

# Can The Dollar Remain The World's Most Important Reserve Currency?

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## ABSTRACT

*In the future, there is no one currency that is likely to replace the dollar as the main reserve currency. Although the euro and yen meet some of the requirements of a reserve currency, neither is sufficiently strong to take over. Instead, the world might evolve towards a multiple reserve-currency system, shared among the dollar, euro, and yen, (or perhaps the yuan?) at some point in the future. It remains to be seen where the dollar is going and whether Paul Volcker's concerns will be realized in the years ahead.*

## INTRODUCTION

From 1994 to 2002, the U.S. dollar steadily appreciated against the currencies of its major trading partners. Since that peak, the dollar has continuously depreciated, falling almost 30 percent against a basket of major currencies in the past 3 years. However, this decline has been uneven against individual currencies. For example, the dollar has decreased more than twice as much against the euro as it has against Japan's yen, and has not fallen at all against China's yuan. These differences are largely due to policies that these countries have used to prevent their currencies appreciating against the dollar.

By 2004, the depreciation of the dollar was widely publicized. Analysts questioned whether further depreciation would be gradual or whether a free fall of the dollar would occur. Paul Volcker, former Chairman of the Federal Reserve, stated that there is a 75 percent probability that a currency crisis would emerge for the United States within 5 years. A crash of the dollar would disrupt stock and bond markets, possibly ignite a global recession, and increase the probability that interest rates would have to be raised to defend the currency and head off inflation. As Thailand discovered in 1997 and Argentina in 2001, a collapsing currency is a difficult one to stop once in motion (Mann, 2002).

The path of the dollar provides an application of the asset market approach to exchange rate determination, taught in upper level courses in international economics and money and banking at many colleges and universities. This paper uses the asset market approach to analyze the nature of the dollar's ups and downs, and its future as a reserve currency. A clear understanding of the forces that determine exchange rates and the international status of a currency, that this paper attempts to provide, is of vital importance to applied economists and business people who conduct transactions in the global economy.

## ASSET MARKET APPROACH TO EXCHANGE RATE DETERMINATION

Like the price of any good or asset in a free market, the dollar's exchange value is determined by the interaction of supply and demand of dollars in the foreign exchange market. In the long run, the dollar's exchange value is influenced by dollar movements resulting from international trade in goods and services. Export and import demand for goods and services are influenced by four key factors: price level differences, productivity differences, consumer preferences, and trade barriers. Accounting for gradual trends (several years or more) in the supply of and demand for currencies in the foreign exchange market, these factors are the long-run determinants of exchange rates.

However, analysts are especially concerned about factors that cause short-run fluctuations in exchange rates, sometimes several percent from day to day. Looking at foreign exchange market activity, asset market transactions

(e.g., bank accounts, stocks, and Treasury securities) generally occur at a higher volume and greater speed than do export and import transactions in goods. Indeed, a very large share of transactions in financial assets can be carried out electronically and thus move far more rapidly than do goods, which tend to require a slower physical transfer. Thus, economists maintain that it is events in international asset markets that are the primary factors that underlie the dollar's exchange value in the short run. The asset market approach is founded on the notion that the decision to hold domestic or foreign assets therefore plays the most important role in influencing exchange rates at any given point in time.

According to the asset market approach (Frenkel,1976), the exchange rate is the price that balances the demand for and supply of financial assets denominated in foreign currencies. The demand for financial assets by domestic and foreign investors is strongly influenced by the rate of return on those assets. The level of nominal interest rates provides a first approximation of the rate of return on assets that can be earned in a particular nation. Thus, differences in the level of interest rates between economies tend to induce international capital movements, as investors seek the highest rate of return. For example, if interest rates in the United States are significantly higher than interest rates in Europe, the demand for U.S. financial assets becomes stronger. This results in an increase in the demand for dollars to buy these assets, which causes an appreciation of the dollar's exchange value against the euro. Among the key market fundamentals that determine the level of interest rates are the vigor of the private economy, the balance of the government budget, the level of domestic saving, and the inflow of foreign saving (Branson,1977).

However, investment decisions may be driven by factors other than differences than nominal interest rates. Because investment returns are paid out over some future period, the realized value of that future payment can be modified by changes in other variables. Thus, investor anticipations of those future events will influence the anticipated payoff and thus the relative attractiveness of a financial asset. Two key variables relevant to this decision are the expected change in the exchange rate itself over the term of the investment and the expected rate of inflation.

First, consider future movements in the exchange rate itself. Even a relatively high nominal interest rate on a foreign certificate of deposit (CD) would not be beneficial if the American investor anticipates that the foreign currency will depreciate at a similar rate, and thus eliminate all the gain. For example, suppose an American investor can earn 4 percent interest on a one-year German CD, but expects the euro to depreciate by 4 percent during the year. When it comes time to convert the euro-denominated earnings into dollars, a 4 percent exchange rate loss is expected. Thus, the anticipated return from investing in German CDs is zero.

The affect of expected inflation on investor decisions is less direct. To an American investor, the rate of inflation in Germany would have little direct effect on her anticipated rate of return from a euro-denominated CD. The crucial uncertainty for the investor is the behavior of the euro/dollar exchange rate, which will determine how any given euro return will convert into dollars. Yet, relative inflation rates among nations can affect how much the exchange rate will move over time, and thus, are potentially relevant to the American investor's assessment of the expected return. If Europe has a lower inflation rate than the United States, the euro can be expected to appreciate relative to the dollar and the attractiveness of the German CD increases. Capital would thus flow from the United States to Germany.

While relative levels of interest rates between countries and investor anticipations of future changes in an exchange rate and the level of inflation influence capital movements among nations, other factors can also affect these movements. For example, the size of the stock of assets denominated in a given currency in investor portfolios can induce a change in investor preferences. Why? Investors know that it is prudent to have an appropriate degree of *diversification* across asset types, including the currencies in which they are denominated. Thus, even though dollar-denominated Treasury securities may provide a high relative return, if the accumulation has been substantial, at some point foreign investors, evaluating both reward and risk, will conclude that their portfolio's share of U.S. securities is large enough. To broaden the diversity of their portfolios, investors will slow or terminate their purchases of U.S. securities.

Also, there is likely to be a substantial *safe-haven* effect underlying some investment flows. Some investors may be willing to sacrifice a large amount of return if an economy offers them an especially low-risk repository for

their funds. For many years the United States, with a long history of steady economic growth, large and efficient financial markets, and stable government has been able to attract foreign investment for this reason.

In spite of the popularity of the asset market approach, to date there is no unified theory of exchange rate determination that has proved reliable in forecasting exchange rates. The lack of predictive ability of the asset market approach reflects both conceptual problems and the lack of adequate data on the size and currency composition of private sector portfolios. Despite its forecasting limitations, the asset market approach provides a useful framework of highlighting the financial assets as determinants of exchange rate movements.

#### **AN ASSET-MARKET VIEW OF THE DOLLAR'S PATH, 1980-2005**

It is revealing to examine the path of the dollar over the past two decades by using the asset market approach as summarized above. During this period, the dollar has experienced sustained appreciations and depreciations several times, but for different reasons (Elwell, 2004).

##### **The 1980's**

During the 1980s, the dollar's exchange value followed a path of sizable appreciation followed by sizable depreciation. The dollar's exchange value actually began to increase in 1979 in response to a restrictive monetary policy, which resulted in higher domestic interest rates. The Federal Reserve's objective at this time was not dollar appreciation, but to combat double-digit inflation, which plagued the economy. Nevertheless, as investors became convinced of the Federal Reserve's determination in fighting inflation and the likely possibility of steadily increasing interest rates and decelerating inflation, the United States became an attractive location for foreign investment. Also, the Reagan Administration enacted sizable tax cuts along with increased government spending, which resulted in large federal budget deficits. That federal borrowing increased the demand for a shrinking pool of domestic saving and added to the upward pressure on interest rates. Investment flowed into the United States and the dollar climbed higher. The dollar peaked in 1985, about 50 percent above its level in 1979.

The latter half of the 1980s witnessed a depreciation of the dollar of similar magnitude. What triggered the change? One factor was a change in the speculative belief that the dollar would continue to appreciate. At this point, many of investors apparently felt that the dollar was far above a sustainable level and would more likely depreciate than appreciate. These investor expectations were reinforced by substantial currency interventions by the United States and other major economies intended to weaken an overvalued dollar. Investors thus developed expectations that the government wanted the dollar's exchange value to fall and that changes in macroeconomic policy would support that desire. The Federal Reserve enacted an expansionary monetary policy that forced interest rates down. Fiscal policy began to reduce the size of budget deficits, which also fostered lower interest rates. Both factors contributed to investment outflows and a weakening dollar.

Overall, the 1980s illustrated that sizable fluctuations in the dollar's exchange value were not haphazard, but were broadly predictable responses to changes in market fundamentals that affect the expected rate of return on dollar-denominated assets. Also, those fluctuations were significantly caused by changes in macroeconomic policy, including monetary policy and fiscal policy.

##### **The 1990's**

For the United States, the 1990s began in economic downturn. The pace of economic growth dwindled noticeably and the economy slipped into recession in 1991. Reacting to the softening economy, monetary policy became more expansionary, and the federal budget deficit automatically rose as fiscal policy increased government spending and dampened tax receipts. Interest rates in the United States declined. In contrast, economic activity abroad was relatively robust. In this situation, the demand for dollar-denominated assets declined, and the dollar depreciated about 15 percent on average against the currencies of its major trading partners.

By the mid-1990s, however, the U.S. economy was growing rapidly. What under laid the acceleration of growth was a sharp increase in the pace of investment spending by business and a substantial increase in productivity growth. The combination of strong consumer demand, trade liberalization, deregulation, and a movement to include computers in the production process stimulated investment spending at a record pace. But even with the federal budget's shift toward surplus, the flow of domestic saving could not match investment spending, and interest rates increased. Also, the United States witnessed a declining rate of inflation, while the economies of other nations such as Japan and Europe were sluggish. These factors resulted in the United States becoming an attractive haven for foreign investors. An increase in the foreign demand for dollar-denominated assets increased the dollar's exchange value, rising more than 30 percent on average against the currencies of its trading partners from 1995 through 2001.

This time, the dollar's substantial appreciation was propelled by the private sector. Economic policy moved in conflicting directions, probably making its net effect on the dollar relatively minor. The government's adoption of budget surpluses resulted in increased national saving which tended to lessen the dollar's appreciation. However, the Federal Reserve implemented a persistently more contractionary monetary policy that raised interest rates; this may have added to the dollar's upward momentum. But the Federal Reserve was not the main force behind the appreciation of the dollar.

### **The 2000's**

An appreciating dollar and the sizable flow of investment into the United States that moves the currency higher could not continue indefinitely. Borrowers and lenders alike tend to find sound grounds for decreasing the size of the investment inflow. For lenders, increasing risk and the imperative of adequate portfolio diversification can motivate a declining willingness to obtain dollar-denominated assets. For the borrower, an increasing burden of debt service may reduce the incentive to borrow (Tille, 2003).

The depreciation of the dollar during 2002-2004 reflected a declining demand for dollar-denominated assets by foreign investors. Recession in the United States in 2001, apprehensions about corporate accounting practices, a declining stock market, and a continuing decline in interest rates to levels not seen in more than 30 years (and decreasing substantially more than foreign interest rates) all resulted in a likely decline of the attractiveness of the investment climate in the United States. Combined with this, the inevitable increase of uncertainty because of the ongoing war on terrorism and the war with Iraq, and a depreciation of the dollar was not surprising.

By 2004, the dollar showed considerable weakness despite the strong fundamentals of the U.S. economy and a tightening of interest rates by the Federal Reserve. This reflected a decision by foreign central banks, especially those in Asia, to reduce their dollar buying and subsequent accommodation of a rising U.S. current-account deficit through purchases of Treasury securities. In 2004, the U.S. current-account deficit rose to an unprecedented 5.7 percent of gross domestic product, about twice as much as mainstream economists consider sustainable. This resulted in concerns about a possible collapse of the dollar, leading to global recession. By early 2005, however, the dollar showed some signs of rallying as the Federal Reserve continued to raise interest rates and the federal government showed greater interest in adopting measures to reduce its budget deficit.

The main reasons why foreign central banks decided to decrease their accommodation of U.S. external deficits was the fact that heavy dollar purchases by Asian central banks to prevent deflationary appreciation of their currencies amounts to a subsidy to U.S. consumption, and therefore results in increased current-account deficits while encouraging excess capacity in Asian export industries (Makin, 2004). Alan Greenspan, the Chairman of the Federal Reserve System, noted that America's current account deficit was unsustainable because foreigners' appetite for dollar assets could not increase forever.

### **THE DEPRECIATING DOLLAR: UNEVEN ADJUSTMENT BURDEN**

Although the U.S. dollar's exchange value has steadily fallen since 2002, it has not dropped uniformly against other currencies. The depreciation of the dollar against the euro has been especially steep, since export-oriented Asian countries are less willing to allow their currencies appreciate. For example, the Bank of Japan

has a long history of intervening to keep the yen from rising too sharply against the dollar. This places greater pressure on other countries, such as Europe, to bear a disproportionate amount of the adjustment burden.

In 2004, for example, the dollar dropped about 5 percent against the yen while falling 10 percent against the pound and 11 percent against the euro. Unfortunately, that's the last thing Europe needs. Its economies have been barely growing for the past several years, and a weaker dollar makes it that much harder for Europeans to export to America while encouraging more imports from America. Having bungled in the past, Europe has shown little recent interest in intervening in the currency markets to prevent an appreciation of the euro against the dollar.

China is an even more important contributor to uneven adjustment in exchange rates. This is because China maintains an exchange rate system that is pegged to the U.S. dollar. Under this system, China's central bank issues a target dollar-yuan exchange rate of about 8.3 yuan to the dollar, combined with a limited band of 0.3 percent in which the yuan is allowed to fluctuate. To maintain the target rate, the People's Bank of China must intervene in the foreign exchange market. For example, preventing a dollar depreciation against the yuan requires the central bank of China to increase its dollar reserves by buying dollars from the public in exchange for newly printed yuan. During 2004, the People's Bank of China was forced by purchase about \$15 billion per month as the price of keeping the yuan constant against the dollar. This is in contrast to 1999 when the foreign exchange market was roughly balanced, the People's Bank of China could manage the yuan's peg without buying (or selling) dollars at all. As long as the Chinese are willing to accumulate dollar reserves, they can continue to maintain the peg. Rather than hold U.S. dollars, which earn no interest, the Chinese central bank mostly holds U.S. securities, mainly U.S. Treasury securities but also other U.S. agency securities such as obligations of Fannie Mae and Freddie Mac.

Many U.S. policymakers and business and labor representatives have charged that China's currency is significantly undervalued relative to the dollar, by as much as 40 percent (Obstfeld and Rogoff, 2004). They cite China's huge trade surplus and large accumulation of dollar reserves now approaching \$600 billion by the People's Bank of China as evidence. An overvalued yuan makes U.S. exports to China more expensive than they would be if exchange rates were determined by market forces. This harms U.S. production and employment in manufacturing industries such as textiles, apparel, and furniture that are forced to compete against artificially low-cost goods from China. If the yuan's exchange rate was set by market forces instead of central-bank manipulation, the currency would appreciate sharply, increasing the price of Chinese exports and taking pressure off manufacturing industries elsewhere. U.S. policymakers have argued that China should either officially revalue its currency so as to cause the yuan to appreciate against the dollar. Alternatively, China could allow the yuan to float freely in international markets, in which market forces of supply and demand would result in an appreciation of the yuan.

However, Chinese officials maintain that its currency peg policy is not intended to favor exports over imports, but rather to foster economic stability. Chinese officials note that many developing countries, including China, tie their currencies against the dollar at a constant level to promote economic stability. Chinese leaders fear that abandoning the peg could induce an economic crisis in China and would especially damage its export sectors at a time when painful economic reforms, such as shutting down inefficient state-owned businesses and restructuring the banking system, are being implemented. Simply put, Chinese officials view economic stability as crucial to maintaining political stability. They are concerned that an appreciating yuan would reduce employment and decrease wages in several industries, and thus cause worker unrest.

It should be noted that not everyone agrees that an appreciation of the yuan would be that helpful to American manufacturers. This is because Chinese export workers make textiles, toys, sporting goods and light electronics, products that the United States and other developed countries mostly gave up a long time ago. Chinese export workers do not compete head-to-head with U.S. workers in autos, chemicals, machinery, and technology--sectors in which even small changes in pricing could shift orders and production between one country and another (Anderson, 2004).

Proponents of floating exchange rates contend that over time, a depreciating dollar would help restore balance in the U.S. payments position. However, complications hinder the adjustment efficiency of exchange rate fluctuations. As noted above, countries such as Japan have intervened in the foreign exchange market to limit the

appreciation of the yen against the dollar; critics refer to such intervention as a “dirty” float. Also, China and other Asian countries tie their currencies to the dollar, which prevents any exchange rate adjustment. Moreover, many U.S. companies outsource production to foreign affiliates. As foreign-currency denominated costs become a larger portion of the U.S. firm’s total costs, a dollar depreciation leads to a smaller decrease in the dollar cost of the firm’s product compared to the cost changes that occur when all input costs are dollar denominated. This limits the ability of the American firm to compete in a global market.

### **CAN THE DOLLAR REMAIN THE WORLD’S MOST IMPORTANT RESERVE CURRENCY?**

Since World War II, the U.S. dollar has assumed the position of the reserve (key) currency of the global monetary system. Because the world’s supply of liquidity was inadequate following the war, the United States became the main source of liquidity growth through its balance of payments deficits. In this way, the dollar became the primary reserve currency, and observers soon began to refer to the postwar monetary system as the dollar standard.

The requirements of a reserve currency are a large economy, open and deep financial markets, low inflation, and confidence in the value of the currency. Maintaining the dollar as a reserve currency has required the United States to defend its value by controlling its domestic money supply, and thus its payments deficits. By so doing, it effectively determines the amount of official international liquidity, for each new deficit will inject an equivalent amount of reserve assets into the global economy. To achieve this result, however, the United States has needed the cooperation of other nations so that they will run surpluses implicit in its own deficits. As the reserve center, the United States issues monetary liabilities that need to be sufficiently attractive so that other nations will want to acquire them; its liquidity supply will have to be matched by comparable demand. The system fails if the United States floods the world economy with assets of questionable value, or if U.S. reserve-assets are inadequate to provide for the financing of the growth of world trade.

By 2004, however, the world economy today was clearly out of balance. Americans have become the world’s dominant consumers, snatching up far more than the United States produces by importing from countries that produce far more stuff than they can digest at home. Americans purchase from thriftier economies, mainly in Asia, and they lend Americans almost \$2 billion each day. Simply put, Americans save very little, buy a lot and enjoy lots of imported goods; other countries save a lot, sell a lot, and enjoy lots of export jobs. Americans borrow while foreigners lend.

In the short run, this may appear to be not all that bad. Americans are able to live beyond their means. Also, interest rates have remained low in the United States because foreigners have been content to purchase huge amounts of debt issued by the U.S. government. Analysts note that if not for the inflow of foreign money, U.S. interest rates would be up to 1.5 percentage points higher. Moreover, the ability to borrow without shoving up interest rates has been a benefit to the U.S. government, which can increase spending on both social programs and defense without having to raise taxes. Foreigners have also benefited from the consumption excesses of Americans. Goods sold to the United States have kept Japan’s economy from being even more sluggish. And China looks to strong exports to the United States as a way of lifting its people out of poverty.

However, mainstream economists contend that this "consumption party" will come to an end as foreigners grow reluctant to hold ever-more dollars. As the dollar weakens, the value of dollar-denominated assets held by foreigners will decline. This will cause foreign investors to demand higher interest rates if they are to keep lending America the money it needs. Americans will thus have to borrow on less and less favorable terms. This will render the U.S. current-account deficit increasingly untenable.

The best way out of this situation would be for the Americans, especially the U.S. government, to formulate a credible plan to live within its means. If this does not occur, the United States will eventually be forced by markets and the rest of the world to save more and buy less, particularly from other countries. In turn, other countries have to save less and buy more, particularly from the United States.

What is clear is that America's habits are inappropriate for the guardian of the world's main reserve currency: huge government borrowing, substantial consumer spending and a current-account deficit large enough to have bankrupted any other country years ago. If the dollar did not have the advantage of being the world's main reserve currency, America would already be in serious difficulty. Instead, the willingness of Asian central banks to lend to the United States has allowed its deficit to keep increasing for many years. Nevertheless, the deficit is unsustainable: sooner or later it will need to decline, and that will require a cheaper dollar. How rapid and how far the dollar will fall, and which currencies it will depreciate against, are key issues.

If the dollar were to undergo a precipitous decline, markets would become greatly disrupted and a global recession might ensue. A sharply falling currency can become a vicious cycle that is difficult to stop, as Thailand recently discovered. But a gradual decline, perhaps 1 percent per month constitutes a more orderly depreciation, allowing exporters and investors time to adjust and avoid serious economic damage. Between 1985 and 1995, for example, the dollar fell by more than 50 percent against the German mark, inducing German automakers to transfer production to the United States. As long as a depreciation of the dollar occurs gradually, companies have time to adjust (Greenspan, 2004).

Concerns about the falling dollar have resulted in some economists considering the once unthinkable: might the dollar lose its reserve currency status? Over the past 2,000 years, the leading international currency has changed many times, from the Roman denarius to the Dutch guilder to the British pound and then to the U.S. dollar. However, never before has the guardian of the world's main reserve currency been its biggest net debtor, as the United States is today. Some economies, such as New Zealand and Australia, have realized larger debt burdens without noticeable adverse economic repercussions, but they are small countries so their current-account deficits absorb only a tiny portion of global saving. In 2004, America's borrowing from abroad soaked up a massive 75 percent of the world's surplus saving.

So far, America's sizable debt has not been a major burden on its economy. Although the United States is a large debtor, it does not have to make net payments of interest and dividends to the rest of the world. Instead, the United States realizes a net inflow of investment income because it earns a higher average return on its foreign assets than it pays on its liabilities. But as interest rates increase in the future and net foreign debt climbs, the net investment income of the United States will likely turn negative in 2005. That will result in an additional drag on the American economy.

### **HIDDEN STRENGTHS MAY PREVENT A CURRENCY CRISIS**

In spite of the recent weakening of the dollar, a currency crisis is not necessarily inevitable. This optimism is reinforced by the fact that the rate of return is a powerful motivation to the investor and there are several reasons by the United States may remain for some time a relatively attractive destination. First, there seems to be a shortage of better investment alternatives around the world, since most other major economies have lower growth rates than the United States. Also, the prospect of a series of large U.S. budget deficits in a growing economy suggests that interest rates in the United States will likely rise, thus attracting short-term investment into the United States. Finally, about three-fourths of foreign investment in the United States is long-term investment, including direct investment in plant and equipment, bonds, and stocks. These investments tend to be more stable than short-term investment flows because they are based on long-run return and are thus less sensitive to adverse short-term changes in economic conditions. Combined, these factors would place upward pressure on the dollar. At some point, however, the desire for diversification of foreigners' investment portfolios would be a motivating force to move out.

The increased depth, reach, and sophistication of the U.S. economy is another reason why the United States can avoid a crisis. Alan Greenspan argued in 2003 that an ever more flexible international financial system suggests that global imbalances are more likely to be defused with little disruption. Moreover, the United States has an additional advantage over other nations when it comes to preventing a currency crisis: Its economy is too important for the world to passively accept a dollar collapse.

Although the dollar has been the main reserve currency for 60 years, its dominant role can no longer be taken for granted. If the United States continues to spend and borrow at its present pace, the dollar will eventually lose its mighty status in global finance. And that would hurt: the privilege of being able to print the world's reserve currency allows the United States to borrow cheaply and therefore to spend much more than it earns, on better terms than are available to others. But rather than expecting a catalytic crisis, it is more likely to expect a gradual downward drift where we pay more and more of a cost. Unfortunately, economists have no scientific basis with which to ascertain when and how fast this adjustment might be. They are quite confident where the United States is headed, but they do not know when the journey might begin, how quickly the United States will get there, and how wrenching the experience will be.

In the future, there is no one currency that is likely to replace the dollar as the main reserve currency. Although the euro and yen meet some of the requirements of a reserve currency, neither are sufficiently strong to take over. Instead, the world might evolve towards a multiple reserve-currency system, shared among the dollar, euro, and yen, (or perhaps the yuan?) at some point in the future. It remains to be seen where the dollar is going and whether Paul Volcker's concerns will be realized in the years ahead.

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