Institutional Requirements for Stable Money in an Integrated World Economy

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The European Monetary System is one of the important pillars of the international monetary order, and the planned development of this system toward a monetary union may be of great importance to the future of the international monetary regime. If monetary union were realized in Western Europe, then the characteristics of its monetary constitution and its stability or instability would have consequences for the states outside its orbit. Because of this, there is ample reason to reflect on the characteristics of the present international monetary system and to discuss the institutions necessary to turn it into an inflation-stable monetary order. But such an analysis is not sufficient. Just as important is how and under which conditions the institutions favored could be introduced, given the present political and economic environment. Although we still need to learn more in order to fully answer these questions, they must be considered and an effort must be made to answer them.

The Present International Monetary Order

The international monetary order—or rather disorder—reflects the partial anarchy implied by the existence of sovereign national states (see Bernholz 1990). Uncoordinated and contradictory national policies exist because fiat money regimes give decisive power to governments and central banks. True, there remains some competition among different national currencies, but it is severely restricted by spatial monopolies whose policies are influenced by domestic politi-

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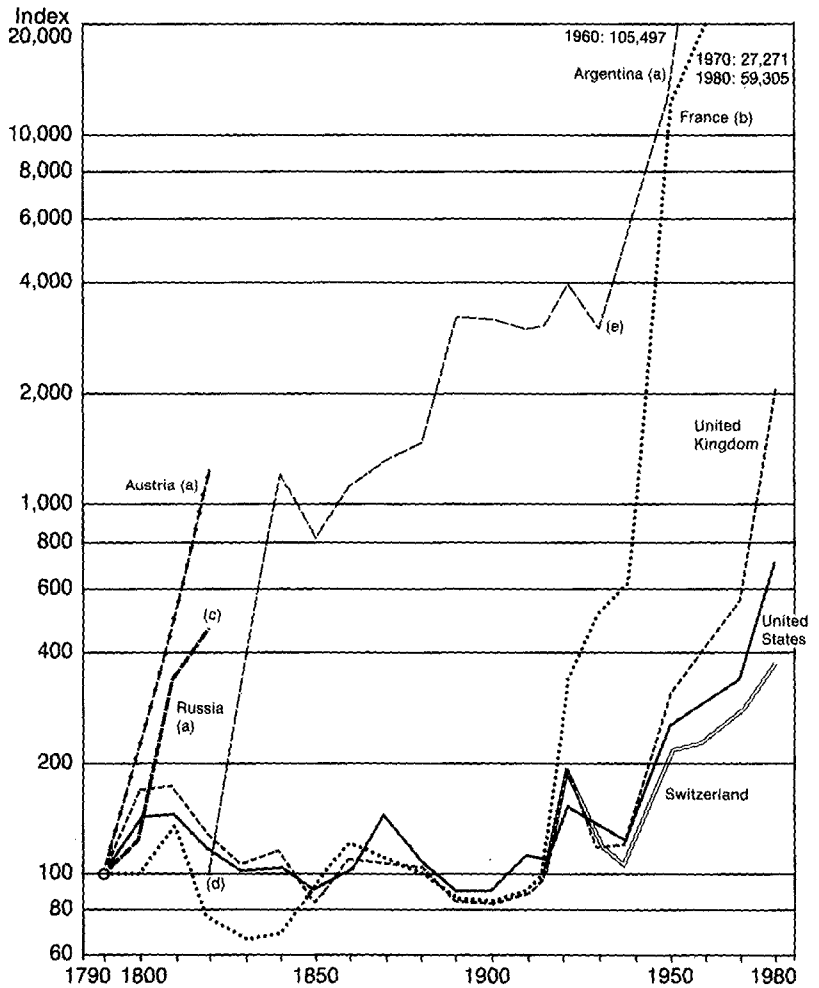
cal processes, special interests, and international bargaining among states. According to Roland Vaubel (1986, p. 927):

> At present, currency competition is severely restricted in many countries. Currency competition from *foreign central banks* can be restricted in several ways:
>
> - The currency issued by the national central bank can be prescribed as a private unit of account;
> - Contracts in foreign currencies can be prohibited by law or discouraged through discriminatory contract enforcement in the courts;
> - Governments can restrict or discourage the holding of foreign currencies by residents (or the holding of the domestic currency by foreigners) and thereby interfere with the choice of means of payments;
> - Governments can refuse to accept any other currency than the one issued by their central bank.
>
> Currency competition from *private money suppliers* is not admitted in any industrial country.

Discretionary monetary regimes, in contrast to the gold standard, for example, show a long-term inflationary bias (Figures 1 and 2). This is true, though to a lesser extent, even if central banks are independent of the government (Parkin and Bade 1978). Even "relatively" stable currencies like the U.S. dollar, the D-mark, and the Swiss franc have lost two-thirds of their value since 1950. This performance is worse than that of Russia during the 19th century after 1816 (Figure 2), which was considered to be inflicted with a weak and unstable currency. Moreover, no international reference standard in the form of a stable monetary constitution exists; there is no monetary regime that the governments of politically less stable countries could imitate to control the forces of inflation. During the 20th century, countries like Argentina (Alemann 1966), Brazil, Peru, Austria-Hungary (Subercaseaux 1912), and Russia (Zielinski 1898) endeavored again and again to introduce the silver or gold standard in an effort to return to the conditions existing in more "civilized" developed countries. Sometimes these efforts failed, and sometimes gold or silver convertibility had to be suspended after some time. But even under those conditions, the average rates of inflation remained well below those experienced today as a consequence of such repeated efforts, even though the political situation was as unstable in Latin America, the Balkans, and Italy as it is today. Figure 2 presents the results of Russia's efforts to move back to the silver standard after 1816 (convertibility was reached in 1839 and again abolished in 1856) and to introduce the gold standard from the 1880s (finally succeeding

FIGURE 1

DEVELOPMENT OF WHOLESALE PRICES IN SEVERAL COUNTRIES, 1790–1980

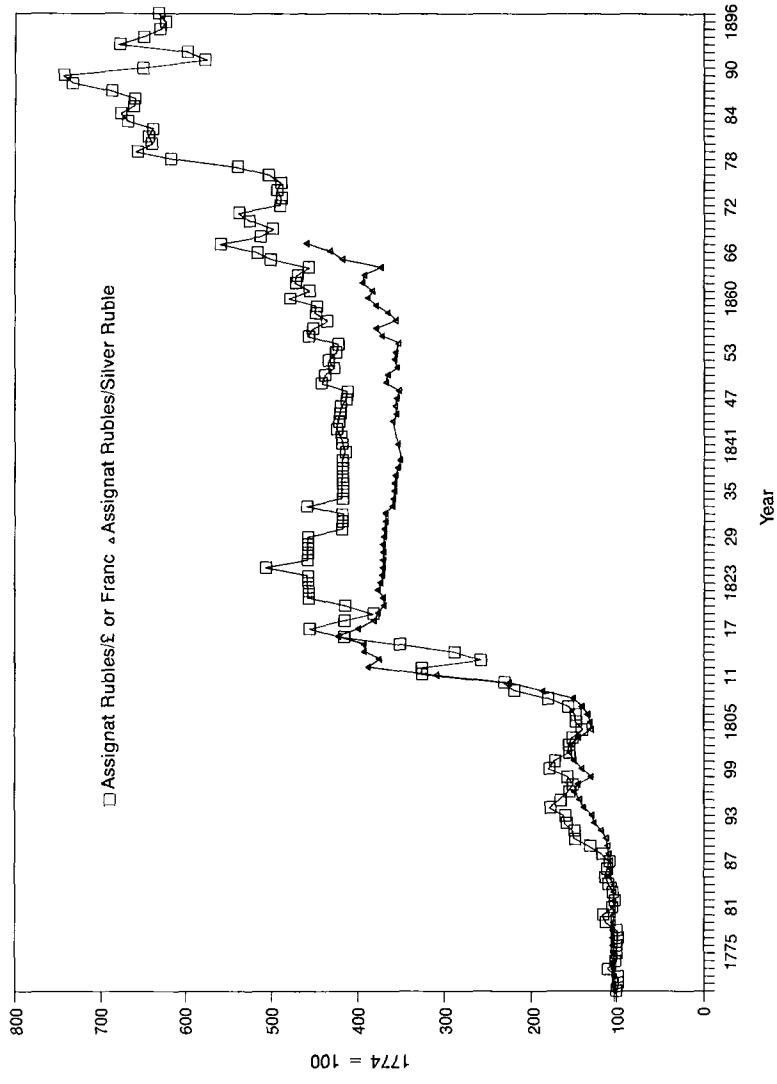


(a) Exchange rate on Amsterdam for Russia, on Hamburg for Austria, gold price until 1929, and exchange rate on US$, since then for Argentina.
(b) 1796 = 100.
(c) 1814.
(d) 1826 = 100.
(e) 1929.

SOURCE: Mitchell (1976, pp. 735–47); U.S. Department of Commerce (1975, Part 1, pp. 199–202); Bernholz (1982, p. 15); Jiménez (1968, pp. 181–84).

FIGURE 2

RUSSIAN EXCHANGE RATE AND SILVER PRICE, 1769–1897

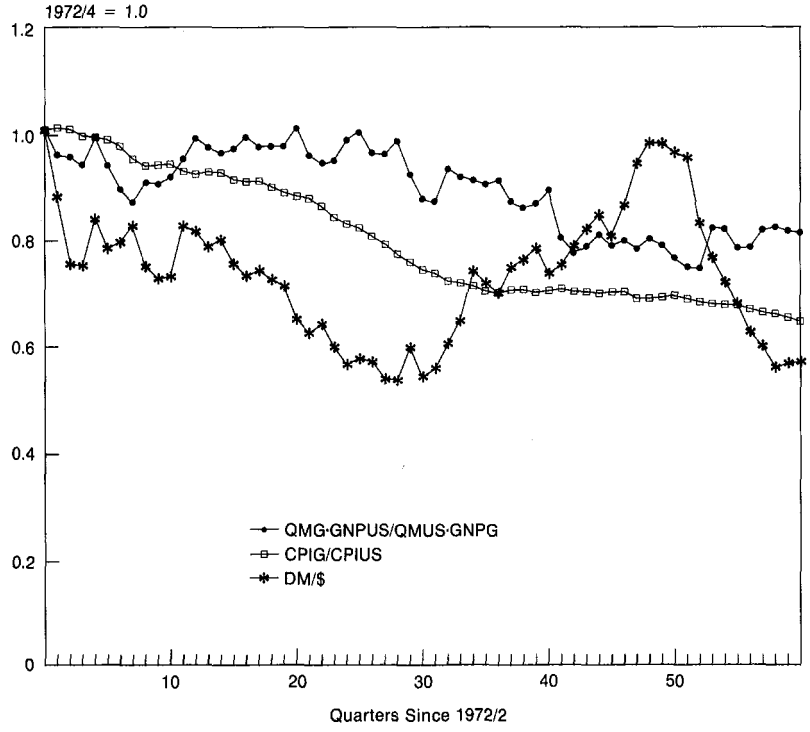


in 1896). In Argentina, Brazil, and Austria-Hungary, similar efforts took place. In some cases, as in Austria-Hungary and in Argentina in the 1890s (Bernholz 1984), the stabilization in the form of a return to the gold standard even proved to be a lasting success.

The present international monetary regime is not only plagued by inflation, but also by erratic, short-term moves of nominal exchange rates and by large, medium-term swings of real exchange rates around purchasing power parities (Figures 3 and 4). Erratic, short-term movements of exchange rates may not pose a great problem for international trade and capital movements, because exporters, importers,

FIGURE 3

MONEY SUPPLY, EXCHANGE RATE, PRICES
(GERMANY/UNITED STATES)

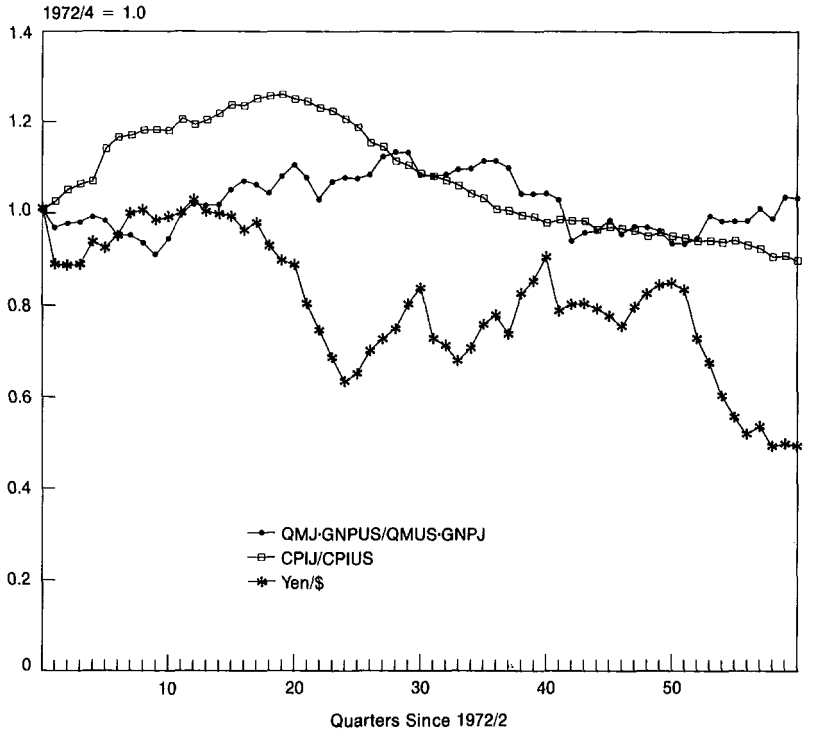


SYMBOLS: QMG, QMUS Quasi Money in West Germany and United States; GNPG, GNPUS Gross National Products; CPIG, CPIUS Consumer Price Indices.

SOURCE: International Monetary Fund, *International Financial Statistics*, monthly reports.

FIGURE 4

MONEY SUPPLY, EXCHANGE RATE, PRICES
(JAPAN/UNITED STATES)



SYMBOLS: See Figure 3; J refers to Japan.
SOURCE: International Monetary Fund, *International Financial Statistics*, monthly reports.

debtors, and creditors can usually hedge in forward markets. Still, hedging costs might be saved in another monetary regime if a great part of the short-term variability of exchange rates is caused by the discretionary monetary policies of governments and central banks that are manipulating their national monies because of domestic policy reasons.

The situation is different for the large, medium-term swings of real exchange rates. Here, usually, no hedging in forward markets is possible, since scarcely any such markets exist for more than one year. Even in this case we can argue that these movements of exchange rates are preferable to corresponding changes, say, of price

or wage levels. But this argument can be accepted only if and insofar as the medium-term swings of exchange rates are mainly caused by changes in real factors. The empirical evidence seems to point in another direction. The study of more than 20 cases, from 1750 to the present for different countries, has shown that the medium-term swings of real exchange rates have been caused mainly by diverging policies of monetary authorities controlling fiat paper currencies, with aims strongly influenced by domestic policies (Bernholz 1982, 1984; Bernholz, Gärtner, and Heri 1985). If this is true, then the medium-term swings of real exchange rates are mainly welfare losses, since they make international trade and capital movements more hazardous because of the insecurity of the future values of contracts and payment obligations. Moreover, such swings pose an inherent danger to free international trade. During periods of overvaluation or vanishing undervaluation, governments are under strong political pressure by export- and import-competing industries and the people employed by them not only to reinflate and intervene against their own currencies but also to introduce protection against foreign competition in the form of quotas, asking foreign governments to limit exports, and exchange controls (Corden 1984, Bernholz 1987). Empirical evidence for this public choice argument is available. Gärtner and Ursprung (1989, pp. 120–21) conclude:

> The results of the estimation justify the model equation used. The greater the variance of the DM/$ exchange rate corrected for inflation, the more rapidly the number of anti-dumping complaints grow [introduced at the U.S. International Trade Commission] initially. . . . The variance explained remains modest with 23%. . . .
>
> Intervention activity of the Fed rises when the variance of the external value of the dollar increases and when trade protection grows, though, here again, not unlimited.

Compatible results were obtained by Gärtner (1987) and Honegger (1989) for West Germany, Great Britain, Japan, Canada, and Switzerland. In fact, with reference to events in 1977–78, the Swiss National Bank (1982, pp. 227–29) reported:

> The expansionary policies practiced in the United States in spite of rising inflation brought increasing pressure on the dollar since mid-1977. . . . The National Bank tried to fight the substantial revaluation of the franc through three kinds of measures. Since June 1977, she bought heavily on the foreign exchange market. . . . Secondly, she lowered the discount and lombard rates mainly because of the exchange rate in July 1977 and in February 1978. . . . Thirdly, the countermeasures against the inflow of money from abroad were strongly strengthened at the end of February 1978, especially by forbidding the investment of foreign funds in domestic

> securities. . . . Already in June the American dollar came again under pressure. . . . On September 26, 1978, the rate of the franc reached its absolutely highest level. . . . The dollar fell to 1.45 francs (2.00 francs at the end of 1977) and the D-mark to 0.75 francs (0.95 francs at the end of 1977). Such exchange rates were a severe danger for the existence of broad segments of the Swiss export industries.
>
> In this situation, the National Bank decided, in agreement with the Federal Government, to change the course of its monetary policy. She announced on October 1, 1978, that she would influence the franc exchange rate in a way that the rate of the D-mark would stand sizably above 80 francs per 100 D-marks. In doing so, she gave up, for some time, the policy of a monetary target practiced since 1975. . . .
>
> To reach the announced exchange rate target, the National Bank had to intervene heavily during the first days of October. Taken together, she bought in the fourth quarter a gross amount of dollars valuing 10.6 billion francs. As a consequence, the franc weakened substantially.[1]

Instead of protectionist measures or discretionary interventions, some countries have taken more adequate action to remove at least a large part of their foreign trade from the dangers posed by real exchange rate movements. The European Monetary System stabilizing its internal exchange rates, and before it the European Currency Snake, may be seen as such an effort. Other countries stabilize their currencies vis-à-vis the U.S. dollar (e.g., Hong Kong), the European Monetary System (Austria), or currency baskets (Sweden, Norway, Finland).

It has been argued that present discretionary monetary regimes have proved to be superior in other respects to the inflation-stable gold standard before 1914. There is empirical evidence that some real variables—such as real growth rates of GDP, real interest rates, and unemployment rates—in most leading industrialized countries showed more variance before 1914 than between 1950 and 1980 (Meltzer 1986, Schwartz 1986). But this possible advantage has to be compared with the higher variance of real exchange rates, their medium-term swings, and the negative consequences of these factors for free trade. It also has to be compared with the disadvantages of inflation. The empirical results look quite different for the many countries suffering from advanced inflations that did not occur before 1914 (with the exception of France in the 1790s and the United States in the 1780s).

Finally, given the discretionary powers of governments and central banks, it is very difficult, if not impossible, for economic agents to

[1]For further historical evidence, see Bernholz (1987, pp. 416–20).

form adequate expectations concerning the future movement of price levels and exchange rates. Whereas the gold or silver parities with free convertibility gave everyone an opportunity to monitor the working of the system and to form reliable expectations, this is not as true or is far less true for discretionary monetary regimes, even where target rates are announced for monetary growth. Thus, whereas commodity standards encouraged stabilizing speculation in foreign exchange markets, the opposite often happens in the present system. The announcement of targets for monetary growth has proved to be unreliable in all countries concerned and thus scarcely informed economic agents. It has also been argued, however, that the unpredictability of exchange rates is not important, since everybody can cover in forward markets. But except for the dollar, these markets are limited to up to one year and coverage costs are in no way negligible.

Governments have tried to mitigate the problems of the present international monetary system by efforts at international cooperation. The International Monetary Fund has remained, even after the fall of the Bretton Woods system. Within the IMF framework, some rules have been agreed to concerning exchange rates, competitive devaluations, and so forth. Also, the IMF has played an important role in temporarily postponing the debt crisis and in exerting some influence on domestic monetary and fiscal policies of the respective countries. Similarly the groups of 7 and 11 industrialized countries have tried to coordinate monetary and exchange rate policies and to set up specific credit facilities at the IMF. In spite of and partly even because of these efforts and institutional arrangements, the partial anarchy of the international system has only been mitigated, although not removed.

This is not surprising, given that national monetary authorities are strongly influenced by domestic political processes and that international organizations are, at least, partly oriented by bureaucratic ends to survive and expand. Moreover, the international bargaining game between monetary and fiscal agencies may lead to results, in a prisoner's dilemma setting, which is Pareto-inferior even judging from the political ends of the collective actors, not to speak of the interests of citizens (compare Vaubel 1983).

Let me finally note that these arguments should in no way be construed as expressing a preference for a regime of fixed exchange rates or a commodity standard. In fact, we have mainly adhered to a positive analysis of the present international monetary system, so no normative statements can be derived here. Even if we have judged certain characteristics of the present system as negative from a welfare point of view, this does not mean that a system of flexible

exchange rates with more adequate monetary constitutions—and, thus, lower inflation and less volatility of real exchange rates—may not be superior to a fixed exchange rate system, especially in absorbing real shocks.

The Problem of an International Monetary Order in Historical Perspective

My sketch of the condition of the international monetary system suggests that far-reaching institutional reforms are necessary to remove the inflationary bias and the volatility of real exchange rates with their obnoxious consequences, caused by discretionary monetary policies of national authorities. To bring about such reforms, two major problems present themselves. Only the first problem has been discussed widely: Which kind of stable monetary regime and institutions should be introduced? I will return to this question later and mention here only that the problem has been discussed primarily for national economies without reference to the international setting.

The second problem has been sadly neglected: How can we move from the status quo to a stable international monetary regime, given the interest of politicians and governments to maintain their nation-bound discretionary hold on money? In an earlier paper (Bernholz 1986), I showed under what conditions individual countries have instituted stable monetary regimes. There have been four categories: (1) to end hyperinflations; (2) to restore a stable monetary system abandoned because of war, where the domestic price level had not moved too far out of line with that of important trading partners who had maintained a stable system; (3) to imitate successful monetary constitutions of developed countries; and (4) to respond to the removal of an undervaluation, an undervaluation caused by moderate inflation, that has diminished or turned into overvaluation because of a return to more stable monetary policies. In these cases, the new stable monetary regime was introduced together with a fixed exchange rate (gold parity) at a still undervalued level that made the regime palatable to export- and import-competing industries and the people employed by them.

For a discussion of how to arrive at a stable international monetary order, we can put aside the first two categories. But even the third and fourth categories are not suited for a *general* international reform taking place in many countries at about the same time. To imitate stable monetary regimes, at least one stable system must already exist, and not all countries can introduce undervalued currencies at the same time. It follows from the historical evidence that the third

and fourth categories would allow only a gradual emergence of a stable international monetary system. At different times, different countries could introduce a stable monetary regime at exchange rates undervalued at that time, which would slowly be moved toward purchasing power parity by an adaptation of price levels. It is clear, however, that a stable international monetary regime could only evolve by such a process if the reforms in different countries would introduce about the same basic characteristics into a stable monetary constitution. This happened, in fact, in Argentina (1898), Austria (1892), the Netherlands (1875), British India (1896), Russia (1896), Belgium (1927), France (1927), and Czechoslovakia (1927), since all these countries introduced the gold or gold exchange standard at undervalued gold parities (see Bernholz 1986).

Early Examples of Stable International Monies

These examples should warn us against taking constructivist approaches to the establishment of a stable international monetary system. This impression is confirmed if we look at the historical evidence concerning international monetary systems. Most such systems were neither planned and designed nor introduced by international treaties but evolved as an unintended consequence of the actions of many individuals, including those in governments. The Byzantine gold coin, the hyperpyron (sometimes called the bezant), was a direct successor of the late Roman gold coin, the aureus or solidus. Because of its stability over centuries, it was widely used in the Mediterranean (including Islamic countries) until early Medieval times (Pirenne 1951). The Arabians imitated it with their dinar, which was also used internationally. The internationalization of the hyperpyron happened very much against the intentions of Byzantine emperors, who were afraid of the flow of gold out of their domains (Hendy 1985).

D. J. Joubert Botha (1987, pp. 102–4) commented on the development of the hyperpyron into an international currency:

> It [the bezant] satisfied all the conditions required to serve as an international medium of exchange: it had a high unit value (4.55 grams of 24-carat gold), it was stable both in weight and alloy (until the eleventh century) and it was backed by an economy that inspired confidence. . . .
>
> Although the emperors did not favour the role of the bezant as an international currency there was little they could do about it. The bezant entered international markets through commodity imports, and to limit its role to that of domestic currency only would have required that payments for imports be outlawed. . . . This never happened; in fact the bezant moved freely between countries. . . .

> The confidence in the bezant was supreme. . . . Underlying the practice of resorting to a dominating medium of exchange has been the universal quest for stability in monetary affairs—stability, safety, and security. In the bezant all three requirements were satisfied through the aura of majesty surrounding this coin, the defacing and misuse of which carried the death penalty.

The debasement of this currency began with the decline of the Byzantine Empire. At the same time, economic development sped up in Western Europe (in the second half of the 11th century) while monetary disorders eroded the monetary system instituted by Charlemagne. Henri Pirenne (1951, pp. 258, 266) concluded:

> The progress of monetary circulation provided princes with the possibility to use it to their own advantage. Possessing the right to mint coins, they believed themselves to be authorized to use this in the interest of their treasury to the detriment of the public. The more money became indispensable for economic life, the more it was changed by those who had the right to strike it. . . . At the end of the 12th century, the monetary disorder had reached a point that a reform imposed itself.

In 1192, the Doge Henry Dandolo of Venice emitted a new silver coin, the gros or matapan, which had the value of 12 old Carolingian deniers (pennies). This new money was soon used internationally and was imitated. In Germany the heller, in France the sou, and in England the sterling appeared. These, in their turn, were imitated in Flanders, Brabant, and the Rhineland (in the form of the groschen).

But what does it mean to say that "a reform imposed itself," given the fact that money issuers could profit from a debasement of coins? Obviously, it must have been in their own interest to introduce the better money. Two explanations are suggested. First, if trade and commerce were important in the respective territories and could be furthered by good money, then its emission could benefit the treasury because of higher revenues from taxes, duties, and fees. Second, even with a small seigniorage per coin for a coin that was used internationally, a larger revenue could be secured than with a debased money that was used only in a restricted territory.

Seen from this perspective, it is not surprising that a trading city like Venice began the process of issuing good money and that its successful example was imitated by other cities and princes. The same is true for the resumption of the minting of value-stable gold coins. Following the example of Emperor Frederick II in Sicily, it was Florence that issued the first florins (*fiorino d'oro*) in 1252. Venice followed in 1284 with its ducat or zechin, a replica of the florin. It was no surprise, then, that France, Castilia, and sever-

al princes of the Empire imitated this practice and issued gold coins during the late 13th and the 14th centuries (Pirenne 1951, pp. 262–63). The florin was widely used in Western Europe as a unit of account and in international transactions, presumably because of its stability in terms of other currencies (Table 1). The gold content of the florin was 3.54 g in 1252, when it was first issued. It amounted to 3.53 g in 1500 and never fell below 3.33 g between these dates. Thus, in 250 years the gold content changed maximally by 6 percent.

TABLE 1

VALUE OF FLORIN IN DIFFERENT CURRENCIES

	1300	1400	1500	Currency
Castille	5.8	66	375	Maravedi
	100	1137.9	6465.5	
Cologne	6.7	42	112	Schilling
	100	630	1680	
Flanders	13.1	33.5	80	Groot
	100	255.2	609.5	
Austria	2.2	5	11	Schilling
	100	225	495	
France	10	22	38.8	Sou
	100	220	387.5	
Hanse	8	10.5	31	Schilling (of Luebeck)
	100	131.2	387.5	
Rome	34	73	130	Soldo
	100	214.7	382.4	
Florence	46.5	77.9	140	Soldo
	100	167.6	301.1	
Bohemia	12	20	30	Groschen (of Prague)
	100	166.7	250	
Venice	74	93	124	Soldo
	100	125.7	167.6	
Aragon	11.5	12.7	16	Sueldo
	100	110.5	139.1	
England	2.7	3	4.6	Shilling
	100	112.5	171.9	

SOURCE: Spufford (1986, Table 1).

(Bernocchi 1976). The equally stable Venetian ducat was the dominant currency in trade with the Near East (Spufford 1986).

The self-interest of Free Cities and of princes and the competition among them for commerce—or, rather, for the duties, fees, and taxes derived from it as well as the seigniorage to be gained from internationally circulating stable gold or silver coins—motivated the introduction of stable international monies. But this neither that all newly issued coins remained stable permanently nor that a real international monetary order emerged. That had to wait until later. As Pirenne (1951, p. 263) observed:

> The creation of the gros and the minting of gold ... made the circulation of money easier, but did not end the abuse from which it had suffered. The kings and princes continued to alter the coins and to impose on them arbitrarily fictitious values. Their value did not cease to follow a descending course. To sum up, politics has sacrificed economics for fiscal aims. The first appeals made by Nicolas Oresmius in the 14th century for a better understanding of relationships, went unheard. Several centuries had to pass before governments began to follow the principles of a true monetary administration.

The Emergence of the Gold Standard

The gold standard, which became the first truly worldwide stable monetary regime in history, was not planned nor set up by international treaties; it emerged as an unintended consequence of many independent decisions. In fact, the gold standard may owe much to a wrong proposal made by Isaac Newton in 1717 when he was Master of the Mint. During the second half of the 17th century, the market price of gold had fallen in terms of silver, so that, in accord with Gresham's Law, bad money (gold coins) began to drive out good money (silver coins). Newton took stock of the situation in 1699 and recommended a reduction of the price of guineas by up to one shilling. In 1717, he proposed a price of 21s, which was accepted by Parliament in a proclamation of December 22. Newton's appraisal of the situation still proved to be inadequate and the value set for the guinea to be too high. So, in time, silver was driven out of circulation, and Britain moved toward a pure gold standard, which was not legalized before the 19th century (Fearveryear 1963).

The evolution of the gold standard in Britain did not mean the establishment of an *international* gold standard. In fact, in about 1850 most countries were still either on a pure silver or a bimetallic standard. Russia and Austria-Hungary had a fiat paper money regime, as did most Latin American states. In the early 1870s, the newly

founded German Reich followed Britain's example and adopted the gold standard. Other countries, such as the Netherlands, Sweden, and Norway, went to the gold standard because of the fall in the price of silver (Table 2). The same thing happened between 1874 and 1878 in the member states of the Latin Monetary Union, France, Italy, Belgium, Switzerland, and Greece, which had been on a bimetallic standard. Since gold became undervalued at the official parity, silver began to drive out gold coins. In 1874, a conference decided to

TABLE 2

PRICE OF SILVER FROM 1864–1891

Year	Price of Silver in Pence Sterling
1864	100.00
1865	99.94
1866	99.59
1867	98.68
1868	98.57
1869	98.47
1870	98.68
1871	98.57
1872	98.27
1873	96.54
1874	95.01
1875	92.67
1876	85.95
1877	89.31
1878	85.64
1879	83.50
1880	85.13
1881	84.22
1882	84.11
1883	82.38
1884	82.48
1885	79.22
1886	73.87
1887	72.68
1888	69.59
1889	69.62
1890	77.72
1891	73.42

SOURCES: Until 1885, Soetbeer (1886); 1886–91, Menger (1970, pp. 259–61).

limit the coinage of silver five franc coins, which implied a *de facto* introduction of the gold standard (Bamberger 1885). Russia, Austria-Hungary, and Argentina moved from a paper money standard to gold in the 1890s, and India, Peru, and Japan also substituted gold for the silver standard. The United States adopted the gold standard in 1878 by returning to the pre–Civil War gold parity, though there were efforts to get a bimetallic standard instead.

It is no exaggeration to assert that most contemporaries saw the international gold standard during the 19th century as one of the great accomplishments of civilization (see, for example, Jevons 1900). For the first time, there was a common international monetary system that would get rid of debasement, exchange instability, and inflationary tendencies, and people were able to base international loans and all calculations on the same common unit of account, gold.

This does not mean that there were no problems. Jevons (1884) and Cassel (1932, pp. 489–99), for example, were concerned about the dependence of the system, especially of the price level and of economic activity on the production of gold and the vagaries of new gold discoveries. Moreover, since Adam Smith, economists had pointed to the waste of resources in using gold as money or as monetary reserves. In several nations, export- and import-competing industries and the silver industry lobbied to maintain paper money or silver money standards or to return to bimetallism. We have already seen that only fixing an undervalued gold parity made the introduction of the gold standard possible in several nations. But around 1900 there was no question of leaving the gold standard. It took the convulsions of World War I to shatter the system. Also, after the negative experiences with inconvertible paper money around 1800 in most countries—and later in Russia, Austria-Hungary, Italy, the Balkans, and Latin American countries—there was no inclination to even think of returning to such unstable systems (Jevons 1900, pp. 229–32). As Adolph Wagner (1868, pp. 46–48) put it in 1866:

> Experiences with paper money until now prove at least that it is possible . . . to give value to a paper money, which cannot be exchanged at will into another money. This may not necessarily and not easily be at a permanently equal value with some metal money; but this would not by itself result in a disadvantage. . . . The obstacles for an equal value, i.e., for maintaining an equal general purchasing power . . . is the impossibility to fulfil the requirements necessary for the strength of this belief. One would have to institute the most reliable guarantees to prevent that paper money would ever be used for financial purposes to create artificial purchasing power for the issuing agency without labor out of nothing; and to secure that it would be increased only according to the true neces-

> sity of the economy. . . . These guarantees are relative to the first point only given by the absolute impossibility to increase the money arbitrarily without effort. . . . Men would have first to be capable of unlimited self-discipline to resist any temptation to increase money arbitrarily, even if their very existence, or that of the state, were at stake. . . . A somewhat greater security against the abuse of the right to issue money might perhaps be provided by one or the other constitutional form. But this certainly does not amount to a big difference.

Monetary Systems Created by International Treaties

The gold standard evolved out of many independent decisions, most of which did not aim at its establishment. But even in the 19th century, efforts were made to reach "better" monetary systems through international conferences and agreements. The Latin Monetary Union, which was founded in 1865, lasted until 1914. The Scandinavian Union was formed in 1873 and broke up during World War I. There were also monetary agreements between the states of the German Confederation, of the Deutscher Bund, including Austria, before 1866.

All of these international monetary agreements were regional agreements and were concerned with setting certain standards for coinage, the amount of coins to be minted by members states, and the mutual use of coins. For example, the Latin Monetary Union fixed the gold or silver contents of several coins, established a firm relationship of silver to gold at 15.5:1, and stipulated that all governments should accept payment in any of these coins without regard to their national origin (Bamberger 1885). The Scandinavian Union, comprising Sweden, Norway, and Denmark, moved even further, giving the different national monetary units a common name, the krona. The union embraced all subsidiary currency issues of the participating countries. Foreign exchange quotations were discontinued, so that the region could be considered as one country for monetary matters. The agreements between the German states also established firm relationships between the South German and Austrian Gulden and the North German Thaler, by fixing the exact silver contents and weights of these and, implicitly, other coins.

All of these agreements, though limited to coins, unified the entire monetary system. Because deposits and bank notes were convertible into coins at the silver or gold parities, these agreements also implicitly ruled the relationships among other types of money and with the gold and silver coins of all member states. This was not true, however, in cases in which convertibility of paper money was suspended, as in Austria-Hungary and Italy for extended periods and in France

during the war of 1870–71. During such periods, metallic money was usually traded with a premium.

It should also be mentioned that monetary agreements sometimes faced problems that led to heavy disputes among member states, which had conflicting interests, and to the danger of a discontinuation. This was especially true for the German Conventions and the Latin Monetary Union (see Bamberger 1885). In this respect, they remind strongly of the Bretton Woods International Monetary System.

International Agreements in the Case of Fiat Money Regimes

We have seen that international agreements concerning the monetary regime have been plagued by diverging interests even in the case of gold and silver currencies. Problems are much more severe if national governments or central banks have discretionary control of the supply of fiat monies in their countries. Whereas the powers of monetary authorities are strictly limited in the case of a convertible commodity standard, this is not true for freely manipulated fiat money regimes. Even in commodity standards, governments can change the fineness, weight, and denomination of coins if they have the right to mint. But individuals—especially money traders—will soon find out about any changes and revalue the respective coins in international transactions. As a consequence, the limits of exchange rates among metallic coins are broadly determined by the content of precious metals and the free-market prices of the metals. Thus, even in cases in which no international monetary regime has evolved and no international monetary agreements exist, there is always a tendency in the system to move toward exchange rates governed by these relationships. Exchange rate movements will be smaller than in the case of discretionary national fiat money regimes and subject to stronger controls by competitive market forces.

This difference was already clearly expressed by Adolph Wagner (1868, pp. 43–48):

> But not only unlimited self-discipline, but also omniscience would be necessary to increase the amount of money . . . in such a way, that the increase does not cause a decrease of the value of money. . . . But even the paper money of a single national economy, which would fulfill all these impossible conditions, would still not be a world currency. Its purchasing power . . . would remain limited in space. A world currency would require a world state or at least a kind of federation . . . among the civilized nations. To get these we still have to go a long way. . . . Because of this, one has to forego a permanent paper currency and thus the necessity of an early return to a metallic currency has again . . . been proved.

Jevons (1900, pp. 230–32) presents quite similar arguments.

Given the existence of fiat paper money regimes controlled by national governments or central banks like those developed in the wake of World War I and the Great Depression, there are only two ways to establish international monetary systems. First, some or all countries but one could fix their exchange rates relative to one other currency. This happened within the sterling bloc when several countries maintained the sterling parities of their currencies and held sterling exchange reserves for the necessary interventions after Britain abolished the gold exchange standard in September 1931. Today, several countries keep fixed exchange rates, such as Hong Kong with the U.S. dollar and Austria with the European Monetary System (and thus mainly with the Deutsche mark), without any international agreements. Such a policy implies, of course, a subordination of national policies to the policies of the reserve currency country and a far-reaching abolishment of domestic discretionary monetary policies. It is also obvious, if more and more countries converge toward fixing their exchange rates vis-à-vis the same currency, that a worldwide international monetary system would emerge.

A second way to reach such a system would be through an international agreement among nations. We know that the sterling bloc was transferred into the sterling area with the help of such agreements, especially after 1939–40. Another treaty led to the European Payments Union (EPU) in the late 1940s and early 1950s and to the European Monetary System in 1979. More important, the Bretton Woods System came about by international agreement. It fixed exchange rates vis-à-vis the U.S. dollar or gold, created the International Monetary Fund with credit facilities available on certain conditions, and tried to set up rules for changing parities and removing exchange controls. It was originally constructed as a weak gold exchange standard giving only monetary authorities the right to exchange dollars at a fixed parity into gold and vice versa at the U.S. Treasury. It had, thus, some rules to limit not only the discretionary policies of ordinary member states, but also of the United States as the main reserve currency country. It is well known, however, that U.S. authorities did not want to be limited in their discretionary powers, so they did not follow the rules of the game and abolished the limited gold convertibility in 1971. President Nixon's decision implied an inflation-biased pure dollar exchange standard as the international monetary system. Because several countries did not approve the rate of inflation implied by the domestically oriented monetary policies of the United States, it is not surprising that the system broke down in 1973. What were the advantages for politicians

and central bankers of other countries to forego monetary discretion if the international system did not provide price stability or allow them to use monetary policies for employment policies?

Which International Monetary System Should Be Established?

Many economists are convinced permanent inflation can only be eliminated if countries return to a monetary constitution that binds the hands of government and central bank. But there is no agreement among those economists on the nature of the monetary constitution to be substituted. The proposals include schemes for stabilizing the monetary unit in terms of a price index (Fisher 1912, Simons 1948), for constraining the issue of fiat money by a constitutional growth rule (Friedman 1968), for introducing a commodity money (Yeager 1962), and for instituting free banking with no governmental control (Hayek 1976; Vaubel 1978, 1986; White 1987). But as Brennan and Buchanan (1981, p. 64) have emphasized: "The proponents of free market money, competitive monies, commodity money, or rule-constrained fiat issue all agree on the desirability, necessity, [and] acceptability of some monetary constitution."

My discussion (Bernholz 1983) of the political and economic reasons for the inflationary bias of unrestrained governments shows that this bias can be contained only for an extended period by adequate monetary constitutions.[2] The idea that sound monetary constitutions are necessary to limit the inflationary tendencies of unfettered government dates to at least 1800 and has been favored by many economists. To quote Ludwig von Mises (1912, p. 288):

> As soon as only the principle has been accepted that the state is allowed and has to influence the value of money, be it even only to guarantee its internal stability, then the danger of mistakes and exaggerations again at once emerges.
>
> These possibilities and the memories of the financial and inflationary experiments of the recent past have pushed into the background the unrealizable ideal of a money with an unchangeable instrinsic value as compared to the postulate: that at least the state should refrain from influencing in any way the intrinsic value of money.

Even though economists have discussed the reasons for the inflationary bias of central banks and governments and the possible alternatives restricting them by sound monetary constitutions, they have

[2]For a discussion of the behavior patterns of independent central banks, see Frey and Schneider (1981) and Burdekin and Wohar (1990).

paid little attention to equally important problems. First is the problem of implementing and maintaining a sound monetary constitution, given the political forces working in favor of inflation. The second problem is the need for a stable international monetary order. For example, even if all countries introduced monetary constitutions requiring the central banks to follow monetary growth rules, then these rules might be different concerning the definition of the monetary aggregate to be used, the growth rate, or the relevant base from which to start. Or if the constitution required the stabilization of a price index, countries might differ as to the goods to be included and their weights, not to speak of local differences in prices. Such difficulties can be removed only by international agreements that establish common rules and standards or by converging to or introducing a common commodity standard.

I have already shown how difficult it is to implement and to maintain a stable international monetary system through a worldwide agreement among nations. National interests reflecting voters' needs, the power and composition of interest groups, and different political systems diverge widely and change over time. Politicians and central bankers prefer to have discretionary control of their own money supply. Both factors work against the implementation and maintenance of an international system if the national monetary systems are dominated by governments and central banks. Moreover, the chances to reach stable monetary constitutions are not enlarged by the differences of opinion among economists, especially among those advocating monetary reforms.

Finally, it is difficult to move toward a stable international monetary system. The gold standard emerged; it was neither planned nor constructed. The only other worldwide international monetary regime, the Bretton Woods System, was created through international agreement. Bretton Woods imitated the gold standard in many respects and would not have been possible without its example. The international agreement creating it was politically feasible, since politicians could provide their constituents with a better solution by moving away from exchange controls, multiple exchange rates, and bilateralism, which had been created by short-term national interests during the Great Depression. But from the beginning the Bretton Woods agreement provided for many loopholes to allow at least limited domestic monetary discretion. It proved not to be an inflation-stable monetary regime, but it also allowed governments and central banks, especially of the United States, the reserve currency country, to follow discretionary monetary policies oriented by domestic

political aims. Such conflicting policies led to an accelerating number of crises and finally to the breakdown of the system in 1973.

If we draw our conclusions from the historical evidence and the politico-economic relationships, we have to admit that the chances are rather poor of reaching a stable international monetary regime by a general treaty among governments. It seems naive to assume that governments would move toward an adequate international agreement because of the advice given by economic experts. As a consequence, a somewhat different approach will be taken. This approach does not try to describe or analyze the characteristics of a supposedly superior monetary regime, for example, of a commodity standard or free currency competition (compare Selgin 1988). We rather endeavor to formulate six conditions that would make the emergence of a stable international monetary regime more probable if they were fulfilled. These conditions are as follows:

1. The influence of governments and central banks on money must be reduced to remove or at least mitigate the force of political influences on monetary developments. The reduction of these influences, however, should take place gradually to minimize political opposition.
2. The differences of opinion among monetary economists concerning the monetary constitution to be selected seem to show that not one of them has and can have a knowledge of the "best" monetary regime available.
3. This implies that the search processes of competition should be allowed to play an important role in trying to find better monetary systems.
4. Because we cannot know whether innovative developments will always be beneficial, the safety net of the present monetary regime should be allowed to compete with emerging new solutions.
5. Condition 4 would also make it easier to get sufficient political support for deregulating the creation of money.
6. The different proposals of economists should be allowed as possible solutions to emerge from the competitive process.

The only institutional framework that would fulfill these conditions is one that deregulated the creation and use of money (see Vaubel 1986) without abolishing the present monetary systems by law or decree. It seems that incorporating the following postulates into national constitutions or laws would be sufficient to reach this purpose:

1. Banks should be allowed to create any claims they want against themselves, including bank notes.
2. Everybody should have the right to stipulate in contracts any unit of account and means of payment he and his partner(s) agree on.
3. Everybody should have the right to keep his books and do his accounting in any unit of account.
4. Everybody should have the right to pay taxes in any freely convertible currency at the exchange rate valid at the date the payment is made.
5. Everybody should have the right to index any future obligations with any index he and his partner(s) agree on.
6. All foreign exchange and payments controls and all limitations on the use of foreign and domestic currencies should be forbidden by the constitution.
7. Changes in these rules should be possible only if two-thirds of the members of both chambers of Parliament and of those voting in a popular referendum agree.

These rules would allow not only the free international competition of existing national currencies but also the development of new types of monies created by banks. These monies could be based on a single commodity or on baskets of commodities, on shares, on stabilizing some index, and so forth and could prove their advantages or disadvantages in freely competing with other existing and emerging monies. The competition among national currencies and with other emerging monies would limit the possibility to overexpand the monetary base of national currencies for political purposes, for with flexible exchange rates bad money would be replaced by better money. In fact, there would even be a motivation for improving national monies, because a wider use of them would increase seigniorage. As a consequence, proposals like Friedman's (1968) concerning the stabilization of the growth rate of money could be tried. But the use of national currencies might be phased out if newly created private monies proved to be more appealing to the public.

It might be argued that the abolishment of many banking regulations would remove the protection that customers presently enjoy. First, however, it is not clear whether private insurance schemes would not emerge from the competitive process among banks. Second, it seems probable that the instability of present currencies has done more harm to most members of the public than would follow from the abolishment of the respective regulations. And third, one could counter these dangers by introducing, for example, unlimited

liability of the bank owners in case of bankruptcy. Other legal provisions that do not hinder the creation of money and the competition of banks would also be conceivable.

This proposal has the advantage of taking into account the lessons of history. We have seen that the only stable worldwide international monetary system, the gold standard, was not planned. It seems to be very difficult, if not impossible, therefore, to institute and maintain a stable monetary system by international agreement. However, if nations independently institute constitutional rules like those stated above, then the conditions would be established for the emergence of stable money without excluding international agreements. But, it should be emphasized that this approach to international monetary order does not require nations to transfer sovereign rights to international authorities or organizations. Finally, this approach would tend to remove the monetary system from government control without postulating a move that might prove not to be politically feasible.

Conclusion

I have shown that historically the development of stable international monetary systems has been slow and has always been threatened by government interventions. Such systems usually emerged spontaneously and were not created by agreements among states. Discretionary government control of money always led to an inflationary bias of the monetary regime. The only inflation-stable, worldwide monetary system that existed was the pure gold standard. And even that regime may have been plagued by too high a variability of real variables like real growth rates of GNP, employment, and real interest rates. The other worldwide system, the Bretton Woods System, has been created by international agreement, but it was not an inflation-stable regime and always contained the seeds of its own destruction, since it did not adequately limit the discretionary power of member states, especially of the reserve currency country.

Efforts to promote a stable international monetary system should take into account the lessons of history. Economists should try to encourage legal and constitutional frameworks in nations that would encourage the emergence of stable monies and a corresponding international monetary order. For this purpose, several conditions allowing the creation and use of competing monies are proposed. It is my conviction that the introduction of such rules in any treaty striving for European Monetary Unification would be a big step forward toward the goal of a stable international monetary system.

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WORLDWIDE CURRENCY COMPETITION: A GUARANTOR OF STABLE MONEY

Herbert Giersch

Peter Bernholz's interesting paper has three parts: it assesses the present global monetary order, summarizes historical experiences and lessons gained from alternative monetary regimes, and makes a proposal for future monetary reform. The historical part, which I think is the strongest part of the paper, examines the link between diagnosis and therapy. In a nutshell, the lesson is that the gold standard was not the result of a grand design but of evolution.

Bernholz uses the concept of evolution to propose a new approach to international monetary reform—one based on framing a monetary constitution and then letting a new monetary order emerge spontaneously. In this comment, I will focus on Bernholz's evolutionary approach to international monetary order; but, first, I wish to consider the case for flexible exchange rates—a case that was not adequately addressed in Bernholz's paper.

The Case for Flexible Exchange Rates

Bernholz complains about erratic "short-term moves of nominal exchange rates," "large medium-term swings of real exchange rates," and protectionist pressures arising from overvaluation. From these remarks, it appears that he favors fixed exchange rates. But this impression is later dispelled when he tells us that even though the present exchange rate system has some negative effects on welfare, "this does not mean that a system of flexible exchange rates with more adequate monetary constitutions—and, thus, lower inflation and less volatility of real exchange rates—may not be superior to a fixed exchange rate system, especially in absorbing real shocks."

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Flexible exchange rates help discipline national monetary authorities. Markets react to changes in monetary policy and act as a negative feedback mechanism that forces authorities to learn from their mistakes. A more complete analysis on Bernholz's part would have to consider this disciplinary function of floating rates and the increasingly important role played by international capital movements. The globalization of capital markets surely had not been foreseen when the Bretton Woods System was devised in 1944. Capital flows that change direction or accelerate are bound to bring about changes in real exchange rates and fluctuations in output. We have known this since the Keynes-Ohlin debate on the German reparation issue of the interwar period.

From this I conclude that we could have exchange rates that are close to purchasing power parity, if at all, *only* if governments refrained from effectively competing in international capital markets. The dollar, for example, was bound to rise at the beginning of the 1980s when the United States became a magnet for international investment. The increase in U.S. imports was the means to bring about the transfer of real resources when investment increased over domestic savings. I doubt that this resource inflow really harmed American producers in the import substitution sector or that it was the *true* cause of protectionist dangers. Mercantilists focusing on trade rather than capital movements, of course, have a different view of the world. I tend to maintain that world economic growth has become more and more dependent on capital mobility. It may already be that trade balances are more dependent on autonomous capital flows and that capital flows serve to finance current account balances determined otherwise.

To emphasize my point, I am inclined to state the proposition that constant real exchange rates require utopian conditions. Let me mention three of them:

1. Governments must form a cartel that binds them not to engage in activities that make domestic locations more attractive for international investment, for example, cutting business taxes.
2. There must not be any competition among national labor markets. The U.S. labor market, for example, almost perfectly adjusted to the demographic bulge and to the increasing supply of female workers; it showed more real wage flexibility than labor markets in Europe. For a long time, there were competitive real wages in the United States and excessive real wages in Europe, which raised the marginal efficiency of investment in the United States and induced a transatlantic capital flow.

3. The norm of constant real exchange rates is not compatible with differences in per capita growth. Rich countries—and rich regions within a country—tend to be expensive, and countries and regions catching up with richer competitors become more expensive, whether by relative inflation at fixed rates or by an upward revaluation of their currencies.

In this context, it is worth noting that the move to flexible exchange rates that began at the end of the 1960s in West Germany was partly motivated by the recognition that catching up had been achieved and that it was better for Germany to adjust by an upward revaluation of the exchange rate than by a rise in the domestic price level. Some proponents of flexible exchange rates, like myself, have always been guided by concerns of price-level stability; and I continue to believe that flexible exchange rates promote monetary competition, in contrast to a monetary cartel supporting a system of fixed rates.

The Case for Competing Currencies

Bernholz's proposal for international monetary reform calls for more rather than less currency competition, and more rather than less exchange rate flexibility and volatility. What Bernholz proposes is free choice of currencies for money-holders and free-market entry for the suppliers of money. Anything goes. I am in full sympathy with this position. What I miss in his paper is, first, a serious attempt at arguing the case for free money by making full use of the existing literature and, second, an application of the insights gained to the problems of currency unification in Europe. I shall briefly try to fill these gaps. Those who want to go deeper should consult Roland Vaubel's excellent 1978 book *Strategies for Currency Unification.*

The case for free money is simple. In the same way that free competition among producers of goods brings profit rates close to zero, free competition in the supply of currency reduces the inflation tax and the seignorage gain. In the ideal case, a zero seignorage would let the price level fall at the rate of the real rate of interest, allowing people to earn interest on cash. The private costs of holding money would equal the social costs of producing it.

An alternative outcome, as probable as the first, is a stable price level plus the payment of interest on deposits with commercial and central banks (including minimum reserves). This would come about "if a money's stability as a standard of value is found more important by money users than the little income that could be earned by holding notes and coins in a money of (slowly) increasing purchasing power" (Vaubel 1978, p. 55).

In the case of money, the competitive output is not larger than monopolistic output, contrary to what happens in goods markets. But this applies only to the *nominal* output. In real terms, the outcome is different: The competitive money supply is *larger* than the monopolistic supply, just as it is in goods markets (Vaubel 1978, p. 56).

The popular, standard objection that a competitive money supply is inflationary ignores the preference of people to hold stable money. It also ignores the need for suppliers of money to maintain people's confidence in the stability of its purchasing power, be it through sound performance or contractual guarantees like convertibility into some other assets or goods. The hope is that private enterprises have a longer time horizon than democratically elected governments. *Value guarantees* (indexation) protect the holder against deliberate inflation by the issuer. They can best be given in the form of convertibility into legal tender at an exchange rate reflecting constant purchasing power.

Parallel currencies compete with legal tender just as parallel economies compete with overtaxed and regulated official economies. The Deutsche mark, for example, was a parallel currency in East Germany before the currency unification in July 1990. The ECU may have opportunities to become a competitor in the weak currency parts of the EC, though not in Germany. Perhaps the ECU has already exerted some pressure toward hardening national currencies, thanks to its Deutsche mark component. The good currency may not drive out bad currencies if the latter defend themselves by becoming better. The disequilibrium exchange rates needed to validate Gresham's Law may thus not fully materialize.

Let me add two observations with relevance to the European scene. The first concerns East Germany. I would have preferred a parallel currency approach in which East Germany would have had an interest in upvaluing its exchange rate by privatization and, thus, by attracting capital. My second observation refers to European monetary unification. The ECU, I repeat, is no competitor to the Deutsche mark in West Germany because it is considered to be weaker. In order to make it an efficient competitor, I still support the proposal I made in Brussels in 1975 when I was part of the Study Group on Economic and Monetary Union (Giersch 1975): Redefine the ECU to make it a "compensated" type of currency unit. Stipulate that the number of French francs in the ECU basket will automatically be raised by 1 percent as soon as the French official price index is calculated to have increased by 1 percent. Do this in the case of any other currency constituting the ECU, and do the reverse for a currency that is associated with a declining price level. By definition,

the "compensated ECU" would be stable. The question then is: If Europe wants one money and if price-level stability is to be the optimum characteristic of money, then why does Europe not move in this direction?

One answer is that politicians and central bankers, like members of the same trade since Adam Smith and before, are more in favor of cartels than of competition. The EMS is such a cartel, under the Bundesbank's barometric price leadership and with a monetary behavior of its members designed to maintain fixed exchange rates, without fixing quantities of supply. The aspiration is merger; and if central bankers are asked to make proposals for merger, they vote for independence without sanctions. In essence, this is the Delors plan. To be sure, price-level stability is promised as a goal, but an ECU as an index-linked stable unit of account will not be allowed or proposed. It would be too rigid a control parameter for central bankers.

The possible objections against a "compensated ECU" are rooted in the same ground as the objections against issuing index-linked bonds. In the early 1970s, when inflation accelerated and the indexation topic came to the fore, the argument against indexation was that it would further accelerate inflation. The kernel of truth behind this assertion is that any destruction of money illusion and any freedom to evade the inflation tax will accelerate inflation in the case that central banks must—or want to—collect an inflation tax in a given quantity of goods and services. Emigration from the inflation tax area, so to speak, was not to be permitted and will not be easily allowed in the future.

Emigration with portfolio is the individual citizen's only weapon. The larger the monetary area is, compared to the rest of the world, the less power an individual citizen can exercise by threatening to move out. Barriers to emigration, including high transaction costs, are like tariff protection for the producers of money. Banking regulations can effectively prevent the supply of better money by private banks. This is also an equivalent to tariff protection. Therefore, it makes a great deal of sense that Hayek (1976) calls for a "Free Money Movement" in analogy to the Free Trade Movement of the 19th century.

This movement is already under way as part of a general trend toward greater mobility of resources across frontiers. Declining communication costs make the world economy shrink, reducing the power of national governments and enlarging what Hayek calls "the extended order." Governments do not only face actual competition; potential competition from innovation can be equally as strong. And the pace of technical progress, including financial innovation,

accelerates with the growth of knowledge. This growth depends on the absolute number of intelligent people participating in the international division of labor among minds that recognize the importance of private property and a rule of law. The growth of this number makes me optimistic about the prospects of worldwide currency competition as a guarantor of stable money. In sum, there can be stable money, but there cannot be stable real exchange rates. We can only eliminate changes in real exchange rates caused by currency substitution, that is, changes in the monetary rule.

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