The Deutsche Mark between the Dollar and the European Monetary System

By Hugo M. Kaufmann, New York

I. Introduction

Economic interdependence among Western industrialized countries has increased during the last three decades in both the real and the monetary sectors and so has the international transmission of economic disturbances and the potential for inter-country conflicts.

Among the problems of international monetary relations, the most important and interesting is the triangular interaction between the Deutschemark (DM), the United States dollar, and the European Monetary System (EMS), which officially began 13 March 1979. It is this triangular relationship which I intend to analyse to determine whether and how developments in the United States, Germany, and the other EMS partners were affecting each other. The first part deals with general and theoretical questions of exchange rates, interest rates and their interdependence. The second major section deals with the salient features of the EMS in action and its relation to the dollar, inasmuch as they pertain to our theme. The conclusion forms the third part.

It is generally agreed that the European Monetary System was created to remove Western Europe's economies, especially the European Communities' (EC), from the influence of the United States, to create through the EMS a "zone of monetary stability," to foster greater convergence of EMS countries' economic performances, and to breathe new life into the stalled Common Market integration process. During the first three-and-one-half years, the expectations set for the new monetary system has hardly been fulfilled, as the United States, Germany, and the other EMS member countries have experienced greater divergence and higher rates of inflation and unemployment as well as slower growth rates. The latter two are certainly an unintended convergence.

Some of the interesting questions for us are: what influence did the EMS have on Germany's monetary policy and the exchange rate of the DM – and vice versa? What role does the DM play between the dollar and the EMS? Is Germany to the EMS what the United States is to Germany – a pace setter? Is the United States still the pace setter for Europe? ("When the U.S. sneezes, Europe catches pneumonia," was the saying after the Second World War.) What are the consequences of a strong dollar for Germany? For the other EMS countries? For the stability of the European Monetary System?

II. Interdependence, Exchange Rates, and Interest Rates

1. Interdependence

Though they are politically sovereign nation-states, the countries of the industrialized West have economically grown progressively more interdependent on both the real and the monetary planes. Even a cursory look at the recent economic performance of the United States, Germany, and other EC countries, as well as that of nonmembers of the EC – all countries in stagflation – makes one wonder whether Europe has attained the independence the EMS seemed to have promised its founders. True, the cross-country and trans-Atlantic stagflation which all have experienced could be accidental, with countries finding themselves at a similar stage in the economic cycle for country-specific reasons; but this is highly unlikely for the period under investigation, and it is an interpretation that has not been suggested, at least not in isolation. Alternatively, the United States and the Western European countries – the latter either singly or qua members of the EC – could experience recessions owing to outside forces impinging on the two areas, e.g., consequences of OPEC oil pricing. There is a third possibility: irrespective of the point of origin or the initial causes, the economies of the industrialized West are still linked with one another despite the creation of the EMS and despite fluctuating exchange rates and cyclical fluctuations are transmitted from one side of the Atlantic to the other and between EMS countries. These alternative possibilities are not mutually exclusive and may in fact have interacted. Country-specific causes, such as budgetary deficits, could have been compounded by influences transmitted from abroad, such as OPEC fuel pricing.

It is my hypothesis that the special position of the DM, as the pivotal element between dollar and the other EMS currencies, played a crucial role in the transmission process. It is, however, not suggested that a change in, or special controls for, the Deutschemark are justified. Any pivotal currency would have become the conduit. Special controls would merely introduce distortions, with the cure being worse than the disease. Rather, it seems that floating has not been free, nor does it guarantee complete insulation from outside influences.

A national game any politician can play – and many delight in so doing – is to attribute domestic woes to foreign influences. Another pastime for politicians and critics of central bank independence is to point their fingers at central bankers, and make them responsible for high inflation or interest rates and/or slow growth rates, whatever the case may be. In Europe, the Deutsche Bundesbank (Germany's central bank) and the United States were made the culprit for the present malaise, and in the United States, the Federal Reserve and its chairman, *Paul Volcker,* had to bear the brunt of criticism.

The levels and volatility of interest rates, even more than exchange rate movements, have made headlines here and abroad during this period of stagflation and are singled out as the major cause for this current protracted and most severe recession since World War II. If an Atlantic interest-rate disarmament could not be negotiated, then the EMS should "de-couple" itself from United States interest rate influences and coordinate a reduction of interest rates among EMS members. This was the French proposal at the beginning of 1982.

2. *Exchange Rates, Interest Rates, and the European Monetary System*

a) Exchange Rate Developments Before the Establishment of the EMS

Two elements stand out for consideration in analysing the position of the Deutschemark as conduit for United States influence upon the EMS: exchange rates and interest rates – not unrelated variables, these.

During the period of the Bretton Woods system with its intermittently pegged-exchange rates, conflicts between goals of internal equilibrium – price stability, a satisfactory and sustainable growth rate, and low unemployment – and external equilibrium – maintenance or attainment of balance of payments equilibrium – plagued many countries, including the United States and Germany. Under the pegged-rate system, internal disturbances were easily transmitted among open economies. Moreover, policies designed to reduce internal (external) aggravated external (internal) disequilibria. It was, thus, natural to look for an alternative international monetary system, one that would eliminate these dilemmas and would permit a country to pursue its domestic economic goals unimpeded by external, i.e., balance of payments, contraints.

In the late 1960s and the 1970s, nations attempted to extricate themselves from the vagaries of the dollar standard, as the United States flooded the world money market with its currency. As long as pegging of exchange rates existed, domestic money supply – unless sterilized by monetary policy – was largely determined by in- and outflows of foreign exchange. Ironically, the search for a new international monetary arrangement intensified during the 1970s – a period of generalized exchange rate floating.

The overriding purpose of forming the European Monetary System was a desire to reduce exchange rate fluctuations among the members of the European Communities. Joint fluctuations against the U.S. dollar and other third currencies were considered of lesser importance.

The road to some form of European monetary integration and thus, indirectly, to effective operation of the EMS, started in the late 1960s, but it was slow in coming. One of the main impediments during the negotiations was the rift between the "monetarist" and the "economist" approach to monetary integration as a process and the ultimate goal of forming an European Economic and Monetary Union. The two diametrically opposed approaches provided different theoretical analyses of the economic and political processes, with the former, the monetarist approach, being based on economic determinism and neofunctionalism; that is, begin with fixity of exchange rates, and the external contraints will force the members of the pegged-rate system to harmonize and coordinate other economic policies as well. The "economist" thought, in contrast, was that the so-called disciplining effect of a pegged-rate system cannot be relied upon and will not work, unless policy coordination and harmonization preceded the pegging of exchange rates. Then, exchange rate fluctuations would perforce become smaller and pegging feasible.

In addition to these quite different analyses of the processes leading up to exchange-rate unification, based on theoretical reasoning, they also offered different philosophies regarding economic policy – interventionism vs. reliance on market forces. Of the two major initiators of the EMS, France and Germany, the former had few inhibitions about reverting to administrative interventions – which it never completely abandoned and for which it had a large and trained bureaucracy – and interference with market forces, beyond the mere smoothing of exchange rate fluctuations through interventions in exchange markets. Germany, on the other hand, generally rejected – partly for historical reasons – exchange control as a suitable weapon to achieve monetary union.

From 1972 onward to the formation of the EMS in March 1979, in the absence of a formal agreement about a new international monetary system, Germany, together with other Common Market countries, formed the European narrow margins arrangement, the "snake," and had, as "économie dominante," a determining and anti-inflationary influence on the members of the "snake." The countries with similar goals to Germany's, elected the "strong-currency option" by pegging their currencies to the Deutschemark – thereby creating a de facto DM currency area. For the countries belonging to and staying with the DM currency area, it meant that at times they had to pursue policies under dilemma conditions – as was to be expected under fixed or pegged exchange rates. What was the gain in joining the DM bloc? The members hoped to escape the highinflation rates of the nonmembers – especially after the first and second oil shocks. The aftermath of the second oil shock was somewhat different since the EMS had by then been established.

b) Exchange Rates and the European Monetary System

The final impetus uniting the Europeans of the EC – with the notable exception of England – for establishing a formal currency arrangement, the European Monetary System – came during the United States' "benign" – or was it "malign"? – neglect of the dollar exchange rate in 1978. Exchange rate pegging under the EMS rules was expected to generate a "zone of monetary stability" for the participants by setting them apart from the exchange rate developments of other currencies. By creating a European currency bloc, the EMS was to free Europe from dollar hegemony – without, however, substituting a Deutschemark hegemony in its stead. A symmetric adjustment mechanism within the EMS, through the introduction of a European Currency Unit and a Divergence Indicator – an early warning system, as it were – were supposed to assure that no currency within the system would become a key currency, and that the asymmetry of the defunct Bretton Woods system would not be reintroduced into the new pegged-exchange-rate arrangement.

Since the term "exchange rate stability" was not further defined, it was interpreted as referring to nominal, bilateral exchange rates. While this definition may simplify matters greatly, it leaves many questions open, for bilateral and nominal exchange rates are but one set of a multitude of exchange rates – and not the only meaningful ones. Intra-EMS real and nominal exchange rate relations are important for intra-EC or intra-EMS trade and capital movements, respectively, and for EMS performance and stability. Real exchange rate movements determine a country's competitive position, while the profitability of capital movements is related to nominal exchange rate changes. What counts most for a country's economic performance in the foreign trade sector, however, is its exchange rate vis-à-vis a weighted average of its important trading partners, i.e., its effective exchange rate.

Exchange rate behavior is a multifaceted phenomenon: first, bilateral exchange rate developments may be significantly different from multilateral, effective exchange rate changes – nominal and real. For instance, the Organization for Economic Cooperation and Development (OECD) calculated a bilateral DM-dollar depreciation of some 15 percent between the end of 1979 and May 1982, whereas the DM's effective exchange rate was about the same at the beginning and the end of this period.[1]

Another aspect of the multifariousness of DM exchange rate movements is that the DM, like other currencies, moves against other EMS currencies and against those of nonmembers of the EMS, and these movements may be rather disparate. To complicate matters further, within the EMS itself, differences of exchange rate behavior are observable among members of the old "snake" and the "mini-snake." The Dutch guilder, e.g., in general moved with the Deutschemark; but this was not an unaltering relationship. The Belgian franc, a member of the "snake" and the "mini-snake", like the Dutch guilder and the Deutschemark, had managed to tie itself to the strong currency, even though this frequently created or aggravated domestic imbalances. Finally, the Belgian franc had to take the plunge, cut itself loose from the Deutschemark, and had to be devalued on 22 February 1982 – for the first time in thirty-three years.

c) The Deutschemark as Pivotal Currency

Although the technical and institutional arrangements of the EMS were designed to overcome the asymmetries experienced under the Bretton Woods system, it was unavoidable that one currency in the EMS – the Deutschemark – would become primus inter pares. Germany's and the Deutschemark's status was an outgrowth of two major elements: one was Germany's emergence in the 1950s as the main trading partner of the original EC countries and also of some non-EC countries, such as Austria and Switzerland. The other element was Germany's success in attaining inflation rates which were either very low in absolute terms or at least in relation to most of its main trading partners. Thus, Germany was to become the

[1] Organization for Economic Cooperation and Development (OECD), Economic Outlook, 31 (July 1982), p. 62.

center of gravity of a large economic area, and with it was laid the foundation and continuation of a de facto DM currency area. Next to the dollar, the DM had emerged as the second most important reserve currency and also an investment currency. It also serves as intervention currency.

Over much of the Bretton Woods and post-Bretton Woods periods, the dollar and the Deutschemark have moved in opposite directions. This behavior became even more pronounced as the Deutschemark became an alternative to the dollar for investment and intervention purposes – a trend which, as long as the DM was very strong, received a mixed blessing by the Deutsche Bundesbank[2] and its then President, *Dr. Otmar Emminger*. As the DM weakened and Germany ran large current account deficits, the Bundesbank's – and its new President, *Karl-Otto Pöhl's* – attitude toward the DM's prominent position changed; the attractiveness of the DM as international reserve and investment currency was emphasized in an attempt to finance the current account deficits with capital imports.

The Deutschemark's pivotal role transcends its influence on the EMS and affects non-EMS currencies as well. EMS rules allow formal association of non-EC countries – an avenue, which has not been pursued yet. Austria and Switzerland, both having close trade ties with the EC, however, have attached their currencies to the EMS informally. Austria seeks to maintain a constant real effective exchange rate with the DM, while Switzerland has "adopted an intervention margin around the Deutschemark, which effectively means a unilateral act of association with the EMS."[3]

With the emergence of the Deutschemark as a reserve and investment currency, and with the DM's emergence as the pivotal currency within the EMS, the DM was exposed more than other EMS currencies to international capital movements. DM exchange rate movements have become more sensitive to developments in Germany's and other countries' current accounts,

---

[2] See e.g., Deutsche Bundesbank, Monatsberichte (MB), September 1979, p. 40.

[3] *Michael Emerson*, "Experience under the EMS and Prospects for Further Progress towards EMU," in M. T. Sumner and G. Zis, eds., European Monetary Union – Progress and Prospects. New York: St. Martin's Press, 1982, p. 25. The exchange rate relationship between the Swiss franc and the Deutschemark is not unaltering, however, as the fate of the two currencies demonstrated during 1981 and 1982: until early May 1981, the Swiss franc depreciated against the dollar, as did the Deutschemark. When the discount and lombard rates were raised in Switzerland on 11 May, 1981, the Swiss franc appreciated against other European currencies – capital flowed into Switzerland, also in connection with the outcome of the French elections. Between early March and the end of June, the Swiss franc appreciated vis-à-vis the Deutschemark. Subsequently, the Swiss franc, together with EMS currencies, declined against the dollar. See e.g., Bank for International Settlements (BIS), Fifty-second Annual Report. Basel, June 1982, p. 145.

interest and inflation rates, and exchange rate expectations. The relative weight of these four factors in influencing exchange rate movements has varied over time: current accounts have outweighted the other variables, only to be replaced in importance by interest rate differentials or one of the other two variables.

d) The German-United States-EMS Triangular Relationship

Because of the international importance of the Deutschemark, the exchange rate policy of the Federal Reserve, the U.S. central bank, was geared to, and its effectiveness was judged by, dollar-DM exchange rate movements. This special relationship was noted both when the dollar was weak in the pre-EMS era, as well as after 1979, when the dollar rebounded and the DM weakened. Similarly, if the Bundesbank intervened in foreign exchange markets to affect the DM exchange rate vis-à-vis currencies against which the DM was floating without limits (i.e., non-EMS currencies) it chose to influence the DM-dollar rate, letting cross rates determine the DM rates of the other currencies.[4]

When the Federal Reserve focused on the dollar-Deutschemark relationship in its exchange rate policy, European central banks had to decide for themselves whether and how they intended to react to its policy. This provided fertile soil for potential and actual policy conflicts between the Bundesbank and the Federal Reserve, on the one hand, and between the Bundesbank and EMS partner central banks. One of the more frequent conflicts occurred in 1981, when the Bundesbank reacted to the extreme Deutschemark weakness that had developed. Conflicts can easily arise when the German policy makers attach higher priority than do other EMS partners to eliminate external deficits, which had been one of the underlying causes of DM weakness. It has been correctly stated that "The durability of any monetary arrangement ... depends in part upon whether the decisions made by the Bundesbank and the FED about this key exchange-rate relationship are acceptable to partner central banks and governments."[5] Avoidance of intra-EMS conflicts presupposes acceptance of German hegemony,

---

[4] Because the dollar and the Deutschemark are much more affected than other currencies by decisions of private and official investors, the fixing of a dollar-DM exchange rate would be rather problematical. See e.g., *Leonhard Gleske,* „Ohne Schützenhilfe droht die Geldpolitik überfordert zu werden," Deutsche Bundesbank, Auszüge aus Presseartikeln (AP), 39; 28. April 1981, p. 82.

[5] *David T. Llewellyn,* "European Monetary Arrangements and the International Monetary System," Sumner and Zis, eds., European Monetary Union, op. cit., p. 142.

which is an unlikely supposition in the light of the insistence upon symmetry within the system – despite the de facto hegemonic role of the Deutschemark.

When there is talk of the desirability of an EMS-dollar policy, one is implicitly referring to a DM-dollar policy, rather than to any other currency's dollar relationship or, for that matter, to an ECU-dollar policy.[6] The role which the dollar still plays as intervention currency in the EMS, combined with the diversifications of international reserves, can lead to strains in the dollar-DM exchange rate.

Intentions by the countries of the European community to adopt a joint dollar policy had been expressed in the early proposals of forming a European Monetary Union. Also, the European narrow margins arrangement ("snake") of spring 1972 was in effect a coordinated dollar policy, which lasted till the March 1973 collapse of the Bretton Woods system and underwent substantial modifications thereafter. One aspect of the European Monetary System was to free Europe from the effect of dollar exchange rate volatility, which is, in effect, another form of joint dollar policy – at least in design, if not in execution.

For a dollar policy to be successful in the framework envisioned, the United States has to be willing to forgo its own dollar policy and accept the passive role of n-th currency, i.e., letting the dollar rate be determined by other countries' exchange rate policies. Such was also the case under the Bretton Woods arrangement, which the United States had abandoned in the early seventies by trying to pursue its own dollar policy.

When countries on both sides of the Atlantic try to conduct an independent dollar policy, success of such a policy depends on whether the goals are mutually compatible or not, i.e., on whether both currency blocs envision a high (low) dollar rate, or whether the United States wants a high (low) dollar rate, whereas the other countries aim at a low (high) dollar rate. In the latter instance, an irreconcilable exchange rate policy conflict has emerged. – Assuming, that the exchange rate is exogenously determined and, therefore, becomes a policy instrument. (See the discussion on exchange rate determination.)

An European joint dollar float is possible as long as the EMS partners accept – in the absence of an EMS currency, such as the ECU – one member currency that will function as key currency. This role would also have to be

[6] The European Currency Unit (ECU) is a composite or basket of EMS member currencies, which may, one day in the future, function not merely as a unit of account but also as a medium of exchange.

accepted by the currency thus designated. The key currency country would then determine the dollar policy for the currency area. When the actual exchange rate that ensues coincides with what the policy makers in the various other countries perceive as consistent with their own policy goals, a joint dollar policy is manageable from the currency bloc's point of view. Conflicts arise when the key currency's, say the DM's, actual dollar rate or Germany's perception of a desired dollar rate is at odds with that of the other members. A joint dollar policy is further complicated when, as a result of a dilemma between domestic and external – but intra-EMS – goals, the key currency no longer accepts the n-th-currency-status, but tries to conduct its own intra-EMS exchange rate policy. Such was Germany's reaction to the worsening of the DM's exchange rate in mid-February 1981.

Preferences for appreciation or depreciation of one's currency may diverge as different countries may not only have different notions about the "correct" exchange rate relationships, but since countries could try to redistribute certain costs among countries: the revaluing country tries to reduce its inflationary pressures by shifting them abroad; devaluing countries hope to reap employment benefits in the international distribution of labor. One should remember that in the mid-1970's, Germany, Switzerland and some other countries, whose currencies appreciated rapidly, were accused of having engaged in "competitive revaluations." The more familiar case is, of course, the opposite one, "competitive devaluation."

Whether the dollar becomes extremely strong or weak, the DM is its counterpart among EMS currencies. The resulting DM-dollar exchange rate then can create problems for other EMS currencies, as the DM moves to the margin of permissible fluctuations against the other EMS currencies, creating dilemma situations within the system. This was the case in May 1979, when the Bundesbank sold dollars and engaged in restrictive monetary policy – at a time when the DM was strong.[7] To prevent conditions like these from adding to already existing market pressures against certain currencies, it was proposed that bilateral "swap" agreements with the Federal Reserve be taken over by the European Monetary Cooperation Fund (EMCF), instead of being conducted by individual EMS central banks. The EMCF would thus coordinate swap transactions for the system, and its stature within the system would thereby be enhanced.

The goal of greater exchange rate stability – which had assumed great importance in United States and other countries' monetary policy after the

---

[7] *R. S. Masera,* "The First Two Years of the EMS: The Exchange Rate Experience." Banca Nazionale del Lavoro, Quarterly Review, 139, September 1981, p. 278.

autumn of 1978, and especially after the fall of 1979 – was not attained, for the years 1980 through 1982 saw large shifts in exchange rates between the major floating currencies, with the notable exception of greater stability between EMS currencies. The dollar recovery during 1980 contrasted sharply with the DM weakness; a weakness which significantly contributed to intra-EMS stability.

The DM weakness referred to here was against the dollar and against other EMS currencies during 1980 until mid-February 1981. This situation does not always occur, for the DM may be weak against the dollar but strong against other EMS currencies, as was the case after mid-February 1981. In the latter case, even though the strength vis-à-vis other EMS currencies created tension within the EMS and may force a realignment of exchange rates, as in 1981 and 1982, the stress in the EMS is mitigated somewhat when the DM is weak against the dollar.

Exchange rates from 1979 up to November 1982 have undergone remarkable changes. There also have been differences between DM exchange rate movements vis-à-vis the dollar and other independently floating currencies, such as the British pound sterling and the Japanese yen, on the one hand, and between the DM and EMS currencies, on the other. Moreover, although the EMS exchange rate relationships appeared more stable and outperformed the skeptics' expectations, exchange rate had to be altered during the EMS' existence: stable but adjustable exchange rates were among the pronounced goals of the EMS.

A word about the relationship between the Swiss franc and Germany's and Switzerland's monetary policy. Between 1973 and 1975, the Swiss franc reversed its position vis-à-vis the Deutschemark a few times – from discount (where it had been during the postwar years till 1973) to premium or parity; thereafter the Swiss franc traded at a premium of varying magnitude. Both currencies moved in similar fashion against the dollar.

The widening and narrowing of the size of exchange rate movements of the Swiss franc and the Deutschemark against the dollar (and, thus against each other), even as the direction of exchange rate movements against the dollar was the same, finds an explanation in the fact that variables impinging on their exchange rates have a different impact on the two. The German mark has been formally linked to other European currencies – first through the European narrow margin arrangement (the snake) and later through the requisites of the European Monetary System. To cite but one example of the different impact: as the French franc came under selling pressure and reached the lower intervention point while the German mark reached the upper intervention point, the Deutschemark had to support the French franc. The Swiss franc could float upwards against the French franc – and against the Deutschemark.

In 1978, the weighted external value of the Swiss franc appreciated rapidly and significantly – by 24 percent, and by 7 percent against the Deutschemark. As the Swiss National Bank (central bank) tried to control the growth rate of monetary aggregates, it lost control over exchange rate developments. When the Swiss National Bank judged the franc (real) appreciation excessive and a threat to Switzerland's economic activity and especially its export industry, the monetary authority decided temporarily to shift its policy goal from controlling monetary aggregates to greater exchange rate stability. Result: in 1979, the weighted external value of the Swiss franc rose by 1.5 percent and fell by almost 4 percent against the Deutschemark.

The underlying element for stabilizing the Swiss franc-Deutschemark exchange rate was not merely the close trade relationship of the two countries – one-fourth of Switzerland's exports goes to Germany – but agreement in the two countries about ranking priorities, with internal price stability generally taking precedence over other goals. As long as the price performance of the two countries did not diverge significantly, bilateral nominal exchange rate movements were tantamount to changes in real bilateral exchange rates, affecting relative competitiveness.

Besides the preeminence of price stability goal, aiming at exchange rate stability between the Swiss franc and the Deutschemark was justified by other similarities between Switzerland and Germany: among them preference for greater reliance on market forces than direct government intervention. Both countries' currencies serve as investment and reserve currencies. This exposes them to currency transactions influencing their exchange rates. In the fall of 1981 and February 1982, the Swiss National Bank's interest rate movements came on the heels of the Bundesbank's rate setting and were seen as part of "concerted action" between the Bundesbank (as pace-setter in the EMS) and a country which is not affiliated with the European Monetary System.

The interest rate relationship, as the exchange rate relationship, is not unalterable – if domestic economic conditions in Switzerland require divergent interest rate behavior. Germany's elimination of the special lombard rate on 6 May 1982 was not immediately followed by similar action in Switzerland, where inflation had been rising again. A further drop of the Swiss franc against the Deutschemark would have rendered the fight against inflation more difficult.

e) Highlights of the Development of the DM-EMS-Dollar Relationship

In the fall of 1978, during the extreme dollar weakness and before the United States Government together with the Federal Reserve Board, had announced drastic measures – to be implemented 1 November 1978 – to redress the U.S. external position, capital had flowed into Germany primarily for speculative reasons. Thereafter, the turnaround in capital movements was accompanied by a widening interest differential in favor of the U.S. and a decreased likelihood of further near-term Deutschemark appreciation against the dollar. As the effectiveness and determination of administration anti-inflation policies were doubted, the dollar again weakened, capital flowed to Germany, which absorbed the equivalent of DM 13 billion of foreign exchange between June and July 1979. The Bundesbank intervened in foreign exchange markets whenever exchange rates went or tended to go beyond what was thought justified on the basis of underlying factors.[8]

The European Monetary System started officially 13 March 1979, although it began to operate de facto from the beginning of 1979. During the first few months of the existence of the EMS, compulsory interventions within the System were relatively small and involved support operations for the Belgian franc and the Danish krone by the DM 1 1/2 billion. The relative calm in the EMS did not last beyond the first few months and on 23 September 1979 the first realignment within the EMS had become necessary. Before the realignment, both the dollar and EMS currencies had been weak against the Deutschemark – a parallel movement which had started during the European narrow margin arrangement (the "snake") and which lasted to 1980. It was the DM strength within the EMS which created tension in the system and led to central bank interventions. From mid-March to the beginning of September, EMS central bank interventions to stabilise the exchange rate between the DM and other EMS currencies amounted to DM 8 billion of which DM 5 1/2 billion were intra-marginal transactions.[9]

---

[8] Changes in foreign exchange holdings at any single central bank are not an infallible gauge for assessing the magnitude of currency support operations, since such interventions may at times be conducted simultaneously by more than one central bank. Besides, central banks also engage in swap and "reverse" swap transactions with their domestic commercial banks – transactions which have the same effect upon domestic liquidity as open market operations – which may or may not affect exchange rates. The purpose of swap transactions is to influence domestic liquidity, not to obtain a particular exchange rate. Such an effect would be indirect, through the interest effect of liquidity changes. Cf. *Leonhard Gleske,* „Die Devisenpolitik der Deutschen Bundesbank," Kredit und Kapital, 15 (2), 1982, p. 259. (Under "reverse foreign exchange swaps" the Bundesbank sells dollars spot to domestic banks and at the same time repurchases them forward. Central bank reserve changes remain nevertheless an important indicator of exchange rate support transactions.

The Bundesbank's foreign exchange reserves increased precipitously – by DM 9.5 billion in September. Half of these reserves were from DM sales by the U.S. monetary authorities in the DM-dollar market; the other half consisted of EMS interventions, as pre-realignment speculative tensions within the EMS heightened.

The first EMS exchange rate realignment, of September 1979, was judged reasonably successful, inasmuch as no exchange rate changes – with the exception of another devaluation of the Danish krone in November 1979 – had to be undertaken until the March 1981 devaluation of the Italian lira and a major realignment in October of that year. But a major reason for the "success" of the first realignment lay with the position of the Deutschemark within the EMS and its exchange rate movement against the dollar.

(i) *Period of DM Weakness*

When Germany's current account deteriorated in 1979 and moved into deficit, capital imports at times more than compensated for the deficits, at other times they no longer sufficed to finance them. In either case, capital movements tended to exert pressure on exchange rates, by either overshadowing or reinforcing current account developments. Although the DM appreciated between July and November by six percent against the dollar and by nearly four percent on a weighted average against 23 important trading partners,[10] its real appreciation was modest and did not recapture the decline during the first half of 1979.[11]

Beginning in 1980 and lasting through mid-February 1981, the Deutschemark moved, to the surprise of many observers, from what had been considered "chronic" strength to weakness, both against the dollar and – within the EMS permissible margins of exchange rate movements – against other EMS currencies.

The main reasons for the DM weakness, especially against the dollar, were of an economic as well as a political nature on both sides of the Atlantic and were consequences not only of developments inside Germany but also of the return of dollar strength after the dramatic change in U.S. monetary policy in 1980, when high and rising interest rates and interest rate differentials favored the dollar while the U.S. current account position started to improve.

---

[9] Deutsche Bundesbank, MB, September 1979, p. 41.

[10] Whenever the DM's trade-weighted average exchange rate is referred to, the weighted average comprises 23 important trading partners, unless noted otherwiese.

[11] Deutsche Bundesbank, MB, December 1979, p. 40.

Foremost among the economic reasons in Germany was the sudden and severe deterioration in its current account, which had turned negative for the first time in fourteen years. Some figures are needed to suggest the magnitude of the current account changes that took place. During the period, which lasted from 1975 through 1977, the current account surplus amounted to nearly DM 10 billion each year, and it nearly doubled thereafter in 1978, to over DM 18 billion, but declined into deficit of nearly DM 11 billion in 1979, a swing of over DM 29 billion.

Germany's current account deterioration resulted from Germany's expansionary policies of 1978, which coincided with the effect of the second oil shock, and OPEC did not, nor was it expected to, increase in the near future their orders from Germany as in 1974.

At about the same time, the effect of the real DM revaluation, that occurred from 1976 - 1979, had worked itself through the system, with increased import and reduced export growth, first in volume, then later in value terms. As the terms of trade effects of exchange rate changes had temporarily outweighed the corrective influence on real flows, the so-called J-curve phenomenon had masked the underlying trade developments. The Bundesbank estimates that the Deutschemark's $6^{1}/_{2}$ percent nominal appreciation in 1978 amounted to a $3^{1}/_{2}$ percent improvement in its terms of trade and had been the only reason for the increase in Germany's trade balance surplus by DM 3 billion to DM 49 billion.[12] On a volume basis, i.e., with constant, 1977 prices, Germany's trade surplus would have shrunk by DM 6 billion.

The weakness of the Deutschemark was not only the result of the magnitude of the swing in Germany's current account from surplus to deficit, but also the private as well as official expectation that Germany would not soon be able to reverse its current account deficit, and that for the near-term, things would get much worse before they improved – the J-curve working in the opposite direction as Germany's terms of trade deteriorated with the decline in the DM's exchange rate. Indeed the current account deficit deteriorated to nearly DM 30 billion for 1980, while for 1981, a year of anticipated international stagflation, only a moderate improvement to a possible deficit of DM 22 - 25 billion was forecast by the Federal Government.[13] The actual improvement, however, was much bigger – a decrease to

[12] Deutsche Bundesbank, Annual Report (AR) 1978, p. 20. The trade surplus was calculated on an f. o. b. basis for both imports and exports. If exports had been calculated on an f. o. b. and imports on a c. i. f. basis, the trade surplus would have amounted to DM 41 billion.

a deficit of about DM 17 billion. This improvement, in conjunction with monetary policy, helped the Deutschemark to appreciate later – at least within the European Monetary System.

Other contributory elements to the DM weakness were the interest rate differentials, real and especially nominal, favoring other currencies of the European Monetary System and the dollar. Capital exports from Germany to countries with higher nominal interest rates added to DM exchange rate pressures that had developed after the deterioration in the current account. Nominal interest rate differentials within the EMS became more important than real interest rate differentials – as long as exchange rate stability within the system was reasonably assured. As long as exchange rates are not changing, the return on assets is calculable from interest rate or dividend income and exchange rate risk is negligible; furthermore, interest rate income is not reduced by devaluations.

EMS countries which had inflation rates resembling those in the United States also had nominal interest rates more in harmony with those prevailing in the U.S. than those in Germany. Thus, capital was attracted to other countries in search of higher yields.[14]

Reinforcing the causes of DM weakness was its role as alternative international reserve and investment currency, rendering the DM more vulnerable than other EMS currencies to interest rate induced capital movements. Germany's partnership in the EMS did not shield the Deutschemark from exposure and attractiveness as alternative international reserve currency. It may have been expected that the creation of the EMS would distribute more equally among the various EMS currencies their attractiveness for serving as dollar or pound sterling substitutes in international transactions.[15]

Initially, the Bundesbank accepted, even welcomed, high United States interest rates as a price that had to be paid for "resolute anti-inflationary monetary policy ... in the best interest of all countries, even if ... this policy

---

[13] „Jahresbericht 1981 der Bundesregierung. Auszüge aus den für 1981 angestrebten wirtschafts- und finanzpolitischen Zielen." Deutsche Bundesbank, AP 14; 17 February, 1981, p. 3.

[14] This development provides further proof, if it were needed, that convergence of economic performance and policies among EMS member countries should not only be among the goals of the EMS but is a prerequisite for its smooth functioning, i.e., exchange rate stability.

[15] This is one of the reasons why a joint dollar policy by EMS countries would not be able to forestall or reduce tensions within the EMS. See *Leonhard Gleske,* „Perspektiven der deutschen und der internationalen Währungsentwicklung." Deutsche Bundesbank, AP, 5; 13 January, 1981, p. 2.

led to exceptionally high levels of interest rates and marked shifts in exchange rates with which we still have to live today."[16]

Nominal interest rate differentials and changes in interest rate differentials were, however, not always good predictors of capital and exchange rate movements between countries whose exchange rates were permitted to fluctuate. Even massive interventions in foreign exchange markets, both when the dollar weakened against the DM and when it strengthened, were unable to stem the trend of exchange rate movements, as long as expectations of further depreciations or appreciations prevailed. Between 1977 and the latter part of 1979, a widening interest rate differential in favor of the dollar did not prevent a steady deterioration of the dollar exchange rate vis-à-vis the DM.

In the early months of 1979, however, shortly after the October 1978 announcement of U.S. anti-inflation policy, the dollar rose about five percent, despite a narrowing of the interest rate differential in favor of the United States. This was possible and lasted only as long as anti-inflation measures were believed to take hold. When the opposite became evident, the dollar resumed its decline against the Deutschemark – despite a widening of interest rate differentials in favor of the dollar. Exchange rate movements paralleling interest rate differentials movements – as they did between 1974 and 1976 and as expected on an a priori basis – came only after early 1980, when the second U.S. anti-inflation program had been instituted and the Federal Reserve had adopted a policy controlling monetary aggregates to bring inflation under control, irrespective of where interest rates would be headed in the short run.

Similar was the case of Germany in 1980, when the improvement in its relative interest rate position was accompanied by an appreciation of the DM during the second quarter. The foreign exchange markets must have assessed that the DM would not stay fundamentally weak in the medium run, even though in the short run the balance of payments was expected to worsen before an improvement would set in. If the expectations for the medium run had been otherwise, the narrowing and even the reversal of interest rate differentials[17] would not have aided the Deutschemark exchange rate – as it did not help the dollar during the period from 1977 through 1979.

In real terms, the Deutschemark declined in the first half of 1980 by about three percent,[18] a development which was welcomed as assisting the balance

[16] Deutsche Bundesbank, AR 1980, p. 45.

[17] During May and June, 1980, the interest rate differential was in favor of Germany.

[18] On wholesale price basis.

of payments adjustment process, increasing Germany's international competitiveness. But at the same time it also raised the possibility of direct and indirect importation of inflation. To lessen the latter effect, the Bundesbank intervened in the dollar market during DM weakness, and in the EMS, the DM was supported by EMS partners when it reached the lower intervention point. Because of the linkage between the dollar, the DM, and EMS currencies, less intervention in the dollar market would have caused a larger decline of the DM against the dollar and with it the need, for institutional reasons, of greater EMS support operations for the Deutschemark.

Because of Germany's worsened balance of payments situation, the Bundesbank relaxed its restrictions against capital imports and, together with the Federal government, actively sought to encourage the financing of its current account deficits through capital imports. For the entire first half of 1980, capital outflows even exceeded the current account deficit, as they did during the final quarter of that year. Only during the third quarter of 1980 was Germany able to finance its current account deficit with capital imports. But that was hardly a "stable" situation, since short term capital imports of about DM $9^1/_2$ billion by far outweighed long term capital import of DM 1 billion.

With renewed pressure on the DM exchange rate in October 1980, the United States authorities acquired DM as part of smoothing operations in the DM-dollar market. Required interventions were undertaken in the EMS as the DM reached the lower intervention margin, especially vis-à-vis the French franc and the Dutch guilder. These interventions accounted for the bulk of the Bundesbank's October reserve losses.[19] For the entire fourth quarter of 1980, half of Germany's foreign exchange reserve losses were caused by compulsory DM interventions within the EMS. The Bundesbank availed itself of the "very short term financing facility" of the European Monetary Cooperation Fund.

The decline of the DM in the fall of 1980 was the result of nominal interest rate differentials unfavorable to Germany, combined with large deficits in its current account. Thus a situation arose whereby the country with the

---

[19] Deutsche Bundesbank, MB November 1980, p. 11. Of course, not all interventions show up as foreign exchange reserve changes. However, all DM interventions within the EMS at intervention points are reflected in the Bundesbank's ECU position. See Deutsche Bundesbank, MB December 1980, p. 40, footnote 3. The Bundesbank objected to the insinuation of having intervened in the foreign exchange market to prevent changes in the DM's exchange rate. It asserted that only 20 percent of its intervention transactions were not compulsory. See Deutsche Bundesbank, MB December 1980, p. 40.

better price performance – Germany – and therefore lower nominal interest rates could not attract sufficient capital to finance its current account deficit and lost foreign exchange reserves to countries with much higher inflation rates, such as France, which had an inflation rate twice that of Germany, but whose current account, though also negative, was better than Germany's. Capital flows from low- to high-inflation countries could continue as long as the risk of devaluation (revaluation) of the high (low) inflation countries' currencies were judged low for the near term, because of trust of the stability of EMS currency relations. Under these conditions, nominal yield differentials crucially influenced capital flows.

Whereas the DM recovered within the EMS after the reduction of interest rates in France and managed to stay above the floor between October 1980 and the beginning of February 1981, the DM decline against the dollar continued unabated: the DM had become anything but a candidate for revaluation within the EMS or appreciation against the dollar in the near term.

From the end of September 1980 to the first week of February 1981, the DM tumbled 15 1/2 percent against the dollar, 13 1/2 percent against the pound, and 19 percent against the yen.[20] On a trade-weighted average, the DM fared less badly, declining by about four percent over the same time span. This was the result of relatively stable exchange rate relations within the EMS, with whose partners Germany conducted over 40 percent of its trade. Germany's EMS membership imparted stability for Germany, at least in this instance, and against Germany's original expectations.

(ii) *How (not) to deal with the DM Weakness*

When the DM weakened, both EMS members and the Bundesbank – in conjunction with the German government – engaged in operations to keep the DM within EMS margins. They did so, despite recommendations by the Scientific Council at the Federal Economics Ministry, some economic research institutes and sectors of the economy that Germany should resolve its unemployment and balance of payments problems by devaluing the Deutschemark.[21] The institutes reasoned that such an act would soon attract

[20] For the period since the United States had changed its policy course (end-1979) to mid-February 1981, when the Bundesbank changed its own policy course, the DM had plunged 23 percent against the dollar, 24 and 33 percent against the pound sterling and the yen, respectively. See Deutsche Bundesbank, MB March 1981, p. 6.

[21] The other, more extreme, recommendations were to ignore external aspects of economic policy entirely and to conduct economic policy with a view to internal issues only – or even to drop out of the EMS arrangement, at least for the time being.

capital in expectation of an improvement in the DM exchange rate. Correctly, the Federal Government and the Bundesbank rejected their recommendation and the reasoning behind it: first, the social costs involved in changing price relations between tradeables and non-tradeables in a devaluation which proves to be "unnecessary" could be avoided. A devaluation was considered unnecessary because of the substantially better price performance in Germany than in other major trading partners, which would soon be reflected in an improved balance of payments position for Germany.

Secondly, such a temporary devaluation as the proponents of the exchange rate change envisioned, was unnecessary since the European Monetary System, as a "zone of monetary stability" was designed to assist countries in temporary difficulties with very short term financing facility and medium term assistance to avoid exchange rate changes if currencies are not fundamentally under- or overvalued.

Furthermore, the "stable but adjustable" exchange rate system was meant to impart internal price stability, warding off the possibility of imported inflation through higher foreign prices, calculated in domestic currency.[22] The Bundesbank estimated that two-thirds of the 11 percent increase in import prices – calculated in DM – between September 1980 and April 1981, was caused by the DM depreciation, primarily the depreciation against the dollar.[23] Here, too, the dollar-DM relationship is important, since one-third of all German imports are calculated in dollars.[24]

This kind of imported inflation has the potential to set in motion a vicious circle of increasing prices, followed by depreciating currency, which in turn will lead to another round of price increases and depreciation, etc. For Germany, being price-stability-conscious, a devaluation of the Deutschemark would have to be accompanied by deflationary policies in order to prevent a vicious circle from being set in motion – not exactly conducive to the promotion of full employment.

Another reason why a devaluation of the DM would not have been advisable or, for that matter, easily accepted by the other EMS partners, who are involved in exchange rate change deliberations, was that Germany, like Bel-

[22] The Bundesbank even emphasized the value of the EMS in this particular instance for helping Germany in its fight against inflation by making a devaluation of the Deutschemark unnecessary. See Deutsche Bundesbank, AR 1981, p. 79.

[23] Deutsche Bundesbank, MB June 1981, p. 6. In its September 1981 MB, p. 6, the Bundesbank estimates that three-fourth of the price increase of imports can be explained by the DM decline against the dollar.

[24] Deutsche Bundesbank, MB, June 1981, p. 31.

gium, when it devalued its franc in 1982, would have been suspected of attempting to engage in "competitive devaluation." This suspicion would have been more applicable in the case of Germany than in other instances, since Germany's price behavior in the EMS was better than other countries', so that, even with a constant nominal DM exchange rate, Germany's real exchange rate was depreciating and its international competitiveness improving. But to erase any suspicion that one devaluation might be insufficient and might, therefore, have to be repeated, a substantial devaluation would be called for which, as we have seen, would have been neither desirable nor acceptable.

The importance of an overvalued currency in the fight against inflation was amply demonstrated not only in Germany's case after the first oil shock; it was also experienced by Japan and Switzerland – both countries which managed to reduce their inflation rates rapidly without great sacrifice in terms of reduced gross national output. One may recall that Germany and some other countries were, therefore, accused of having engaged in a deliberate exchange-rate-appreciation policy during the mid-seventies. Since not all countries can engage in a successful currency-overvaluation policy – if, indeed they did – a source of potential conflict between countries in external economic policy is given. This external dilemma is added to the internal one – which may exist in any case – such as the conflict between monetary and exchange rate policy. It is not suggested, on the other hand, that overvaluation (undervaluation) per se is desirable to fight inflation (underemployment), since in the longer run the costs of exchange rates, which are far out of line, may outweigh the benefits, by transmitting the wrong signals to the economies.

Finally, and certainly not the least important, consideration was that, in the light of the prominent position of the DM as a reserve and investment currency, the proposal to devalue the DM to encourage capital inflow seemed almost perverse. If anything, a devaluation would have led to a capital flight out of Germany and from the DM. The basis of DM reserve currency status was the expected stability of the currency's national and international purchasing power. The demand for the DM as an investment vehicle was, at least partly, encouraged by its tendency to appreciate vis-à-vis other currencies, with total return on investment consisting of interest rate yield plus capital (i.e., also currency) appreciation. To regain international confidence after a devaluation would have been difficult and not attainable in the short run.

A foretaste of what could have resulted from a DM devaluation could be seen in the increased capital flow out of the Federal Republic of Germany when the DM came under heavy selling pressure during the first month and a half of 1981.

Instead of the proposed devaluation, Germany temporarily tried to finance its current account deficits through capital imports, which proved very difficult under the given circumstances: the comparatively low interest rates in Germany and the absence of any reasonable expectations that the DM might be revalued in the near future, made DM investments unattractive, while at the same time it encouraged DM borrowings. Consequently, even without a danger of a DM devaluation, German interest rates had to be raised to decrease the unfavorable interest rate differential. It is, thus, highly questionable whether, after a devaluation of the DM a reversal of capital flows would have materialised, without a further increase in Germany's interest rates. After a devaluation, especially if it would have been judged insufficient for short-run reversal, a DM appreciation could have been achieved only with increasing German interest rates or increasing interest rate differentials in favor of Germany. Because upward pressure on exchange rates combined with declining interest rates or interest rate differentials favorable to the country with the appreciating currency, is an indication of a shift of asset preference in favor of the appreciating currency.[25]

The imbalance in current and capital accounts, combined with unfavorable interest rate differentials, put heavy pressure on the DM exchange rate, Bundesbank foreign exchange reserves, and, ultimately, on Bundesbank monetary policy. In its effort to avoid what it considered an unnecessary DM devaluation and to fulfill its obligations of staying within the permissible EMS exchange rate margins, the Bundesbank intervened in the foreign exchange markets and was assisted in its undertaking by other central banks. There are two kinds of interventions by the Bundesbank: those within the EMS, which are required by EMS regulations, and those against the U.S. dollar, which are not compulsory. The Bundesbank seemed not to have pursued a dollar policy in order to establish a predetermined dollar-DM exchange rate, since this could have been accomplished only if the Bundesbank had accepted the liquidity effects of such a policy in the German economy.[26]

---

[25] See also *Edwin M. Truman* and *Jeffrey R. Shafer*, "International Portfolio Disturbances and Domestic Monetary Policy," in The International Monetary System under Flexible Exchange Rates – Global, Regional, and National. Essays in Honor of *Robert Triffin*. *Richard N. Cooper* et al., eds. Cambridge, MA: Ballinger Publishing Company, 1982, p. 142.

[26] *Leonhard Gleske*, Member of the Directorate of the Deutsche Bundesbank, „Ohne Schützenhilfe droht die Geldpolitik überfordert zu werden." Deutsche Bundesbank, AP 39; 28 April 1981, p. 2.

To reduce dollar fluctuations against the EMS and to reduce the upward pressure on interest rates in the European Community and notably in low-inflation Germany during 1980 and until February 1981, there was EMS intervention in the dollar market, particularly between November 1979 and April 1980, and again between December 1980 and June 1981.[27] The EMS central banks were initially assisted in their endeavor by the Federal Reserve, which also intervened until the end of 1980. Early in 1981, the U.S. had decided no longer to take an active part in part in foreign exchange market interventions – only to correct disorderly markets.[28] The policy of at times heavy interventions in foreign exchange markets, introduced under the *Carter* Administration in 1978, when the dollar was extremely weak, was thus discontinued under the *Reagan* Administration. With this decision, the burden of foreign exchange market intervention was shifted into the European and other non-U.S. central banks. The decision by the U.S. no longer to intervene in the foreign exchange market may itself have contributed to the strength of the dollar – not in isolation, to be sure, but in conjunction with confidence in U.S. anti-inflation policy – because a certain "psychological barrier to exaggerated movements in the dollar rate was removed."[29] The absence of U.S. foreign exchange market intervention also contributed to the magnitude of daily fluctuations and to the pronounced short-term fluctuations of exchange rates which interacted with longer term trends, whereas the shorter term movements of exchange rates responded to constantly changing interest rate differentials.

---

[27] Commission of the European Communities, Annual Economic Review 1981 - 1982. SEC (81) 1532/2, Brussels, 14 October 1981, pp. 5.2 - 5.3. Such EMS central bank joint intervention must be harmonized and may at times be awkward and lead to conflicts, especially when central banks have different notions about the "correct" or "desirable" dollar price of their currencies or ECU movement against the dollar.

[28] According to a Treasury spokesman, U.S. authorities desisted from market interventions since January 1981 – "except for a relatively small amount" at the time of the assassination attempt on President *Reagan*. See Federal Reserve Bank of Chicago, International Letter, No. 447, May 8, 1981, p. 2. After the June 1982 realignment, foreign exchange markets were in turmoil, and to reduce pressure on the dollar and to restore orderly conditions in the foreign exchange markets, the Federal Reserve bought $ 21 million worth of DM and $ 9 million worth of yen on 14 June. The New York Times, 16 September 1982. And between August and October 1982, the Federal Reserve had intervened four times to stem the rise of the dollar. The Wall Street Journal, 10 December 1982. The U.S. announced in December that it would discontinue its policy of non-intervention in the foreign exchange markets.

[29] Deutsche Bundesbank, AR 1981, p. 69.

(iii) *Turnaround for the DM – EMS versus Dollar Movements*

Finally, early in 1981, the situation of the DM had become so precarious vis-à-vis the dollar and EMS currencies, that in mid-February 1981, the Bundesbank became convinced that a signal had to be given regarding Bundesbank intentions to assist Germany in reducing and ultimately eliminating its external disequilibrium, even if it meant initially aggravating its internal disequilibrium with respect to economic growth and employment. Accelerating inflation in Germany gave the final justification for the Bundesbank's new policy moves. Interest rates were raised, and the regular lombard rate, which at that time stood at nine percent was replaced, for the time being, by a special lombard rate, initially set at 12 percent, but to be determined daily as conditions required. Of this stipulation, however, the Bundesbank made no use.[30]

The period from the beginning of 1981 to October 1982 can conveniently be divided into three major phases which were, in turn, superimposed upon minor phases.[31] In 1981 alone, the dollar-Deutschemark relationship underwent four episodes of dollar appreciation of at least six percent and at most 26 percent. These episodes of appreciation were followed by periods of dollar decline against the DM of at least five percent and at most 15 percent. The market seems to have regarded interventions to smooth dollar fluctuations as less convincing, in the absence of Federal Reserve transactions.[32]

The two year span from 1981 through 1982 was also the period in which exchange rates within the EMS were altered four times, of which three were multilateral realignments. So it contrasts sharply with the period between 30 November 1979 and 9 March 1981, during which no exchange rate changes had to be undertaken – a period which, not surprisingly coincided with Deutschemark weakness within the EMS and against the U.S. dollar.

The first major phase in 1981 lasted till early August, with the DM – and the Swiss franc – depreciating against the dollar. But during this phase,

---

[30] Deutsche Bundesbank, MB July 1981, p. 6. The availability and cost of special lombard credit were to be determined daily, "notably in the light of exchange market developments." Cf. OECD, Economic Outlook 29 (July 1981), p. 27., footnote 3. Yet, the disarray in financial markets caused by this special lombard facility forced the Bundesbank to keep the rate constant. See The Wall Street Journal, 9 October, 1981. To prevent the new policy measures and the balance of payments deficit from creating a liquidity crisis in Germany's banking system, the Bundesbank added reserves, overcompensating by DM 5 billion the DM 40 billion liquidity reducing effect of the balance of payments deficit. Deutsche Bundesbank, MB March 1981, p. 8.

[31] Bank for International Settlements, Fifty-second Annual Report, 1982, pp. 142 - 147.

[32] Deutsche Bundesbank, AR 1981, pp. 73 - 74.

exchange rate movements against the dollar reversed direction twice. The second major phase, one of dollar decline, commenced in early August, to last till the end of November, as the expensive dollar had become technically vulnerable, reinforced by a weakening in the United States' and a strengthening in Germany's current account positions, as well as by a decline in the interest differential favoring the U.S. (The Swiss franc improved even more against the dollar than did the DM, and with this movement also improved its position vis-à-vis the DM.) In December 1981, the third major phase started, showing renewed DM weakness against the dollar, and continued to do so – with two major reversals – till October 1982.

The increase in Germany's interest rates in February 1981, which reduced Germany's international interest rate differential, reversed the downward trend of the DM vis-à-vis the dollar and the other EMS currencies. The DM moved rapidly from the bottom of the margin band to its ceiling, joining the French franc, which at that time had been the System's strongest currency. The Bundesbank's monetary policy switch achieved the balance of payments financing goal. Yet, it was not an external equilibrium, since, again, capital imports were primarily of a short-term nature – DM 11.3 billion, vs. long-term capital inflows of DM 1.6 billion. And this short-term inflow was largely the result of support transactions by the Bundesbank for other EMS currencies. A calming down in EMS exchange markets was thus expected to lead to a return flow of the reserves.

The renewed strength of the Deutschemark, which assisted Germany's fight against inflation, renewed tensions within the EMS and forced a devaluation of the Italian lira – effective 9 March 1981 – with which the DM had shared, in February, the lowest position within the EMS.[33] Soon thereafter, the French franc was to join the group of weakest EMS currencies in need of support operations by the Bundesbank. The French election results of May 1981 pushed the French franc to the lower compulsory intervention point, despite preceding heavy intramarginal support operations and despite a steep increase in French interest rates and tighter controls on capital movements.[34]

---

[33] With different permissible margins, though: ± 2.25 percent and ± 6 percent for Germany and Italy, respectively.

[34] The most extreme pressures on the French franc were reduced by France's reinvoking an exemption, on 21 May 1981, which had been granted before, in December 1968. The exemption was based on Article 108 of the Rome Treaty, authorizing countries in balance of payments difficulty to introduce safe-guarding measures, including controls on capital movements. Following the 27 May 1981 meeting of French and German leaders in Paris, the then German Chancellor, *Helmut Schmidt,* seemed impressed with France's determination to defend the franc's exchange rate, and the

The strength of the Deutschemark within the EMS was not matched, however, by a similar position vis-à-vis the dollar, and the Bundesbank's acquisition of foreign exchange reserves from support operations in favor of the Belgian and French francs was partly offset by sales of reserves in the dollar market. The divergent movement of DM exchange rates against the dollar and against EMS currencies started in October 1980 and lasted – with only a short respite during February 1981 – until June 1981. It resumed after November 1981. The divergent movements of the DM in the dollar and other exchange markets were a new phenomenon.

Between the end of April and the end of August, the DM was near the top of EMS band, but lost seven percent against the dollar and 6 1/2 percent against the Swiss franc. The DM rose by 12 1/2 percent against the British pound, but was nearly unchanged against the yen as well as on a trade-weighted basis.[35] Yet, the real depreciation of the DM continued, especially within the EMS and on a trade-weighted basis. During this period, inflation differentials within the EMS persisted, but German interest rates were more in line with other EMS partners and with the United States, and the current account deficits stabilised and were expected to improve in line with Germany's improved competitive position. Expectations that the Deutschemark was out of line compared to other EMS currencies combined with the other developments to put upward pressure on the DM within the EMS. No longer were the weaknesses in other EMS countries masked by a weak DM, and an EMS realignment became inevitable. It finally came about in the first week of October and was the first major realignment in the EMS in over a year.

In the judgment of the Bundesbank, the October realignment was designed not merely to adjust for discrepancies in inflation rates. It also considered other factors such as interest rate differentials and their influence on capital movements and the effect wage indexing had on price movements after a devaluation.[36]

We have noted earlier that the singular position of the Deutschemark in the European Monetary System makes other countries dependent on German monetary and/or exchange rate policy. A major cause of the delay in the long-expected realignment within the EMS was that the Bundesbank did

franc's divergence indicator against the ECU rose from −85 percent to −45 percent within one week.

[35] On the basis of the consumers price index, Italy experienced an inflation rate of 19.5 percent between August 1980 and August 1981, France had 13.6 percent inflation; the Netherland's and Germany's inflation rates were 6.4 percent and 6 percent, respectively.

[36] Deutsche Bundesbank, MB October 1981, p. 6.

not see its monetary policy threatened by large speculative capital inflows; the Bundesbank used increased foreign exchange reserves for interventions in the dollar market to smoothen DM fluctuations and thus to reduce the liquidity creating effect of speculative capital inflows. The Bundesbank also thought it appropriate to delay a revaluation until the ascent of the dollar had come to a pause, if not a halt. With the improvement in Germany's balance of payments more firmly established, the time for a realignment had seemed opportune.[37]

The October realignment had in many respects the expected consequences: a movement to the lower range of the band by the revalued currency – whose exchange rate nevertheless was higher after the revaluation, but not by the full magnitude of the revaluation, while the devalued currencies became the "strong" currencies in the system, although at a lower exchange rate, but again not by the full amount of the devaluation.[38] Smoothing foreign exchange interventions on behalf of the DM in the dollar market had to be undertaken almost exclusively by the Bundesbank when the U.S. decided to abstain from foreign exchange interventions. Within the EMS, intra-marginal interventions took place, as well as compulsory support transactions by the French franc, transactions which reduced the Bundesbank's ECU holdings in the European Monetary Cooperation Fund by an equivalent of DM 4 billion in October alone.

Different from other DM revaluations was that after the October 1981 revaluation the DM remained weaker for a longer period than after previous realignments. One explanation which had been suggested was its weak position against the dollar in 1981.[39] In the previous revaluations, the DM had benefitted from dollar weakness and continued capital flows to Germany. Dollar strength and absence of expectation about further DM appreciation led to capital outflow after the realignment, especially also since administrative interest rates came down after the realignment.

The October revaluation of the DM and the realignment, quite generally, increased the Bundesbank's maneuverability in conducting monetary policy. The special lombard rate came down as did other interest rates. The

---

[37] Deutsche Bundesbank, AR 1981, p. 76.

[38] Because of an EMS idiosyncrasy, actual EMS exchange rates do not necessarily correspond to bilateral reference rates. Consequently, by 13 October 1981, the effective DM revaluation within the EMS amounted to 2 1/2 percent as against a 5 1/2 percent revaluation of its reference rate. For an increase in the market rate to correspond to the increase in the reference rate, the revalued currency would have to move to the upper end of the band. See Deutsche Bundesbank, MB, October 1981, p. 6.

[39] Deutsche Bundesbank, AR 1981, p. 76.

relaxation in German money and capital markets took place even though U.S. interest rates continued to climb till mid-November – the intra EMS strength of the DM facilitated the decrease in interest rates, which obtained an additional downward impetus when U.S. interest rates declined.

This development, from mid-October to mid-November, demonstrates that some limited degree of "decoupling" of European – or German – from U.S. interest rates is possible, provided domestic conditions are conducive to such a move: in this instance, the improvement in Germany's current account and the DM position within the EMS, which preceded the interest rate reductions. They contributed, however, to the longer than usual DM weakness after the realignment.

For 1981, the Deutschemark lost 13 percent on a bilateral basis against the dollar, $11^1/_4$ percent against the Swiss franc and $8^3/_4$ percent against the yen, but gained against the British pound $7^1/_4$ percent. On a trade-weighted basis, the DM gained 3 percent over this period. Within the EMS, the weighted average (on EMS weight basis) of the DM rose $6^1/_2$ percent, of which 4 percent were attributable to the DM's move from weakness to strength; the other $2^1/_2$ percent, to the realignment. The real value of the DM depreciated, however, by 10 percent,[40] increasing Germany's international competitiveness.

By mid-January 1982, the DM had moved into the middle range of permissible exchange rate fluctuations within the EMS band, aided by a weak Belgian franc, which, together with the Luxembourg franc[41] and the Danish krona was devalued, effective 22 February 1982.

Partly to alleviate downward pressure on the Belgian franc, but also for internal reasons, Germany, in coordination with the Netherlands and Switzerland reduced its official lending rates in late January and again in mid-February. This coordination was designed to minimize any possible impact upon exchange rate developments that widening interest rate differentials within the EMS, against Switzerland and the United States might produce. When renewed tensions within the EMS arose, the Dutch and German offi-

[40] Deutsche Bundesbank, MB March 1982, pp. 29 - 30.

[41] The Luxembourg franc is fixed vis-à-vis the Belgian franc, since Belgium and Luxembourg formed a monetary union. When the Belgian franc was devalued – without prior consultation with Luxembourg authorities – the Luxembourg franc declined by the same percentage, although Luxembourg did not face the same problems as Belgium. With imports amounting to 80 percent of domestic consumption, Luxembourg found itself forced to adopt tough anti-inflationary measures. In the aftermath of this devaluation, the Luxembourg government insisted on institutional changes in the monetary policy decisionmaking process of Belgium/Luxembourg and obtaining a greater voice in it.

cial lending rates were cut, effective 19 March 1982, to alleviate those tensions, while France, then the EMS country with the weakast currency, raised its interest rates and tightened its exchange controls.

The devaluations in February had only a short run effect on the DM: although the action amounted to a de facto revaluation of the DM, it moved soon to the ceiling of the band – until in mid-June 1982, another major realignment in the EMS had to be adopted, in which the DM and the Dutch guilder were revalued while the French franc and the Italian lira were devalued. Whereas the DM exhibited strength within the EMS, its relationship to the dollar changed direction repeatedly, with a major improvement in May being followed by an even greater deterioration in June and July. From the beginning of 1982 to the realignment in mid-June, the DM had gained $6^1/_4$ percent within the EMS, while losing 8 percent against the dollar; against the Swiss franc and the yen, the DM gained 8 percent and $6^1/_2$ percent, respectively.

This divergent development continued even after the realignment; according to Bundesbank estimates, between the end of 1981 and mid-September 1982, the DM appreciated about 6 percent against the most important currencies, but its depreciation against the dollar amounted to 10 percent, while on a trade-weighted basis, the Deutschemark appreciated $4^1/_2$ percent.[42]

The continued depreciation of the Deutschemark against the dollar during summer and fall of 1982 took place in spite of a narrowing of interest differentials in favor of the United States down to 3 precentage points. This could have been an indication of how much the Federal Reserve was trusted to continue its anti-inflation policy despite having abandoned "for the time being" the attempt to keep the growth rate of monetary aggregates within the "non-inflationary" limits. The explanations that institutional changes in the banking system and the savings and loan associations would render the familiar definitions of monetary aggregates less useful, if not meaningless, and that temporary bulges were not to be interpreted as abandonment of anti-inflationary monetary policy – despite the high and still (expected to be) rising unemployment rate and despite heavy political pressures by the administration and Congress to concentrate more on economic recovery and bringing interest rates down – these interpretations by the Federal Reserve were believed at home and abroad, with the result that internationally the dollar continued to gain in strength against the major European currencies, those inside and those outside the European Monetary System.

---

[42] Deutsche Bundesbank, MB September 1982, p. 7.

But starting in November 1982, another change has taken place: the DM not only continued to strengthen within the EMS; this it did since the June 1982 realignment, with some minor reversals, although it stayed within the lower range of the band. The DM's strength within the EMS was paralleled by its strength against the dollar. It is too early, however, to determine whether this is a new trend or just one more intermediate term reversal as was experienced between June and August 1981 and again in April 1982 with the latter move being less pronounced and shorter-lived.

III. Conclusion

The dollar-Deutschemark-European Monetary System interdependence exhibits some important relationships and asymmetries, consisting of the following configurations:

1. If the Deutschemark is weak vis-à-vis the dollar as a consequence of, say, Germany's balance of payments position or a decline of confidence in Germany, then the dollar exerts strong pressure on Germany's monetary authorities to tighten its domestic monetary policy, a policy move which is transmitted to the rest of the EMS. Such a development may occur with considerable time lag, as was the case in 1980 and lasted till February 1981.

2. If the DM is weak vis-à-vis the dollar but strong "internally," i.e., Germany has a balance of payments equilibrium or surplus, or is expected to move in that direction, with high probability of realization, then some form of "decoupling" of the DM – and the EMS – from the dollar and dollar policy is possible. The EMS gains greater freedom for action, as was the case after the early months of 1982.

3. As exchange rates have become an intermediate target or indicator of monetary policy, the EMS arrangement has raised expectations of greater exchange rate stability through major and unlimited very short-term market interventions. With this development, nominal, rather than real, interest differentials regained importance. Lower nominal rates in low-inflation countries were no longer expected to be supplemented by appreciations of low-inflation countries' currencies.

This put a strain on monetary policy in low-inflation countries where monetary conditions had to be made more restrictive for external considerations than was the case under greater exchange rate flexibility, or smaller number of participants as under the "snake" arrangement.

4. A paradox emerged: at the time when the United States and other countries shifted attention from interest rate policy to controlling monetary

aggregates, letting nominal interest rates find their market-determined levels, other countries, especially those of the European Monetary System, notably Germany, were forced to shift their emphasis somewhat to interest rate developments, despite their avowed goal of attaining a present monetary growth target.

Zusammenfassung

Die Deutsche Mark zwischen Dollar und Europäischem Währungssystem

Die Wirtschaftsverflechtung der westlichen Länder hat zugenommen und ebenso die internationale Übertragung wirtschaftlicher Störungen. Dies wiederum hat die Suche nach alternativen internationalen Wirtschaftsstrukturen belebt, die einzelnen Ländern oder Ländergruppen eine bessere Kontrolle über ihre Zukunft ermöglichen würden. Die Einführung des Europäischen Währungssystems (EWS) war ein solcher Versuch, der im März 1979 begann.

Die miteinander verkoppelten Ziele des EWS bestanden darin, zum einen den Mitgliedern der Europäischen Wirtschaftsgemeinschaft wieder eine größere wirtschaftliche Unabhängigkeit gegenüber den Vereinigten Staaten zu verschaffen und zum anderen die festgestellten Nachteile der flexiblen Wechselkurse durch die Gründung einer „Zone monetärer Stabilität“ zu vermindern. Keines der beiden Ziele wurde erreicht. Die bloße Bildung eines Währungsblocks konnte die Abkoppelung Europas von der Geldpolitik der Vereinigten Staaten nicht bewirken. Die D-Mark und Deutschlands wirtschaftliche Entwicklung bilden ein wichtiges Bindeglied in der laufenden Transmission der Wirkungen amerikanischer Geldpolitik auf die Mitgliedsländer der Europäischen Wirtschaftsgemeinschaft.

Diese enge Verbindung vom US-Dollar über die D-Mark zum EWS wird in diesem Aufsatz untersucht. Da sie mal stärker, mal schwächer ist, versuche ich, die Frage zu beantworten, welche Bedingungen geeignet wären, eine gewisse europäische Abkoppelung von den Vereinigten Staaten z.B. in bezug auf die Zinsbewegungen zu erreichen sowie eine größere Stabilität innerhalb des EWS.

Summary

The Deutsche Mark between The Dollar and the European Monetary System

Economic interdependence among Western countries has increased and so has the international transmission of economic disturbances. This in turn has promoted the search for alternative international economic structures that would give countries or a group of countries greater control over their destiny. One such attempt was the creation of the European Monetary System (EMS) which became operable in March 1979.

The twin goals of the EMS were to return to the members of the European Economic Community greater economic policy independence from the United States and reduce

the perceived disadvantages of the flexible exchange rate arrangement, by creating a "zone of monetary stability". Neither goal was achieved. A European decoupling from United States monetary policy was not attainable by merely creating a currency bloc. The Deutschemark and Germany's economic performance are important links in the transmission process of the effects of United States monetary policy upon members of the European Economic Community.

It is this link from the U.S. dollar to the EMS via the Deutschemark, which this article investigates. Since this link is stronger at times, weaker at other times, I attempted to answer the question of which conditions are propitious for some European decoupling, say, of interest rate movements from those in the United States, and for greater stability in the EMS.

Résumé

Le marc allemand entre le dollar et le système monétaire européen

L'interdépendance économique entre les pays occidentaux a augmenté et, partant, la transmission internationale de perturbations économiques. Ceci, à son tour, a poussé à rechercher des structures économiques internationales alternatives qui donneraient à des pays ou à un groupe de pays un plus grand contrôle de leur destin. La création du système monétaire européen, qui est entré en vigueur en mars 1979, compte parmi une de ces tentatives.

Le système monétaire européen visait, d'une part, à rendre aux membres de la Communauté Economique Européenne une plus grande indépendance économique par rapport aux Etats-Unis et, d'autre part, à réduire les désavantages perçus du système des taux de change flexibles, en créant une «zone de stabilité monétaire». Aucun des deux objectifs n'a été réalisé. Une indépendance de l'Europe vis-à-vis de la politique monétaire des Etats-Unis ne pouvait pas être réalisée simplement en créant un bloc monétaire. Le marc allemand et la performance économique de l'Allemagne sont un lien important dans le processus de transmission des effets de la politique monétaire des Etats-Unis sur les membres de la Communauté Economique Européenne.

C'est précisément ce lien du dollar américain avec le système monétaire européen par le truchement du marc allemand que cet article examine. Ce lien étant plus fort à certains moments et plus faible à d'autres, j'essaie de répondre à la question suivante: quelles sont les conditions favorables pour une certaine indépendance européenne, par exemple, des mouvements des taux d'intérêts par rapport à ceux des Etats-Unis et pour une plus grande stabilité au sein du système monétaire européen.