

# THE EURO: EXPECTATIONS AND PERFORMANCE

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## THE CREATION OF THE EURO

At the beginning of 1999, the member states of the European Monetary System (EMS) joined stage 3 of the Economic and Monetary Union (EMU) of Europe with the introduction of the euro and a common monetary policy by the European Central Bank (ECB). The euro was introduced on 1 January 1999 as the common currency of eleven European countries (Austria, Belgium, Germany, Finland, France, Ireland, Italy, Luxembourg, Spain, Portugal and the Netherlands). Britain, Denmark, Sweden, and Greece were not part of it (Britain and Denmark chose not to participate, Sweden was not eligible because it had not been part of the EMS, and Greece was not admitted because it was unable to meet four of the five Maastricht indicators; Greece was admitted on 1 January 2001). The official euro conversion rates for the participating currencies were decided in the fall of 1998 and are given in Table 1. The creation of the euro was certainly one of the most important events in postwar monetary history—never before had a large group of sovereign nations voluntarily given up their own currency for a common currency.

From 1 January 1999, the exchange rate of the euro fluctuated in terms of other currencies, such as the U.S. dollar, the British pound, the Japanese yen, and so on, but the value of each participating currency remained rigidly fixed in terms of euros. This meant that the exchange rate of the currencies participating in the euro fluctuate in relation to other currencies only to the extent that the euro fluctuated in relation to those other currencies.

## BENEFITS OF THE EURO

Analyzing the benefits and costs of a common currency must inevitably start from the brilliant foresights of Mundell [1961] and McKinnon [1963], the originators of the theory of optimum currency areas. Using this theory, economists have analyzed and, on the whole, agree on the general benefits and costs from the establishment of the euro. The benefits are: (1) the elimination of the need to exchange currencies of EMU members (this has been estimated to save as much as \$30 billion per year); (2) the elimination of excessive volatility among EMU currencies (fluctuations will only occur between the euro and the dollar, the yen, and the currencies of non-EMU nations); (3) more rapid economic and financial integration among EMU members; (4) a European Central Bank that may conduct a more expansionary monetary policy than

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*Eastern Economic Journal*, Vol. 28, No. 1, Winter 2002

**TABLE 1**  
**Official Currency Conversion Rates for the Euro**

Country	National Currency	Currency Units per Euro
Austria	schilling	13.7603
Belgium	Belgian franc	40.3399
Finland	markka	5.94573
France	French franc	6.55957
Germany	Deutsche mark	1.95583
Ireland	punt	0.787564
Italy	Italian lira	1936.27
Luxembourg	Luxembourg franc	40.3399
Netherlands	guilder	2.20371
Portugal	escudo	200.482
Spain	peseta	166.386

The Launch of the Euro. *Federal Reserve Bulletin*, October 1999, 655-66.

the generally restrictive one practically imposed in the past by the Bundesbank on the other EMU members; and (5) greater economic discipline for countries, such as Italy and Greece, that seemed unwilling or unable to "put their house in order" without externally-imposed conditions.

Other benefits of the euro for the EMU members are (6) a seigniorage from the use of the euro as an international currency (the use of the dollar as an international currency confers about \$8-10 billion in benefits to the United States, and the expectation is that the euro could provide similar seigniorage benefits to the euro area); (7) the reduced cost of borrowing in international financial markets (it has been estimated that U.S. cost of borrowing on international financial markets is about 25-50 basis points lower than it would have been if the dollar were not used as an international currency—for a total savings of about \$10 billion, and the expectation is that the euro area could gain as much from the use of the euro as an international currency); and last but not least (8) the increased economic and political importance that the European Union (EU) will acquire in international affairs.

There is, however, a concern in the United States that the European Union will use this increased power to become more confrontational in transatlantic relations. To be sure, when there are real and important disagreements it is only proper and fair for the European Union to use its newly acquired clout to protect and foster its economic and political interests, but the hope is that it will not use it to pursue anti-American policies for their own sake and simply to assert its power or to strengthen internal cohesion. Similarly, the expected increased economic and political importance of the European Union in international affairs is likely to check American power now that the fear of communism has vanished and the Soviet Union has collapsed as a military superpower.

## THE PROBLEM WITH THE EURO

The most serious unresolved problem that the establishment of a European Central Bank (ECB) and the euro may create is how a EMU member states will respond to asymmetric economic shocks. It is almost inevitable that a large and diverse single-currency-area such as the euro area will face periodic asymmetric shocks that will affect various member nations differently and drive their economies out of alignment [IMF, 2000, Ch. 6]. In such a case, there is practically nothing that a nation so adversely affected can do. The nation cannot change the value of its currency or use monetary policy to overcome its particular problem, and fiscal discipline will also prevent it from using this policy to deal with the problem, at least until the Growth and Stability Pact (GSP) is fully implemented and frees up the automatic stabilizers [Salvatore, 1997; 1998; 1999; Arestis, McCauley, and Sawyer, 2001; European Commission, 2001; Issing, 2001].

A single currency works well in the United States because if a region suffers an asymmetric shock, workers move quickly and in great numbers out of the region adversely affected by the shock and toward areas of the nation with greater employment opportunities. This escape hatch is not generally available in Europe to the same extent as in the United States. In fact, the Organization for Economic Cooperation and Development [1986] and the European Commission [1990] found that labor mobility among EMU members is from two to three times lower than among U.S. regions because of language barriers, inflexible housing markets, and labor markets that remain regulated.

In addition to much greater regional and occupational labor mobility, in the United States there is a great deal of federal fiscal redistribution in favor of the adversely affected region. In the euro area, on the other hand, fiscal redistribution cannot be of much help because the EMU budget is only about 1 percent of the EMU's GDP and more than half of it is devoted to its Common Agricultural Policy [Salvatore, 1997]. Furthermore, real wages are also somewhat more flexible downward in the United States than in the euro area. None of these "escape valves" are available to an EMU member adversely affected by a negative asymmetric shock. In fact, the difference in unemployment rates among EMU member nations is much higher than among U.S. regions.

Supporters of the single currency reply that the requirements for the establishment of single currency will necessarily increase labor market flexibility and, by promoting greater intra-euro area trade, a single currency will also dampen nationally differentiated business cycles. Furthermore, it is pointed out that highly integrated euro area capital markets can make up for low labor market mobility and provide an adequate automatic response to asymmetric shocks in the euro area. While these automatic responses to asymmetric shocks may in fact be present, they may not be adequate. It is true that meeting the Maastricht parameters will increase labor market flexibility, but this may be a slow process and may not be allowed to take place to a sufficient degree if euro area labor insists on retaining many of its present benefits (such as job security and high unemployment pay). Furthermore, "excessive" capital flows may also work perversely by reducing the incentive for fundamental adjust-

ment measures and may even produce supply shocks of their own by pushing up the exchange rate of the EMU member adversely affected by an asymmetric shock.

A major asymmetric shock would result in unbearable pressure within the euro area because of limited labor mobility, grossly inadequate fiscal redistribution, and a European Central Bank that would probably want to keep monetary conditions tight in order to hold inflation at bay and to make the euro as strong as the dollar. Some indication of the type of problem that the euro area may be facing is given by the fact that in 2001 Ireland and the Netherlands were facing high growth and inflation while Germany and Italy were growing sluggishly. This meant that the ECB should have tightened monetary policy to cool off Ireland and the Netherlands and should have adopted an expansionary monetary policy to stimulate growth in Germany and Italy. A much larger asymmetric shock could create a much greater problem, and it is impossible to anticipate how the euro area would resolve and come out of it.

Whether increased economic integration within the EU reduces or increases the frequency and magnitude of asymmetric shocks is greatly debated. Frankel and Rose [1998] believe that greater economic integration dampens asymmetric shocks while Krugman [1993] believes the opposite. The available data are not sufficient to resolve the disagreement. Most economists, however, do believe that greater economic and financial integration enhances the effectiveness of the common monetary policy in member nations [Fратиanni, Salvatore, and von Hagen, 1997; OECD, 1999; 2000b, Angeloni and Mojon, 2000]. There is also the question of the effectiveness of a euro-wide monetary policy on the various EMU members. Previous research by the IMF [1998] indicated that a rise in interest rates took twice as long to have a significant effect in Austria, Belgium, Finland, Germany, and the Netherlands than in France, Italy, Portugal, and Spain, but that the final impact was almost twice as large, on average, in the first group of countries than in the second because of their different financial structure. For example, the IMF found that Spanish banks passed an interest rate increase on to customers within three months, while German banks took one year or more because of their closer relationship with customers. Similarly, a country such as Italy, where adjustable-rate debt is common, responds faster to interest-rate changes than do countries such as Germany, where fixed-rate debt is more common. Although the euro will very likely lead to the narrowing of these country differences over time, they are likely to persist at least for several years to come.

### THE MAJOR INTERNATIONAL CURRENCIES

An international currency is the currency of a nation (such as the U.S. dollar) that fulfills in the world economy the same basic functions that it performs in the nation's economy. That is, it serves as a unit of account, a medium of exchange, and a store of value. However, while the nation chooses its own currency, a national currency becomes an international currency as a result of market forces and by being able to perform the functions of money for both private and official transactions in the international economy [Cohen, 2000].

During the nineteenth and early twentieth centuries, the pound sterling was by far the dominant vehicle currency. Since then, the international use of the U.S. dollar

**TABLE 2**  
**Relative International Importance of Major Currencies in 1998**  
**(in percentages)**

	Official Use of Currencies		Currencies of Denomination in Private Transactions				
	(1) Foreign Exchange Reserves <sup>a</sup>	(2) Pegging of Currencies <sup>b</sup>	(3) Foreign Exchange Trading <sup>c</sup>	(4) Euro- Currency Deposits <sup>d</sup>	(5) Internat'l Bank Loans <sup>e</sup>	(6) Internat'l Bond Issues <sup>f</sup>	(7) Trade Invoicing <sup>g</sup>
U.S. dollar	65.7	30.8	49.8	50.8	69.8	45.7	47.6
Deutsche mark	12.1	4.6	17.2	14.8	3.3	10.1	15.3
Japanese yen	5.3	0.0	11.6	5.5	0.2	11.3	4.8
Pound sterling	3.8	0.0	6.1	8.0	15.6	7.9	5.7
French franc	1.3	23.1	2.9	4.0	5.3	5.1	6.3
Swiss franc	0.7	0.0	4.0	4.1	1.1	3.8	0.0
ECU	0.8	0.0	0.8	1.6	0.8	3.7	0.0
Other	9.9	49.8	7.6	11.2	3.9	12.4	20.3

Percentages may not add to 100 because of rounding. Sources: (a) IMF. *Annual Report*. Washington, D.C., IMF, 2000, 111; (b) IMF. *Annual Report*. Washington, D.C., IMF, 1998, 18-19; (c) BIS. *Annual Report*. Basle. BIS, 1999, 117; (d) BIS. *Annual Report*. Basle. BIS, 1998, 116. Data are for 1997; (e) OECD. *Financial Market Trends*. February 1998, 69, 82. Data are for 1997; (f) IMF. *International Capital Markets*. Washington, D.C., IMF, September 2000, 11, (g) Hartman [1999]. Data are for 1992. More recent data were not available.

increased in step with the increase in the relative economic and political importance of the United States. After World War II, the dollar became the dominant vehicle currency. The reasons for the decline of the pound sterling and rise of the U.S. dollar as a vehicle currency after World War II were (1) the high rate of inflation in the United Kingdom and sharp fluctuation in the value of the pound compared to the low inflation in the United States and stability of the U.S. dollar during the late 1940s and early 1950s, (2) the existence of exchange controls in England in contrast to the relative openness of the U.S. financial market, and (3) the decline in the sterling area's share of world exports in comparison to the rise in the U.S. share. Today, the pound sterling remains a vehicle currency (but to a much smaller extent than the U.S. dollar) because London remains a sophisticated international financial center [Tavlas, 1997]. One indication of the changed international role of the dollar and the pound sterling after World War II was the decision by OPEC (Organization of Petroleum Exporting Countries) in the mid-1970s to price petroleum in dollars instead of pound sterling.

Table 2 shows the relative importance of the dollar and other major currencies in international finance and trade in 1998 on the eve of the euro creation. The first column of the table shows that 65.7 percent of the international reserves held by central banks were held in dollars, 12.1 percent in Deutsche marks, 5.3 percent in yen, and smaller percentages for other currencies and the ECU (European Currency Unit). This is much greater than the U.S. share of world output and reflects the dominant international role of the dollar as a vehicle currency. On the other hand, the

share of international reserves held in Japanese yen is much less (5.3 percent) than the share of Japan's output in world output (7.6 percent). It must be pointed out, however, that neither Japan nor Germany encouraged the use of their currencies as international reserves so as not to constrain their ability to conduct a domestic monetary policy. Being much larger than either Japan or Germany, the United States did not feel so constrained.

The second column of the table shows that 30.8 percent (20 of the 65 mostly-small countries) that pegged (i.e., defined their currency) in terms of an international currency pegged it to the dollar, 4.6 percent (3 countries) to the Deutsche mark, 23.1 percent (15 countries) to the French franc, and 41.5 percent (the remaining 27 countries) to other currencies, SDR (IMF's special drawing rights), or a basket of currencies. It was the strong appreciation of the U.S. dollar to which they pegged their currency that triggered the serious financial and economic crisis in some of the countries of Southeast Asia (Thailand, Malaysia, Indonesia, South Korea, and the Philippines) and Latin America (such as Mexico and Argentina) during the second half of the 1990s. The relatively large number of countries that pegged their currencies to the French franc were the France's former in West Africa and they, too, faced a financial crisis as a result of their inflation rate more rapid than France's during the last decade.

The third column of Table 2 shows that 49.8 percent of foreign exchange trading in world markets was in U.S. dollars, 17.2 percent in Deutsche marks, 11.6 percent in yen, and smaller percentages for other currencies. Once again the dollar dominated. It seems that once a currency becomes the leading currency, its domain will far exceed the share of its economy in the world economy because of the reduced costs and increased benefits that economic agents face when using the leading currency instead of other currencies. Columns (4) to (6) of the table show that dollars represented 50.8 percent of Euro currency deposits (that is, bank deposits in a currency other than the currency of the nation in which the deposit is made), 69.8 percent of international bank loans (that is, euro and foreign bank loans), and 45.7 percent of international bonds. Column (7) of the table shows the relative use of the various international currencies in trade invoicing. From the table, we can see that the U.S. dollar occupies a dominant position in international finance and trade—a position that is much greater than the U.S. share of world output, assets, and trade. Only in the number of nations pegging their currencies to another currency, does the French franc come close to the U.S. dollar (23.1 percent of the total for the French franc as compared with 30.8 percent for the U.S. dollar). In all other uses, the U.S. dollar is far more dominant with respect to the other international currencies.

Table 3 shows the currency composition of foreign-exchange reserves from 1990 to 1999. The table shows that the percentage of foreign exchange reserves held in U.S. dollars increased almost continuously from 50.6 percent at the end of 1990 to 66.2 percent at the end of 1999. This reflected the greater confidence in the U.S. dollar as a result of the superior performance of the U.S. economy in relation to Europe and Japan. The Deutsche mark's use declined from 16.8 percent of the total in 1990 to 12.1 percent at the end of 1998 (before its international reserve function was taken over by the euro, on 1 January 1999). Over the same period, the French franc declined from 2.4 percent to 1.3 percent, the Netherland guilder went from 1.1 percent to 0.3

**TABLE 3**  
**Share of Currencies in Official Holdings of Foreign Exchange Reserves,**  
**End of Year, 1990-1999 (in percentages)**

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
U.S. dollar	50.6	51.1	55.1	56.4	56.4	56.8	60.1	62.1	65.7	66.2
Euro										12.5 <sup>a</sup>
Deutsche mark	16.8	15.1	13.0	13.4	14.0	13.5	12.8	12.6	12.1	
French franc	2.4	2.9	2.5	2.2	2.3	2.2	1.7	1.3	1.3	
Netherland guilder	1.1	1.1	0.7	0.6	0.5	0.4	0.3	0.4	0.3	
ECU	9.7	10.2	9.7	8.2	7.7	6.8	5.9	5.0	0.8	
Japanese yen	8.0	8.5	7.5	7.6	7.8	6.8	6.0	5.3	5.3	5.1
Pound sterling	3.0	3.2	3.0	2.9	3.2	3.1	3.4	3.6	3.8	4.0
Swiss franc	1.2	1.2	1.0	1.1	0.9	0.8	0.8	0.8	0.7	0.7
Unspecified currencies	7.1	6.9	7.4	7.4	7.1	9.6	9.0	9.0	9.9	11.6

Percentages may not add to 100 because of rounding. Source: IMF. *Annual Report*. Washington, D.C.: IMF, 2000, 111.

a. Not comparable with the combined share of euro legacy currencies in previous years, part of which reflected holdings of the Eurosystem that became domestic assets, and thus were no longer recorded as foreign currency holdings, upon conversion into euros on January 1, 1999 (for example, Germany's holdings of French francs became holdings of domestic assets after their conversion into euros).

percent, and the ECU from 9.7 percent to 0.8 percent. Again, we see that once a currency becomes the leading international currency, its dominance becomes far superior to the relative position of the nation in the world economy. On 1 January 1999, the euro took over the international reserve function of the euro-legacy currencies and by the end of 1999 it represented 12.5 percent of total world foreign exchange reserves. The euro represented a smaller percentage of foreign exchange reserves than the sum of the euro-legacy foreign exchange reserves at the end of 1998 because the portion of the international foreign exchange reserves that each euro-area country held in euro-legacy currencies became domestic assets upon the adoption of the euro on 1 January 1999.

Table 3 also shows that the Japanese yen represented 8.0 percent of total foreign exchange reserves in 1990 and declined almost continuously until the end of 1999, to 5.1 percent. Over the same period, the percentage of foreign exchange reserves held in British pounds (the United Kingdom was not part of the euro area) increased from 3.0 to 4.0 and those held in unspecified currencies increased from 7.1 to 11.6, while Swiss francs declined from 1.2 to 0.7. Thus, the relative importance of the dollar as an international reserve currency increased during the decade of the 1990 (after declining from 100 percent in the late 1940s, to 85 percent in 1975, and 51 percent at the beginning of 1990) as a reflection of the higher growth and greater dynamism of the U.S. economy. As pointed out later in the paper, however, the relative share of the dollar is expected to decline in the future, while that of the euro is likely to increase.

## THE EURO AS AN INTERNATIONAL CURRENCY

Expectation about the euro before its creation ranged from those, such as Feldstein [1991] and Dornbusch [1996], who did not believe that Europe needed or would succeed in introducing a common currency (or that if one were introduced, it would fail) to those, such as Portes and Rey [1998], who not only believed that the euro would be created as scheduled and that it be very strong from the very beginning, but that it could also replace the dollar as the leading international currency in a very short time. In between these two positions were others (such as Frankel, [1995]) who were more cautious and believed that the euro would be created as a strong currency, but that it was not likely to replace the dollar as the leading international currency for a long time, if ever. My position [Salvatore 1996; 1997] at the time was that because Europe wanted the euro, it would get it, but the benefits would be more political than economic during the first years of its existence. Only afterwards was the European Union likely to receive major economic benefits.

An excellent framework for analyzing issues relating to the future role of the euro is that provided by Portes and Rey [1998]. The basic equation of their model is

$$V = f(B, E, T, I)$$

where,  $V$  = the volume of foreign-exchange transactions in euros

$B$  = cross-border bond flows in euros

$E$  = cross-border equity flows in euros

$T$  = volume of trade

$I$  = international use of the euro

In analyzing the future role of the euro, however, Portes and Rey concentrated on  $B$  and placed much less importance on the other variables in their model. Thus, they predicted that (1) creating a single financial market in the EMU would reduce transaction in the euro area so much as to make the euro a strong rival of the dollar (possibly even surpassing it as the leading international currency in a short time) and (2) the euro would appreciate sharply with respect to the dollar soon after its introduction. From a theoretical point of view, assigning much less importance to the other variables in the model (other than  $B$ ) did not seem justified. Furthermore, the authors' justification for assuming that the supply of euros would increase at a later time than the increase in their demand, thus justifying a quick appreciation of the euro with respect to the dollar does not seem to be entirely justified. Indeed, because of these reasons their predictions did not turn out to be correct.

Despite its unexpected weakness in relation to the U.S. dollar and the Japanese yen since its introduction on 1 January 1999, the euro had been an important international currency from the very beginning and is bound to become even more important in the future. The reasons are that the EU: (1) is as large an economic and trading unit as the United States, (2) has a large, well-developed and growing financial market, which is increasingly free of controls, and (3) is expected to have a good inflation performance that will keep the value of the euro stable.

TABLE 4  
Relative Economic Size of EU, USA and Japan in 1999 (in percentages)

	EU	USA	Japan
Relative Economic Size:			
Share of World GDP <sup>a</sup>	20.3	21.9	7.6
Share of World Merchandise Exports <sup>b</sup> (excluding intra-EU)	14.1	12.4	7.5
Financial Structure (in trillions of dollars) <sup>c</sup>			
Bank Deposits	4.9	5.1	5.5
Bank Loans	6.4	4.5	5.2
Outstanding Debt Securities	5.5	15.3	6.3
Issued by Corporations	0.2	2.7	0.7
Issued by Financial Institutions	1.9	4.3	0.9
Issued by the Public Sector	3.3	8.3	4.7
Stock Market Capitalization	5.5	16.5	7.3

Sources: (a) IMF *World Economic Outlook*, October 2000, 187, (b) WTO *Annual Report*, 2000, 168-171, (c) OECD *Financial Market Trends*, July, 2000, 111. Data for the EU refer to Euro Area.

As the data in Table 4 indicate, the 15-member EU (even though only 12 countries presently participate in the euro) has very similar shares of world GDP and exports as the United States, and the size of its financial sector is also similar. Thus, if the international use of the euro were to match its share of world GDP, exports, and financial sector, the euro would become as important as the dollar as an international or vehicle currency. This would mean that the relative international use of the dollar would fall to 40-45 percent of the total, with an equal share going to the euro, and the remainder going mostly to the yen and a few other smaller currencies, such as the Swiss franc, the Canadian dollar, and the Australian dollar—mostly the yen.

It is unlikely, however, that the international use of the euro will soon match the EU share of world GDP and exports (as some European economists believe). First of all, the absence of a federal government in the EU puts a ceiling on the integration process in the market for government securities, and so financial integration in the EU will inevitably fall short of that in the United States. Secondly, with a smaller and declining covariance among the assets of the various EU members, according to strict portfolio diversification motives, there is less of a reason for EU investors to increase their holding of euro-denominated assets, while there will be a greater reason for increasing their dollar—and yen—denominated assets, as long as the ECB pursues an independent monetary policy with respect to the U.S. central Bank (the Fed) and the Bank of Japan. Thirdly, a portfolio shift in favor of euro-denominated assets will occur only if the ECB will conduct a tighter monetary policy than the Fed, but with the need to reconcile the different monetary-policy requirements of the various EU members, this may be difficult to do.

It is unlikely that the euro will soon displace the dollar as the most important international currency for other reasons. These are: (1) most primary commodities are priced in dollars and this is likely to remain the case for some time to come; (2) non-EMU countries are likely to continue to use the dollar for most of their interna-



tional transactions for the foreseeable future, with the exception of the former communist nations in central and eastern Europe and the former French colonies in Africa, which shifted from using the Deutsche mark or French franc, respectively, to using euros, and (3) of sheer inertia that favors the incumbent (the dollar).

Thus, it is more likely that about 50 percent of international transactions will be conducted in dollars in the future (down from the present 60 percent or so), 40 percent in euro, and the remaining 10 percent in yen and other smaller currencies [McCauley, 1997]. That is, the euro will very likely have more weight than the mark had up to 1998 but somewhat less than the relative weight that the EU has in international trade and finance in the world economy—at least during the first few years of its existence. This would involve a substitution of dollars for euros of about \$500 billion to \$1 trillion and lead to a depreciation of the dollar relative to the euro. But because this substitution is likely to occur gradually over time, it may not put undue pressure on the dollar. Furthermore, the increased financial integration resulting from the replacement of many currencies by a single one will also expand the supply of euro-denominated assets (as foreign borrowers tap into the expanded European financial system) thus dampening the tendency of the euro to appreciate with respect to the dollar.

To be noted is that with the euro, intra-euro area balance-of-payments deficits and surpluses will be netted out, and so the reserve needs for the euro area as a whole (to be held primarily in dollars) will be considerably less than the reserve needs of individual members without the euro. But it is what will happen in the much larger private international holdings of dollars (which depend primarily on expectations of future monetary and fiscal policies in the euro area) that will primarily determine the euro/dollar exchange rate. The emergence of the euro as a major international currency may also lead to a reduction in the international use of the yen, but this could be neutralized if Japan completes the planned deregulation of its financial sector and finally succeeds in resolving its serious decade-old banking and economic crisis.

### THE EURO SINCE ITS CREATION

The euro was introduced on 1 January 1999 at the value of \$1.17; it rose to \$1.18 on 4 January (the first business day of the new year) but, defying almost all predictions, it declined almost continuously reaching near parity to the dollar at the end of 1999 and then falling to a low of \$0.82 on 26 October 2000 (see Figure 1).

Just before its introduction, Portes and Rey [1998] and many others believed that the euro would appreciate with respect to the dollar to between \$1.25 and \$1.30 by the end of 1999 because of the important synergies that they believed would quickly develop between the use of the euro in foreign exchange transactions and in euro area financial asset markets. Instead, the euro depreciated by more than 30 percent by 26 October 2000, and so the question arises as to how could so many financial experts be so wrong. The major reason is that exchange rates, just as stock prices, are practically impossible to predict over short periods of time (days, weeks, or even months) because "news" and other unforeseen events usually overwhelm other more fundamental forces at work on which most experts rely to make their forecasts [OECD, 2000a]. One fundamental explanation for the depreciation of the euro during the first half of

FIGURE 1  
Daily Exchange Rate U.S.\$ /Euro



Federal Reserve Statistical Release - Foreign Exchange Rates Historical Data

its first year of existence was that the value chosen for its debut was set too high in the fall of 1998 (when the growth rate and the interest rate were expected to fall in the United States and rise in Europe). Because the opposite occurred, it was only natural for the euro to depreciate. Thus, aside for the embarrassment of some high-level euro area officials and European economists who had trumpeted the introduction of the euro with considerable fanfare and predictions of its appreciation, the depreciation that followed encouraged European exports and stimulated growth, which was anemic in most members of the euro area. As was the case for stocks, however, there was no shortage of forecasts as to the future euro/dollar exchange rate—and they were all over the place (for example, at the beginning of 2000, Deutsche Bank predicted that the euro would close the year at \$1.12, as contrasted with the actual closing value of \$0.94).

The euro continued to depreciate relative to the dollar during 1999 and 2000 for several reasons. First was the positive interest differential in favor of the United States, which attracted huge amounts of financial capital from Europe to the United States, and put upward pressure on the dollar and downward pressure on the euro. Second was the market perception that European countries were not restructuring as rapidly as necessary, and so growth and profitability were expected to be higher in the United States than in Europe. This attracted net direct investment from Europe to the United States and put further downward pressure on the euro. But even this does not tell the whole story—otherwise the euro should have appreciated with respect to the yen in view of the fact that growth and profitability were higher in Eu-

FIGURE 2

## Daily Exchange Rate Japanese Yen /Euro



www.Oanda.com—Historical Currency Exchange Rate

rope than in Japan during 1999 and 2000. Instead, as Figure 2 shows, the euro depreciated even more with respect to the yen than with respect to the dollar.

The missing link was that financial markets viewed the lack of political unity in Europe as a sign of weakness. In short, the international value of a currency inevitably also reflects the political situation of the nation or economic area. As a result, the euro depreciated with respect to the dollar much more than justified by purely economic fundamentals. And the pronouncements by Schroeder, the German Prime Minister, in mid-2000 that he was not concerned about the weakness of the euro certainly did not help. Nor did Duisenberg's [1999] periodic exhortation to financial markets not to unduly punish the euro, followed by the half-hearted and weak intervention of the European Central Bank in support of the euro in mid-September 2000, lift the fate of the euro.

Although the EMU and the euro were not in danger of collapse in fall 2000, the continued weakness of the euro magnified the problems caused by the increase in petroleum prices for Europe (because petroleum is priced in dollars). The danger was that this would slow down growth and profitability in Europe more than in the United States and put even more pressure on the euro. It was for that reason that the European Central Bank in concert with the NY Fed (which executes international operations for the U.S. central bank) and the central banks of Japan, France, England and Canada, in a move that caught the markets by surprise, intervened in foreign exchange markets for the first time on Friday, 22 September 2000 in support of the euro, which had fallen in previous days to its all-time low of \$0.82. By the end of the day the euro had risen to \$0.88, but in the following days the euro fell back to its pre-intervention level.

Then on 28 September 2000, the euro received another blow by the clear rejection of Danish voters in the referendum to adopt the euro. This may influence the United Kingdom and Sweden to also refuse to join the single currency. By its vote, Denmark rejected the plan to create a "deep Europe"—the idea of eventually forging a federal European government and parliament with real authority—as wanted by France and Germany. That is, the Danish vote can be taken as a pure test of the political will to become part of the Franco-German vision of a large superstate. The Danes saw the euro as a way to compel Europe toward deep political integration and rejected the idea. Henceforth, if France, Germany, Italy, the Netherlands, and Belgium want a deep Europe rapidly, they will very likely have to go ahead alone. The Danish vote also underscored the daunting task facing the European Central Bank in forging confidence in a currency that has no single government and no unified fiscal policy behind it.

At the beginning of November 2000, the European Central Bank intervened again several times (but alone) in foreign exchange markets in support of the euro, but to no avail. Not even the uncertainty surrounding the election of the President of the United States was sufficient to lift the value of the euro. Only when it became evident, toward the end of November, that the growth rate of the United States had declined sharply and that, as a result, the European Union was expected to grow more rapidly than the United States in 2001, did the net capital outflow from Europe to the United States dry up, and the euro start to appreciate significantly with respect to the dollar. (It reached the value of \$0.96 on Friday, 5 January 2001.) The trend was expected to continue with the euro reaching parity with the United States by mid-2001.

From February to June 2001, however, the euro fell and remained lower than \$0.90 as markets anticipated that growth and profitability in the United States would resume in toward the end of 2000 or in early 2001, and thus that there was no reason for the euro to continue to appreciate relative to the dollar. Another possible explanation for the strength of the dollar relative to the euro was the continued higher growth of labor productivity in the United States compared to the European Union (despite the slowdown in the U.S. economy in the latter part of 2000 and first half of 2001). Only if the current U.S. slowdown kills the growth of its labor productivity, the argument goes, will the euro appreciate significantly with respect to the dollar. Still another possible reason for the continued strength of the dollar is that perhaps investors still see the United States as a "safe haven" in times (such as the present one) of economic turmoil (due to the financial crisis in Turkey and Argentina, the continued economic crisis in Japan, and danger of renewed financial instability in Brazil and Russia). As is clear from the above, there is no shortage of explanations for the current strength of the dollar and, as some older explanations are contradicted by emerging facts and evidence, new ones are confidently introduced. Of course, should the dollar begin to depreciate heavily with respect to the euro, all sorts of reasons will be advanced for that. In short, no economic model or theory can consistently and accurately predict exchange rate movements in the short run because fundamental forces at work are easily and frequently overwhelmed by transitory ones and "news".

## THE EXCHANGE RATE BETWEEN THE EURO, THE DOLLAR, AND OTHER CURRENCIES

The introduction of the euro on 1 January 1999 proceeded smoothly and did not create problems for the working of the international monetary system [Danthine, Giavazzi, and Thadden, 2000]. What may create problems is the fact that with most trade and financial relations conducted within, rather than between, the three major trading blocks (the EU, NAFTA, and Asia centered on Japan), there will normally be less concern about the euro/dollar and euro/yen exchange rate, and less interest in intervening in foreign exchange markets to stabilize exchange rates (only with the deepening depreciation and undervaluation of the euro in 2000, did interest in the euro exchange rate come to the forefront). With less interest and less intervention, it is likely that the euro/dollar and euro/yen exchange rate will continue to be volatile in the future. This tendency also arises because the exchange rate is one of only a few market equilibrating mechanisms operating among the three major trading blocks. Exchange rates among the three leading currencies are likely to be especially volatile if and when the three blocks will face different cyclical conditions and shifting market perceptions about economic and financial prospects [Buitter, 2000].

Large exchange rate volatility, by adding to transaction costs, will affect the volume and pattern of international trade. These costs, however, are not very large and firms engaged in international trade and finance can easily and cheaply cover their foreign exchange risk. Potentially more damaging to the flow of international trade and investments than excessive exchange rate volatility are the wide and persistent exchange rate misalignments (as they seem to have developed in 2000 between the euro, on the one hand, and the dollar and the yen, on the other). An overvalued currency acts as an export tax and an import subsidy on the nation and, as such, reduces the international competitiveness of the nation or trading block and distorts the pattern of specialization, trade, and payments. A significant exchange rate misalignment that persists for years cannot possibly be hedged away and can impose significant real costs on the economy in the form of unemployment, idle capacity, bankruptcy, and protectionism, and these may lead to serious trade disputes. This is exactly what happened when the U.S. dollar became grossly overvalued in the mid-1980s.

Also important is the relationship between the euro and the currencies of the EMU countries that so far have not joined the euro (the British pound, the Swedish krona, and the Danish krone). The exchange rate between the euro and these other currencies is also likely to be subject to high volatility and misalignments without the establishment of an exchange rate mechanism similar to the ERM. But, as the experience with 1992-93 ERM crisis showed, such a system is unstable and crisis prone [Salvatore, 1996]. It is, however, in the interest of Britain, Sweden, and Denmark to enforce strong limits on the fluctuation of their currencies with respect to the euro in anticipation of their possible joining it in the future, and to avoid importing financial instability in the meantime. The only way to limit excessive exchange rate misalignment among the euro, the dollar and the yen is by greater macroeconomic policy coordination among the three major trading blocks than has hereto been possible.

Then there is the exchange rate between the euro and the currencies of the dozen or so former communist countries that are in line for admission into the European Monetary Union. These countries have opted for a wide variety of exchange rate arrangements from currency boards to flexible rates [Salvatore, 2001]. Important as they are, however, it is the exchange rate between the euro and the dollar and the euro and the yen that will determine for the most part how smoothly the entire international monetary system will operate in the future. The only way to limit excessive exchange rate misalignment among the euro, the dollar and the yen is by greater macroeconomic policy coordination among the three major trading blocks than has hereto been possible [Salvatore, 1999].

## REFERENCES

- Angeloni, I. and Mojon, B. After the Changeover: Three Conditions for a Successful Single Monetary Policy. *Euro*, 2000, 19-28.
- Arestis P., McCauley, R. N., and Sawyer, M. The Future of the Euro: Is There an Alternative to the Stability and Growth Pact? Levy Institute Public Policy Brief, March 2001.
- Board of Governors of the Federal Reserve. The Launch of the Euro. *Federal Reserve Bulletin*, October 1999, 655-66.
- Buitter, W. H. Optimal Currency Areas: Why Does the Exchange Rate Regime Matter? CEPR Discussion Paper No. 2366. London: CEPR, January 2000.
- Cohen, B. J. Life at the Top: International Currencies in the Twenty-First Century. *Princeton Essay in International Economics*, December 2000.
- Danthine, J. P., Giavazzi, F., and von Thadden, E. L. European Financial Markets After the EMU: A First Assessment. CEPR Discussion Paper No. 2413. London: CEPR, April 2000.
- Dornbusch, R. Euro Fantasies. *Foreign Affairs*, September-October 1996, 25-37.
- Duisenberg, W. F. Economic and Monetary Union in Europe—The Challenges Ahead, in *New Challenges for Monetary Policy*. Symposium sponsored by the Federal Reserve Bank of Kansas City. Kansas City, August 1999, 185-94.
- European Commission. Is the Commitment to Sound Public Finances Robust Enough in Europe? IP/01/900, 27 June 2001.
- \_\_\_\_\_. One Market, One Money. *European Economy*, 1990, 29-36.
- Feldstein, M. Does One Market Require One Money? In *Symposium on Policy Implications of Trade and Currency Zones*, Kansas City: Federal Reserve Bank, 1991, 77-84.
- Frankel, J. Still the Lingua Franca: The Exaggerated Death of the Dollar. *Foreign Affairs*, July-August 1995, 9-16.
- Frankel, J. and Rose, A. The Endogeneity of Optimum Currency Criteria. *Economic Journal*, July 1998, 1009-25.
- Fratianni, M., Salvatore, D., and Von Hagen, J., eds. *Handbook of Macroeconomic Policies in Open Economies*. Westport CT.: Greenwood Press, 1997.
- Hartman, F. The Euro in the New Order of International Currencies. *Euro*, 1999.
- IMF. The Real Effects of Monetary Policy in the European Union, Working Paper no. 160, Washington, D.C.: IMF, 1998.
- \_\_\_\_\_. *World Economic Outlook Supporting Studies*. Washington, D.C.: IMF, 2000, Ch. 6.
- Issing, O. The Euro Area and the Single Monetary Policy. Working Paper 44, Osterreichische Nationalbank, Vienna, 1 May 2001.
- Krugman, P. The International Role of the Dollar, in *Currencies and Crises*, edited by P. Krugman. Cambridge, MA: MIT Press, 1992, Ch. 10.
- \_\_\_\_\_. Lessons of Massachusetts for the EMU, in *Adjustment and Growth in the European Monetary Union*, edited by F. Torres and F. Giavazzi. Cambridge and New York: Cambridge University Press, 1993, Ch. 7.
- McCauley, R. N. The Euro and the Dollar. Essay in International Finance No. 205. Princeton: Princeton University Press, November 1997.



- McKinnon, R.** Optimum Currency Areas. *American Economic Review*, September 1963, 717-25.
- Mundell, R.** The Theory of Optimum Currency Areas. *American Economic Review*, September 1961, 657-65.
- OECD.** *Flexibility in the Labor Market*. Paris: OECD, 1986.
- \_\_\_\_\_. *Facts, Challenges and Policies*. Paris: OECD, 1999.
- \_\_\_\_\_. *Financial Market Trends*. Paris: OECD, February 2000a.
- \_\_\_\_\_. *EMU: One Year On*. Paris: OECD, 2000b.
- Portes, R. and Rey, H.** The Emergence of the Euro as an International Currency, in *Prospects and Challenges for the Euro*, edited by D. Begg, J. von Hagen, C. Wyplosz, and K. Zimmermann. Oxford: Blackwell, 1998, 305-43.
- Salvatore, D.** The European Monetary System: Crisis and Future. *Open Economies Review*, December 1996, 593-615.
- \_\_\_\_\_. The Unresolved Problem with the EMS and EMU. *American Economic Review*, May 1997, 224-26.
- \_\_\_\_\_. Europe's Structural and Competitiveness Problems. *The World Economy*, March 1998, 189-205.
- \_\_\_\_\_. The Operation and Future of the International Monetary System, in *Ideas for the Future of the International Monetary System* edited by M. Fratianni, D. Salvatore, and P. Savona. Hingham, Massachusetts: Kluwer, 1999, 5-45.
- \_\_\_\_\_. The EU Eastern Enlargement. *Empirica*, July 2001, 1-21.
- Tavlas, G. S.** The International Use of the U.S. Dollar: An Optimum Currency Area Perspective. *The World Economy*, November 1997, 709-47.
- World Trade Organization.** *Annual Report*, 2000, 168-171