Reports of the Dollar's Demise are Greatly Exaggerated

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Reports of the demise of the dollar have been greatly exaggerated. It is of course true that the value of the U.S. currency has fallen against the yen and mark recently. It is also true that some measures of the dollar's use as an international currency show a decline. These are longstanding trends, however. There is little evidence so far of an abrupt acceleration or "tipping" in the use of the dollar. In particular, and contrary to widespread belief, the dollar's standing as a reserve currency has actually increased in the 1990s. Furthermore, there is little likelihood that some other currency will supplant the dollar as the world's premier reserve currency by the year 2020.

WHAT IS A RESERVE CURRENCY?

A reserve currency is one in which central banks choose to hold their foreign exchange reserves. It is one important aspect of being an international currency, which is defined as a currency that is used outside its home country. Figure 1 shows holdings of the major currencies as percentages of total reserves. The dollar's share declined gradually in the 1970s and 1980s. The mark's share has increased gradually over the same period. The yen's share has also increased, starting from very low levels in the 1970s.

The view that the dollar is losing its reserve currency role suddenly became popular in early 1995. The reason may be that pundits were hard-put otherwise to explain the dramatic depreciation of the dollar in 1994-95. Most of the traditional fundamentals would lead one to expect a strengthening dollar: U.S. interest rates had risen since February 1994, American growth had been stronger than expected over this period, and inflation lower. Furthermore, political disarray in Washington had been nothing compared to the weakness and disarray in

\[1\] While U.S. growth in 1993-94 was strong, Japan was still hobbled by the hangover of the speculative excesses of the late 1980s.
Tokyo. Yet from February 1994 to May 1995, the dollar depreciated 20 per cent against the yen and 18 per cent against the mark \([86.70/106.3 \text{ and } 1.4475/1.7355]\). Financial commentators seized on the declining reserve currency role of the dollar to explain this mystery. Their case was buttressed by reports from East Asian central banks, whose reserve holdings are now an important share of the world total, that they were shifting out of dollars into yen. The case is also buttressed by the observation that the large movement in the foreign exchange market over the preceding year had taken place only against the yen and mark (and Swiss franc), the leading rival reserve currencies.\(^2\)

Other measures of international currency use [besides reserve holdings] are relevant as well. A second measure of official use is the choice by smaller countries to peg their monies to major currencies. Twenty-three countries still peg to the dollar [as compared to fourteen for the French franc]. Here the mark and the yen are little-used. Measures of international use in the private market include the frequency with which currencies are selected for use in the invoicing of imports and exports, in the denominating of international bonds and bank loans, as the vehicle currency in foreign exchange trading, and as the preferred substitute for domestic currencies in cash transactions. [The pound sterling and Swiss franc still play major roles in the denomination of bond issues.] Overall, these measures show the yen and the mark as the two most serious rivals for the dollar. These measures, like the reserve measure, show a gradual long-term decline in the dollar's role, with little sign of dramatic acceleration.

The issue of the declining international role of the dollar is distinct from the issue of the declining value of the currency. [For example, the greatest evidence of increased use of the yen in East Asia at the expense of the dollar over the last ten years is the rapid increase in the share of debt that emerging-market countries owe in yen, most of it to Japan. However, this shift does not put downward pressure on the yen/dollar exchange rate. If anything, when Japan increases the supply of yen assets in this way it puts downward pressure on the yen and upward pressure on the dollar. An increase in the supply of yen assets is the opposite of an increase in demand, and might be expected to affect the price accordingly. These debtors are now lamenting the debt-service cost of their yen obligations, and may curtail their use of the yen for borrowing in the future.]

Such fine points aside, the popular impression that the decline of the dollar as a reserve currency is correlated with the decline of the value of the dollar on the foreign exchange market is, overall, a correct one. If central banks shift their reserve holdings out of dollars and into yen or marks, that adds to the downward pressure on the value of the dollar at least as much as when private investors do so. The shift thereby works to reduce the market price of the dollar. Causality can also run the reverse direction. If a history of dollar depreciation causes a loss of

\(^2\) On a comprehensive trade-weighted basis, the dollar is down only about five per cent over this period, even in real terms. The explanation for this surprising fact is that the United States now trades more with Canada than with Japan, more with Mexico than the United Kingdom, more with China than Germany, more with Taiwan than France, and more with Korea than the Netherlands. The Canadian dollar, Mexican peso, Chinese yuan, new Taiwan dollar, and Korean won have all, like the dollar, depreciated against the yen and mark. Thus it would be more accurate to say that the yen and mark are up than that the dollar is down.
faith in the greenback as a stable store of value and unit of account, importers, exporters, borrowers and lenders will become more reluctant to use it. This includes central banks: if they expect continued depreciation in the future, they may jump on the bandwagon (particularly the smaller central banks, who are less likely to feel some responsibility for the global system). If they sell dollars, the dollar will depreciate, fulfilling the pessimistic forecasts.

So, is a portfolio shift by central banks from dollars to yen and marks to blame for the recent depreciation of the dollar? The latest official figures, for the end of 1994, are shown in Figure 1. Contrary to widespread belief, they show that the dollar's share in reserve holdings was virtually flat in 1994. It is substantially up since 1990. The yen share, again contrary to expectations, is down slightly. The mark's share was approximately flat in 1994, but it is down since 1990. The recent data show no acceleration in the longstanding downward trend in the dollar's share. If anything, they show the reverse. What is going on?

What is going on is that the Bank of Japan and major European central banks have in the early 1990s bought up dollars on the foreign exchange market, in order to prevent the value of the dollar from falling more against their own currencies than it otherwise would. They may not be happy with this situation, but they find it preferable to the alternative. It is the same thing that they have done regularly for three decades. Will they continue to do so? We consider the attributes that determine whether a currency is fit for the greatness of reserve-currency status, and then consider in this light what is in store for the dollar.

CONDITIONS CONducIVE FOR AN INTERNATIONAL CURRENCY

There are four major sorts of conditions that determine whether a currency is an international currency.

(1) History. There is a strong inertial bias, in favor of using whatever currency has been the reserve currency in the past. An individual (exporter, importer, borrower, lender, or currency trader) is more likely to use a given currency in his or her transactions if everyone else is doing so. For this reason, the world's choice of vehicle currency is characterized by multiple stable equilibria. The pound remained an important international currency even after the United Kingdom lost its position as an economic superpower. In the present context, this favors the continued central role of the dollar.

(2) Magnitudes of output and trade. The currency of a country that bulks large in the world economy has a natural advantage. The U.S. economy is still the world's largest in terms of output and trade. Alarmist fears notwithstanding, it is very unlikely that Japan, a country with half the population and far less land area or natural resources, will surpass the United States in sheer size. [If the measure of a vehicle currency is how often it is used in the invoicing and

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financing of international trade, then other aspects of the pattern of trade may also be relevant. The fact that much of Japan’s imports are raw materials and that much of its exports go to the Western Hemisphere, for example, helps explain why a disproportionately small share of trade is invoiced in yen as opposed to dollars.

(3) The country’s financial markets. They must be not only free of controls, but also deep and well-developed. The large financial marketplaces of New York and London clearly benefit the dollar and pound relative to the deutschmark. Tokyo financial markets came a long way in the 1980s. But Tokyo still lags behind New York and London as a financial center, while Singapore and Hong Kong have been gaining on it. It has been argued that a strong central bank, and large financial sector to counterbalance the political influence of the trade sector, are also important; the point is to be able to resist political pressure in favor of depreciating the currency to help sell goods.

(4) Confidence in the value of the currency. Even if a key currency were used only as a unit of account, a necessary qualification would be that its value not fluctuate erratically. A key currency is also used as a form in which to hold assets (firms hold working balances of the currencies in which they invoice, investors hold bonds issued internationally, and central banks hold currency reserves). Here confidence that the value of the currency will be stable, and particularly that it will not be inflated away in the future, is critical. The monetary authorities in Japan, Germany and Switzerland, in the 1970s established a better track record of low inflation than did the United States.

Given the good U.S. inflation performance over the last ten years, this is no longer such a concern as it was formerly. A more important negative for the dollar is the fact that the United States is now a large-scale debtor country. Indeed, 1994 was the first year when the country actually paid out more in interest, dividends, and repatriated profits to foreigners, on their past U.S. investments, than it received on its own past investments abroad. Even if the Federal Reserve never succumbs to the temptations or pressures to inflate away the U.S. debt, the continuing U.S. current account deficit is always a possible source of downward pressure on the dollar. Such fears work to make dollars unattractive.

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4 Many of the steps that the U.S. side urged onto the Japanese in the 1984 Yen/Dollar negotiations were designed to encourage the development of markets in Tokyo in hedging instruments, bankers’ acceptances, commercial paper, short-term government securities, and offshore banking. The explicit goal was precisely to facilitate the internationalization of the yen. (The U.S. campaign of ten years ago is ironic, in light of current concerns about the declining international role of the dollar.) While such steps have been taken in Japan over the last ten years, these markets remain as yet relatively less developed.

5 See, for example, David Hale, “Is the Currency Market Experiencing a Yen Crisis or a Dollar Crisis?” Kemper Financial Companies, May 1995.

6 A contrary viewpoint is possible. As argued by Triffin, only if a country like the United States does run a deficit will other countries be able to earn the dollars they need to match reserve growth with real economic growth.
WHICH CURRENCY WILL BE THE WORLD’S LEADING INTERNATIONAL CURRENCY IN THE YEAR 2020?

It is actually a good bet that in the year 2020 the dollar will still be the world’s favorite currency for holding reserves, pegging minor currencies, invoicing imports and exports, denoting bonds and loans, and transacting in cash. There is no plausible alternative for the number one position.

If the European Economic and Monetary Union (EMU) were to come into existence in the latter part of this decade, as many European leaders are planning, then its currency (formerly to be called the ECU, but now the euro) would be a prime contender to take over a major global role from the declining dollar. According to the terms of the Maastricht Treaty of 1991, European leaders must decide whether a majority of members meets the criteria to qualify for EMU in 1997. It is already clear that very few will satisfy the criteria, perhaps even by the second-chance deadline of 1999. If the leaders try to force the pace, they may end up with a repeat of the foreign exchange market crisis of September 1992. In the meantime, the use of the ECU to denominate bonds and loans has stagnated since that crisis.

The deutschmark has substantial monetary influence in Europe now. At least one currency, the Estonian kroon, pegs to the mark formally, and others such as the Austrian schilling and Dutch guilder virtually do so. German monetary policy is a major determinant of interest rates throughout the continent. But if most Europeans are reluctant to subordinate their countries' monetary policies to that of the Bundesbank, which is ultimately the stumbling block in EMU, then they are even less likely to countenance an enhanced formal role for the mark in Europe. Countries outside of Europe have still less incentive to link to the mark officially. As regards the use of mark in private transactions, it remains handicapped by Germany’s underdeveloped financial markets.

The yen will probably in the future continue to gain ground, particularly in East Asia. But no country as yet pegs its currency to the yen. Indeed, a Pacific country that seeks to stabilize the value of its currency in terms of a basket of currencies, whether tightly or (more often) very loosely, generally gives far more weight to the dollar than the yen. East Asian countries still conduct a great deal of their trade and investment with the United States and the rest of the Western Hemisphere, and they wish to keep it that way. They will continue to use the dollar as long as the rest of the world does.

None of this is to deny that the dollar’s past record of depreciation may motivate central banks to shift somewhat their reserve holdings to the mark and yen in the future, as they did in the 1970s and 1980s, or to use these currencies in other ways. But neither of these currencies, nor the ECU, is likely to supplant the dollar as premier international currency anytime soon.

It is not that the dollar is ideally suited for this role. It has some characteristics that mar its appeal. Most importantly the United States is a debtor country with a large current account deficit. But an international currency is one that people use because everyone else is using it.

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Three of the four determinants of reserve currency status -- economic size, developed financial markets, and historical inertia -- support the dollar. The fourth determinant could in principle disqualify the dollar, if the Federal Reserve launched a high-inflation strategy, but this is unlikely to happen.

There is a nice analogy with the international use of the English language. Nobody would claim that English is particularly well-suited to be the world’s lingua franca by virtue of its intrinsic beauty, simplicity, or utility. Yet it is certainly the language in which citizens of different countries most often converse and do business, and increasingly so. One chooses to use a lingua franca, as one chooses a currency, in the belief that it is the one that others are most likely to use.\(^8\)

In a statistical sense, one can explain much of the downward trend in the dollar’s share of world reserve holdings over the last 25 years, and the upward trends in the yen and mark shares, by the falling share of U.S. GDP in the world economy, and the rising share of the Japanese and German GDPs. Specifically, one can explain a decline of the dollar share over the period 1970-1992 of 5 percentage points by the shift in GDPs evaluated at PPP (the U.S. GDP share falling from 24 per cent of Gross World Product to 20 per cent). [One can explain a decline of 3 percentage points in the dollar share by the shift in GDPs evaluated at actual exchange rates (the U.S. share going from 32 per cent to 26 per cent.) One can also explain increases in the mark and yen shares of 1 percentage point and 5 percentage points, respectively. We have estimated that for every one percentage point increase that a major country experiences as a share of Gross World Product measured at PPP rates, its currency experiences an estimated 1.33 percentage point increase in its share of central bank reserve holdings. [For every percentage point increase in that the country experiences as a share of Gross World Product measured at actual exchange rates, its currency experiences an estimated .55 percentage point increase in its share of central bank reserve holdings.]

What does this regression equation predict for the future? The United States is estimated to have a permanently higher constant term than the mark or yen [attributable to the second and third of the conditions listed above]. At current exchange rates the aggregate GDP of the EC 12 is approximately equal to that of the United States (which is 26.1 per cent of Gross World Product). At PPP exchange rates, EC GDP is slightly less than that of the U.S. (which is 22.5). Japan’s share is smaller, but has been gaining on the U.S. rapidly when evaluated at current exchange rates. To take an extremely pessimistic scenario, from the viewpoint of the dollar, imagine that by the start of the next century, the Japanese economy is as large as the United States, and the mark has become the common currency throughout a Western Europe of the same size. If the aggregate size of the three regions together, evaluated at PPP, remains the same (one half of GWP in 1992), then each becomes one-sixth of the world economy. Our

\(^8\) If the dollar is the world monetary system’s version of the English language, the SDR (Special Drawing Right) is the system’s version of esperanto. The SDR was created by the IMF to be an ideal international currency. Because it is defined as a basket of the five major currencies, it is better suited in at least one way than each of the others: A currency that pegs to the SDR will not experience the large changes in effective exchange rate that have discouraged East Asian countries, for example, from pegging to the yen. Yet the SDR is even less widely used today than it was ten years ago. Like esperanto, it lacks a natural base of constituents who would use it even if it were not in international use (attribute (2) above).
A regression equation predicts that the dollar's share of world reserves would in that case fall to 62 per cent (from 63 per cent currently), the mark's share would rise to 28 per cent (from 16 per cent), and the yen's share to 17 per cent (from 9 per cent). This would indeed be a continuation of the trend of the 1970s and 1980s. Yet the dollar would remain in the number one position by a large margin.

The nature of the calculation rules out the possibility of a sudden "tipping" phenomenon that would render the old constant terms obsolete. But why should the world equilibrium converge on a non-dollar currency? This would only happen if some of the conditions enumerated above were to shift drastically, such as either Japan or a DM-dominated area actually surpassing the United States in economic size, or the Fed turning inflationary, both of which seem unlikely.

ADVANTAGES OF HAVING A KEY CURRENCY

Does it matter whether or not the dollar retains its role as an international reserve and vehicle currency? There are four advantages to a country of having its currency used internationally. All but the last will sound relatively narrow [i.e., minor and technical].

(1) **Convenience for residents.** It is certainly more convenient for a country's exporters, importers, borrowers and lenders to be able to deal in its own currency than foreign currencies. The global use of the dollar, as with the global use of the English language, is a natural advantage that American businessmen tend to take for granted.

(2) **More business for the country's banks and other financial institutions.** There need be no firm connection from the currency in which banking is conducted to the nationality of the banks (nor from the nationalities of the savers and borrowers to the nationality of the intermediating bank). British banks, for example, continued to do well in the Eurodollar market after the pound lost its international role. Nevertheless, it stands to reason that U.S. banks have a comparative advantage at dealing in dollars. Only U.S. banks have access to the safety net provided by U.S. regulatory authorities (access to the discount window, and so forth).

(3) **Seignorage.** This is perhaps the most important advantage of having other countries hold one's currency. They must give up real goods and services, or ownership of the real capital stock, in order to add to the currency balances that they use. Just as American Express reaps profits whenever people hold its travelers' checks, which they are willing to do without receiving interest, so the United States profits whenever people in Argentina or Russia hold dollars that do not pay interest. Wherever hyperinflation or social disorder undermine the public's faith in the local currency, the American dollar is the preferred alternative. (The drug trade and other illegal activities is another source of demand, of course.) Federal Reserve Board Governor Lawrence Lindsay, in a 1994 speech that reminded Americans of the benefits of international currency status, estimated the cumulative additional currency seignorage accrued to the Fed since 1981 to be some $64 billion. This is a growing source of revenue. Another calculation suggests that the United States now derives about $12 billion a year in seignorage...
from foreign holdings of U.S. currency, which are conservatively estimated at 60 per cent of total dollar currency in circulation.\(^9\)

There is another (much smaller) component of seignorage in addition to the currency component. Most foreign central banks and other investors hold their dollars in the form of interest-paying treasury bills. To the extent that the reserve currency role of the dollar allows the U.S. Treasury to pay a lower interest rate on its liabilities than must other borrowers, the difference is a further source of seignorage.\(^{10}\)

(4) Political power and prestige. The benefits of "power and prestige" are decidedly nebulous. Nevertheless, the loss of key currency status and the loss of international creditor status have sometimes been associated, along with such non-economic factors as the loss of colonies and military power, in discussions of the historical decline of great powers. As with most of the other benefits and conditions mentioned above, causality flows both from key currency status to power and prestige and in the opposite direction as well.

[The "responsibilities commensurate with Japan's new status as a great economic power" that many Americans have urged on Japan in the abstract, will -- when realized in the concrete -- increasingly be seen as Japanese gains at U.S. expense. Examples include increased roles for Japan in the United Nations and International Monetary Fund, in return for Japanese financial contributions as in connection with the Gulf War and recent Mexican peso crisis.]

There are also some disadvantages to having one's currency used as the international reserve currency. Chief among them is the possibility of larger fluctuations in the demand for one's money. In the past, the German and Japanese governments have been reluctant to see their currencies play larger international roles. They have been particularly worried about the possibility that a sudden increase in demand for marks or yen on the part of foreign residents would cause their currencies to appreciate, and thereby render exporters uncompetitive on world markets. Perhaps it is the determination of these countries in the past to resist appreciation of their own currencies that now makes them so suspicious of repeated statements by the Clinton Treasury that the United States does not welcome a weak dollar. A fair reading of the record is that the Administration in fact recognizes that the advantages of reserve currency status outweigh the disadvantages.

**THE CURRENT PROGNOSIS**

We have seen that the latest data do not support the popular impression that there has been a dramatic acceleration in the decline of the dollar's reserve currency role, at least not up to the end of 1994. Reserve currency status is lost over the course of decades, as the result of slow growth and deficits. It is not likely to be lost in the course of a few months.

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\(^9\) One simply multiplies the interest rate times foreign-held currency.

\(^{10}\) This was the basis of European resentment against the dollar standard and against the U.S. basic balance deficit in the 1960s, to the extent that the European need to acquire dollars was the fundamental origin of that deficit.
Just as the death of the dollar as a reserve currency has been oversold, so the dollar itself may be oversold in the foreign exchange market. Many investors who lost money on the dollar in 1994 and early 1995 have decided that the dollar can only go down and the yen can only go up. They are wrong. Exchange rates can move up as easily as down. The yen may have experienced a speculative bubble in 1994-95, as the Japanese stock market did in 1987-89 and the dollar in 1984-85. Such bubbles eventually burst. In light of the present 5-point interest differential advantage in favor of the dollar, the yen at 80-some to the dollar is not a good bet.

There does exist an alternate scenario. Foreign central banks could tire of their ever-increasing holdings of dollars, particularly the newly-important central banks of East Asia. They could dump dollars in 1995, and thereby push the value of the currency even lower than its already low levels against the yen and mark.

To make the alternate scenario look particularly worrisome, consider the following question: Who is financing the U.S. trade deficit? The international deficit in goods and services first reached 1.7 per cent of GNP in 1983, which at the time was a record unheard-of in the twentieth century. It peaked at 3.4 per cent in 1987. A big depreciation in the dollar over the last ten years has helped make American goods much more competitive on world markets. Despite the effects of this newfound competitiveness, however, the deficit in goods and services was a still-hefty 1.6 per cent of GDP in 1994. The trade deficits are virtually certain to continue, so long as the U.S. national saving rate remains at the depressed levels where it has been ever since 1982.\(^{11}\)

These trade deficits must necessarily be financed one way or another. To give an extremely stylized rendition of recent history, the U.S. deficit was initially financed primarily by net banking inflows [in 1982-83], then by sales of securities to foreigners [in the mid-1980s, beginning primarily with Treasury securities, and later progressing to corporate bonds and equities], then by sales of companies and real estate [the late 1980s]. It was through these sales of assets to foreigners that the United States became the world's largest international debtor. In 1990, private residents in Japan and elsewhere lost their enthusiasm for investing in the United States; the net inflow of private long-term capital sharply diminished. In 1991, transfer payments associated with Operation Desert Storm financed the U.S. trade deficit. In 1992 and 1993, purchases of dollars by the Bank of Japan and other foreign central banks have done so. What happens when the foreign central banks grow weary of increasing their dollar holdings? If foreign private investors do not renew their interest in dollar investing, the currency will have to depreciate yet further.\(^{12}\)

Such concerns become sharper when one focuses on the reserve holdings of developing countries. As the result of recent balance of payments surpluses, these are now almost as big as holdings by industrialized countries. The dollar share of developing-country holdings, unlike

\(^{11}\) Net national saving fell to roughly 2 per cent of GNP, down from 7-8 per cent in the 1950s, 60s, and 70s.

\(^{12}\) I predict that foreign investors will resume their interest in U.S. investments.
industrialized country holdings, did decline by 1.7 percentage points from 1993 to 1994 [though that still puts it at its second-highest level; there was a big increase in preceding years]. The worry is that the newly-important central banks in East Asia are less likely to feel the same civic responsibility for supporting the dollar standard as the traditional G-10 countries supposedly do. [These monetary authorities are thus playing the same role in U.S. fears that the OPEC countries played 15 to 20 years ago.]

There are reports that East Asian central banks, stung by past losses on their dollar holdings, have recently begun to switch their reserve-holdings from dollars to yen on a large scale, notwithstanding the numbers in Figure 1. Assuming the reports are true, there are two possible ways of reconciling this conflicting information. The first possibility is that the statistics that are reported to the IMF are in error. One major omission is known. Taiwan is not included in the statistics of Figure 1, because it is not a member of the IMF. Yet its $93.2 billion of reserve holdings are the second highest in the world [after Japan]. It is reported to have recently been reducing its dollar holdings by about 4 percentage points in each of the last several years [to about 57 per cent of its total at the end of 1994, and 54 per cent at the end of March 1995]. Even when one makes the appropriate adjustment, however, the true worldwide dollar share is still above the 1990 level.

The second possibility is that large shifts out of the dollar have taken place since the end of 1994. Reports of such shifts in early 1995 have come from such countries as China and Thailand. It is quite possible that 1995 figures will show a substantial drop in the dollar share. Central banks would have to dump a lot of dollars in 1995, however, before the reported share fell below the level in 1989-91.

A future return to the gentle downward trend of the seventies and eighties would not be surprising. The dollar's long-term decline can be explained by the declining share of the United States in Gross World Product. The U.S. economy accounted for almost half of world GNP in the aftermath of World War II, and is now down to about one-quarter. This says at least as much about the economic success of other countries as about the shortcomings of the United States. The postwar reconstruction of Europe and Japan and, more recently, the industrialization of poor countries in East Asia and elsewhere have been both desirable and to some extent the inevitable result of catch-up. As we have learned from the debate on competitiveness, popular concern about the economic standing of the United States relative to our trading partners is useful if and only if it helps focus on the underlying structural causes of

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13 The central bank of China has revealed that it raised the non-dollar component of its reserves to 25 per cent in early 1995, from 10 per cent, where it stood at the end of 1994 (Financial Times, May 10, 1995). This $8.7 billion shift reduces the dollar’s share of the world total by another 0.8 per cent.

14 Even then, the quantities of dollars held would be considerably higher, relative to the quantities of yen and marks, than in 1990. This is because the valuation effect of large declines in the yen/dollar and mark/dollar exchange rates constitutes most of the downward trend in the dollar’s portfolio share over the last twenty-five years.

15 Indeed, the decline in the dollar’s share in reserve holdings is smaller than the decline in the U.S. share of Gross World Product, when the latter is calculated on a PPP-basis [over the period 1973 to 1992].
low productivity growth: the low rate of national saving, and the consequent low rates of investment in physical and human capital. The gradually declining international role of the dollar is but one more symptom of these deficiencies.