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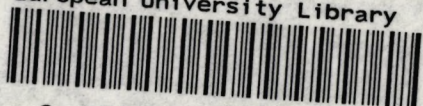
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**The EMS — The First Ten Years
Policies — Developments — Evolution**

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THE EMS - THE FIRST TEN YEARS
POLICIES - DEVELOPMENTS - EVOLUTION

Horst Ungerer

I

When the EEC came into being in 1958, the world of international exchange rates was in order, the Bretton Woods system was in place and functioning, and the US dollar was strong and fully met its responsibilities as the key currency of the international monetary system. The EEC Treaty dealt mainly with the problem of customs union and not so much with that of implementing common economic policies and establishing an economic and monetary union. Consequently, the Treaty says relatively little - and this in fairly general terms - about economic, monetary and exchange-rate policies. Art.103 declares the conjunctural policies of Member States "a matter of common concern". Art. 104 defines the "magic triangle" - balance-of-payments equilibrium, high level of employment and price stability - as the general objectives for economic policy. Significantly, the fourth "corner" of the "magic quadrangle", exchange-rate stability, is not even mentioned: it was taken more or less for granted. Art.105 calls on Member States to

This article was written during a study leave from the International Monetary Fund, Washington, in spring and summer 1989, which the author spent at the European University Institute, Florence, and at the Institut für Weltwirtschaft, Kiel. The views expressed here are not necessarily those of any of the above-mentioned institutions.

coordinate their economic and monetary policies. With regard to exchange-rate policy, Art.107 simply states that "each Member State shall treat its policy with regard to the rate of exchange as a matter of common concern". Art.108 institutes, in case of balance of payments difficulties of a member country, the possibility of "mutual assistance" including but not limited to financial assistance.

As the customs union reached completion and as concerns about the stability of the international monetary system mounted in the second half of the '60s, the EEC focused increasingly on the question of how to develop the customs union into an economic and monetary union and how to organize a common approach to monetary and exchange-rate policies. An extensive debate about the best approach ensued between "economists" and "monetarists": the latter school basically arguing that one should first establish common monetary institutions and policies, and then everything would fall into place; the former saying that first a high degree of convergence of economic policies and developments was needed, and then a common monetary policy and a common European currency could be aimed at as a "crowning" achievement. If this sounds somewhat familiar to the reader, this is not accidental: a large part of the more recent debate about the creation of a European central bank and a common currency is being conducted in similar terms.

The EC summit meeting of Heads of State and Government in The Hague in December 1969 agreed that "a plan in stages will be worked out... with a view to the creation of an economic and monetary union". A special committee of high-level experts, under the chairmanship of Pierre Werner, then Prime Minister of Luxembourg, was formed to work out

proposals. The "Werner Report" was presented in October 1970, and a subsequent Resolution of the EC Council of Ministers of March 1971 envisaged as significant steps towards economic and monetary union (EMU) the reduction and eventual elimination of the existing exchange-rate fluctuation margins of 0.75 percent between EC currencies and the complete liberalization of capital movements within the EC. The latter had already been aimed at in Art.67 of the EEC Treaty but only limited progress had been made in the first ten years of the EEC.

The events of 1971 - free floating of the Deutsche mark and the Dutch guilder in May, and the suspension of the obligation of the United States to convert dollar holdings of other countries into gold in August - delayed the first step towards EMU, namely a narrowing of fluctuation margins between EC currencies. Eventually, the only tangible result of the "Werner Plan" was the creation of the European common margins arrangement in April 1972, in response to the changed conditions of the international monetary system. ^{1/} The "Smithsonian Agreement" of December 1971, restored, for a while, fixed exchange rates and implemented a regime of "wider margins" for the fluctuation of the market rates for individual currencies of ± 2.25 percent around their US dollar central rates as compared to 1.0 percent under the IMF Articles of Agreement, and 0.75 percent for European currencies under the European Monetary Agreement. This widened the maximum range for the fluctuation of market rates between European currencies and the US

^{1/} Another outcome of the "Werner Report" was the establishment of the European Monetary Cooperation Fund in April 1973 which, however, did not gain any great significance.

dollar to 4.5 percent, and consequently that between European currencies to 9 percent. The European common margins arrangement introduced between EC currencies fluctuation margins of ± 2.25 percent around their bilateral central rates, thus narrowing the maximum range of fluctuation for market rates to 4.5 percent and setting the EC currencies vis-à-vis each other on the same footing as vis-à-vis the dollar. The "snake in the tunnel" was created. ^{1/} After the transition to general floating in March 1973, the "tunnel" - i.e. the fluctuation band vis-à-vis the dollar - around the "snake" disappeared, and the snake currencies floated jointly against the US dollar and other third currencies.

The history of the snake was a lively one. Originally all currencies of the EC countries (including the "newcomers" of 1973, Denmark, Ireland and the United Kingdom) took part in the arrangement, while Norway and Sweden were formally and Austria informally associated with the EC currency group. As time went on, pressures within the snake made it difficult for countries to honor their obligations under the arrangement. As a consequence, early on the United Kingdom (together with Ireland), later Italy and France left the snake rather than embarking on appropriate adjustment efforts. At one point Sweden and, just before the establishment of the EMS in March 1979, also Norway ceased to participate. Thus, the European currency bloc had shrunk to the currencies of Belgium and Luxembourg, Denmark and the Netherlands

^{1/} For more details, see Günter Wittich and Masaki Shiratori: The Snake in the Tunnel, in: Finance and Development, Washington, June 1973; and Commission of the European Communities: Documents relating to the European Monetary System, Annex A, European Economy, No. 12, July 1982.

being grouped around the Deutsche mark, the only larger EC currency remaining in the bloc. While this arrangement worked operationally quite smoothly and served its participants well, it was characterized by several small realignments, betraying a lack of economic convergence; being composed of only five of the EC countries, it could hardly be called a "European" arrangement any longer.

II

There were a number of proposals to provide the EC with a more unified exchange-rate system as a framework for cooperation in the monetary field and as a starting-point for relaunching efforts towards EMU. Among the most interesting ones were proposals by the then Ministers of Finance in France, Fourcade, (who suggested a "boa" with wider margins around the "snake") and the Netherlands, Duisenberg (who recommended "target zones" for EC currencies). Among non-official proposals was the idea of moving towards monetary union by means of introducing a European "parallel" currency. ^{1/}

Within the EC, concerns increased about the stagnation of the integration process. After the completion of the customs union and the adoption of a common trade policy (as stipulated in Article 113 of the EEC Treaty) in 1968, and the earlier establishment of a common market

^{1/} E.g. see the "All Saints' Day Manifesto for European Monetary Union", by a group of well-known economists, *The Economist*, November 1, 1975.

for most agricultural goods, not much had been achieved in other areas, and there was the fear that in not moving forward the EC was actually moving backwards. In the '70s great uncertainties in the international economy, stemming from sharp increases in the prices of oil and other sources of energy and the lack of stability and predictability in the exchange rates between the US dollar and other currencies, were accompanied by strong increases in inflation within the EC and throughout the world, although differing significantly from country to country.

The challenge for the EC was clear: to regain momentum in the European integration process, to fight inflation, and to work towards a greater stability of exchange rates. This was the starting point for the initiatives which eventually led to the creation of the EMS.

It was in a speech at the European University Institute in Florence in October 1977, that the President of the EC Commission, Roy Jenkins, called for a fresh look at the case for European monetary union. ^{1/} In December 1977, the European Council "reaffirmed its attachment to the objective of economic and monetary union".

In 1978, the French President, Valéry Giscard d'Estaing, and the German Chancellor, Helmut Schmidt, took the initiative for the establishment of a common monetary system for the EC which would combine formal commitments to more stable exchange rates with the effort to work towards domestic monetary and price stability. At its summit in Bremen in July 1978, the European Council discussed a "scheme for the creation

^{1/} Roy Jenkins: Europe's present challenge and future opportunity, First Jean Monnet Lecture, European University Institute, Florence, October 27, 1977.

of closer monetary cooperation leading to a zone of monetary stability in Europe". In its meeting in Brussels on December 4 and 5, 1978, the European Council agreed that "a European Monetary System (EMS) will be set up", and it was resolved "to ensure the lasting success of the EMS by policies conducive to greater stability at home and abroad for both deficit and surplus countries".

The EMS went into operation on 13 March 1979. Belgium and Luxembourg, Denmark, France, Germany, Ireland, Italy and the Netherlands decided to participate in all aspects of the EMS, including the obligations of the common exchange-rate and intervention mechanism. The United Kingdom signed the EMS agreement but did not join the exchange-rate mechanism (ERM), thus in essence maintaining a freely floating exchange rate vis-à-vis the other EC countries as well as the rest of the world. 1/

It is not necessary to describe here the operational features of the EMS; this has been done in other places. 2/ But two important elements deserve to be mentioned which throw a particular light on the EMS and which are important for understanding its evolution in the first ten years of its existence.

Firstly, the EMS is not just a mini-Bretton Woods system (BWS) on a

1/ The countries who joined the EC after the inception of the EMS - Greece, Portugal, Spain - signed the EMS Agreement but initially did not become participants in the ERM. As of June 19, 1989, Spain is participating in the ERM.

2/ Horst Ungerer: The European Monetary System, in: International Monetary Fund, IMF Survey, Washington March 19, 1979, Supplement; Commission of the European Communities: The European Monetary System - Commentary, Documents, in: European Economy, No. 3, Brussels July 1979.

regional scale. It was not designed to (and in the first years did not) center on one dominant currency as the BWS centered on the US dollar. The later evolution of the EMS in which the Deutsche mark became the "anchor currency" for the system was not a matter of design but rather of policy preferences and operational developments over the years. In the EMS, there is a common decision-making process with regard to parity ("central rate") changes, in contrast to the regime of parity changes under the BWS, which were initiated by an individual country and required only the "concurrence" of the IMF, which was given more or less as a matter of routine. ^{1/} Generally speaking, the EMS in its intentions and with regard to the implementation of its decisions and operations has a clear political dimension, with the objective of European integration playing an important role, and with strong efforts being made to balance common and national interests. In the view of this observer, this is one major reason why the EMS survived a number of critical periods and why a number of sceptics, inside and outside official circles, who predicted an early demise of the EMS proved to be mistaken.

Secondly, the EMS is not just another version of the snake. In the first place, it comprises a larger number of EC countries, including three of the four largest countries. Central rate changes, as discussed above, are decided upon by following an established common procedure.

^{1/} On this point, see also Massimo Russo: Cooperation and Coordination in the EMS - The System at a Crossroad, in: Internationales Währungssystem und weltwirtschaftliche Entwicklung (The International Monetary System and Economic Development), Proceedings from the Malente Symposium VII, Baden-Baden 1988, p. 285.

Furthermore, the EMS has as a general objective to strive for exchange rate stability under conditions of internal stability. There is strong emphasis and peer pressure to rely in case of imbalances not only on "corrective" central rate changes but also on internal adjustment policies. This implies a preference for not only correcting past policy actions and their consequences but for providing a disciplinary constraint for future policy actions. That this over time led to a discussion about the general policy orientation of the EMS will be discussed later.

The following sections describe developments and policies in the EMS. Somewhat arbitrarily, a distinction is being made between three phases of development, the first one up to 1982/83; the second up to 1987; and the third reaching into the present discussion over the future course of monetary integration in the EC. 1/

III

The first phase of the EMS can be described as a period of trial and orientation. In those first years, the EMS resembled the snake in a number of aspects. Economic developments in EMS countries continued to be divergent as the authorities responded differently and with a varying

1/ In a short summary of developments in the EMS, the EC Commission introduces a similar distinction between three main phases, however, with a somewhat different emphasis. See Commission of the European Communities: The EMS - Ten Years of Progress in European Monetary Cooperation, Brussels 1989.

sense of priorities to the challenges of an inflationary world-economic environment which at the same time was characterized by low growth and high unemployment. In the period 1974-78 (that is the period following the first round of oil price increases), the consumer price index (CPI) for the ERM countries as a whole had risen on an annual average by 8.9 percent; for Germany the increase was only 4.7 percent, and for the Netherlands 7.9 per cent, while in France the increase amounted to 10.7 percent and in Italy to 16.4 percent. In the years 1979-81, i.e. following the inception of the EMS, the average annual rise of the CPI for Germany was 5.2 per cent and for the Netherlands 5.8 percent; for France the figure was 12.5 percent and for Italy 17.9 percent. Yet, short-term interest rates which in Germany nearly tripled from 1978 to 1981, increased during the same period in France less than twofold (although on a higher level). In Italy, the rise in short-term rates was even less. ^{1/} A similar picture emerges if one compares the rate of growth of domestic credit. In Germany, the growth rate declined persistently from 1979 to 1983, while in France and Italy the growth rates remained on average on their high earlier levels. ^{2/} These differences indicate that inflation in France and Italy throughout those years was significantly worse than in Germany, but also that in France and Italy less of an effort was being made to correct this situation.

^{1/} Horst Ungerer, Owen Evans, Peter Nyberg: The European Monetary System: The Experience, 1979-82, International Monetary Fund, Occasional Paper No. 19, Washington 1983, Tables 12 and 14.

^{2/} Horst Ungerer, Owen Evans, Thomas Mayer, Philip Young: The European Monetary System: Recent Developments, International Monetary Fund, Occasional Paper No. 48, Washington 1986, Table 39.

One important factor for economic developments in France was the shift in economic and fiscal policy to a clearly expansionary line, following the success of Francois Mitterand in the presidential elections of May 1981.

The consequence of this divergence in economic policies and developments were a total of seven realignments of central rates in the ERM from 1979 to March 1983. The most important feature was a downward shift of the French franc but also of the Italian lira mainly vis-à-vis the Deutsche mark and the Dutch guilder (October 1981; June 1982; March 1983; see Table).

The realignments of February 1982 and March 1983 mark in a number of ways a turn-around in the history of the EMS. With the benefit of hindsight, the question can be asked whether without this turn-around, the EMS would have continued to exist or, at least, whether it would not have developed into a less cohesive and stable system which would have failed to move towards its main objectives of "external and internal stability".

The two realignments established that in the EMS central rate changes would be no longer a matter of unilateral decisions, with which partner countries would concur, but indeed common decisions. Consequently, discussions on realignments became increasingly politically charged, difficult, and at times even acrimonious. To this observer, it is only natural that in view of differing national viewpoints and priorities, common decisions which are to be economically and politically acceptable to all participants entail tough negotiations and cannot be realized in a smooth and noiseless way. Proposals at the

EMS Realignments: Percentage Changes in Bilateral Central Rates ^{1/}

	Sept. 24, 1979	Nov. 30, 1979	Mar. 23, 1981	Oct. 5, 1981	Feb. 22, 1982	June 14, 1982	Mar. 21, 1983	July 22, 1985	Apr. 7, 1986	Aug. 4, 1986	Jan. 12, 1987	Jan. 8, 1990
Belgian and Luxembourg francs					-8.5		+1.5	+2.0	+1.0		+2.0	
Danish krone	+2.9	-4.8			-3.0		+2.5	+2.0	+1.0			
Deutsche mark	+2.0			+5.5		+4.25	+5.5	+2.0	+3.0		+3.0	
French franc				-3.0		-5.75	-2.5	+2.0	-3.0			
Italian lira			-6.0	-3.0		-2.75	-2.5	-6.0				-3.7
Irish pound							-3.5	+2.0		-8.0		
Netherlands guilder				+5.5		+4.25	+3.5	+2.0	+3.0		+3.0	

Sources: Commission of the European Communities and IMF staff calculations.

^{1/} Calculated as the percentage change against the group of currencies whose bilateral parities remained unchanged in the realignment, except for the realignments (3/21/83, 7/20/85) in which all currencies were realigned-for this the percentages are shown as in the official communiqué.

time aimed at avoiding such difficulties, e.g., by introducing many small realignments or a crawling peg. Such proposals did not fully recognize the dynamics of a common decision-making process by placing strong emphasis on domestic adjustment policies to accompany exchange rate changes, and its positive contribution to the domestic opinion-forming process. As the convergence of economic developments improved over time, the idea of having smaller (and also fewer) realignments became more realistic.

The significance of the February 1982 realignment was that Belgium accepted a noticeably lower devaluation than it had initially sought and seemed justified by the commonly used indicators of external competitiveness. This established in the EMS the "hard currency" strategy which avoids compensating fully for past losses in competitiveness and takes a dynamic, future-oriented approach with emphasis on internal adjustment. ^{1/} With the agreed exchange rate change, a clear stand was also taken against even a presumption of competitive devaluation, reflecting a concern of other countries with regard to their own competitiveness. The devaluation marked for Belgium also the beginning of more decisive internal adjustment policies, initially in the area of prices and wages, later on also in the budgetary field.

The realignment of March 1983 was significant in a number of respects. In the first place it was the most comprehensive realignment

^{1/} For a detailed discussion of the Irish experience with a "hard currency" strategy, see Jeroen J.M. Kremers: Gaining Policy Credibility in the EMS: The Case of Ireland, IMF Working Paper 89/36, April 1989.

so far, with changes in the central rates of all participating currencies, while in earlier realignments some currencies stayed put, and central rates of other currencies were changed in relation to those currencies. In March 1983, all central rates were either revalued or devalued against a hypothetical zero line. From a purely economic standpoint it may not matter whether a currency devalues or revalues; it is the relative shift in central rates which is of relevance. Psychologically, things are somewhat different. Market perceptions and, hence, expectations, may be influenced by whether a shift in central rates is called a devaluation or revaluation. Politically, the word "devaluation" still carries a notion of defeat which may adversely affect the external and the domestic standing of a government.

Secondly, the realignment signalled a reordering of economic policy priorities in those countries which previously had sought to combine the aim of stable exchange rates within the ERM with expansionary policies. France, in particular, decided to give top priority to domestic cost and price stability. To this end, the French authorities adopted a comprehensive stabilization program, making the commitment to stay in the EMS and to aim at a stable exchange rate credible by introducing a series of domestic adjustment measures. This program was supported by a medium-term credit under the EC's Community loan mechanism, amounting to ECU 4 billion. The stabilization program was successful in restoring external competitiveness and affecting positively inflationary and exchange rate expectations. As the current account improved the French

authorities were able to repay the credit in advance of maturity. 1/

The French decision, and the support for it by partner countries, reflected on the one hand a renewed joint commitment to the EMS and, ultimately, to a continuation of the process of economic and political cooperation within the EC. On the other hand, there was the realization that not taking this decision would probably have resulted in France temporarily or permanently leaving the EMS. This could have led to a significantly larger devaluation of the French franc than undertaken in the realignment, fueling inflation in France and seriously undermining the credibility of French economic policy at home and abroad.

It was also during this first phase of the EMS' development, in December 1980, that initial plans to consolidate the EMS, not later than two years after the start, into a "final system" were postponed indefinitely. This final system was to entail the creation of a European Monetary Fund and the full utilization of the ECU as a reserve asset and a means of settlement.

IV

The time following the realignments of 1982 and 1983 can be seen as

1/ For a short characterization of the French program, see Ungerer et al. (1986), p. 6. For a discussion of the French experience in the EMS, see Harald Eggerstedt, Stefan Sinn: The EMS 1979-1986: The Economics of Muddling Through, in: Geld und Währung - Monetary Affairs, Zug, May 1987.

the second phase of the development of the EMS and as a period of consolidation. It was characterized by a widespread consensus to follow stability-oriented policies, an increasing convergence in the development of costs, prices and monetary aggregates, and by long periods without realignments of central rates.

It is also during this phase that the Deutsche mark evolved as the "anchor currency" of the system and that the anti-inflationary policies of the German monetary authorities became the reference point for the policies of the other partner countries. Already during the snake period, the Netherlands conducted policies that moved more or less in tandem with Germany. Now, after the economic turmoil of the '70s and the early '80s, other countries also recognized the importance of anti-inflationary policies for their own economies.

In terms of exchange-rate policy, this meant that countries increasingly sought to stabilize the exchange rates of their currencies against the Deutsche mark, and to support such a peglike link if necessary by intervention in German currency within the margins and by maintaining appropriate interest rate differentials vis-à-vis Germany.

Already in the early phase of the EMS intra-marginal intervention had gained preference over intervention at the margins. It was then mainly seen as an instrument to counter exchange-rate movements from the very start, before they could develop a momentum of their own. Due to the institutional constraints on the use of partner currencies for intra-marginal intervention, and the more ready availability of the US dollar, this currency became initially the preferred intervention currency. Only in periods of strong market pressure, which at times led

to a realignment, were exchange rates allowed to move to the outer limits of the band, where intervention in partner currencies was employed (with the consequent use of the very short-term financing facility (VSTF) and its settlement rules).

With the reorientation of policy priorities, the Deutsche mark became the main currency for intra-marginal intervention also for those countries which formerly had exclusively used the US dollar. Linking their currencies in this way to the mark, the monetary authorities of other countries were able to import stability, to exert adjustment pressure on their own economies by implementing a supportive high interest-rate policy, and to gain credibility in their stabilization efforts by being very closely associated with the successful economic policy strategy of the German authorities.

The EMS Agreement basically limited the provision of the currencies by partner central banks for intervention purposes to obligatory intervention at the margins. Intra-marginal interventions in partner currencies had to be financed out of holdings in these currencies (which under the EMS Agreement are to be limited to working balances), and were subject to approval by the issuing central bank. As intra-marginal intervention was increasingly seen as a valid tool for regular intervention, the term "working balances" was interpreted in a very liberal fashion. This allowed central banks to acquire partner currencies on the market at times of strength of their own currencies, and to use them at times of weakness. The Bundesbank, as the issuer of the main ERM intervention currency, accepted and at times encouraged this practice not only because it saw the advantages of intra-marginal

intervention for the stability of the system as a whole - an important aspect for a large exporter - but also for reasons of its own monetary policy. Any intervention at the margins which required the provision of Deutsche marks under the VSTF implied an injection of additional liquidity into the market, with the potential of upsetting the Bundesbank's monetary targets. Intra-marginal intervention, involving the use of other central banks' holdings of Deutsche marks, on the other hand, did not imply the creation of additional liquidity. This consideration also explains why during the discussions about the further development of the EMS, the Bundesbank took initially such a strong line against the possibility of allowing the automatic financing of intra-marginal intervention through the VSTF.

While in most situations the existing arrangement and understandings concerning intra-marginal intervention in partner currencies worked well, there remained two main sources for complaint. Firstly, in suddenly changing market conditions which could take on the character of an emergency situation, the procedure for obtaining approval for intra-marginal intervention could prove to be too cumbersome and time-consuming, despite the efficient and extensive communication network in existence between EMS central banks. There was also the more political aspect of central banks having to seek from partner central banks permission to carry out transactions which were generally seen as useful and in the interest of the system. Another concern was that due to the important position of the Deutsche mark in international exchange markets and its role as an alternate reserve currency, the exchange-rate relationship between the US dollar and the

EMS currencies was increasingly determined by the dollar policy and transactions of the Bundesbank. Ironically, the increased reliance on intra-marginal intervention in partner currencies instead of the dollar made the dominant position of the Deutsche mark in this respect even more pronounced. Since the exchange rate of the dollar exerts a powerful influence particularly on trade developments and inflation in EMS countries, there were calls for a common dollar policy for the EMS. The Bundesbank, on the other hand, in view of the exposed position of the mark as an international reserve currency was concerned that a common dollar policy would not sufficiently safeguard its domestic monetary targets. ^{1/}

Various proposals on how to modify the EMS were put forward. The EC Commission presented in 1985 a package of proposals which were intensively discussed by the competent EC bodies. While some considered that the adoption of these proposals would strengthen the EMS and contribute to its quest for exchange-rate stability, others put strong emphasis on the adjustment aspect within an exchange-rate system and felt that any mechanism which would weaken the resolve to adjust in time would actually weaken the EMS. It is therefore not surprising that no agreement could be reached on the proposals of the Commission. Nevertheless, with effect from July 1, 1985, it was agreed to supplement the existing mechanisms of the EMS mainly in order to improve the

^{1/} For further comments on the problems of a common dollar policy, see Horst Ungerer, *The European Monetary System and the International Monetary System*, in: *Journal of Common Market Studies*, March 1989.

usability and attractiveness of the ECU. 1/ Under the new provisions, central banks in need of other currencies for the purpose of intra-marginal intervention can obtain these currencies by mobilizing, through the European Monetary Cooperation Fund, their net creditor positions in ECUs and part of their ECU allocation. Other parts of the package linked the interest rate on net holding in ECUs more closely to market rates, and provided for the possibility of "other holders", i.e. holders other than EMS members, of official ECUs.

The mobilization scheme has been used only twice by Italy. The Bank for International Settlements (BIS), the Swiss National Bank and, more recently, the Austrian National Bank, became "other holders". In general, however, the agreement was of limited importance. In particular, it did not do very much to enhance the status and the use of official ECUs. This can be traced back to a number of reasons. Firstly, while the 1978 Resolution designated the ECU to be at the center of the system, the ECU plays only a very limited role in the determination of central rates within the ERM. Also, the divergence indicator 2/ which is based on the ECU never gained any policy relevance. As a means of settlement of intervention debts, the role of the ECU was subject to an acceptance limit of 50 percent and confined to obligatory intervention which - as described above - does not account for the bulk of intervention. Finally, the ECU is not in demand as a

1/ See EC Commission (1989), Appendix I.

2/ The divergence indicator signals whether a currency diverges in its movement from the average of others. This may lead to a presumption that the authorities concerned will take corrective action. For details see Ungerer (1979), and Ungerer et al. (1983), p. 15.

reserve asset, reflecting its limited usability. In general terms, the ECU suffers from the ambiguous attitude of EC countries and central banks adopted from the very beginning of the EMS. While at least some countries had hoped to be able to mobilize part of their de facto frozen gold holdings, and thus to use ECUs more extensively to back up their intervention needs, even countries in principle favourably inclined towards the ECU were not willing to permanently exchange part of their reserve holdings (in particular gold) against ECUs. Hence, the curiously transitional arrangement of renewable three month swaps as a basis for the allocation of ECUs, which requires reconfirmation every two years. ^{1/}

This situation has been frequently decried as robbing the EMS of part of its "European identity" and as being contrary to the intentions of the creators of the EMS. While the latter is not fully correct as shown above, the more important practical aspect is probably that the actual evolution of the EMS did not allow the ECU to play a greater role. This reflects the fact that the EMS was from the beginning designed to be flexible so as to meet emerging needs and policies, and much less to accord with presentational and political demands other than through its existence in general and its actual achievements.

^{1/} For more on the limited significance of the ECU, see Hans-Eckart Scharrer: Das EWS - Ein Beispiel erfolgreicher Wirtschaftskooperation? in: Internationales Währungssystem und weltwirtschaftliche Entwicklung (The International Monetary System and Economic Development), Proceedings from the Malente Symposion VII, Baden-Baden 1988, p. 261; Alfred Steinherr: The EMS with the ECU at Centre Stage, European University Institute, Florence, Working Paper No. 88/339, pp. 1-2; Rolf Hasse: Die ECU - ein Währungsmedium mit Integrationswirkungen? in: Zeitschrift für Wirtschaftspolitik, Heft 2-3, Köln, 1988, pp. 225-228.

In contrast to its official use, the ECU became quite popular as a financial instrument in private markets. In essence, the private ECU is an asset which consists of the same basket of EC currencies as the official ECU but is being made available for transactions between private market participants. It serves as a hedge against the exchange-rate risks of individual currencies and tries to capitalize on the higher interest rates for assets denominated in weaker currencies. The market for private ECU in its first years grew rapidly, although it was to a large extent limited to inter-bank transactions. The private ECU became the fourth largest investment currency, although its market share remained quite small. More recently, the rapid growth of the private ECU market slowed down significantly. 1/

V

What I called the second phase in the development of the EMS was a period of consolidation: low inflation rates became the main priority; the Deutsche mark evolved as the "anchor currency" of the system, not least because the German monetary authorities had followed consistently for many years a stability-oriented policy; a substantial degree of convergence with regard to inflation rates and the growth of monetary aggregates was achieved; and there were no multi-currency realignments

1/ For a discussion of the markets for the private ECU, see Hasse (1988); The Role of the SDR in the International Monetary System, International Monetary Fund, Occasional Paper No. 51, Washington, 1987; various issues of ECU Newsletter, Istituto Bancario San Paolo di Torino.

for more than three years. But it was also a period when a number of policy and operational features of the EMS started to be questioned.

During the third phase in the development of the EMS -- starting in late 1986/early 1987 -- concerns over the state of the EMS became more pronounced in some partner countries, particularly in France and Italy. 1/ The system was considered to be asymmetric: politically, because it was dominated by the currency of one member country, Germany; and economically, because too much emphasis was laid on price stability at a time when low economic growth and high unemployment were increasingly seen as threats. Operationally, the management of the system which favoured intra-marginal intervention, thus precluding the financing of intervention through the VSTF, was seen as putting the burden of adjustment unevenly on the countries with weaker currencies. 2/

The realignment of January 12, 1987 was small in scale: the Deutsche mark and the Netherlands guilder revalued by 3 percent, the

1/ See the memoranda by the Finance Ministers of France and Italy; Edouard Balladur: *Mémoire sur la construction monétaire européenne*, in: ECU No. 3, Brussels, March 1988; Giuliano Amato: *Un motore per lo Sme*, in: *Il Sole - 24 Ore*, February 25, 1988. For a response, see Leonhard Gleske: *Die Fortentwicklung des Europäischen Währungssystems, Ausführungen vor dem Ausschuss für Wirtschaft, Währung und Industriepolitik des Europäischen Parlaments*, Brussels, February 22, 1988, in: *Deutsche Bundesbank, Auszüge aus Presseartikeln*, March 1, 1988.

2/ The question of asymmetry in the EMS generated also a discussion in academic circles. See, e.g., Charles Wyplosz: *Asymmetry in the EMS: Intentional or Systemic?* Research Working Papers 88/41, Institut Européen d'Administration des Affaires, Fontainebleau, 1988; Paul de Grauwe: *Is the European Monetary System a DM-Zone?* CEPS Working Paper, Brussels 1989; Richard Portes: *Macroeconomic Policy Coordination and the European Monetary System*, Paper presented for the conference "The European Monetary System, Ten Years Later", University of Bergamo, May 1989 (mimeo).

Belgian and Luxembourg francs by 2 percent against all other currencies in the ERM. But two aspects made it a point of crystallization for criticism. There was wide agreement that the realignment had not been caused by the loss of international competitiveness by some countries but by disturbances in international markets, i.e. a drastic fall in the US dollar in the second half of 1986 and again in the beginning of 1987 which affected various ERM currencies differently and put pressure in particular on the French franc. Secondly, it was felt that the realignment could have been avoided by a better coordination of monetary policies, in particular with regard to interest rates, and if the system had been in a position to respond to the emerging crisis more adequately.

At the conclusion of the realignment meeting, the EC Finance Ministers requested the Committee of Central Bank Governors and the Monetary Committee to examine measures to strengthen the EMS. The result of the discussions in these two bodies was an agreement on a package of measures which the Committee of Central Bank Governors adopted in Basle and which was endorsed by the Ministers of Economics and Finance of the EC at their meeting in Nyborg on September 12, 1987, the so-called Basle-Nyborg agreement. Its main elements were:

- a closer monitoring of monetary developments within the EMS and vis-à-vis third currencies, with a view to detecting possible trouble spots well in advance;
- orientation of monetary policies towards narrowing the remaining inflation differentials and making inflation rates converge on price stability;

- improved coordination of interest-rate policies and a more flexible use of existing fluctuation margins in order to deter speculation and to avoid prolonged bouts of intra-marginal intervention;
- liberalization of the rules for the financing of intra-marginal intervention by introducing the presumption that such intervention, if agreed to by the issuing central bank, will be financed under the VSTF, subject to specified quantitative limits and conditions. 1/

There was also a consensus that future realignments should be infrequent and as small as possible, so as to make speculation unrewarding. This was seen as possible in view of the increased convergence in economic performance achieved over past years.

The Basle-Nyborg agreement had a mixed reception. By some, it was seen as an important but only first step towards a strengthening of the EMS. Others saw no further need for institutional changes provided national policies continued to be oriented towards more convergence. In Germany, the agreement came under strong criticism. By concentrating almost exclusively on the extended financing provisions, it was feared that this would undermine adjustment efforts in weak currency countries and would erode the ability of the Bundesbank to conduct a stability-oriented monetary policy. In a special meeting with the press on September 14, 1987, the President of the Deutsche Bundesbank, Mr. Pöhl,

1/ For details, see EC Commission (1989), Appendix II.

defended and explained the agreement in some detail. ^{1/}

Within a short time, the new arrangements became subject to a severe test in the aftermath of the Wall Street crash in October 1987. In the wake of the sharp fall of share prices in US stock markets, the dollar dropped against European currencies by more than 10 per cent in a matter of a few weeks. As international money sought refuge in the Deutsche mark, seen as the main alternate reserve currency, strong tensions developed within the ERM, and some currencies, in particular the French franc, came under heavy pressure. However, the affected central banks successfully managed the situation by concerted action in several fields. The Banque de France increased its interest rates significantly, while the Bundesbank lowered its lending rates to their lowest levels ever. The French franc was allowed to depreciate within the band by about 2 per cent. At the same time, massive intra-marginal intervention, financed to the newly agreed maximum through the VSTF and additionally by a bilateral arrangement between the Bundesbank and the Banque de France, kept the market rate for the French franc above its lower intervention point, thus convincing the market of the determination of the authorities to stick to existing central rates within the ERM. In joint communiqués France and Germany emphasized that in a difficult international financial situation, the EMS was able to preserve stability among European currencies and in particular between the French franc and the Deutsche mark.

The viability of the EMS had been proven and the credibility of the

^{1/} See Deutsche Bundesbank, Auszüge aus Presseartikeln, September 16, 1987. For an English translation see BIS Review, September 17, 1987.

monetary authorities had been greatly enhanced. Operationally, the EMS continued to function smoothly. The view that the development of competitiveness in the participating countries did not indicate the need for a realignment was generally accepted. Noticeable interest-rate differentials helped to keep the ERM in balance. Significant rate fluctuations between the US dollar and the ERM currencies during 1988 and in the first months of 1989 led to debates about the required course of economic and financial policies in the US and Europe and about appropriate intervention policies. There were other periods of tension in the EMS in 1988. In late August/early September 1988, realignments rumours emerged in connection with a strengthening of the Deutsche mark, and the French and Italian currencies came under pressure. Again, following a combination of intervention, interest rate moves, and a downward shift in exchange rates of the weaker currencies within their fluctuation band, the speculative attacks were successfully arrested.

The continued existence of large budgetary deficits (and their partially monetary financing) in some participating countries, particularly Italy, and increasing imbalances in the current accounts of such countries as Germany (surplus) and France and Italy (deficit) have led to questions about future developments. There are also some doubts about the longer-term validity of the argument that there was no loss of competitiveness on the part of the deficit countries, and that their trade imbalances were caused only or chiefly by structural factors which could not be corrected by exchange-rate action. The view has been gaining some currency that commonly used indicators of competitiveness might not sufficiently reflect actual competitiveness. At any rate, for

the time being, the existing imbalances have been financed without apparent problems, aided by noticeable interest-rate differentials and, perhaps, an "umbrella" notion, to the effect that, if needed, the existing but largely unused EC medium-term financing facilities would be employed in combination with appropriate domestic adjustment measures for the defense of a currency in trouble. Market financing of existing imbalances also seems to reflect the confidence of the market in the continued determination of the authorities to maintain and if necessary to defend the existing ERM parity grid. 1/

VI

Following the Basle-Nyborg agreement, the discussion about further monetary integration did not come to a halt. Instead of being confined to the question of how the EMS should be further developed in order to correct its real or perceived deficiencies, the discussion turned increasingly to the issues of how the EMS could gradually move towards a framework in which monetary and exchange-rate policies would be commonly designed, or whether the EMS should be replaced at an early stage by a common European currency under the administration of a European central bank.

1/ Following a period of three years without realignment, effective January 8, 1990, the Italian lira was revalued by 3.7 percent vis-à-vis its parties currencies in the ERM. At the same time, Italy accepted the narrow margins of ± 2.25 percent. This leaves Spain as the only ERM country availing itself of the wider margins of ± 6.00 percent.

This shift in emphasis from the problems of an exchange-rate system to the much broader issue of monetary unification was in large part related to two developments. The one was the so-called single market program, i.e., the setting in motion of a process under which the formation of a single internal market for the EC would be completed by removing all existing barriers to the free movement of goods, services, persons and capital within the EC by the end of 1992. This single market program was the main objective of the Single European Act, a series of amendments to the treaties establishing the European Communities which was adopted by all EC countries in 1987.

The question has been raised whether a single market could achieve optimal results and would function satisfactorily if national currencies and with them the possibility of exchange-rate changes were to continue to exist. High transaction costs caused by different currencies and the uncertainty implicit in the continued possibility of central rate realignments as well as daily fluctuations in market rates could hamper the free movements of goods, services, persons and capital and thus hinder the formation of a truly single market.

The other event - in fact part of the single market program - was the adoption by the EC Council of Ministers in June 1988 of a directive on the liberalization of capital movements. The EEC Treaty contains the obligation to liberalize capital movements progressively "to the extent necessary to ensure the proper functioning of the Common Market" (Art. 67). Not much progress had been made in this field since the early '60s. Indeed until just a few years ago, a number of member countries by using existing safeguard clauses, had actually fallen behind the

degree of liberalization obtained earlier on. With the drive towards the completion of the internal market and in view of the successful operation of the EMS, it was increasingly felt that there could be no complete internal market without fully integrated financial markets. The EMS, characterized by an increasing convergence of economic developments and common procedures in a number of areas of monetary and exchange-rate policies, should be complemented by the full liberalization of capital movements. The 1988 directive requires in general the complete liberalization of capital movements by June 30, 1990. For a number of countries which still rely extensively on capital controls (Greece, Ireland, Portugal and Spain), a transitional period extends to the end of 1992, and in the case of Greece and Portugal, a further extension of up to three years may be approved. Belgium and Luxembourg undertook to formally abolish the dual exchange market by the end of 1992. ^{1/}

A lively debate ensued as to whether the EMS could continue to operate smoothly and, indeed, continue to exist under full liberalization of capital movements. A number of observers argued that the EMS had been held together by widespread capital controls. This compensated for the differing economic and financial strengths of

^{1/} For a description of the directive, see International Monetary Fund, IMF Survey, August 29, 1988. For a history of capital liberalization in the EC, see Leonhard Gleske: Die Liberalisierung des Kapitalverkehrs in der EG. Deutsche Bundesbank, Auszüge aus Presseartikeln No.48, July 9, 1986. A companion piece of EC legislation, the Second Banking Directive, governing the authorization of credit institutions and the provision of the financial services throughout the EC, was adopted by the EC Council of Minister in December 1989. For a description, see IMF Survey (forthcoming).

participating countries and impeded large-scale speculative capital movements related to differentials in fundamentals or changing market sentiments and conditions which would trigger and necessitate exchange-rate realignments. In sum, fixed exchange rates, free capital movements, and independent monetary policies were mutually inconsistent. ^{1/} To enable free capital movements under fixed exchange rate conditions would require a common monetary policy and, ultimately, a common currency.

Others felt that realignments would continue to be possible without the inevitability of large speculative attacks as long as they were relatively small and compensated frequently enough for divergences. However, the success in achieving convergence in economic performance during the last few years would require such realignments less often. What was called for was to continue efforts to reach more convergence, and free capital movements would exert a disciplinary influence to this end. The coordination of monetary policies, particularly with regard to interest rates, would have to play an even more important role than in the past in balancing the exchange-rate mechanism. Common monetary policies would simply provide a cover for non-convergent policies in other areas, allow the development of gaps in competitiveness in the absence of exchange rate-induced pressure for internal adjustment, and

^{1/} See in particular Tommaso Padoa-Schioppa: The EMS: A Long-Term View, in: Francesco Giavazzi, Stefano Micossi, Marcus Miller (Eds.), The European Monetary System, Cambridge, New York, New Rochelle, Melbourne, Sydney 1988.

ultimately lead to an aggravation of existing regional imbalances within the EC. 1/

The question that remains under intense discussion is whether too fast a pace in the process of institutional development could not undo the very achievements of the EMS; and whether definite moves towards economic and monetary union would not require a more solid basis in terms of compatible economic, in particular fiscal policies, and convergent economic developments.

Thus, in a way, although with changed terminology, the old difference of opinion between the "monetarists" and the "economists" continues to exist. Positions are, however, not as apodictic any more, and both sides agree that there is a dynamic interaction between the building of institutions and the strengthening of policy coordination.

VII

The debate about the future monetary organization of Europe acquired another dimension and received an important impulse in early 1988 when a number of leading politicians from EC countries expressed support for the idea of moving towards an economic and monetary union. The debate was broadened and deepened by contributions from other high

1/ For a view on how the liberalization of capital movements will affect the working of the EMS, see Paul de Grauwe: Liberalization of Capital Movements and the EMS, Paper prepared for the conference "The European Monetary System, Ten Years Later" University of Bergamo, May 1989 (mimeo).

officials, mainly from central banks. During the same period several non-official groupings as well as personalities from the academic world put forward precise and detailed proposals as to how and under what conditions a European monetary authority and a common European currency could be created. 1/

At its meeting in Hanover on June 27 and 28, 1988 the European Council of Heads of State and Government set up a committee chaired by Mr. Delors, President of the EC Commission, consisting of the Presidents and Governors of the EC central banks and four other well-known personalities. The Committee was entrusted with "the task of studying and proposing concrete stages leading towards [economy and monetary] union". The Committee presented its report in April 1989. 2/ In its report, the Delors Committee proposed the realization of economic and

1/ Balladur (1988); Hans-Dietrich Genscher, Memorandum for die Schaffung eines europäischen Währungsraumes und einer europäischen Zentralbank, February 26, 1988, published in: Deutsche Bundesbank, Auszüge aus Presseartikeln, March, 1988; Gerhard Stoltenberg: The further development of monetary cooperation in Europe, Press Release of the Federal Ministry of Finance, Bonn, March 15, 1988; Lamberto Dini, Statement for the Committee on Economic and Monetary Affairs and Industrial Policy of the European Parliament, Brussels, July 13, 1988, in: BIS Review, July 14, 1988; W.F. Duisenberg, Speech at the American Chamber of Commerce, The Hague, June 1, 1988, in: BIS Review, June 2, 1988; Norbert Kloten: Wege zu einem Europäischen Zentralbanksystem, in: Europa-Archiv, June 10, 1988 (English version in: BIS Review, July 19, 1988); Committee for the Monetary Union of Europe (Co-chairmen: Valéry Giscard d'Estaing, Helmut Schmidt): A Programme for Action, June 1988; Daniel Gros, Niels Thygesen: The EMS - Achievements, Current Issues and Directions for the Future, CEPS Paper No. 35, Brussels 1988; Marcello de Cecco, A. Giovannini (Eds.): A European Central Bank? Perspectives on monetary unification after ten years of the EMS, Cambridge University Press, 1989. For a discussion of several publications, see Russo (1988), pp.300-303.

2/ Committee for the Study of Economic and Monetary Union: Report on Economic and Monetary Union in the European Community, Brussels April 1989.

monetary union in three stages. No deadlines were suggested for the transition from one stage to another; instead, the beginning of each stage should be decided individually depending on the progress achieved during the preceding stage.

Monetary union is characterized in the report by the total and irreversible convertibility of currencies; the complete liberalization of capital movements and the full integration of financial markets; the elimination of fluctuation margins and the irreversible locking of exchange rates. Economic union is defined as a single market within which persons, goods, services and capital can freely move, with common competition, structural and regional policies; and macroeconomic policy coordination including binding rules for budgetary policies.

At the heart of the Delors report is the proposal to create a single currency and to set up a European System of Central Banks (ESCB). The ESCB should be federally organized and consist of a central institution and the national central banks. The ESCB would be committed to the objective of price stability, and - subject to the foregoing - should support the general economic policy set at the Community level. The ESCB would be responsible for the formulation and implementation of monetary policy, and exchange rate and reserve management. It would not lend to public sector authorities, and should be independent of instructions from national governments and Community authorities. In the field of economic policy, the report does not propose the creation of a new institution. Rather, the roles of existing bodies, such as the Council of Ministers, would be modified and extended.

Stage one would aim at a greater convergence of economic

performance through the strengthening of economic and monetary policy coordination within the existing institutional framework. In the economic field, stage one would center on the completion of the internal market and the reduction of existing regional disparities. In the monetary field, the objective of a single financial area would be fully implemented. All EC currencies should participate in the EMS exchange rate mechanism. The Committee of Central Bank Governors would formulate opinions on the overall orientation of monetary and exchange rate policy and would express opinions to individual governments and the Council of Ministers.

In stage two, the ESCB would be set up and would absorb existing institutions such as the European Monetary Cooperation Fund and the Committee of Central Bank Governors. The key task for the ESCB would be to begin the transition from the coordination of independent monetary policies to a common monetary policy. The margins of fluctuation within the ERM would be narrowed. The final stage would commence with a move to irrevocably locked exchange rates. Common structural and regional policies would be further strengthened and rules in the macro-economic and budgetary field would become binding. The transition to a single monetary policy would be made, and the ESCB would assume all its responsibilities. Decisions on exchange market interventions in third currencies would become the sole responsibility of the ESCB, and official reserves would be pooled and managed by the ESCB. The change-over to a single currency would take place during this stage.

A new Treaty would be required since the EEC Treaty was insufficient for the full realization of economic and monetary union.

The report lists two options: a new Treaty for each stage, and a single comprehensive Treaty for the process as a whole. In its report, the Committee expresses a preference for the latter approach and calls for a clear political commitment to the final stage, i.e. the full realization of economic and monetary union.

At a meeting on June 26 and 27, 1989, in Madrid, the European Council "restated its determination to progressively achieve Economic and Monetary Union". The Council felt that the realization of the recommendations of the Delors Committee "would have to take account of the parallelism between economic and monetary aspects, respect the principle of 'subsidiarity' and allow for the diversity of specific situations". The Council decided that the first stage of the realization of economic and monetary union, as proposed in the Delors report, would begin on July 1, 1990, and asked the Council of Ministers, the Commission, the Committee of Central Bank Governors and the Monetary Committee "to adopt the provisions necessary for the launch of the first stage on 1 July 1990" and "to carry out the preparatory work for the organization of an intergovernmental conference to lay down the subsequent stages". ^{1/}

While the European Council thus agreed on procedures regarding the realization of economic and monetary union, the views as to the main issues involved continue to differ widely. On the one hand, it is felt

^{1/} Since this paper was written, the European Council at its meeting in Strasbourg on December 8 and 9, 1989 agreed to call, before the end of 1990, an Intergovernmental Conference charged with preparing an amendment of the EEC Treaty with a view to the final stages of economic and monetary union.

by a number of countries that common policies and institutions should be in place as soon as possible. 1/ Other countries argue for extended "dress rehearsals" during the first stage proposed in the Delors report and stress the need to intensify policy coordination and to achieve more and irreversible progress in economic convergence - a "hardening" of the EMS - before it could be contemplated to institutionalize and permanently determine common aspects of economic and monetary policy in the EC. 2/ One country - the United Kingdom - remains fundamentally opposed to any early substantial move toward economic and monetary union. 3/

1/ A similar view is presented by the Committee on Economic and Monetary Affairs and Industrial Policy of the European Parliament in its report on European Monetary Integration, January 1989.

2/ For one such view, see Wissenschaftlicher Beirat beim Bundesministerium für Wirtschaft: Europäische Währungsordnung, Bonn, January 21, 1989.

3/ See Financial Times, April 18, 1989; and House of Commons, Official Report: Parliamentary Debates, Thursday 29 June 1989, London, Her Majesty's Stationary Office.

REFERENCES

- AMATO, Giuliano: Un motore per lo Sme, in: Il Sole - 24 Ore, Milan, February 25, 1988.
- BALLADUR, Edouard: Mémoire sur la construction monétaire européenne, in: ECU No. 3, Brussels, March 1988.
- BASEVI, Giorgio, Michele FRATIANNI, Herbert GIERSCHE, Pieter KORTEWEG, David O'MAHONY, Michael PARKIN, Theo PEETERS, Pascal SALIN, Niels THYGESEN: The All Saints' Day Manifesto, The Economist November 1, 1975.
- CECCO, Marcello de, A. GIOVANNINI (Eds.): A European Central Bank? Perspectives on monetary unification after ten years of the EMS, Cambridge University Press, 1989.
- COMMITTEE FOR THE MONETARY UNION OF EUROPE: A Programme for Action, June 1988.
- COMMITTEE FOR THE STUDY OF ECONOMIC AND MONETARY UNION: Report on Economic and Monetary Union in the European Community, Brussels, April 1989.
- COMMISSION OF THE EUROPEAN COMMUNITIES: The European Monetary System - Commentary, Documents, in: European Economy, No. 3, Brussels, July 1979.
- : Documents relating to the European Monetary System, Annex A, European Economy, No. 12, Brussels, July 1982.
- : The EMS - Ten Years of Progress in European Monetary Cooperation, Brussels 1989.
- DINI, Lamberto: Statement for the Committee on Economic and Monetary Affairs and Industrial Policy of the European Parliament, Brussels, July 13, 1988, in: BIS Review, July 14, 1988.
- DUISENBERG, W.F.: Speech at the American Chamber of Commerce, The Hague, June 1, 1988, in: BIS Review, June 2, 1988.
- EUROPEAN PARLIAMENT, Committee on Economic and Monetary Affairs and Industrial Policy: Report on the Development of European Monetary Integration, January 1989.
- EGGERSTEDT, Harald, Stefan SINN: The EMS 1979-1986: The Economics of Muddling Through, in: Geld und Währung - Monetary Affairs, Zug, May 1987.

- GENSCHER, Hans-Dietrich: Memorandum für die Schaffung eines europäischen Währungsraumes und einer europäischen Zentralbank, February 16, 1988, in: Deutsche Bundesbank, Auszüge aus Presseartikeln, March 1988.
- GLESKE, Leonhard: Die Liberalisierung des Kapitalverkehrs in der EG, in: Deutsche Bundesbank, Auszüge aus Presseartikeln, July 9, 1986.
- _____: Die Fortentwicklung des Europäischen Währungssystems, Ausführungen vor dem Ausschuss für Wirtschaft, Währung und Industriepolitik des Europäischen Parlaments, Brussels, February 22, 1988, in: Deutsche Bundesbank, Auszüge aus Presseartikeln, March 1, 1988.
- GRAUWE, Paul de: Is the European Monetary System a DM-Zone? CEPS Working Paper, Brussels 1988.
- _____: Liberalization of Capital Movements and the EMS, Paper prepared for the conference "The European Monetary System, Ten Years Later", University of Bergamo, May 1989 (mimeo).
- GROS, Daniel, Niels THYGESEN: The EMS - Achievements, Current Issues and Directions for the Future, CEPS Paper No. 35, Brussels 1988.
- FINANCIAL TIMES: UK rejection of Delors plan threatens EC unity, April 18, 1989.
- HASSE, Rolf: Die ECU - ein Währungsmedium mit Integrationswirkungen? in: Zeitschrift für Wirtschaftspolitik, Heft 2-3, Köln 1988.
- HOUSE OF COMMONS: Official Report - Parliamentary Debates, Thursday 29 June, 1989, London, Her Majesty's Stationary Office.
- INTERNATIONAL MONETARY FUND: IMF Survey, August 29, 1988.
- _____: The Role of the SDR in the International Monetary System, Occasional Paper No. 51, Washington 1987.
- ISTITUTO BANCARIO SAN PAOLO DI TORINO: ECU Newsletter, various issues.
- JENKINS, Roy: Europe's present challenge and future opportunity, First Jean Monnet Lecture, European University Institute, Florence, October, 27, 1977.
- KLOTEN, Norbert: Wege zu einem europäischen Zentralbanksystem, in: Europa-Archiv, June 10, 1988; English translation in: BIS Review, July 19, 1988.

- KREMERS, Jeroen J. M.: Gaining Policy Credibility in the EMS: The Case of Ireland, IMF Working Paper 89/36, April 1989 (to be published in IMF Staff Papers).
- PÖHL, Karl-Otto: Pressegespräch am 14. September 1987, in: Deutsche Bundesbank, Auszüge aus Presseartikeln, September 16, 1987; English translation in: BIS Review, September 17, 1987.
- PORTES, Richard: Macroeconomic Policy Coordination and the European Monetary System, Paper presented for the conference "The European Monetary System, Ten Years Later", University of Bergamo, May 1989 (mimeo).
- PADOA-SCHIOPPA, Tommaso: The EMS: A Long-Term View, in: Francesco Giavazzi, Stefano Micossi, Marcus Miller (Eds.), The European Monetary System, Cambridge, New York, New Rochelle, Melbourne, Sydney 1988.
- RUSSO, Massimo: Cooperation and Coordination in the EMS - The System at a Crossroad, in: Internationales Währungssystem und weltwirtschaftliche Entwicklung (The International Monetary System and Economic Development), Proceedings from the Malente Symposium VII, Baden-Baden 1988.
- SCHARRER, Hans-Eckart: Das EWS - Ein Beispiel erfolgreicher Wirtschaftskooperation?, in: Internationales Währungssystem und weltwirtschaftliche Entwicklung, Proceedings from the Malente Symposium VII, Baden-Baden 1988.
- STEINHERR, Alfred: The EMS with the ECU at Centre Stage, European University Institute, Working Paper No. 88/339, Florence 1988.
- STOLTENBERG, Gerhard: The further development of monetary cooperation in Europe, Press Release of the Federal Ministry of Finance, Bonn, March 15, 1988.
- UNCERER, Horst: The European Monetary System, in: International Monetary Fund, IMF Survey, Washington, March 19, 1979, Supplement.
- : The European Monetary System and the International Monetary System, in: Journal of Common Market Studies, March 1989.
- : Owen EVANS, Peter NYBERG: The European Monetary System: The Experience, 1979-82, International Monetary Fund, Occasional Paper No. 19, Washington 1983.
- : Owen EVANS, Thomas MAYER, Philip YOUNG: The European Monetary System: Recent Developments, International Monetary Fund, Occasional Paper No. 48, Washington 1986.

WISSENSCHAFTLICHER BEIRAT BEIM BUNDESMINISTERIUM FÜR WIRTSCHAFT:
Europäische Währungsordnung, Bonn, January 21, 1989.

WITTICH, Günter, Masaki SHIRATORI: The Snake in the Tunnel, in: Finance
and Development, Washington June 1973.

WYPLOSZ, Charles: Asymmetry in the EMS: Intentional or Systemic?
Research Working Papers 88/41, Institut Européen d'Administration
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