THE EURO AND THE DOLLAR: AN AGNOSTIC VIEW

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I. Introduction

As Europe has achieved its now long time goal of monetary unification, a vast literature has for the last two years developed on the international implications of the European Monetary Union (EMU).[1] Questions have been asked about the potential of the euro in rivaling the US dollar as an international money, about the evolution of nominal and effective exchange rates, about the impact on the coordination of monetary and economic policies, as well as on transatlantic relations more generally. Some predict that the euro will swiftly compete with the dollar and become a top-currency in its own right, alongside the dollar. Others believe that the euro has the potential, but that change will be very gradual and that, as the incumbent, the dollar's position will be difficult to challenge successfully. Yet others believe that public policies will interfere with market forces in influencing currency competition, in Europe to promote the euro, in the US to prevent the dollar from losing ground, with a risk that transatlantic relations might suffer from monetary skirmishes and political conflicts (B.J. Cohen, 1998). On the opposite side, a few economists have called the bluff and have played down the stakes of such competition (Krugman, 1998).

Clearly, peaceful currency unification among such a number of independent countries of such a size is a unique historical event. It would be hard to claim that this unprecedented move is not a watershed whose repercussions should be carefully heeded. Yet, thinking about the future impact of EMU is speculative at best: it implies a change of regime which means that the past is of little use in grasping how it will work. This limitation is yet another occurrence of the so-called Lucas critique. Indeed, it is the change of regime itself that matters, as one could argue that Europe has been on a *de-facto* monetary union around the D-Mark for some time already. Moreover, the credibility of the move toward the single currency, now well established and demonstrated by the lack of intra-European exchange rate disturbances following the Asian financial crisis, may already have elicited some portfolio adjustment toward European currencies in preparation for EMU. Hence, the actual shift to the euro may not have visible consequences in the short run and might well be dubbed a "non eventful event."

In this paper, we review and discuss some of the conjectures about the international implications of EMU. This is not a new subject for debate. Interestingly, it was already addressed a quarter of a century ago (Krause and Salant, 1973) at the request of the US Department of State, although in a very different context: it was in the wake of the international monetary and real disorders that eventually led to the demise of the Bretton Woods international monetary system. At that time Europe had embarked, with the Werner Plan, whose first stage had begun with the Snake, on an ambitious project of creating a monetary union by 1980. There were questions about whether and how Europe could succeed, whether or not the "Europa" would become a reserve currency (which was thought by some unlikely or unstable), what it would imply for the reform of the international monetary system then under discussion, what it meant for international economic integration, and

[1] See Bergsten (1996, 1997), Henning (1997), Portes and Rey (1997).

whether or not the US should give its support to the project. What came, of course, is the full demise of the Bretton Woods gold exchange standard, the move to flexible exchange rates between the major currencies, the postponement of monetary integration in Europe, with a gradual resumption of the process with the introduction of the European Monetary System (EMS), and two decades characterized first by stagflation, and then by lengthy and successful disinflation. Twenty-five years later, most questions about the international implications of EMU remain similar to what they were. The frame of mind, though, is different. The prospects for currency competition are widely debated, but exchange rate flexibility has become a fact of life and the current international monetary system is not directly threatened. In 1973, one would ask how the move toward EMU could shape Europe's stance with respect to international monetary reform and contribute to a solution to, or compound, the problem of inadequate international liquidity; today, the relevant question is how EMU might shape the evolution of the international monetary system, irrespective of any desire to "reform" it, and what it means for individual countries and economic interdependence.

In the current state of the international monetary system, there is no formal arrangement between the top currencies, and a wide diversity of cases applies (Mussa and al., 1995). Although the dollar is still overwhelmingly dominant, there are essentially three key currencies floating with respect to each other; then there are a number of formal regional arrangements, like the Exchange Rate Mechanism (ERM) of the European Monetary System (EMS), or the Franc zone, or unilateral pegs to one of the three currencies or a basket of currencies, from the crawling variety to quasi- or full currency boards. Nevertheless, the state of the system has strong implications on the international distribution of roles of the currencies as well on the overall stability of the system. A monetary system with one monopoly monetary power (as in the Bretton Woods arrangement) will not behave and perform in the same manner as a system with a dominant currency and two other key currencies (as in the current system), or a bipolar system (as in the likely future system). This paper discusses the likely emergence of a truly bipolar international monetary system with the euro and the dollar as dominant currencies , and assesses the costs and benefits of sharing monetary leadership (section II). Section III addresses exchange rate prospects and policy while section V reflects on the future of on transatlantic relations and international policy coordination.

II. Toward a bipolar key currency system

It goes beyond doubt that the euro will progressively acquire some sort of international status, since it substitutes for a number of European currencies, one of which already has such a status, and others which also play some role as international reserve and transaction currencies. What is uncertain, however, is the place the euro will have among the key currencies, how and at what pace its emergence will proceed, and how currency competition in a context of economies of scale will eventually carve out a division of labor between the dollar and the euro rather than the outright domination of one of them.

Many authors[2] have discussed the criteria for a money to become an international currency, namely to assume the role both of a vehicle in international transactions, of an official reserve money and of a currency of asset denomination. They differ in the taxonomy of the criteria they identify, but come up with similar lists of characteristics. Among them, one generally finds the confidence in the value of the currency, the political stability in the issuing country, and deep and wide financial markets, free of controls, in that country. Bergsten (1996, 1997) lists five more specific determinants : (1) the size of the underlying economy and its global trade, (2) the economy's independence from external constraints, (3) the avoidance of exchange controls, (4) the breadth, depth and liquidity of its capital markets, and (5) the strength and stability of the economy's

[2] e.g.) Commission of the European Communities (1990), Alogoskoufis and Portes (1991),Bergsten (1996, 1997), Eichengreen and Frankel (1996), Frenkel and Goldstein (1997).

external position. Size, which we discuss further below, gives the currency the geographical base that will contribute to its usefulness as a medium of exchange; independence from external constraints makes the currency less vulnerable and gives the country of origin all latitude to maintain the quality of the currency; the avoidance of exchange controls ensures full currency convertibility; the size of capital markets also contributes to the usefulness of the currency by allowing it to enter transactions at a low cost; finally, the strength and stability of the economy's external position underscores the strength of the currency, namely expectations that it will not undergo future depreciation.

Such a list offers a useful but somewhat incomplete characterization of international currency status. First, some criteria are not independent. For example the liquidity of capital markets and the independence from external constraints are related to size. Second, are the criteria necessary to reach the status of international currency, or to maintain it, or both? For example, there is a consensus about the potential for the dollar to remain a world currency, whether or not the euro emerges as a challenger, and, although it has declined over the last two decades, the dollar remains by far the dominant currency. Yet, the US external position has steadily deteriorated since the early 80s, casting some doubt about the relevance of the external position in assessing the international status of the dollar. Third, this analysis provides no clue to the dynamics of a currency assuming international status. For example, does fulfillment of the conditions—or some of them—place a currency at the top of the currency league? Does it prevent decline? Ours is, therefore, a steady state, comparative static analysis with little predictive insight. It is, nevertheless, useful to ask how the future euro will fare on these criteria. Here, we first focus on size.

1. Size is an asset

Several authors concur on the primacy of size, because it is in fact a determinant to several of the above criteria. Indeed, acquiring what could be termed a "critical size" was a motivation, both political and economic, behind European moves toward integration, EMU being the latest and most ambitious development.

Size matters because a large domestic economy allows exploitation and reinforcement of economies of scale and scope involved in using a currency over a wide domain. Since the attractiveness of a currency for transaction purposes depends on how many people use it, a currency backed by a large economy naturally enjoys an international advantage. This effect has been documented, and there is strong empirical evidence for a significant, non linear relationship between the international role of a currency and the size of the underlying domestic economy. Based on time series estimates, Eichengreen and Frankel (1996) have found that every one percent of world GDP leads to 1.33 percent of central banks reserve holdings in the corresponding currency. Cross-country evidence also confirms the relationship, but it also exhibits significant non linearity: the international power of monies increases more rapidly than the relative share of the underlying economy in world GDP (table 1). In particular, the dollar plays a disproportionate role relative to the size of the American economy, irrespective to the criteria being used as a measure of the size. The elasticity of 1.33 documented above, therefore, is a point-elasticity rather than an average ratio; it explains variations in the relative role of the dollar as an international currency, not the actual proportion.[3] Obviously, its significance is also limited by the adding-up constraint (the sum of all shares cannot exceed 100 percent). The documented relationship therefore cannot allow to infer that, since the EU economy will be comparable in size to the US economy (and even larger if EMU eventually includes the 15 current members, or more as Europe widens), the euro will eventually weigh as much and will play

[3] Eichengreen and Frankel (1996) found that this coefficient explains much of the decline in the dollar and the rise in the yen and the D-mark over the last 25 years. However, as pointed out by McCauley (1997), the reduction of the dollar invoicing seems to be due to the decline in the share of oil in the world trade (see also Deutsche Bundesbank, 1991, p.41, and Ilzkovitz, 1995, p.71).

the same role as the dollar. To proceed further, one needs to elaborate on the correlation between size and currency status, to discuss why the dollar has won a dominant position and what the determinants of the dynamics of change could be in that respect.

Table 1. Size of the Domestic Economy and Use of Currency

	Size indicators					Use of domestic currency					
	GDP[1]	Stock market capitalization[2]	Bond equities bank asset[2]	Domestic and int'l debt[2]	Currency	% of exports invoiced in domestic currency	Total foreign exchange[3]	% total trade invoincing[4]	Reserves[5]	Developing county debt[6]	Private asset portfolio[7]
	1995	1995	1995	1995		1992	April 1995	1992	1995	1995	1995
United States	20.7	26.6	33.5	42.8	US dollar	92	83	48	56.4	50.2	39.8
Germany	6.9	2.2	9.5	8.5	D-mark	77	37	5	7.1	18.1	15.6
Japan	14.6	14.2	24.0	20.7	yen	40	24	15	14.2	na	11.5
France	4.4	.0	7.2	5.8	French franc	55	8	6	1.9	na	na
UK	3.2	5.5	6.8	3.2	pound sterling	62	10	6	3.5	na	na
Switzerland	0.7	na	na	na	Swiss franc	na	7	na	0.9	na	na
Sweden	0.7	0.7	1.2	1.6	Swed. crown	na	na	na	na	na	na
Netherlands	1.1	1.4	2.3	1.5	guilder	na	na	3	0.5	na	na
Canada	1.6	1.4	2.3	2.7	Can. dollar	na	3	na	na	na	na
EU 11	19.4	8.2	30.8	27.2	(euro)	na	70	na	na	15.8	36.9

Notes: [1/] Percent of world GDP. [2/] Percent of North America + EU11 + Japan. [3/] Percent of foreign exchange transactions in which the currency appears in one side (adds up to 200). [4/] Percent in world trade. [5/]Percent of world reserves, excluding gold. [6/]Percent of total debt of developing countries. [7/] Estimated share of outstanding portfolio assets in percent.

Sources: BIS,IMF, Centre d'Etude de l'ECU and authors calculations

Size matters first through the share of the country in international trade. Well diversified, large countries can often rely on their own currency for settling transactions with non residents as they offer the latter a high density network of trading relationships potentially involving the same currency, thereby lowering foreign exchange transaction costs. It is easier to find two firms of a small country, one importing from and the other exporting to the same large country than the reverse, and therefore partners will inevitably agree on the use of the currency of the large partner. Size therefore brings a *de facto* limitation of the convertibility of the smaller countries' currencies. This argument, however, mainly applies to the transaction role of international money. Size is not an insuperable obstacle for a currency to be used as a reserve currency or a currency of asset denomination, in private portfolios, as the example of the Swiss franc and the Dutch guilder demonstrate.

The same argument applies even more forcefully to asset markets. Though diversified goods markets grant a better convertibility of money into goods, large domestic capital markets also give access to more investing and borrowing opportunities and allow effective arbitrage owing to lower transaction costs. This gives a decisive advantage to large countries that also have large and liquid domestic capital markets[4] and where capital mobility is high, thus providing a base to the international expansion of a currency beyond its national borders. However a large domestic capital market does not automatically imply that the domestic currency will have a key international role. The continued success of the London financial center well after the decline of the sterling, and the development of numerous offshore centers suggest that the development of capital markets is not

[4] We do not mean to imply a one-way causality relationship between size and the development of capital markets, though. Developed and efficient capital markets are arguably a powerful determinant of the increase in economic size that will eventually make an economy "large."

necessarily associated with the international role of the national currency. Overtime, however, when a country assumes the role of a large, international, financial center, its currency is bound to play a larger role in international asset trading. As international trade in financial assets dwarfs trade flows in goods and services by a multiple of the order of one hundred, there is little doubt that the financial implications of size play a much bigger role than goods and services trade in supporting an international currency.

As the economic size of the "Euroland" roughly matches that of the US, in terms of GDP as well as population, share in foreign trade, and dynamism of finance[5], the euro clearly meets some of the necessary conditions for currency internationalization. Yet, the size of the US economy alone does not explain the international supremacy of the dollar. The wide openness of the American capital and goods markets to non-residents has contributed to the expansion of the dollar throughout the world. But other factors also played a crucial role. The dollar won the first rank of international currencies in the context of the sterling crisis in the 20s. It gathered further importance while European countries, engaged in war effort in the 40s, then in reconstruction during the 50s, had become incapable of playing any significant international role. The dollar developed further in the 60s and 70s in a context of gold convertibility, low international capital mobility and highly segmented domestic markets. At that time, the large amount of liabilities that constituted a base for the expansion of eurodollars, together with favorable tax treatment on dollar deposits by non residents and with the reluctance of potential competitors to engage in an early process of internationalization of their currency (by fear of losing some domestic policy margin of maneuver), have also contributed to reinforce the dominant position to the dollar. It maintained its supremacy, despite the relative decline of the US economy as a share of world output, and in the face of growing perceptions that it was inexorably losing ground. Beyond incumbency benefits, the reason for this continued preeminence can be found in the absence of viable alternatives. Since the beginning of the 80s, credible challengers, namely the yen and the deutsche mark, have been de facto restricted by domestic policies to a monetary role that is out of proportion with the real weight of Japan and Germany in the world economy.

Size is an asset, but obviously historical context and policies do matter. And when a currency has acquired a dominant international status, network externalities also become the major explanatory factor for its further expansion beyond what size only would suggest and for the maintenance of its role. Goods and assets markets are full of imperfections that generate economies of scale, and this is why size and incumbency play a role. As a result, currencies are far from being perfect substitutes.

2. How far can the euro displace the dollar?

One way to look at the international currency question after EMU would be to argue that we move from a single equilibrium, dollar based world, to multiple equilibria, because the euro will rapidly have the attributes of a world currency and exhibit the relevant necessary qualities to become an international reserve and transactions currency, ready to supplant the dollar. If one believes in multiple equilibria, the broader question then is how and when the world shifts from one equilibrium to another. It is possible to argue that the increasing fluidity and sophistication of capital markets imply that the costs of shifting from one currency equilibrium to the other have substantially declined. Still, the benefits of incumbency, for the dollar, mean that the shift from the dollar to the euro as the world dominant currency could take place only with a powerful and demanding mix of triggering factors, including (1) a significant relative decline of US markets (and political influence); (2) inadequate US economic policies; and (3) better than expected performance and economic success in Europe. The likelihood of such a shift in the foreseeable future is very weak.

[5] Europe's financial markets have comparable depth, breadth, and liquidity to the US markets. There are reasons to think that the bond market in euros will become much more integrated. See the discussion in McCauley (1997).

This was, arguably, the pattern that prevailed through the replacement of the sterling by the US dollar in the first half of this century.

Another, more likely possibility is that the euro leads to a change of international monetary regime; from a single international currency world (or a multi-polar system with a single dominant currency), one would shift to a truly bipolar system, with the dollar and the euro sharing supremacy. Former EMI President Lamfalussy predicted that the euro "won't supplant the dollar but it will compete with it."[6] This raises the problem of the coexistence between the dollar and the euro. B.J. Cohen (1997) underscores the risk of conflicts that could come out of a new balance of monetary power. To be pacific the coexistence has to rely on a mutually accepted share of international monetary responsibility.

Studies of bipolar systems in physics typically suggest that they are prone to systemic instability. Historical experience of bipolar monetary systems, such as the double standard of gold and silver of the Latin Union in the past century, suggest that a similar law can apply in economics. In the multiple equilibria view, a bipolar system would be interpreted as a transition phase toward another dominant currency. The question to ask, however, is whether the bipolar system can be a stable regime instead. Economies of scale and network externalities suggest that a single dominant currency brings benefits. At the same time, however, the political segmentation of the world and the need for portfolio diversification run in a different direction.

The pace at which the euro will establish its international status is uncertain. The conventional wisdom is that the change will take place slowly (see Summers, 1997, and Frankel, 1995). The change may occur surprisingly rapidly, however. History provides evidence of abrupt transformations. The crisis and the devaluation of the pound sterling in 1931 triggered a setback of the British currency and its rapid displacement by the dollar as the dominant currency.[7] This was at a time when capital was much less mobile than it is today. In today's buoyant financial markets, the cost of portfolio adjustment has declined and may not hedge currencies against sudden shifts as they used to do. What the case of the sterling tells us is that when a country has lost its economic supremacy, it is capable to maintain monetary leadership as long as a major shock does not generate costs that exceed the costs of switching to the challenger. However, contrary to Great Britain in the 20s, the US economy today is dynamic enough to make dramatic changes unlikely.

Since incumbency still matters, then, the dollar is likely to remain dominant for some time, but will gradually lose out to the newly introduced euro, as the weight of the European economy increases the benefits from diversification and from using the euro both as a reserve and as a transaction currency. Given the size of the European market and the share of Europe in world trade, euro-invoicing is likely to develop, including for invoicing between third countries. Some of them might turn to the euro as an anchor. Currency competition between the euro and the dollar will likely be shaped by four factors: (1) the possible development of the euro as an exchange rate anchor on a regional basis, or even a wider one; (2) the possible development of euro-invoicing by third parties, including, significantly, oil producing countries; (3) a policy mix conducive to the internationalization of the currency ; (4) deliberate policies to foster the internationalization of the currency by making it attractive to hold by non-residents; and (5) relative performance in terms of the stability of the purchasing power of the currency over the medium to long term. What we know by now is that the two currencies, as well as the underlying economies, are very different in nature and, as a result, could specialize in certain areas both geographically and functionally.

The potential of the Euro as an anchor currency is closely related to its use in international transactions and as a currency for invoicing international trade. Many observers[8] consider that

[6] *Newsweek* , February 3rd 1997. Quoted by Bergsten (1997).
[7] On the pound sterling, see B.J. Cohen 1992 .
[8] See McCauley (1997) for a useful survey and discussion.

Central and Eastern Europe will chose the euro as an anchor. Arguments rest on (1) current practices, which already indicate a strong weight of the D-Mark and other European currencies through the variety of pegs that characterize the exchange rate policies of Central and Eastern European countries; (2) close and deepening trade and investment integration between these countries and the "Euroland"; (3) EU membership prospects and prospects of joining EMU at a later date; (4) usefulness for smaller countries of importing credibility through anchoring the currency to a stability oriented foreign monetary policy. Central and Eastern Europe thus appears as a natural extension of the original euro zone; the nature of exchange rate policies and possible agreements, however, remains uncertain. By anchoring to the euro, Central and Eastern European countries would be exposed to movements of the dollar/euro exchange rate. To the extent that they trade with countries outside the EU, they might well wish to keep some flexibility in their exchange rate policies. While predicting that the euro will have a major share in any reference basket, a pure euro peg may not be forthcoming, at least immediately. An interesting question is about the policy that Russia and the successor states of the Soviet Union will adopt. Trade with Central Europe might induce them to peg to the euro; but Russia's reliance on commodity exports and the actual role played currently by the dollar within Russia would indicate powerful dollar inertia (McCauley, 1997 p. 25). Beyond Europe and Russia, prospects of the euro as an anchor currency extend to the likely transformation of the franc zone into a euro zone, and to countries whose trade is substantially directed to Europe, namely some countries in the Middle East and North Africa. Beyond, these prospects depend on exchange rate policies in fast growing countries that today belong to a dollar zone. The Asian crisis, in this respect, may represent a watershed for two reasons. First, it signals a prolonged slowdown in East Asian economic growth, which acts as a check on the further relative expansion of the dollar zone; second, it may eventually lead Asian countries toward very different exchange rate policies, as they recognize that pegging too rigidly to the dollar has exposed them to a major and overly expensive risk.

Invoicing behavior by third party exporters, notably primary products and oil exporters who currently use the dollar, cannot easily be predicted. It is not clear that the currency denomination of prices in world trade matters much: it is relevant only to the extent that nominal prices are rigid in the short run. In an increasingly interdependent world market where supply and demand are freer from monopoly power, controls and political influence, nominal price flexibility should be more widespread The dollar invoicing standard has become the rule on oil markets given the prominent role of the US and for the raw material markets given the location of most of international transactions in Chicago. However the choice of a standard currency has distributional consequences in terms of shouldering the exchange rate risk. Politics and diplomacy are likely to play a determinant role in invoicing practices.

At the macro level, positive money balances by non residents must be matched by some counterpart in the balance of payments. This implies a balance of payment deficit at some point in time. One possibility is a current account deficit. For instance, a deficit of the trade balance is settled in the domestic currency which is accepted by non-residents and will be used as an international liquidity. Another possibility is a capital account deficit. For example, the purchase of foreign assets by residents exceeds the sales of domestic assets by residents to non-residents. When considering the emergence of the euro as an international currency, one has to ask how the balance of payment will balance. Are we going to see a move of the current account balance from the present surpluses to deficits, for example through a combination of appreciation of the euro and diverging economic cycles across the Atlantic with Europe confirming its recovery? Can we imagine a massive net purchase of US (or other non-European) securities against euros? Or can we imagine swaps of euros for dollars (at a moment when many officials are claiming that the EU will be left with plenty of dollars)? The road towards an international euro cannot be free of any constraint.

In the current system, characterized by a competition between currencies, a proactive external policy would be counterproductive, not least because market investors might be led to wonder

whether and why the currency needs to be artificially supported to fulfill its functions. What is most effective is a structural policy that seeks primarily to establish a non-inflationary permanent regime in the domestic economy, while opening markets to foreign agents. Thus assets denominated in the domestic currency will be seen as a good store of value in an international sense. This means that not only the prices of domestic goods, but also foreign prices, will be stable in the domestic currency, and that foreign private sectors will be prone to hold more domestic assets. Furthermore, foreign monetary authorities that do not benefit from sufficient credibility will find it profitable to choose the domestic currency as a nominal anchor. As a result, the area of the domestic currency will largely exceed the limits of the national borders.

One of the crucial attributes of money, including international money, is the stability of its purchasing power in terms of goods and services. It is in effect key to the currency performing its role as a useful means of exchange, unit of account and store of value. Under the Bretton Woods system, convertibility into gold buttressed the quality of the dollar as an international currency. Gold was the anchor, and US monetary policy was allowed to determine the world rate of inflation (McKinnon, 1993). The pretense of convertibility into gold hid for some time the excessive building of dollar balances in Central bank reserves worldwide, i.e. the fact that the official value of the dollar was artificially blown. In today's flexible exchange rate world, the anchor has become competitive central banking. This is now bound to be a major force in the competition amongst currencies. On this basis, the prospects for the euro are buttressed by the uniquely conservative status of the European central bank and its exclusive mandate to pursue price stability[9].

3. Benefits of an international currency

Though internationalizing one's currency has become an option at least for large countries, essentially Germany and Japan, governments are known to have been reluctant to go too far in such a direction. The answer to this question may be found in the balance of benefits and costs. But why would full internationalization be desirable for the euro while it was not deemed to be for the deutsche mark and the yen? What is there beyond the possibly substantial gain in transaction costs? B.J. Cohen (1998, 119-130) discusses four "boons" that accrue to governments from their national monetary monopoly (which, he argues, does not correspond any longer to the geography of money, namely the disconnection between the domain of circulation and the territory of the issuing country): political symbol, seigniorage, macroeconomic policy flexibility, and monetary insulation. This is also a useful canvass to assess the benefits that the issuing nation may derive from issuing a world currency.

Political symbols

"Great powers have great currencies" said Mundell (1993, p.9).[10] The potency of the perception of international money as a symbol of power should not be underestimated. It is well known to have been a motivation at least for some countries behind the European Union's drive toward EMU. As long as money is recognized as a central attribute of sovereignty, the sovereign's realm will expand with the circulation of the currency. The dominant position of the dollar undoubtedly strengthens the US prestige and influence abroad and provides ample leverage. Countries outside the US care about their dollar exchange rate. Talking the dollar down or up has been a consistent feature of US foreign policy and diplomacy: in the early 80s, the appreciation of the dollar was claimed to be both

[9] This, however, depends on the ECB enjoying good credibility and reputation. It is helped by an impeccable legacy and a stability oriented treaty. While there is no reason to question the credibility *ex ante*, however, doubts have surfaced in 1997 as to whether the euro would be weaker than the D-mark. They may have had some exchange rate effects, temporarily strengthening the dollar and the Swiss franc as investors were selling strong core currencies in anticipation. Such behavior, however, has been short lived and does not seem to have been present more recently.

[10] Quoted by Wyplosz (1997)

desirable and the sign of a restoration of US preeminence after a period of relative weakness; after the Louvre 1987 Accord, "American Treasury Secretaries continued to seek expansionary policy from their trading partners, and sometimes to threaten a renewed depreciation of the dollar as an alternative" (Frankel, 1992); and in the early 90s, talking the dollar down occasionally provided leverage in the bilateral Japan-US relation to exert pressure on Japan to proceed with domestic structural reform. There is such a thing as a "dollar diplomacy".

Now, the emergence of the euro as a rival to the dollar may give Europe a similar symbolic and diplomatic instrument, which can, in principle, restrain in relative terms the influence the US derives from the dollar. There are two caveats, however: the first is that what matters for symbol and influence is economic might much more than the territory of the currency, and Europe has to demonstrate that it can rejuvenate its economy, entrepreneurship and innovation and create jobs. It is through its economic success that Europe will weigh more heavily in world affairs and that the euro will acquire international prestige; the second is that there is no single European sovereign to play with the new European monetary symbol. Unless political cooperation makes a quantum jump, it is unlikely that the euro could be used as an instrument of European diplomacy.

Seigniorage

International seigniorage, i.e. the real resources extracted from the willingness of non residents to hold one's own currency or to acquire domestic assets at a discount, does not any longer provide a very convincing rationale for having an international currency. In the 1960s, a common view outside the US (especially in France) was that the country could finance its projection abroad, including the intervention in the Vietnam war, by issuing dollars that other central banks would hold as reserves in the fixed exchange rates, gold exchange standard Bretton Woods system. The weakness of this view is that US dollar liabilities were held as interest bearing assets, which do not yield seigniorage, except in a limited way: central banks did not have much of a choice between accumulating dollar-denominated bills or choosing other assets, thus leaving the former with a competitive advantage that could translate in lower interest rates. Since the demise of Bretton Woods, seigniorage is admittedly much more limited.

Nowadays, the seigniorage extracted through non-interest bearing deposits in dollar and cash out of the US (about half of the total stock outstanding) has been estimated at 10 to 15 billion dollars by Porter and Judson (1996), a figure which is close to those calculated by the European Commission (1990), Frankel (1995), and Rogoff (1998a). This represents less than 0.1 percent of US GDP. When the liquidity discount on treasury bills is taken into account, one can add 5 to 10 billion dollars.[11] Even in the high side of the interval, those figures remain small. With the need to maintain inflation at its lows, seigniorage will become even smaller. In other words, the advantage of seigniorage is likely to be very limited. Besides, as emphasized by Krugman (1998), one should rather not ask why people need cash in the world. The US private sector achieves some more significant gains as it can save the transaction and insurance costs associated with the use of other currencies.[12] Finally the emergence of a system with two competing currencies is likely to reduce further a seigniorage that will be shared between the two key currencies. But the challenge to the seigniorage of the US dollar is hardly a reason for the United States to be concerned by the emergence of the euro.

Macroeconomic policy flexibility

Another advantage in issuing a world currency concerns the ease through which having an

[11] According to J.P. Morgan's estimates quoted in Portes and Rey (1997).
[12] This is however debatable. If foreign demand of US goods is price elastic, insurance costs (included in foreign prices of US goods) will reduce demand in volume term, thereby leading to lower profits for the US firms.

international currency allows to finance balance-of-payment (current account) deficits. The external constraint is, at least for some time, loosened by the existence of a very elastic supply of foreign lending. The country thus derives more flexibility in the pursuit of domestic objectives through benign neglect with respect to the exchange rate. The risk, however, is that it is in a position to accumulate a large external net debtor position that may overtime tighten the constraint significantly. The weakness of the US current account today puts some clouds on the prospects for the dollar in the medium term, and may penalize it and the US economy notably if the euro is felt to be a more stable monetary asset.

Monetary insulation

But internationalizing a currency also bear costs that are associated with some loss of control of monetary aggregates. Both Germany and Japan kept financial market restrictions aimed at discouraging the use of their currencies as reserve currencies by non-residents, in an attempt to maintain control over the domestic monetary conditions. The use of the domestic money by non residents could lead to welfare losses insofar as it causes a reduction of money balances at home (Matsuyama and al., 1993) and would force the domestic monetary authorities to react to external shocks. The choice of a monetary target becomes much trickier. Reliance on a domestic target is misleading, since a large but indeterminate part of the money supply flows abroad and unanticipated change in foreign demand for money can be destabilizing.

4. Conclusion

The size argument and the stability-oriented monetary stance confer a strong potential to the euro. However the fate of the euro will largely depend on the European economic performance and policies. The euro will probably not replace the dollar and a bipolar monetary system remains a likely conjecture. The incumbency advantage of the dollar will probably persist for some time, but it might be rapidly eroded in world of highly integrated financial markets. This might initiate an era of contentious transatlantic relations. Another scenario would be characterized by some sort of specialization of the two key currencies. In particular the existence of an independent European Central Bank is expected to determine a low and stable inflation rate that will make the euro an excellent nominal anchor for a number of countries outside Europe. Conversely, it is not clear whether it will be attractive for those that are risk averse to the variability of the euro / dollar exchange rate. This raises the question of exchange rate volatility in the new international monetary order, an issue that is addressed in the following section.

III. Exchange rate prospects and policy

Much debate has taken place on the euro-dollar exchange rate question: will the euro be a weak or a strong currency and does it matter? This question really involves two different issues and different time dimensions. The first issue is about the long-term stability of the euro's purchasing power value. This is what a currency strength is ultimately about, and with this definition of currency strength in mind, a "strong" euro is a desirable objective. It rests, however, on the persistence of low inflation: this depends on establishing a lasting social consensus behind price stability, which also requires curing other economic ills and put the European economies back onto a trend of prosperity. This is, arguably, the major task of EMU, which still mainly rests with the member States' disposition toward domestic, structural reform. But macroeconomic policy will also matter, as reform is not likely to emerge from any prolonged slump.

The second issue, however, has to do with exchange rates. Even though it is not a convincing way to address the strength of a currency, the exchange rate of the euro has become a widespread concern. There may be some confusion between a "strong euro" and an appreciating euro; but the concern, more legitimately, deals with the risk of lasting misalignment and of an overvalued euro in real terms. The likelihood that the euro will appreciate for some time after the onset of EMU is

strong: not only will there be some portfolio diversification, but the ECB drive to establish credibility might lead it to adopt a monetary policy that would be tighter than would be required in the same phase of the cycle in the permanent regime. In addition, the US external position points towards a depreciating dollar. On a PPP basis, the inflation objective and the implicit weight given to inflation in the design of monetary policy in EMU imply an appreciation of the euro vis-à-vis the dollar. If the euro should appreciate too much, however, this would constitute a hindrance to growth in Europe, and pressure would appear to engineer some depreciation of the euro that the ECB may not resist, since price stability, even in the stricter interpretation, has been now achieved in most of the European countries of the Euroland.[13]Policy reactions, thus, are crucial.

The exchange rate behavior of the euro depends on private portfolio and official reserve shifts on the one hand, and on EMU's monetary policy and more broadly policy mix on the other hand. On both grounds, the odds point toward at least some appreciation in the short-run and a possibly heated debate in Europe about what the "euroland" exchange rate policy, if any, should be. In the steady state, however, the outcome is fully uncertain.

1. Portfolio shifts

Beside the need to reduce transaction costs, which favors the largest countries and points to a substantial transaction demand for euros, currency diversification is mainly motivated by risk diversification. The portfolio demand for Eurasia will essentially be dictated by the stochastic behavior of the rates of return on various assets, essentially interest rates on assets denominated in various currencies adjusted for expected rates of depreciation and inflation. Standard portfolio theory predicts that the share of the various currencies depends on the covariance matrix of the rate of return on the different assets.

Demand for various currencies comes both from the private sector (bank deposit and securities) as well as from the public sector (official reserves). Of the two, private portfolio movements dominate by far in terms of volume. These two strongly interact, however, which significantly complicates the analysis. As the monetary policy actions of the European Central Bank (ECB) will affect the stochastic property of macroeconomic variables, in particular the interest and exchange rates, it will elicit responses from the private sector. For a given risk/return preference, it is in theory possible to estimate an optimal portfolio with the covariance matrix of the rate of return based on estimations from past observations.[14] Such methodology, however, could be misleading if the results are interpreted as predictions of what will occur in an entirely new monetary regime for which no observation is available. It nevertheless provides useful benchmarks for thought.

Calculations based on an optimal portfolio model have been carried out by Masson and Turtleboom (1997), using observed rates of returns and the covariance of the three major currencies from 1981 to 1995. Negative correlations between variations in the rates of return (see Table 2) suggest that diversification would reduce the portfolio risk for a global investor who combines assets denominated in the three currencies. The optimal share computed from their model gives an almost equal weight to the dollar and to the deutsche mark, and a smaller weight to the yen and therefore substantially misses the actual, overwhelming, weight of the US dollar. Since there has already been ample scope for diversification out of the dollar based on risk diversification, the preeminence of the dollar has to be explained otherwise. While a calculation of optimal shares under EMU might predict a large share for the euro in optimal portfolios, it is also possible that the same factors that explain the current dollar bias operate under EMU.

[13] Let us recall that, as the Maastricht treaty phrases it, the ECB can contribute to the achievement of other policy objective (such as full employment) "without prejudice of price stability".
[14] Masson and Turtleboom (1997) develop such a methodology for the calculation of a portfolio of reserve currencies.

Table 2. Comparison of actual and optimal portfolios

		Covariance			Portfolio share (%)	
	Mean	United States	Japan	Germany	optimal	actual
United States	3.35	1.00			38	59.5
Japan	5.21	-0.47	1.00		23	17.2
Germany	4.0	-0.76	0.14	1.00	39	23.3

Source: Masson and Turtleboom (1997), IMF and authors' calculations.

It is interesting to take a look at what happened before the 1980s, as it gives the opportunity to observe how portfolios reacted to a dramatic change in the international monetary regime after the breakdown of the Bretton Woods system. The share of the dollar in private portfolios declined substantially during the 1970s mostly after the collapse of the system of fixed exchange rates. According to Bénassy-Quéré (1996), the dollar's share in cross-border banking position and foreign currencies declined from 75% in 1977 to 48% in 1995, and the dollar's share of international bonds outstanding declined from 62% in 1985 to 33% in 1995. This development seems to be related to the overall performance of the US economy, notably in terms of inflation. The dollar lost close to 50% of its purchasing power between 1973 and 1990, twice more than in the period 1948-1972 and against a better track record of price stability (both in terms of mean and variance) in Japan and Germany (Frankel, 1992). In addition, as mentioned above, the deterioration of the US external position in the 1980s creates uncertainty about the evolution of the purchasing power value of the dollar in the future. But other reasons certainly play a role as well. The Bretton Woods system institutionalized the status of the dollar as the top international currency. With the demise of the system and the advent of flexible exchange rates, and with the development of financial markets that ensued, diversification naturally took place. The D-mark and the Yen turned out to be the best credible alternatives to dollar holdings but never challenged the status of the dollar as the backbone of the system. The decline of the dollar as a reserve currency in private portfolios may have been slowed down by the reluctance of the Japanese and German authorities to internationalize their currencies. It has not been significantly reversed by the revival of the American economy since the early 1980s.

Even though exchange rate theory has moved to more and more sophisticated models, one central message of portfolio balance models still obtains, namely that rates of return should adjust in order to match asset supply and demand. Because of the instability of asset demand functions following the change in monetary regime, it is almost impossible to predict what will be the share of the different currencies in private portfolios, but it is likely that the major cause of portfolio variations will rather be the change in supply of assets in different currencies. For instance, certain currencies will not exist anymore. Rates of return, therefore interest rates and exchange rates, may react strongly to clear asset markets. If financial market conditions remain unchanged, namely, if the freedom of capital movements is not put into question, it is possible to speculate on the likely change in the rates of interest and of the exchange rate of the euro against the dollar. This, however, requires some assumptions on the behavior of the monetary authorities, in particular on the strategy the latter would adopt pertaining to reserve management. More broadly, there is no reason to believe that the euro will attract investors and not borrowers. The supply of euro denominated assets is likely to increase as the currently fragmented bond market is allowed to integrate further (McCauley, 1997). It follows that a shift of private asset and official reserve managers into the euro would not necessarily lead to and appreciation of the euro and a European current account deficit. Depending on how many borrowers are also willing to borrow in euros, the balance of supply and demand of euro denominated assets might well in fact produce a depreciation of the European currency.

The introduction of the euro in place of ten currencies implies a complete re-design of central banks' reserves management and, as a result, will constitute a major shock on the supply of different

currencies. The most visible effect is the elimination of the European currencies held by the national central banks of the Euroland. However, given the predominance of the D-mark and the limited place of most of the European currencies, the major consequence will be the elimination of the proportion of D-marks held for intra-Euroland intervention purposes. The other part will be converted into euros. Another potential consequence is that the sterling will not be taken out of the reserves of the euroland, although its replacement by euros will certainly appear as desirable. On the contrary, the sterling will keep constituting part of the reserves of non-European banks.

Another important and most controversial aspect is the role that will be devoted to the dollars as a reserve currency of the ECB. The conventional wisdom, as expressed by the EC Commission, is that after the pooling of the non-European currency reserves of the national central banks, the EBC will be left with an excess of reserves that may lead to a downward pressure on the dollar. Such pressure, however, seems rather doubtful. First, the size of the excess dollar reserves has been overestimated, notably the figure of $ 200 billion calculated by the Commission (1990). Masson and Turtleboom's (1997) more recent estimate halves the Commission's figures (but is calculated under the assumption, now out of date, that the EMU would comprise the fifteen members). Second, we know that the Euroland will comprise only eleven countries. In particular, the UK will not participate in the euro in 1999. This means that reserves in dollars held by the Bank of England will not be transferred to the ECB (same for Denmark, Sweden, and Greece.) Third, even though the pooling of reserves would entail an excess of dollar reserves, this does not mean that the ECB would precipitate a dollar fall by proceeding to heavy sales of reserves. Finally, the ECB may want to keep a larger stock of reserves in dollars in order to increase its capacity of intervention on foreign exchange markets at a moment when the credibility of the ECB is not fully established, and the volatility of exchange rate could increase.

2. Exchange rate policy

There are two distinct issues about the behavior of the exchange rate of the euro. First, the stance of monetary policy will crucially matter in determining the early exchange rate movements, and will mainly depend on how the ECB intends to build its credibility and reputation given the cyclical environment and the uncertain behavior of "domestic" money demand alluded to above. One caveat applies here, however. Regardless of EMU, the dollar is intrinsically weakened by the deterioration of the US external position, still aggravated by large expected current account deficits. Second, the premises of the future exchange rate policy of the EMU are yet uncertain. The natural hypothesis is that Europe will emulate the United States in adopting a bounded benign neglect with respect to the movements of the euro exchange rate.

Building credibility and reputation

As is well known, the statutes of the ECB grant the future Central bank the highest degree of independence in the pursuit of an unambiguous, single objective of price stability. Credibility and reputation, however, cannot rest only on the institutional setting. They have to be demonstrated through the unbarring determination to counter inflationary pressures in all circumstances and through the ability to carry this determination through in the face of domestic criticism and opposition. One of the problem, for the ECB, is that it only partly inherits the Bundesbank's credibility. There is no doubt about the frame of mind of the European Central bankers, and they take their new responsibilities at a time when all member governments have demonstrated their determination and success in bringing inflation to record lows. But as often emphasized by German Central bankers, credibility requires more than that. It has to rest, ultimately, on accountability and social acceptance. This is where EMU is a step into the unknown. Not only did the Treaty leave the whole issue of accountability unaccounted for[15], but the change of regime means that the

[15] For a discussion of accountability (and the lack of) of the ECB, see Cooper (1992) and Aglietta and

domestic social acceptance of disinflation so far cannot easily be assume to extend to the whole EMU. The ECB will face several political economy hurdles. First, it could become a convenient scapegoat for Europe's economic ills, and price stability might eventually be endangered by a policy mix that could prove socially or politically unsustainable. In this respect, the stability pact, to the extent that it imposes binding constraints on fiscal policy, overburdens monetary policy and confronts the ECB with a potential dilemma between price stability and demand stimulation. Even if the central bank sticks to price stability, it may take some time to convince the market that monetary authorities will ultimately stay firm on their statutory objective. Second, the differential impact of monetary policy on various member states (Dornbusch et al., 1996) may also create political difficulties between some member States and the ECB. This could weaken either the ECB or the political commitment to EMU as the political base for monetary union remains ad hoc[16].

The ECB therefore must play its hand tactfully. With the rate cut in December 1998, it has demonstrated that it could resist the simplistic view according to which interest rate hikes only can produce credibility. In the current European context, one could argue that the reverse is true. Nonetheless, what matters is a prompt reaction of the ECB to any sign of a potential rise in inflation. The ECB must demonstrate its *savoir-faire* in a very uncertain context, in which advanced indicators of inflation are likely to carry less information than in the current domestic contexts, and in which the instability of money demand also deprives monetary aggregates of their instrumental value. This is why the credibility of monetary policy will have to rely on the transparency of its decision making process and on the willingness to accept contradiction and debate. In other words, credibility requires not only success, but also explanation and persuasion.

The ECB faces a tough agenda. Europe's economic recovery was so far able to withstand the impact of the Asian crisis through a buoyant domestic demand. Signs of a slowdown, however, have shown up, and overheating is nowhere around the corner. The uncertainties relative to the ultimate repercussions of this crisis make policy making particularly difficult. Moreover, high unemployment is likely to create pressures toward slowing down the pace of fiscal adjustment, or even reversing it. In the context of pervasive structural rigidities, expansionary policies would sooner or later result in a renewal of inflationary pressures. Maintaining price stability in the medium to long term therefore goes well beyond the question of monetary policy credibility.

Benign neglect and volatility

The exchange rate policy within EMU will have important repercussions on the functioning of the international monetary system. It is plausible, although we qualify this view somewhat below, that EMU members will adopt a policy of benign neglect *vis-à-vis* the exchange rate of the euro, and thus contribute to further exchange rate volatility.

According to a common *a priori* conjecture, there is a risk that exchange rate instability will increase, because Europe is going to be a large, well diversified and closed zone, with two implications: first, a large economy is *ceteris paribus* likely to be less sensitive to the exchange rate, and second, as a consequence, policy makers will be less inclined to pay attention to the exchange rate. Theoretical considerations, however, point to increased as well as reduced variability after EMU depending on the nature of shocks and policy responses, leading to ambiguity and doubt rather than clear cut results. Model simulations that could in principle alleviate ambiguity critically lack robustness.

Several authors (D. Cohen, 1997, Creel and Sterdyniak, 1997) have argued that a large economy is less sensitive than a small open economy to the change in the exchange rate. The reason invoked is

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Boissieu (1998). See also the discussion by Willem Buiter in the Financial Times (letters, 24 September 1998).

[16] This is not meant to imply that monetary union cannot work without political union; but in the absence of the latter, there is a need to build a vast constituency behind the common monetary policy.

that a small economy is, other things being equal, more specialized and more dependent on imported goods whereas its domestic income heavily depends on its export performance. Given that exports and imports are price sensitive, a change in the exchange rate will affect the balance of trade and thus GDP. On the other side, the exchange rate will affect the price level through the price of imported goods and thus inflation. So it is understandable that the more open the economy is, the more sensitive to the exchange rate it will be. As a consequence, similar shocks that affect a small, open economy and a larger, less open economy will cause larger fluctuations of the exchange rate of the latter.

While this mechanism works in the direction of increased volatility of the dollar-euro exchange rate after the inception of EMU, however, a similar mechanism also works in the other direction: facing a domestic shock, a small, open economy will have an incentive to use the exchange rate to counteract its effect, while the larger, less open economy will not. Hence, volatility might be less if the origin of shocks is primarily domestic[17].

Feedbacks through asset markets introduce further difficulties. The exchange rate is not only the relative price of domestic and foreign goods, but also the relative price of domestic and foreign assets. When assets are imperfect substitutes (as implicitly assumed in the preceding section), a shock on asset markets, such as a fiscal or a monetary expansion, or a shock on financial markets will cause portfolio shifts and a reaction of the exchange rate that can be very large as the recent history of the dollar/D-mark/yen exchange rates amply demonstrates. Reducing the number of currencies can increase further the variability of the dollar/euro exchange rate as compared to the exchange rate of European currencies by reducing assets diversification in international and domestic portfolios. Removing the channel of exchange rates in Europe can increase further the variability of interest rates and thus produce exchange rate volatility. However, running in the other direction, reducing the number of currencies in Europe could also reduce the variability of risk preemie relative to the D-mark and thus reduce European exchange rate variability on average.

Another aspect of the volatility debate has to do with the nature of monetary policy in Europe, well beyond the transitional period of credibility building during which market participants might occasionally test the Central bank resolve. One important change in moving to EMU is the elimination of the asymmetry that characterizes the European Monetary System (EMS), at least for those currencies that belong to the core. The Exchange Rate Mechanism (ERM) of the EMS has worked with an anchor country, Germany, whose monetary policy is led by domestic considerations, and to whose currency the other countries, like France, Belgium, or the Netherlands, pegged their exchange rates. This leads to inappropriate policy responses after a shock affecting Germany and reduces the room for maneuver of other member countries when a shock occurs outside Germany. Within EMU, all members are treated symmetrically. The consequence depends on the nature of the shock. If it affects all the countries symmetrically, the response in EMU will be the same as the one we would have in the EMS. If it affects only Germany, the ECB will respond more weakly than the Bundesbank would have, leading to a reduced variability of the exchange rate. On the contrary, if the shock affects a country outside Germany, the ECB will respond more strongly (as there would have been no Bundesbank response in the ERM, except in the case of a spillover to Germany of the original shock), implying more variability of the exchange rate.

On average, EMU will reduce the variability of exchange rates in the case of shocks affecting Germany and other economies in opposite directions. Cassard, Lane, and Masson (1995) and Masson and Turtleboom (1997) have underscored the fact that shocks affecting the national money demand are negatively correlated. In these circumstances, the aggregate money demand function is more stable than the national money demand, and moving to EMU with a unique monetary policy based on the aggregate money demand function can be expected to lead to less variability of the interest rates, and thus of the exchange rate of the euro. The behavior of money demand after EMU,

[17] See, for example, the discussion in CEPR (1997).

however, is particularly uncertain. Reaction functions of the monetary authorities naturally play a crucial role in shaping the stochastic behavior of macroeconomic variables. Masson and Turtleboom (1997) have carried out model simulations under alternative assumptions concerning the objective of the monetary authorities. Assuming money targeting (M3), these authors have found that all the macroeconomic variables have less variability in EMU, except the exchange rate of the euro. With inflation targeting, even the exchange rate varies less, while a Taylor type rule reduces further real variability at the cost of more variability of the exchange rate. There is no agreement yet on the future strategy of the ECB, although it has been said that it would rely on a mix of monetary targeting and inflation targeting, a sufficiently vague statement to keep almost all options open.

In a nutshell, this review of part of an abundant literature remains somewhat inconclusive on whether the variability will increase after proceeding to EMU. Model simulations lead to mixed results. Contrary to Masson and Turtleboom (1997) who find that EMU will reduce volatility, Creel and Sterdyniak (1997), as well as Bénassy-Quéré (1997) and D. Cohen (1997), conclude that volatility will increase somewhat. In addition, most of this literature is subject to the Lucas critique which, in this particular case, should be taken very seriously. As a result, the behavior of EMU aggregates will not replicate the aggregation of countries' behavior. However, it is fair to acknowledge that, given the complexity of the problem, taking into account the Lucas critique on top of problems that are already quite intricate is a near impossible task.

If Europe takes on a benign neglect with respect to the external value of the euro, it should in itself mean that volatility will not be perceived as a problem[18]. After all, why should a fairly closed country (or zone) be bothered with exchange rate variability? Understandably people care about income volatility, either real or nominal, but it is not easy to understand why people are concerned by external price variability, except those (only a few in large closed countries) who are engaged in international trade or international investment activities. Those agents, mainly companies of financial institutions, know very well how to use the multitude of financial instruments that are available (or could be created) for this purpose. Arguably, the only real issue is the stabilization of domestic variables, possibly at the cost of more exchange rate variability, not the reduction of exchange rate variability when there is such trade-off. Of course, a distinction must be made between volatility, that is the noise around equilibrium levels, and misalignments, which would be expensive. The logic of benign neglect is that monetary and fiscal authorities should not try to engineer nominal exchange rate changes, even in the case of misalignments, but should only focus on domestic aggregates. Yet misalignments could prevent governments from achieving domestic targets, while eliminating misalignments may require a substantial degree of macroeconomic policy cooperation.

One is thus left to question the likelihood of Europe adopting a benign neglect stance. On the face of it, this looks quite plausible. Besides the size and relative openness argument, there is a further reason why EMU will care less about the dollar exchange rate than in the pre-EMU, ERM situation. Under the ERM, in effect, intra-European exchange rates were exposed to dollar-D-Mark fluctuations. When the dollar weakened, the effect was to strengthen the D-Mark against other European currencies, thus making pegging more costly to maintain. This provided one further reason why individual member countries would care about the dollar exchange rate. Under EMU, however, such concern disappears. Moreover, the treaty leaves some room for conflict over exchange rate policy responsibility, which may lead to benign neglect as a conflict avoidance posture. The letter of the treaty (art. 109) gives the European Council the right to conclude formal exchange rate agreements for the ecu in relation to non-Community currencies. In that case, the Council acts "unanimously, on a recommendation from the ECB or from the Commission and after

[18] For an agnostic view about the determinants and welfare effects of exchange rate volatility, see Rogoff (1998b)

consulting the ECB in an endeavor to reach a consensus consistent with the objective of price stability, after consulting the European Parliament." The Council may also, under similar procedures except that the decision is acted by a qualified majority, adopt, adjust or abandon the central rates of the euro within the aforementioned exchange rate system. Art. 109 (2) also specifies that in the absence of such a formal system, the council, "acting by a qualified majority either on a recommendation from the commission and after consulting the ECB or on a recommendation from the ECB, may formulate general orientations for exchange-rate policy…These general orientations shall be without prejudice to the primary objective of the ECB to maintain price stability".

In all likelihood, the Council will refrain from formulating general orientations for exchange rate policies against the ECB advice, since the ECB would not be literally bound to abide by them. Short of formal exchange rate agreements with non-Community currencies, therefore, the day-to-day management of the exchange rate will be left to the ECB. The extent of benign neglect on a daily basis therefore depends on the role of the exchange rate in the formulation of monetary policy. Since the euro-dollar exchange rates will matter less for domestic prices than transatlantic exchange rates did, the ECB should be less concerned.

There are, however, three caveats to the benign neglect hypothesis: first, as long as the dollar is extensively used as a currency for foreign import denomination and world nominal prices in dollar are rigid, the pass-through effect of euro-dollar exchange rate fluctuations into domestic prices will matter more than they do in the United States, which implies that the ECB might care more than the FED about the exchange rate. Second, the euro-dollar exchange rate still will, at least during a transitional period, provide a clear and visible indicator to gauge monetary policy and to communicate on it[19]; it might therefore provide the ECB with a useful communicating tool that the public will understand more than any yet to be devised aggregate price or monetary target.

Third, the political sustainability of benign neglect is open to question. In fact, the domestic political impact of exchange rate changes will likely remain strong. There are several reasons for that. First, the large exporters' or importers' interests will still be intermediated at the domestic level, because Europe is not a political union. Hence, transatlantic exchange rates will have a differential regional impact and test the relationship between the (independent) central bank and national governments. In other words, there might be relative benign neglect from a monetary policy perspective, but not from a political perspective. How long this is sustainable without some sort of a *modus vivendi* acceptable by all is open to question. Second, as argued in CEPR (1997) and Honohan (1997), the exchange rate effects with currencies outside the EMU and other than the dollar will sometimes exhibit strong bilateral biases, as for example the sterling/euro exchange rate, which will matter much more for Ireland than for the whole of EMU (although it will be by no means indifferent at least politically, given the trade integration between the UK and the continent). Third, transatlantic exchange rate fluctuations have always been on the political agenda and are unlikely to disappear fast. Competitive tensions between the US and Europe in a globalized world will still shape transatlantic politics, if not domestic economic policy responses. The result of the strong separation of powers between monetary policy and other dimensions of policies in Europe will probably lead European policy makers to argue that more coordination is needed on economic policies between Europe and the United States, and, more generally, in the triad. Under full benign neglect, one would, on the contrary, expect calls for international coordination of economic policies to lose strength.

Many, in France and elsewhere, indeed consider that benign neglect should not be an option. The euro is often presented as an instrument for full employment and growth.[20] This is pushing the microeconomic efficiency benefit of Monetary Union a bit too far. Not only does it presume that a

[19] For a discussion, see, for example, Buiter and Sibert (1997)

proper policy-mix will be put in place in EMU, which is still an open question, but it crucially distracts the attention from the need for domestic structural reforms in all member countries. Besides, neither monetary policy nor the exchange rate of the euro will be under the control of governments to use as instruments. But such statements are doubly interesting: first, they correctly identify the objectives of public policy: full employment and growth; second, they allow grasping the extent to which EMU, however desirable, is a gamble. Success will require both a proper macroeconomic policy-mix – which requires some coordination between the ECB and fiscal authorities that the Treaty and the stability pact do not provide[21] – and supply side policies undertaken on a domestic basis. There is no reason to expect that EMU provides a smooth path to both achievements.

Meanwhile, however, the first signs of the temptation of benign neglect have appeared with the Asian crisis. European countries, still haunted by the memories of the ERM crisis in 1992-1993, have felt somehow sheltered from speculative attacks so far, and some have interpreted this invulnerability to contagion as a sign that the euro provided Europe with protection from Asian and Russian market turmoil[22]. On the face of it, two factors explain it. First, the present situation is radically different from the crisis of European currencies in 1993. Then, unlike today, divergent evolutions and increasing fiscal deficits had made the prevailing central parities unsustainable in the ERM, leading to its breakdown. Tensions in currency markets alleviated after a significant fiscal correction that was facilitated by the current upswing. Convergence has forced governments to correct unsustainable policies (in particular fiscal policies) which in turn have contributed to improve the market conditions. Second, the immediacy of EMU has contributed to anchor the credibility of the current intra-European exchange rate arrangements. But the risk of exchange rate turbulence from the repercussions of the Asian crisis is only part of the story. EMU does not protect European countries from major shocks affecting financial markets. A collapse of the Asian financial systems would certainly have dramatic costs. In the first months of the crisis, European and North American financial markets reacted in very similar ways. The crisis of the banking system and the fall of the Asian stock exchanges have pushed the western stock exchanges up because international investors have moved away from Asia to US and European safe heavens. The full impact of the crisis, however, is in the making and looks increasingly ominous.

3. EMU and international policy coordination

How will EMU influence the international monetary system? The Asian financial crisis in 1997 and 1998 has prompted a renewed debate on the need to "reform" the system. Exchange rate instability has again been designated as one of the villains, and calls for a more stable international exchange rate system have once again blossomed.[23] EMU takes place at a time when old projects are revisited and when a reappraisal of the current way to manage interdependence is undertaken. For some (European Commission, 1990), EMU will increase the incentives and the practicability of international economic policy coordination. Others dissent (e.g. Kenen, 1993, Goodhart, 1993).

By making the euro-dollar exchange rate highly visible, EMU may well make calls for more active transatlantic coordination more pressing by increasing the costs of non-coordination. One of the reasons has been discussed above: exchange rate volatility, and even more misalignment, will still be a political concern, and it is precisely governments, rather than independent central banks, that can call for international coordination and try to practice it. Recurrent transatlantic tensions over the exchange rate could therefore be expected.

It is hard to believe, however, that time is ripe for a formal reform of the international exchange rate

[21] For a discussion, see Jacquet (1998).

[23] For example, the German Chancellor-designate, Gerhard Schröder has backed target zones for the world's main currencies (*Financial Times*, September 29, 1998).

system. As always, devising a system that would be perceived to be better than the existing one by all the decisive actors appears elusive at best. Stabilizing transatlantic exchange rates, either strictly or within bands, requires either joint determination of the global transatlantic monetary policy, or at least one of the two countries or region to subordinate domestic objectives, including price stability objectives, to the exchange rate target. The ECB has not been set out to behave that way, and one does not imagine the US congress relinquishing or sharing any form of monetary sovereignty. Besides, any "stable but adjustable" exchange rate system will be liable to the inconsistent triangle problem in the context of free capital movements.

Target zones, especially flexible target zones,[24] may provide a workable compromise between formal reform and muddling through. Assuming that long term real equilibrium exchange rates *à la* Williamson[25] can be satisfactorily computed, a flexible target zone system provides two sources of flexibility: adjustment of the central peg in real terms, and adjustment of the band width to deter speculation. It is therefore less demanding than a standard target zone system with a fixed central rate and explicit bands in terms of monetary policy coordination. Schemes of this sort have merits: they signal a political agreement on checking exchange rate behavior and can thus guide expectations. But the smallest hint of formality in the system would test again the willingness to enter potentially binding monetary policy coordination. It would also test the ability of member governments to adjust the system smoothly. However, without formalization, a system of flexible target zones would appear like the political disguise of ad-Hokkai.[26]

A rules-based approach to international monetary reform therefore faces many hurdles. The alternative is discretionary, informal coordination. The record, unfortunately, is not very encouraging. There are several difficulties. The political foundations of such coordination are uncertain, notably because participants are not always in a position to deliver on commitments. This is notably the case for fiscal policy coordination, since ministers of finance cannot commit on what parliaments will vote. EMU will also make the institutional setting awkward.[27] There will be de facto a G4 (later a G3 when the UK joins EMU) on monetary policy, but the responsibility for exchange rate management and for fiscal policy will be much wider. No easy institutional reshuffling will take place, however.

Moreover, successful coordination demands detailed and shared understanding about the effect and interaction of economic policies, a knowledge that neither economists or policy-makers can claim. In addition, the objectives of coordination are often uncertain at best: should it be designed to promote exchange rate stability, world growth, stable prices, current account adjustment? Each participant may have its own views on the objective to be pursued. The exercise cannot but be messy. But, occasionally, blatant real misalignments will require joint concern and action.

EMU, however, is likely to strengthen a trend that has developed with disinflation in the 1980s, and that may have a lasting influence on the international monetary system through the behavior of the major participants. As argued above, the emergence of the euro is likely to strengthen the forces of currency competition. Such competition creates incentives to improve on the quality of currencies, in particular the stability of their real value. EMU may well help the convergence of the flexible exchange rate system *cum* free capital movements toward non-cooperative but depoliticized, monetary policy equilibrium in which Europe and the United States will compete on price stability.

IV. Concluding remarks

Both the size argument and the stability-oriented monetary stance confer a strong potential to the

[24] See the discussion in CEPR (1997, p. 21).
[25] For example, see Williamson (1983).
[26] See Mussa and al. for a discussion on the merits and drawbacks ot target zones à la Williamson.
[27] See the discussion in Bergsten (1997), Henning (1997), Alogoskoufis and Portes (1997), and CEPR (1997).

euro. However the euro will not replace the dollar and a bipolar monetary system remains a likely conjecture. The change in the international monetary order may occur more rapidly than expected. The incumbency advantage of the dollar does exist, but it should not be overstated and will not last long. There is a risk that competition between the two key currencies may open an era of difficult transatlantic relations. According to an alternative scenario the two currencies could specialize geographically and functionally. The existence of an independent European Central Bank is expected to determine a low and stable inflation rate that will make the euro an excellent nominal anchor for a number of countries outside Europe. Conversely, it should be less attractive for those that are risk averse to the variability of the euro / dollar exchange rate. Eventually, the fate of the euro will depend on the European economic achievements and policies

The case for promoting one's currency to international status does not look clear-cut. As is well known, many in Europe have been looking to the euro as an instrument to counter US monetary power. In the current flexible exchange rate system, however, it is not clear that the US derives insuperable advantages from issuing the world currency. Similarly, and taking into account that Europe is not politically united, the political benefits of an internationalizing euro, seem all the more doubtful.

A short term appreciation of the euro against the dollar is likely, because (1) even if it is concerned by the overall economic situation, the ECB will have to establish its credibility and demonstrate that it will be strict on inflation by adopting a firm interest rate policy. In the current context, this may mean that the ECB lowers the interest rates more slowly than a fully credible institution could do it. The ECB starts with impeccable historical credentials, but has to demonstrate its operational credibility and build its reputation; in particular, in the absence of a yet well-established indicator of policy, it may rely temporarily on the exchange rate and demonstrate its firmness by preventing any weakening of the euro. (2) A shift of portfolio managers into the euro is likely, although most of the shift may already have taken place in anticipation; (3) the dollar is burdened by the weakness of the US external position.

This review, however, instills some agnosticism with respect to the longer-term future of the euro as an international currency. On the question as to whether the euro will be a strong or a weak currency, there is no certainty. The exchange rate chiefly responds to policy differentials across countries. Overtime, portfolio movements lead to ambiguous results, as the supply of assets from borrowers in euro may compensate for the increase in demand. On the question of short-term volatility, theoretical as well as simulation results remain contradictory. Moreover, the stance of the ECB with respect to the exchange rate is open to question. Though many commentators underscore the risk of a benign neglect, this position may prove politically unsustainable. EMU's exchange rate policy still looks uncertain.

The implications of EMU on international policy coordination also lead to agnostic conclusions. EMU does not simplify the institutional setting for coordination, as it reduces the number of key players only in the field of monetary policy. It may well increase over time the perception of the costs of non-cooperation, but this is uncertain. If benign neglect obtains on both sides of the Atlantic, there will be no reason to be preoccupied by exchange rate movements, by definition, except when they take undue proportions

The major implication of EMU will undoubtedly be its contribution to European prosperity, with its positive repercussions on the rest of the world. This is where the major gamble lies. EMU brings benefits and challenges. Europe needs now to demonstrate that it is able both to conduct, within EMU, an adequate macroeconomic policy mix and to implement domestic structural reforms that have so far been delayed.

References

Aglietta, Michel and Christian de Boissieu (1998), "La responsabilité de la future Banque centrale européenne", in Conseil d'Analyse Economique, No. 5, *La coordination des politiques économiques*, Paris.

Alogoskoufis, George and Richard Portes (1997). "The Euro, the Dollar, and the International Monetary System," in Thomas Krueger, Paul R. Masson, and Bart G. Turtleboom, eds., *EMU and the International Monetary System*, Washington DC: International Monetary Fund.

Alogoskoufis, George and Richard Portes (1991). "International Costs and Benefits of EMU," in "The Economics of EMU", *European Economy*, special edition no. 1.

Bénassy-Quéré, Agnès (1996). "Potential and Opportunities of the Euro as an International Currency," Document de Travail no. 96-09, Paris: Centre d'Etudes Prospectives et d'Informations Internationales.

Bergsten, C. Fred (1997). "The Impact of the Euro on Exchange Rates and International Policy Cooperation," in Paul R. Masson et al., eds., *EMU and the International Monetary System*, Washington, DC: International Monetary Fund.

Bergsten, C. Fred (1996). *Dilemmas of the Dollar: The Economics and Politics of United States International Monetary Policy*, second edition, New York: M.E. Sharpe.

Bergsten, C. Fred and Randall C. Henning (1996), *Global Economic Leadership and the Group of Seven*, Washington D.C.: Institute for international economics.

Cassard, Marcel, Timothy Lane, and Paul R. Masson (1995). "ERM Money Supplies and the Transition to EMU," in Paul R. Masson, ed., *France: Financial and Real Sector Issues*, Washington DC: International Monetary Fund.

CEPR (1997), "Options for the Future Exchange Rate Policy of the EMU", Occasional Paper no. 17, London: Centre for Economic Policy Research.

Cohen, Benjamin J. (1998). *The Geography of Money*. Ithaca: Cornell University Press.

Cohen, Benjamin J. (1992). "The Sterling Area" in Peter Newman and Murray Milgate and John Eatwell, eds. *The New Palgrave Dictionary of Money and Finance*, Vol 3, Mac Millan Press, London, pp 554-555.

Cohen, Benjamin J. (1997). "Who Challenges Whom? The Euro Versus the Dollar," Department of Political Science, University of California, Santa Barbara, mimeo (October).

Cohen, Daniel (1997), "How will the Euro behave", Discussion Paper Series 1673 (International Macroeconomics), London: Centre for Economic Policy Research. July.

Cooper, Richard N. (1992), "L'Europe et Maastricht: point de vue américain", paper delivered at the French Institute of International Relations (Ifri), Paris: 26 November.

Creel, Jérôme, et Henri Sterdyniak (1998). "A propos de la volatilité de l'euro," *Revue de l'OFCE*, no. 65 (avril): pp. 199-224.

Deutsche Bundesbank (1991). "The Significance of the Deutsche Mark as an Invoicing Currency in Foreign Trade," *Deutsche Bundesbank Monthly Report*, vol. 43, no. 11 (November): pp. 40-44.

Dornbusch, Rudiger, Carlo A. Favero and Francesco Giavazzi (1998). "The Immediate Challenges for the European Central Bank", Working Paper 6369, Cambridge, MA: National Bureau of Economic Research, January.

Eichengreen, Barry, and Jeffrey A. Frankel (1996). "The SDR, Reserve Currencies, and the Future of the International Monetary System," in Michael Mussa et al., eds., *The Future of the SDR*

in Light of Changes in the International Financial System. Washington, DC: International Monetary Fund.

European Commission (1990). "One Market, One Money: An Evaluation of the Potential Benefits and Costs of Forming an Economic and Monetary Union," *European Economy*, no. 44 (October).

Frankel, Jeffrey A. (1995). "Still the Lingua Franca: The Exaggerated Death of the Dollar," *Foreign Affairs*, vol. 74, no. 4 (July-August): pp. 9-16.

Frankel, Jeffrey A. (1992). "Dollar", in Peter Newman, Murray Milgate and John Eatwell (eds.), *The New Palgrave Dictionary of Money and Finance*, p. 699, London : The Macmillan Press Ltd.

Frenkel, Jacob A. and Morris Goldstein (1997). "The International Role of the Deutsche Mark", Paper prepared for *Fifty Years of the Deutsche Mark*, sponsored by Deutsche Bundesbank (manuscript).

Goodhart, Charles A.E. (1993). "The External Dimension of EMU", in Leon Bekemans and Loukas Tsoukalis, eds., *Europe and Global Economic Interdependence*, Brussels: European Interuniversity Press.

Henning, Randall C. (1997). "American Interests and Europe's Monetary Union," statement before the Committee Budget, United States Senate (October 21), Institute for International Economics website.

Honohan, Patrick (1997). "Miniblocs and Fringe Currencies of the Emu", Discussion Paper Series 1704 (International Macroeconomics), London: Centre for Economic Policy Research.

Ilzkovitz, Fabienne (1995). "Recent Developments in the International Use of Currencies: Towards a Tripolar Regime?" in ECU Institute, ed., *International Currency Competition and the Future Role of the Single European Currency*, London: Kluwer Law, pp. 67-95.

Jacquet, Pierre (1998), "L'Union monétaire et la coordination des politiques macroéconomiques", in Conseil d'Analyse Economique, No. 5, *La coordination des politiques économiques*, Paris.

Kenen, Peter B. (1995). *Economic and Monetary Union in Europe: Moving Beyond Maastricht*, Cambridge and New York: Cambridge University Press.

Kenen, Peter B. (1993). "EMU, Exchange Rates, and the International Monetary System", *Recherches Economiques de Louvain*, No. 59 (1-2), pp. 257-82.

Kindleberger, Charles P. and Peter H. Lindert (1978). *International economics*, Homewood, Ill.: Richard D. Irwin, sixth edition.

Krause, Lawrence B. and Walter S. Salant (1973). *European Monetary Unification and its Meaning for the United States*. Washington D.C.: The Brookings Institution.

Krugman, Paul (1998). "Who's Afraid of the Euro?" *Fortune* (April 27).

Krugman, Paul (1984). "The International Role of the Dollar: Theory and Prospect," in John Bilson and Richard Marston, eds., *Exchange Rate Theory and Practice*, Chicago: University of Chicago Press.

Masson, Paul R., and Bart G. Turtleboom (1997). "Characteristics of the euro, the Demand for Reserves, and Policy Coordination under EMU," in Thomas Krueger, Paul R. Masson, and Bart G. Turtleboom, eds., *EMU and the International Monetary System*, Washington, DC: International Monetary Fund.

Matsuyama, Kiminori, Nobuhiro Kiyotaki, and Akihiko Matsui (1993). "Toward a Theory of International Currency," *Review of Economic Studies*, vol. 60, no. 2 (April): pp. 283-307.

McCauley, Robert N. (1997). *The Euro and the Dollar*, Essays in International Finance, No. 205, Princeton NJ: International Finance Section, Department of Economics, Princeton University. November.

McKinnon, Ronald I. (1993). "The Rules of the Game: International Money in Historical Perspective," *Journal of Economic Literature*, vol. XXXI (March): pp. 1-44.

Mundell, Robert, A (1993), "EMU and the International Monetary System" in the Monetary future of Europe, Economic Policy Research, London.

Mussa, Michael, Morris Goldstein, Peter Clark, Donald J. Matieson, and Tamin Bayoumi (1994). "Improving the International Monetary System," IMF Occasional Papers no. 116, Washington, DC: International Monetary Fund (December).

Porter, Richard D., and Ruth Judson (1996). "The Location of US Currency: How Much of It Is Abroad," *Federal Reserve Bulletin*, vol. 82 (October) pp. 883-903.

Portes, Richard, and Hélène Rey (1997). "The Emergence of the Euro as an International Currency," *Economic Policy* 26, London: Centre for Economic Policy Research. April.

Rogoff, Kenneth (1998a). "Blessing or Curse? Foreign and Underground Demand for Euro Notes", *Economic Policy* 26, London: Centre for Economic Policy Research. April.

Rogoff, Kenneth (1998b), Perspectives on exchange rate volatility, forthcoming in *International Capital Flows*, edited by Martin Feldstein (University of Chicago Press and the NBER).

Summers, Lawrence H. (1997). "EMU: An American View of Europe", remarks at the *Euromoney* Conference, NY: New York, April 30.

Wyplosz, Charles (1997), "EMU Why and How it Might Happen", *Journal of Economic Perspective*,vol.11 no 4, p 3-32, Fall.

Williamson, John (1983). "The Exchange Rate System", *Policy Analyses in International Economics*, no. 5, Washington DC: Institute for International Economics.