nothing about whether the dollar's market share is rising or falling.

FIGURE 4
Share of Imports Invoiced in Own Currency in 1992



Source: European Commission

FACTS: THE DOLLAR'S ROLE IN WORLD TRADE

The third aspect of the dollar's role as an international currency is its use as the currency for pricing goods and services in world trade — as the international unit of account, so to speak. It is well-known that a great deal of international trade is conducted in dollars. The latest available data pertain to 1992, so I will use that year for comparisons and hope that things have not changed much since.

Taking U.S. trade first, one of the more amazing statistics to me is that roughly 80 percent of American imports — largely the products of foreign companies — are invoiced in dollars. Such a large share is quite atypical, presumably because our domestic market is so large (Figure 4). Among the other major industrial countries, the fraction of imports invoiced in destination currency ranges from a low of 17 percent (Japan) to a high of 56 percent (Germany). On the export side, of course, invoicing in your own currency is much more common — ranging from 40 percent to 77 percent for other countries, and 92 percent for the United States.

But dollar prices are also common in trade that does not involve the United States as either buyer or seller. Overall, almost 50 percent of total world trade is denominated in dollars. Since U.S. exports and imports denominated in dollars account for only about 23 percent of trade, roughly 25 percent of world trade does not involve the United States but is nonetheless priced in dollars. We have no real competitor in this regard. The mark is the currency for invoicing about 15 percent of world trade. But all of this is either German exports or imports.

Has the dollar's role as the international unit of account been declining? Superficially, it appears to have fallen — from 56 percent of world trade in 1980 to 48 percent in 1992. But this decline was entirely due to the declining relative importance of oil, which is of course priced in dollars, in world trade. In non-oil trade, the dollar's share has been fairly stable for years.

FACTS: THE DOLLAR'S ROLE IN INTERNATIONAL FINANCE

Historically, as I noted at the outset, the market's choice of an international reserve currency has followed patterns of trade — with Italy, Holland, Britain, and the United States dominant in their turn. But, in the modern world, financial considerations may overwhelm trade considerations. For example, the vast majority of foreign exchange transactions today stem from trade in assets rather than trade in goods. So we need to consider the dollar's role in international financial markets.

Let us start with foreign exchange transactions. According to the 1992 BIS survey, fully 83 percent of reported foreign exchange turnover involved the dollar on one side of the transaction. The two closest competitors were the mark and the yen, at 38 percent and 24 percent respectively. (In case you are wondering why these shares already exceed 100 percent, there are two sides to every forex transaction; so shares measured this way must add up to 200 percent.) A similar survey in 1989 found that the dollar was involved in 90 percent of foreign exchange transactions. So the dollar's role in this regard, while still dominant, appears to be declining.

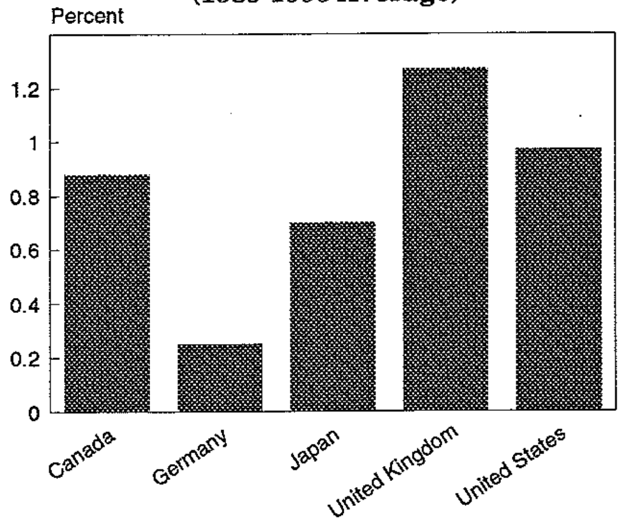
Turning to other financial markets, we find that in 1994 about 43 percent of banks' cross-border claims were denominated in dollars. The closest competitors were the mark and the yen, each with about 14-15 percent. Similarly, about 47 percent of Eurocurrency deposits were Eurodollars, versus about 17 percent for Euromarks and only about 5.5 percent for Euroyen. In both of these cases, however, the dollar's market share has declined rapidly and substantially from peaks that were 20-25 percentage points higher about 15 years ago.

In international bond markets (defined roughly as bonds floated outside the borrower's country), about 35 percent of the outstanding issues are presently denominated in dollars — versus 16 percent in yen and 11 percent in Deutsche marks. But here, too, the dollar's franchise has been eroded substantially in the last 10-15 years. Its market share was about 53 percent in 1981.

Thus, it is in world *capital* markets that the dollar's dominance has eroded most. Surprisingly, at least to me, none of this erosion can be attributed to the diminishing share of the United States in world GDP. That share has not in fact declined since 1980. So we must look elsewhere for an explanation.

One candidate is the fact that, while the United States went first and probably farthest, many foreign countries have followed our lead in liberalizing and deregulating their financial systems. Financial innovation naturally follows in the wake of liberalization. And some of this deregulation and innovation, such as easing restrictions on foreign participation in domestic markets and domestic participation in foreign markets, particularly impacts cross-border transactions. These developments, on the whole, have probably been salutary for the world financial system and for the global

FIGURE 5
Long-Term Bond Spreads:
Private Less Government
(1985-1995 Average)



economy more generally. But, as a side effect, they have diminished the dollar's preeminence in international finance.

IMPLICATIONS: WHAT DOES IT ALL MEAN?

In sum, wherever we have data, the message seems to be more or less the same: The dollar is still unquestionably the world's dominant international currency by any conceivable definition. But its preeminent position is eroding slowly, as mainly the Deutsche mark but secondarily the yen move up on the pecking order. What, then, are the implications for the United States? Let me go back over the list of four characteristics, focusing now on possible implications rather than on bare facts.

Central bank use of the U.S. dollar as official reserves presumably raises the demand for the assets that serve as reserves — mostly, Treasury securities. That, in turn, should lead to lower interest rates on those securities relative to comparable private securities. To look for such evidence, Fed staff compared yield spreads between government and private securities in the United States, U.K., Canada, Germany and Japan. It turns out that the yield spread in the United States is not unusually large. (See Figure 5.) Similarly, a decline in the demand for dollars as central bank reserves should reduce this spread; but, in fact, the spread seems to have widened slightly in recent years.

In brief, it is not clear that the dollar's role as an official reserve currency gives the U.S. Treasury any bonus in the form of lower borrowing costs. But, if it does, there is no evidence that this bonus is diminishing.

The chief implication of the use of paper dollars as a hand-to-hand medium of exchange in foreign countries is that the U.S. government earns considerable seignorage profits. In essence, the Fed borrows interest-free from foreign holders of our currency, invests the proceeds in U.S. government securities, and turns over the profits to the Treasury. As noted earlier, this seignorage revenue amounts to perhaps $11-$15 billion per year.

Should demand for U.S. currency decline, this revenue source would, of course, decline proportionately. I mentioned earlier that we do not know whether the dollar's share of the world currency market is increasing or decreasing. But we are fairly sure that the absolute volume of foreign holdings of U.S. currency is growing faster than our GDP, the federal budget, or almost any other indicator of the size of our domestic economy. Thus seignorage is becoming a relatively more important source of financing for the U.S. government. For example, it is now roughly the same size as federal receipts from estate and gift taxes.

The third aspect of the dollar's role as an international currency is its use in invoicing trade. The interesting question here is whether the fact that most of our imports are denominated in dollars affects the pass-through of exchange-rate changes into domestic prices — either in the short run or the long run.

The short-run case is easier to make. Suppose the dollar depreciates. If foreign goods sold to American importers are priced in foreign currency, their dollar prices rise immediately and automatically — unless foreign suppliers decide to cut their home-currency prices. But there is no such automaticity if these same goods are invoiced in U.S. dollars, as most of them are. Instead, dollar prices rise only if foreign exporters make affirmative decisions to raise them. On a strictly neoclassical view of the world, currency denomination should be an institutional detail of no importance to pricing. But in a world with both nominal and bureaucratic rigidities, it might matter.

I suspect that dollar invoicing may help explain the relative immunity of U.S. domestic prices from exchange-rate influences. But this is just a conjecture, neither supported nor refuted by research. The data we need to test it are simply not readily available.

Last, but certainly not least, comes the dollar's role in world financial markets. Here, two plausible implications spring to mind. First, just as was the case for official reserves, a worldwide portfolio preference to hold dollar-based assets should lead to lower dollar interest rates, other things equal. And, of course, any decline in this preference should erode that interest-rate advantage. But many other factors — especially expected changes in exchange rates — influence interest-rate differentials between dollar and non-dollar assets. So looking for this (presumably small) effect in the data seems a bit like looking for a needle in a haystack.

Second, it is at least believable, though by no means certain, that the dominant role of the dollar in world financial markets gives U.S. financial institutions a competitive edge over their foreign rivals. For example, U.S. banks have access to the Federal Reserve as lender of last resort. And U.S. financial institutions may have a comparative advantage in dollar-based financing. After all, the dollar markets are our home turf. If hysteresis matters in these markets, as it probably does, American firms acquired a durable competitive advantage simply by being there first.

Do American firms really have such an advantage? We simply do not know, but I can offer one suggestive piece of evidence. In the Eurobond market, American companies lead in underwriting dollar-denominated debt issues, Japanese companies lead in Euroyen financing, German banks lead in Euromarks, the French lead in Eurofrancs, and so on. That's hardly a proof, but it does point toward a home-court advantage.

CONCLUSION

One final, and very general, implication is worth mentioning. A shift away from dollars for any reason — including international diversification — should, other things equal, lead to a decline in the dollar's value. Indeed, worries that the shrinking international role of the dollar is putting downward pressure on the exchange rate seem to underlie recent concerns about the dollar's preeminence in world markets.

But what is declining is our international *market share*, not the *absolute demand* for dollars in world markets, which is growing rapidly. Furthermore, any influence of these developments on the exchange rate must be swamped by other more fundamental factors like actual and prospective monetary and fiscal policy. So it seems unlikely that the dollar is being weighed down by its loss of market share.

In sum, it would be going too far to say that the recent concern over the declining role of the dollar as the world's preeminent international currency is much ado about nothing. Rather, it is a bit too much ado about relatively little. The dollar's dominance has in fact declined, but only a bit — and rather slowly. Furthermore, the costs of this decline to the United States are hard to assess and look to be fairly minor. Of course, I might have a different assessment if the dollar was being rapidly dethroned and relegated to secondary status in world markets. But that, fortunately, is most emphatically not the case.

NOTES

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