



The International Use of Currencies

The U.S. Dollar and the Euro

Why does the international monetary system seem to need only one or, at most, a few national currencies to carry out international transactions? This article offers an explanation, discusses recent trends in the international use of the dollar, and assesses the possible impact of the euro in world financial markets.

George S. Tavlas

FOR THE PAST half century, the U.S. dollar has served as the world's preeminent international currency, thwarting challenges from several other currencies in the process. In the early post-World War II period, the pound sterling provided some competition to the dollar, while in the 1980s the increased use of the deutsche mark and the Japanese yen led to speculation that the international monetary system was becoming a tripolar currency regime. By the early 1990s, however, the international use of the deutsche mark and yen stabilized at modest levels and expectations of a tripolar regime subsided. During the past few years, there has been increasing speculation that the international monetary system may become bipolar, with the dollar sharing the spotlight with a currency that has yet to come into existence—the euro.

International uses of a currency

Elementary monetary economics teaches that within a single economy, money fulfills three basic functions—it serves as medium of exchange, a unit of account, and a store of value. An international currency used among economic agents—that is, persons engaging in financial transactions—in multiple economies serves the same functions. As a medium of exchange, it is used by private agents both in direct exchange of currencies and as a vehicle currency in carrying out indirect exchanges between two other currencies in foreign trade and international capital transactions. It is also used by official agents as a vehicle for exchange market intervention and for balance of payments financing. As a unit of account, it is used to invoice merchandise trade, to denominate financial transactions, and—by official agents—to define exchange rate parities. As a store of value, it is used by private agents when they are choosing financial assets, such as bonds held by nonresidents. Similarly, official agents may hold both an international currency and financial assets denominated in it as reserve assets.

There is, however, one fundamental difference between the use of money in a single economy and the use of an international currency in a multieconomy setting. In the former context, governments typically declare (by fiat) the currency that is used as

legal tender within their jurisdictions. For example, when receiving tax receipts, the Swiss government demands to be paid in Swiss francs and not in, say, Mexican pesos. In the international setting, however, the choice of currencies responds predominantly to market forces, whose consequences are ratified more than guided by international agreements. While the process determining the use of international currencies responds to market forces, there may be some inertia owing to the costs of changing currencies, as is explained later in this article.

Because the choice of international currencies is mainly a market-driven process, money's functions as a medium of exchange and a unit of account tend to predominate over its function as a store of value and to lead to the use of a single international currency or, at most, several international currencies. To explain this phenomenon, consider that modern portfolio theory suggests that—in order to diversify their risks—investors will typically choose to hold a wide range of international currencies as *assets*, with the particular quantities of each currency depending upon their respective risk and return characteristics. Consequently, if the choice underlying the international use of currencies depended exclusively on asset motives, many currencies would be held and there would be no reason why the dollar should dominate investors' portfolios. Over the past twenty-five years or so, for example, deutsche mark-denominated assets and yen-denominated assets have provided considerably higher returns—in terms of nominal yields *plus* capital appreciations—than have dollar-denominated assets. Yet the dollar is the dominant international currency.

Underlying the dollar's dominant position are the medium of exchange and unit of account functions of money, and the role of money in conveying information about relative prices. By using money, individuals reduce the amount of information that they must acquire and process, and the number of transactions in which they need to engage. Money, in its capacity as a transmitter of information, performs a function analogous to that of an international language. The use of a language by just one person, of course, is of no social value. The greater the number of people who speak a language, the more it can facilitate communication. The same is true of money. A currency hardly functions as a useful unit of account and medium of exchange if only a single person uses it. The utility of money depends, in part, on how many others use it. When a Saudi Arabian exporter who does not speak Italian sells crude oil to an Italian importer who does not speak Arabic, the transaction may well be conducted in English and denominated and settled in U.S. dollars. Thus, the use of the dollar in the transaction leads, as does the use of English, to economies of communication in transmitting information. The more popular a currency is, the more useful it is to those who hold it. Furthermore, even if individuals should have an incentive to switch to another currency, they would have to convince many other agents to make the same switch before it would

Table 1
**Shares of selected currencies in global gross
 foreign exchange market turnover**
 (percent)

	April 1989	April 1992	April 1995
U.S. dollar	45.0	41.0	41.5
Deutsche mark	13.5	20.0	18.5
Japanese yen	13.5	11.5	12.0
Pound sterling	7.5	7.0	5.0
French franc	1.0	2.0	4.0
Swiss franc	5.0	4.5	3.5
Other currencies	14.5	14.0	15.3
All currencies	100.0	100.0	100.0

Source: Bank for International Settlements, *Central Bank Survey of Foreign Exchange and Derivatives Market Activity 1995* (Basle).

become worthwhile to do so. This “switching cost” is one reason why the pound sterling continued to be widely used internationally years after the United Kingdom lost its position as the world's preeminent economic power.

Several factors are necessary for a currency to be used internationally. First, there needs to be confidence in its value and, therefore, in the issuing country's inflation performance. In order to serve as an international unit of account and medium of exchange, a currency should have a stable value—that is, its price relative to other currencies should provide sufficient information to economic agents, making it unnecessary for them to undertake costly investigations. High and variable inflation generates nominal exchange rate depreciation and uncertainty. In this connection, the inflation performance of the United States has compared favorably with the performances of the other major industrial countries since the move to managed floating exchange rates in 1973; among the Group of Seven industrial countries, inflation (as measured by consumer prices) has been higher on average in the United States than in Germany or Japan, but lower than in Canada, France, Italy, or the United Kingdom. Moreover, U.S. inflation performance in recent years has improved relative to those of both Germany and Japan (although German and Japanese inflation rates remain below the U.S. inflation rate). Second, there needs to be confidence in the political stability of the issuing government. Third, the issuing country should possess financial markets that are substantially free of controls, broad (that is, containing a wide variety of financial instruments), and deep (that is, having well-developed secondary markets). Well-developed financial markets contribute to the international demand for a country's currency, reflecting central banks' and other investors' preferences for safe, liquid financial instruments.

The United States has the world's largest and deepest financial markets. For example, domestic debt outstanding in the U.S. capital market is larger than the combined total of domestic debt outstanding in the capital markets of all the



Table 2
United States and European Union
Relative economic size and use of currencies
 (percent)

	United States	European Union
Economic size		
Share of world GDP, 1996	20.7	20.4
Share of world exports, 1996 ¹	15.2	14.7
Use of currencies ²		
World trade, 1995	51.0	31.0
International bond offerings, September 1997	45.1	41.9
Developing country debt, end of 1996	50.2	15.8
Global foreign exchange reserves, end of 1996	63.7	19.5
Foreign exchange transactions, April 1995	11.5	35.0

Sources: International Monetary Fund, World Economic Outlook database; and *Annual Report*, 1997.

¹ Excluding intra-European Union trade transactions.

² Share denominated in currency (or currencies) of country (or European Union).

other Group of Seven economies, and the U.S. stock market's capitalization is almost as large as the combined total of the stock market capitalizations of all the other Group of Seven countries. The sophistication of U.S. financial markets helps explain why the prices of homogeneous primary products—such as wheat—tend to be denominated in terms of the U.S. dollar and why the unit-of-account function of money (in transmitting information) is so important. Primary products (and capital assets) are typically characterized by low levels of product differentiation and are traded in competitive markets. In such markets, using as a unit of account and a medium of exchange a currency that most market participants are familiar with minimizes the costs of information and calculation, since it is more efficient to transmit price-change information about homogeneous products in a single currency than through many. This leads to the establishment of a centralized commodity exchange that records changes in world demand and supply at a single geographic basing point and explains why trade in primary products is often centered in the United States (in New York and Chicago).

A final set of factors underlying international currency use are the issuing country's economic characteristics, including its share of world trade and the size of its economy. The larger a country's share of world trade, the more likely its currency is to be familiar to traders and the more useful is that currency as a unit of account and medium of exchange. The United States is the world's largest exporter. In 1996, its share of world exports was 15.2 percent, thus contributing to the international use of the dollar. Concurrently, the U.S. economy was, and is, the world's largest (accounting for about 21 percent of world GDP in 1996), so that its economy is relatively closed despite the fact that it is the world's largest

exporter; in 1996, the sum of U.S. exports and imports as a share of its nominal GDP (a measure of how open or closed an economy is) was only 23.6 percent, whereas the average for the three largest economies in the European Union—France, Germany, and the United Kingdom—was about 52 percent.

International use of a currency provides several major benefits to the issuing country. First, it derives seigniorage, because the noninterest-bearing claims on it are denominated in its own currency. The Board of Governors of the U.S. Federal Reserve System estimates that this seigniorage revenue for the United States amounts to between \$11 billion and \$15 billion per year. Additionally, because the nominal interest rate on debt comprises a real component and an expected-inflation component, a country with an international currency can create extra seigniorage by unexpectedly inflating its currency, although doing so would jeopardize the currency's international use. Second, as the international use of a currency expands, loans, investments, and purchases of goods and services will increasingly be executed through the financial institutions of the issuing country. Thus, the earnings of its financial sector are likely to increase. Third, the tendency of world trade in general to be denominated in U.S. dollars means that the U.S. economy is less vulnerable to changes in the value of its currency than are other economies.

The main costs of having a currency that is used internationally are the following: (1) under pegged exchange rates, a shift in preferences by foreigners can lead to large capital flows and undermine the capacity of the monetary authorities to control the monetary base and influence domestic economic activity; and (2) under floating rates, such a shift can lead to large variations in the exchange rate, which could also limit the degree of influence exerted by the authorities over the domestic economy. Concern about the effects of changes in portfolio preferences on the domestic economy caused both the German and Japanese governments to take measures to restrict the international uses of their respective currencies during the 1970s and early 1980s.

The dollar's use internationally

Trends in the volume of currencies traded in foreign exchange markets can be used as proxies for trends in the relative importance of currencies as units of accounts and mediums of exchange. Data on turnover in the interbank markets are available from surveys conducted by central banks in April of 1989, 1992, and 1995, and reported by the Bank for International Settlements. These data are summarized in Table 1. Although the data show that the dollar's share of turnover fell from 45 percent in 1989 to 41.5 percent in 1995, foreign exchange market trading is still dollar dominated; the dollar's share in 1995 was larger than that of the next four competitors (deutsche mark, Japanese yen, pound sterling, and French franc) combined.

Other indicators of international currency use tell a similar story. For example, in 1996, the dollar accounted for about 75 percent of external bond issues, 64 percent of official

holdings of foreign exchange, and 45 percent of Eurocurrency deposits. In general, the dollar accounts for between 40 and 80 percent of the various categories of international currency use, with the categories at the high end of this range (for example, foreign exchange market turnover and trade invoicing) representing mainly the unit of account and medium of exchange functions of an international currency.

The challenge of the euro

The advent of European Economic and Monetary Union (EMU), which is scheduled for the beginning of 1999, will constitute a major change in the international monetary system. EMU's currency—the euro—is expected to eventually challenge the dollar's hegemony in international transactions, since EMU will have the characteristics needed to establish the euro as a strong currency in the international monetary system. The euro's potential to become a leading international currency will depend upon the factors contributing to international currency use that have been discussed previously.

Inflation. EMU will create a new central bank with credible antecedents but no independent reputation of its own making. The European Central Bank (ECB) will have to earn its anti-inflation credentials. Although the ECB will enjoy a high degree of independence in its efforts to achieve price stability (as stipulated in the Maastricht Treaty), it will have to prove that it is credibly committed to the pursuit of price stability. Earning its anti-inflation credentials will take time. The mix and stance of monetary and fiscal policies in the euro area will be important factors determining the strength or weakness of the new currency.

Financial markets. Increased integration of Europe's financial markets, with the euro taking the place of many national currencies, should lower costs of financial transactions, narrow interest rate spreads (a process that has already begun), and expand the supply of euro-denominated assets as borrowers tap into the expanded European financial system. The greater depth and breadth of markets in financial assets denominated in euro, compared with today's markets in which assets are denominated in multiple European currencies, will provide incentives for non-EMU countries to diversify their reserve holdings so that they are more in line with the currency composition of their trade and financial transactions.

Relative economic size. The European Union (EU) and the United States each account for about 20 percent of world output and 15 percent of world exports, but the U.S. dollar is used much more widely as an international currency than all of the current EU currencies combined (Table 2). The larger economic base of the euro (relative to the bases of individual European currencies in the past) and the elimination of the



George S. Tavlas, previously a Deputy Division Chief in the IMF's Treasurer's Department, is on external assignment as a Special Advisor to the Governor of the Bank of Greece and serves as the Bank's Alternate Member of the Monetary Committee of the European Union.

transaction costs currently involved in exchanging multiple European currencies are likely to lead to a gradual increase in the euro's use as a unit of account in the denomination of trade flows, particularly in transactions between the euro area and developing and transition countries. Moreover, if all 15 EU countries eventually join the euro area, then more than 60 percent of their current foreign trade would be reclassified as domestic, so that EMU would be a more closed economy than those of any of its individual members. This factor and the potential for the euro to be used for denominating foreign trade will help make the euro area less susceptible to exchange rate changes than individual European countries currently are. Consequently, the euro will make an attractive alternative to the dollar as a safe haven in the event of shocks to the world economy (such as the oil price shocks of the 1970s).

Political underpinnings. A fundamental distinction will exist between the dollar and the euro. The former is issued by a single political

jurisdiction, while the euro will be issued by a union made up of multiple jurisdictions. As noted previously, political stability is an important determinant of international currency use. Differences between, say, the states of Alabama and Massachusetts over the stance and mix of monetary and fiscal policies are unheard of, as are threats of any state to secede from the U.S. monetary union. Differences between, for example, Germany and Italy over macroeconomic policy issues cannot, however, be ruled out a priori. EMU will, therefore, have to establish its credentials as a politically cohesive entity before the world is truly ready to move to a bipolar international currency system.

Conclusions

In sum, the euro certainly possesses the potential to challenge the hegemonic role now played by the U.S. dollar in international transactions. Whether the euro will fulfill that role or go the route of other challengers to the dollar will, to a large extent, depend upon the credibility—both in terms of inflation performance and political cohesion—garnered by EMU in the years leading into the twenty-first century. **F&D**

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