THE EMS, SPAIN AND MACROECONOMIC POLICY *

José Viñals

I. <u>INTRODUCTION</u>

As a new member of the European Economic Community (EEC) since 1986, Spain has also the option of being a full participant in the European Monetary System (EMS). Created in 1979, and integrated at present by all EEC countries with the exception of Greece, Portugal, Spain, and the United Kingdom[1], the EMS seeks to establish a zone of monetary stability within Europe. Although its ultimate end is the creation of a full monetary union, the current short-term goal of the System is to limit exchange rate fluctuations between the currencies of member countries.

Specifically, the rules of the System are that participating currencies cannot move vis-a-vis each other outside a ± 2.25 per cent band around the jointly agreed bilateral central rates (± 6 per cent for the lira). It is also in the spirit of the EMS that exchange rate stability be achieved mainly through the coordination of economic policies around a common -low and stable- inflation rate, and not through massive intervention in foreign exchange markets. From time to time, however, member countries can revise their bilateral central rates so as to correct a situation of fundamental disequilibrium in their balance of payments. It is hoped nevertheless that such realignments will be small and infrequent enough to preserve the overall stability of the System and to avoid ex post validation of speculative attacks[2].

This paper explicitly focusses on the issue of Spanish participation in the EMS, and tries to answer the following questions: why could it be in the interest of Spain to belong to the EMS?; what preconditions should be satisfied by the Spanish economy for a smooth entrance into the System?; and, what are the main economic policy changes that are likely to occur as a result of Spain's membership?.

The paper is organized as follows: Section II identifies and analyzes the main relative advantages for Spain of EMS participation.

Section III deals specifically with the timing and conditions of Spanish integration. Section IV analizes how should monetary and fiscal policy be changed to achieve stability of the peseta exchange rate inside the EMS. Finally, Section V briefly summarizes the conclusions.

II. WHAT CAN SPAIN EXPECT FROM EMS MEMBERSHIP?

This section discusses several of the possible pros and cons associated with the EMS as opposed to a more flexible exchange rate arrangement.

Before making a decision regarding Spain's entrance into the EMS, Spanish economic authorities must carefully examine the relative gains to be made in going from the current exchange rate policy of managed floating to the policy of formal explicit exchange rate targets dictated by EMS membership. Although the choice of an exchange rate policy does not, by itself, affect the external restrictions to which the economy is subject, it does affect the constraints within which economic policy operates. The basic issue is then to what extent can EMS membership allow Spain to improve its fundamental economic policies and, consequently, its economic performance. In what follows, the likely effects of EMS membership on Spanish economic stability, on monetary policy effectiveness and credibility, and on the peseta short-run volatility and medium-run behavior are analized.

The exchange rate as an economic stabilizer

It is often said that fixing the exchange rate prevents this variable from helping the economy adjust in the face of macroeconomic shocks. However, even those who are in favor of allowing the exchange rate to move flexibly concede that fixing the exchange rate may be

the appropriate thing to do following monetary and financial shocks. Intuitively, with a stable exchange rate, money supply and/or demand changes are automatically offset in the money market, and do not lead to changes in the real side of the economy via interest rate or exchange rate variations. The problem comes, rather, when the economy is hit by real shocks. Since these normally require adjustments in relative prices -like the real exchange rate-, and since relative national price levels are not fully flexible in the short-run, the flexibility of the exchange rate can help making easier the required change in the real exchange rate.

Ideally, one would like to have an optimal exchange rate policy that responds to the variety of shocks hitting the economy in line with the above mentioned principles. However, this is easier said than done, since the derived optimal exchange rate rule may be too complex to be operational.

From this point of view, the EMS seems to offer an a priori attractive combination. In fact, by constraining the bilateral exchange rates of member countries to move within the band, the resulting macro outcome is desirable in the case of monetary and financial shocks, and also of small, transitory, short-lived, real shocks[3]. At the same time, when real shocks are large and persistent, the System still allows changes in the nominal exchange rate -beyond the flexibility provided by the band- through suitable realignments of central rates. In this regard, the survival of the EMS without major tensions in the period 1979-1987 -marked by important oil price variations and by the US deficit problem- seems to support the de facto useful macroeconomic role performed by the EMS.

In sum, although the EMS may not always provide a <u>theoretically optimal</u> exchange rate policy, it seems to provide a <u>practicaly adequate</u> exchange rate policy for its members.

Exchange rate volatility and misalignment

An alternative way of looking at the appropriate exchange rate policy is through the concepts of volatility and misalignment.

It is generally agreed that exchange rate instability is one of the most salient characteristics of the present floating exchange rate system. The cost of exchange rate instability can come in two forms: short-term volatility costs, and medium-term misalignment costs.

The first type of cost is associated with the uncertainty introduced in price signals by the short-run fluctuations of the market exchange rate. However, one would expect such costs to be rather small given the existence of hedging facilities through the forward exchange market. In fact, the available empirical evidence[4] is not conclusive regarding the trade and output effects of short-run exchange rate volatility.

In this regard, although the evidence[5] points towards major nominal and real exchange rate short-term variability reductions of intra-EMS currencies since 1979 (Table 1) this should perhaps better be considered as a small, rather than as a major economic benefit, and mainly as an illustration of the successful mechanical functioning of the System vis a vis the "snake".

Misalignment costs are much more visible and important. Given that the real exchange rate is a key price in an open economy, any sustained divergence between the market exchange rate and the fundamental equilibrium exchange rate is bound to cause very significant economic problems. As Williamson (1987) has recently pointed out, misalignment can result in large payment imbalances, misdirected international investment flows, unnecessary shifts of resources between the tradeable and the nontradeable sectors of the economy, destruction of productive capacity, and protectionist threats[6]. Indeed, few people

TABLE 1: NOMINAL AND REAL EXCHANGE RATE VARIABILITY (a)

	Variability of nominal exchange rates against EMS currencies		Variability of nominal exchange rates against non EMS currencies		Variability of real exchange rates against EMS currencies		Variability of real exchange rates against non EMS currencies	
	1974–78	1979–85	1974–78	1979–85	1974–78	1979–85	1974–78	1979–85
Belgium	11	7	18	23	12	8	19	25
Denmark	13	8	17	23	17	9	20	24
France	17	8	19	24	17	9	19	25
Germany	15	7	18	22	16	8	19	23
Italy	18	9	20	21	20	9	21	22
Netherlands	11	6	18	24	13	7	20	25
EMS average(b)	14	7	18	23	16	8	20	24
Japan	21	22	20	27	23	23	23	29
United Kingdom	17	21	19	24	18	24	21	28
United States	19	27	16	21	20	28	18	27
Non EMS average(b)	19	23	18	24	20	25	21	28

Source: Ungerer, Evans and Nyberg (1986).

(a) The variability is measured by the standard deviation (x1000) of changes in the natural logarithm of average monthly bilateral exchange rates. Numbers have been rounded.
(b) Averages of countries shown.

TABLE 2: CENTRAL PARITY REALIGNMENTS IN THE EMS

(percentage change)

	9-24-79	11-30-79	3-23-81	10-5-81	2-22-82	6-14-82	3-21-83	7-22-85	4-7-86	8-4-86	1-12-87
Belgian–Lux. Franc	0	0	0	0	−8.5	0	1.5	2	1	0	2
Danish Krone	−2.9	−4.8	0	0	−3.0	0	2.5	2	1	0	0
German Mark	2.0	0	0	5.5	0	4.25	5.5	2	3	0	3
French Franc	0	0	0	−3.0	0	−5.75	−2.5	2	−3	0	0
Irish Pound	0	0	0	0	0	0	−3.5	2	0	−8	0
Italian Lira	0	0	−6.0	−3.0	0	−2.75	−2.5	−6	0	0	0
Dutch Guilder	0	0	0	5.5	0	4.25	3.5	2	3	0	3

will negate that the overvaluation of the dollar during the eighties defies a "fundamentalist" explanation[7], and that it had significant economic costs. The behavior of the pound in 1980-81 is another recent example of misalignment.

Such developments have, however, not been apparent in EMS currencies[8]. Specifically, the tight bands established by the EMS around the bilateral central rates have prevented the exchange rate from taking off from the course dictated by the equilibrium exchange rate when this last one has not changed. On the other hand, when the fundamentals of the economy of a member country have changed, realignments have seemed to move the central rate close to the new equilibrium rate. Although some speculative capital flows have preceded each EMS realignment so far (Table 2), such realignments have most likely contributed to avoid important misaligments between member countries currencies since 1979.

In sum, the EMS performs a useful role by reducing the size of short-run, unpredictable, and self-reversing exchange rate changes, and also —and mainly— by accommodating medium-run exchange rate movements. From the Spanish viewpoint, given that about 54% of our imports, and 63% of out exports are currently with EEC countries, and given also that a very large portion of our capital flows is also with the EEC, avoiding misaligment costs through the EMS seems a rather significant benefit.

Monetary policy effectiveness and credibility

One of the traditional criticisms against a regime of limited floating like the EMS is that it implies the loss of autonomy for monetary policy[9]. The basic reason is that in such a System monetary policy has to be fully devoted to achieving the desired exchange rate target, losing therefore the potential to fight unemployment.

It is not clear, however, that monetary policy should be devoted —or can even be succesfully devoted— to systematically influence real economic variables in a world where monetary illusion tends to disappear, and where —as in the case of Spain— the unemployment problem is very much linked to structural problems like the organization of labor markets[10], etc... Monetary policy, rather, should be devoted primarily to the achievement of sustained price stability, leaving to fiscal and structural policies the job of removing the constraints that prevent the economy from creating jobs.

Viewed in this light, the key issue is then whether it is easier to control inflation through an autonomous monetary policy in the context of a floating exchange rate, or through the targeting of the exchange rate inside the EMS.

With respect to the first choice, monetary autonomy will be successful in helping to control inflation if the following conditions are simultaneously satisfied: (1) the authorities resist the temptation to accelerate money growth —in the face of given inflationary expectations[11] — so as to grow a bit more "just this period", (2) money demand and money supply functions are reasonable stable[12] (predictable), and (3) monetary policy is not severely conditioned by the financing of budget deficits or wage increases. However, it is not obvious that these conditions will be simultaneously satisfied in many countries, and particularly in a country like Spain, where the process of financial innovation is intense, and where the financing of the deficit creates important problems for the achievement of the targeted money growth rates (Table 3).

But what are the conditions for the second choice to work adequately in the pursuit of a low and stable rate of inflation?.

In principle mainly two: (1) that the foreign rate of inflation that serves to anchor domestic inflation through the maintenance of a

TABLE 3: DIFFERENCES IN ECONOMIC POLICY: EEC AND SPAIN

(in percent)

	Budget Balance(a) (% GDP)		Monetary Growth(b)		Nominal Wage Growth	
	EEC	Spain	EEC	Spain	EEC	Spain
1981	–5.3(–1.6)	–3.9(–3.1)	11.8	16.2	13.0	15.7
1986	–4.8 (0.2)	–5.7(–1.8)	10.2	11.4	6.0	8.7
1987(c)	–4.5 (0.3)	–5.0(–1.3)	10.2	12.5	5.4	6.5
1988(c)	–4.5 (0.3)	–4.9(–1.2)	8.6	8–11	4.7	5.3

Source: Commision of European Communities, Annual Report 1987-1988, and Bank of Spain.

(a) The budget balance net of debt interest payments is in brackets.
(b) Broad money. Annual average.
(c) Provisional estimates and forecasts.

stable exchange rate be lower and more stable than the national inflation rate, and (2) that the committment of the authorities to stabilize the exchange rate through the appropriate means be fully believed.

Regarding the first condition, it must be noted that if Spain were to join the EMS, the effective anchor for domestic price stability would be given by the German inflation rate. In fact, a reasonably realistic characterization of the workings of the EMS is one where Germany sets its national policy to achieve a low and stable rate of inflation, while the other EMS members peg the exchange rate vis a vis the DM[13]. Consequently, since -as shown in Table 4- German inflation is lower and more stable than Spanish inflation, the first condition for the successful control of Spanish inflation within the EMS seems to be satisfied.

Regarding the second condition, EMS membership imposes very high costs on countries that do not forcefully stabilize their exchange rate, something that will not be generally the case when exchange rate targets are pursued outside a formal System like the EMS. Clearly, if it is decided that Spain should enter into the EMS, this will by itself be enough to show how strong is the committment of Spanish authorities to exchange rate stability.

In this respect, it has been argued that exchange rate targets are more credible than monetary targets[14]. This is so because, while an excessive monetary expansion can always be justified ex post as a needed change of money targets in the presence of portfolio disturbances, exchange rate targets automatically accommodate this type of disturbances, and can only be changed for reasons which are quite visible to the public. Exchange rate targets, therefore, make "cheating" more obvious and, consequently, politically more costly. On the other hand, since central exchange rate realigments imply nonnegligible economic -as well as political- costs for the EMS members triggering them, the credibility of EMS exchange rate targets is further reinforced.

TABLE 4: INFLATION IN THE EMS

(consumer prices, annual average, in percent)

	1979	1982	1986	1987(a)	1988(a)
Belgium	3.9	7.3	1.3	1.8	2.5
Denmark	10.4	10.2	3.6	4.1	4.0
Germany	4.0	4.7	−0.5	0.6	1.8
France	10.4	11.2	2.5	3.1	2.6
Ireland	14.9	15.9	3.6	3.0	3.2
Italy	15.1	15.9	6.3	4.8	4.9
Luxembourg	5.2	10.8	0.3	0.5	2.3
Netherlands	4.3	5.3	0.2	−0.8	1.0
EMS	8.7	9.8	2.4	2.5	2.9
Dispersion index(b)	4.7	5.1	2.9	1.9	1.1
Dispersion index(c)	4.8	4.3	2.3	1.9	1.2
Spain	15.7	14.5	8.9	5.4	4.2

Source: Commision of European Communities, Annual Report 1987-1988, and Bank of Spain.

(a) Provisional estimates and forecasts.
(b) EMS-Germany differential.
(c) Standard deviation.

In turn, a country with a credible exchange rate policy can find lowering inflation more feasible and economically less painful inside than outside the System. This is so because EMS membership -by altering the incentives that policymakers have to pursue inflationary policies- can increase the credibility to the public of the anti-inflationary stance of the authorities. As is well known, when disinflationary monetary policy is more credible it works faster and with smaller output costs.

A recent body of literature has tried to rationalize the disciplinary effect of the EMS on high-inflation member countries[15]. Intuitively, if the System works such as not to let countries fully compensate the competitive losses resulting from higher inflation with an exchange rate depreciation, extra inflation will imply a permanent competitiveness loss and, therefore, lower output. That this has indeed been the case is exemplified by the strong real exchange rate appreciation of the French franc, the Italian lira, and the Irish pound vis-a-vis the German mark since the beginning of the EMS.

Within such a framework, governments have an added disincentive to play the inflation game, and this results in lower inflation without a reduction in the average output of the economy. Consequently, Spain's entrance into the EMS may not only consolidate and "lock in" the inflationary gains made so far in the last decade or so, but may also help achieving a lower and more stable inflation rate without having to bear the output costs that otherwise would emerge.

But, what is the empirical evidence on this? It is obvious that testing the credibility/discipline hypothesis is not without major complications, and -in fact- the evidence is rather mixed. While it cannot be disputed that the EMS period has coincided with a substantial reduction in inflation and inflation differentials (Table 4) of member countries, it is not clear how much -if any- of this effect to attribute to the EMS itself.

Among recent empirical studies, De Grauwe (1986) and Collins (1987) cast more than a shadow of doubt on the inflation discipline virtues of the EMS. In contrast, Giavazzi and Giovannini (1987) find some weak evidence in its support, while Ungerer et al. (1986), and Russo and Tullio (1987) more strongly support it. Another interesting study is Artis and Taylor (1987), who analyze to what extent exchange rate stability within the EMS has been purchased at the cost of increasing interest rate instability or, rather, EMS policy credibility benefits have been so large as to reduce speculative attacks on the exchange rate and, consequently, reduce interest rate instability. They find some evidence in support of the credibility hypothesis.

Without intending to give a final veredict on the available evidence, it seems reasonable to say that there are some indications that the EMS has helped member countries to be less inflationary, although it is true that this effect was probably not very significant until 1982. Indeed, the System seems to have prevented member countries from following policies of competitive devaluations like those observed in Sweden and Greece in the 1981-82 period, and from continuing with overly expansionary policies like those of France in 1981-83.

III.   SPAIN'S ENTRANCE INTO THE EMS.

Why?

As suggested by the analysis in the previous section, although the EMS is not a perfect exchange rate arrangement, it certainly constitutes an attractive alternative for a country like Spain. Moreover, it happens to be the case that our managed floating exchange rate policy of recent years has informally kept the peseta moving most of the time within a ±6% band with respect to EMS currencies[16], as shown by Figures 1 and 2. Therefore, the real issue seems to be the

Figure 1. SIMULATED DIVERGENCE INDICATOR OF THE PESETA

(January 1986 — December 1987)

(Peseta / ECU, in percent)

PESETA DEPRECIATION

2'25 %

6 %

PESETA APPRECIATION

1986   1987
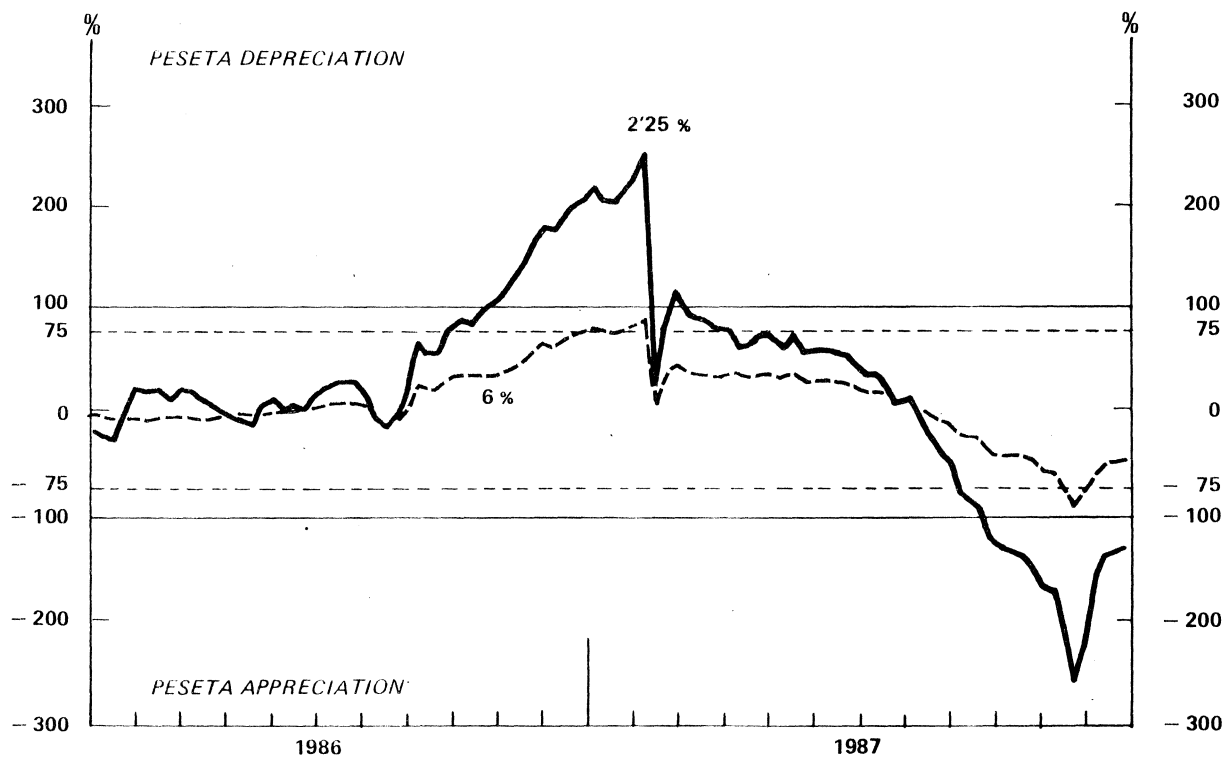
Source: Bank of Spain.
Note: The constructed divergence indicator simulates the behavior of the peseta as if it were on the EMS since
January 1986. The two lines represent the divergence indicator with the 2'25% and the 6% band. Whenever the
peseta moves by ±2'25 % (or 6 %) against all the currencies in the EMS, the appropriate divergence indicator goes
to (±100). The (± 75) straight lines represent the divergence threshold.

Figure 2. SIMULATED BILATERAL FLUCTUATION OF THE PESETA

(January 1986 — December 1987)

(in percent)
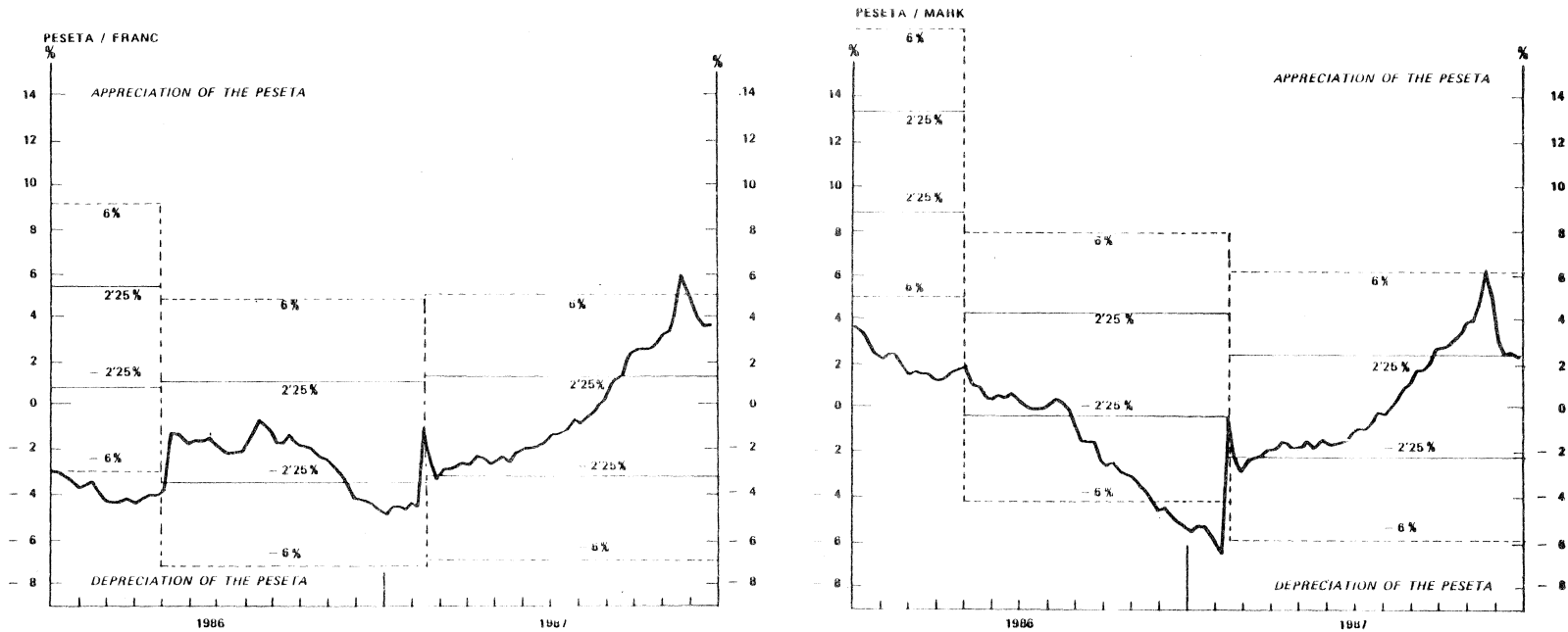
Source: Bank of Spain.

Note: The continuous straight lines represent the borders of the ±2'25 % band around computed central parities. The discontinuous straight lines represent the borders of the ± 6 % band around computed central parities.

following: why not share also the benefits that can be derived from formal adherence to the EMS rather than maintain the present statu-quo?.

Three main objections can be raised -and are often raised-against Spanish membership:

The first objection is that the entrance of Spain in the EMS would just mean buying exchange rate stability at the cost of increased interest rate instability. This would not be true, however, as indicated earlier in the paper, if importing German monetary policy helps reduce the underlying instability that current Spanish policies impose on national interest rates. Indeed, it might be expected that a stable peseta--DM exchange rate will bring future Spanish interest rates closer -on average- to German interest rates[17]. If this is the case, domestic interest rates will be lower and more stable in the future than what they have been so far (Figure 3).

The second objection is that the benefits from membership are likely to be small -given the very substantial reduction of inflation experienced by Spain in the last ten years (Table 5)- while the costs from not being able to use the exchange rate in a more discretionary manner may exacerbate the already significant unemployment problems of the Spanish economy (Table 5). Although this objection contains more than a grain of truth[18], it does not take into account that the EMS prevents the inflation gains so hardly obtained in the past from vanishing, while it also reduces the output -and unemployment- costs associated with further declines in inflation. It should also be pointed out here that nominal exchange rate changes are not very effective in influencing the real exchange rate in an economy as highly indexed as that of Spain. If the real exchange rate is regarded as an important economic variable, it should be taken into account that improvements in competitiveness can be more effectively obtained by reducing the inflation differential of the Spanish economy than by the depreciation or periodic devaluation of the peseta. In the other words, "real"

Figure 3. THREE MONTH INTEREST RATES
(in percent)
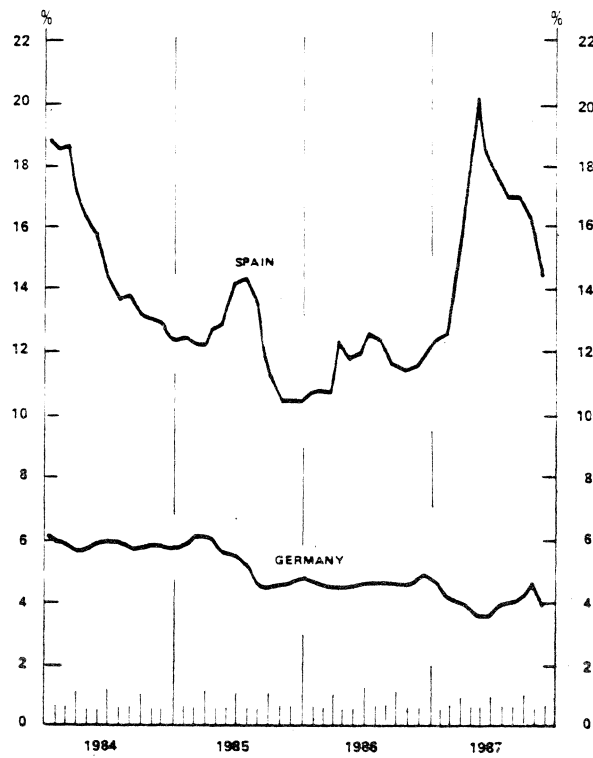
Source: Bank of Spain.
Note: The German interest rate is a Euro-rate. The Spanish interest rate is a domestic interbank rate.

TABLE 5: DIFFERENCES IN MACROECONOMIC PERFORMANCE: EEC AND SPAIN

(in percent)

	Inflation(a)		Unemployment		Current account balance (% GDP)	
	EEC	Spain	EEC	Spain	EEC	Spain
1981	12.0	14.3	7.7	14.4	−1.0	−2.7
1986	3.7	8.9	11.9	21.5	1.5	2.0
1987(b)	3.2	5.4	11.8	20.7	1.1	0.6
1988(b)	3.4	4.2	11.7	20.3	0.8	−0.4

Source: Commision of European Communities, Annual Report 1987-1988, and Bank of Spain.

(a) Consumer prices. Annual average.
(b) Provisional estimates and forecasts.

problems -like unemployment- should be fought with "real" policies -like selective fiscal policies and structural policies.

The third objection to Spanish membership is that the peseta will not be able to hold its own in a system like the EMS after the complete liberalization of intra-Community capital flows in 1992, since speculative attacks will then be unstoppable. This is, perhaps, the most serious objection of the three, and this is why the System has recently been reinforced following the Nyborg Accords[19]. Nevertheless, it must be taken into account that if speculative activity mainly comes from policy divergences between Spain and the other EMS countries, the incentive to equalize inflation rates without capital controls will be stronger than with capital controls. As a result, policy coordination will be fostered under the new situation, and smaller, less frequent realignments will be required. Moreover, by making speculative attacks less likely, capital controls will not be so much needed either to defend the peseta[20].

In sum, although the final decision regarding EMS membership should only be taken after the authorities have carefully weighted the costs and benefits of integration, it is fair to say that EMS participation is not just a very attractive option, but also an option that needs to be exercised to achieve the full economic integration of Spain into the EEC[21].

When and how?

In the hypothetical case that the authorities decide that Spain should join the EMS, it is also important to analyze when to join and how to join. Among the conditions to be satisfied by the Spanish economy prior to entering the EMS, two stand out as particularly important.

The first one refers to the <u>inflation differential</u> between Spain and the EMS that should be achieved prior to entering the System. In fact, one would like the inflation differential between Spain and Germany (the lowest inflation country in the EMS) to be small enough so as not to trigger an immediate speculative movement against the peseta. This differential has been 9.4 points in 1986, and is expected to be 4.8 points in 1987, and 2.4 points in 1988 (Table 4). Indeed, by 1988 Spain's inflation differential vis-a-vis Germany could be even smaller than that of Italy. Therefore, judging by the Italian experience, Spain's inflation could be small enough for the country to join in 1989. It is not clear, however, that Spain should directly be put on the 2.25% band rather than on the 6% band, at least during a transitory period in which Spain will narrow down further the inflation differential.

The second condition is related to the process of <u>opening up the trade balance</u> that the Spanish economy is undergoing since January 1st, 1986 as a result of integration in the EEC. As explained in Section II, in the face of major changes in the structure of effective tariffs and subsidies, and of important reductions in quotas and other non-tariff trade barriers, it is desirable to retain some degree of flexibility for the exchange rate so as to help achieve the required relative price changes, and intersectoral reallocation of resources between the tradeable and nontradeable sectors. At the same time, it seems reasonable and practical to wait until the uncertainties in the balance of payments caused by this process have been substantially reduced so as to have a better idea of what is the peseta exchange rate that can be realistically sustained in the EMS.

As indicated earlier, by 1989 our inflation differential vis-a-vis Germany will be small enough to allow Spain to join the EMS. On the other hand, by this year Spain will have got rid of many of the quantitative restrictions to EEC trade existing before January 1st, 1986, and also of about half of the agreed reduction in the 14% basic tariff (Table 6). The key issue is therefore if the 6.65 basic tariff

TABLE 6: TARIFF REDUCTION SPAIN-EEC

March	1986	10%
January	1987	12.5%
"	1988	15%
"	1989	15%
"	1990	12.5%
"	1991	12.5%
"	1992	12.5%
"	1993	10%

_____

Total 100%

Source: Viñals (1987)

points that still have to be eliminated after 1989 are consistent with the sustainability of the peseta within the 2.25%, or the 6% band. Although this is a complex issue, it may not be too much off the mark to say that a transitory 6% band for the peseta will probably be sufficient to accommodate any remaining trade adjustments.

In sum, both the inflation and the trade opening conditions indicate that Spain could probably join the EMS as soon as 1989 if the transitory 6% band is granted to the peseta. It is doubtful however that the 2.25% band will be sufficient to guarantee a successful performance of the Spanish economy, specially in light of the tariff reduction process that still will remain after 1989. Consequently, if nothing but the narrow band is granted, Spain should perhaps not rush into the EMS but rather wait until the remaining trade adjustment process is small enough to be accommodated by the 2.25% band. Finally, besides all these technical reasons it is also politically clear that Spain will not be willing to get in with the narrow band as long as any EMS country still has the wide band.

A final issue concerns the exchange rate at which the peseta should join the EMS. Although this is something that can only be precisely answered at the time of joining, there one two points that should be taken into account. The first, is that the peseta should be set at a rate that does not endanger the competitiveness of the Spanish economy. The second, is that to preserve the credibility of the anti-inflationary stance of the authorities, the peseta should not be set at a rate so comfortable that it can withstand substantial inflation without hurting the competitiveness of the Spanish economy.

Accordingly, the peseta should be set at an exchange rate that balances competitiveness and discipline/credibility considerations. A possible solution, suggested also by Artis and Miller (1986) for the UK pound, consists on setting a central peseta exchange rate that is appreciated enough to show the anti-inflation commitment of the

authorities, while setting the _actual_ peseta exchange rate at the top of the 6% band to guarantee the initial competitiveness of the Spanish economy.

Figure 4 graphically illustrates the relative position of the peseta-DM central exchange rate (point A), of the actual exchange rate (point B), and of the final actual and central exchange rate (point E) to which both of the above should converge at the end of the transitory period.

IV. ECONOMIC POLICY STRATEGY

As it has been stressed in Section II, Spanish entrance into the EMS is likely to have important consequences for economic policy and, specially, for monetary policy. In this section we explore in certain depth how should Spanish monetary policy strategy and tactics be revised once inside the System to achieve the necessary stability of the peseta exchange rate. In this regard, there are two issues which seem particularly important.

The first is that, although the peseta has been actually moving within a 6% band vis-a-vis EMS currencies in recent years, this has been achieved mainly through foreign exchange _intervention_ operations and capital controls, rather than through policy coordination, as suggested by the wide interest rate differential in Figure 3. Nevertheless, once in the EMS, it would be desirable to make policy coordination the prime weapon for exchange rate stability. In other words, monetary growth and exchange rate goals should be mutually consistent.

The second important issue to be addressed is that although monetary policy can very substantially contribute to achieving exchange rate stability, it cannot -should not- be alone in doing the job. In

FIGURE 4. THE PESETA—MARK EXCHANGE RATE
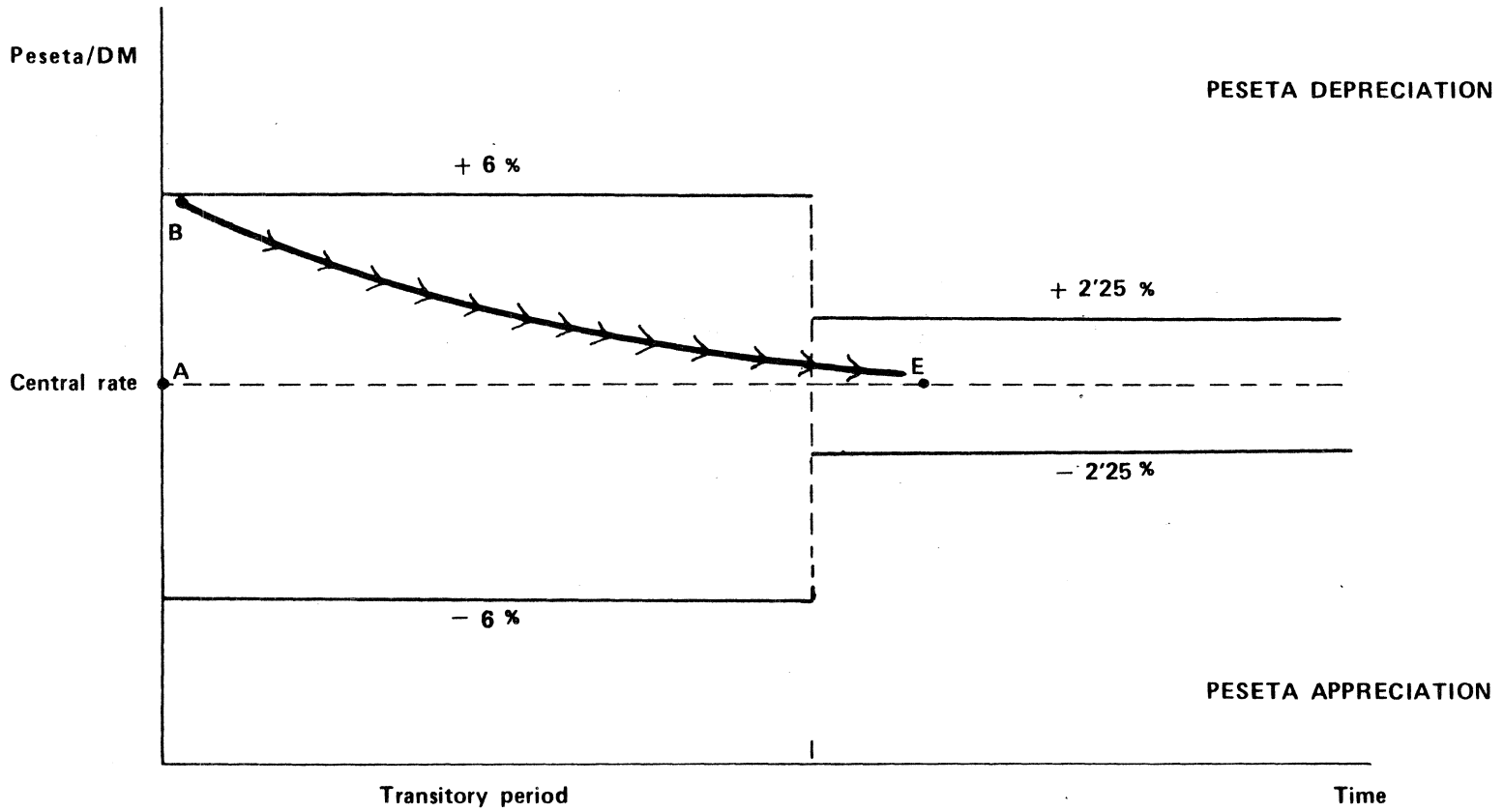
other words, if Spanish fiscal policy is misaligned with respect to the fiscal policies followed by EMS countries (and most notably by Germany), monetary policy will also have to get out of line to guarantee exchange rate goals. While in the short-run even this inappropriate mix of monetary and fiscal policy can be consistent with exchange rate targets, the situation is not sustainable. Consequently, both monetary and fiscal policy have to share the burden of guaranteing exchange rate stability through intra-EMS policy coordination.

Having said this, is what follows we analyze a bench mark case that shows how monetary and fiscal policy could be set to insure the stability of the peseta both in the short and the long-run. Figure 5 provides a summary of the main elements of this policy proposal.
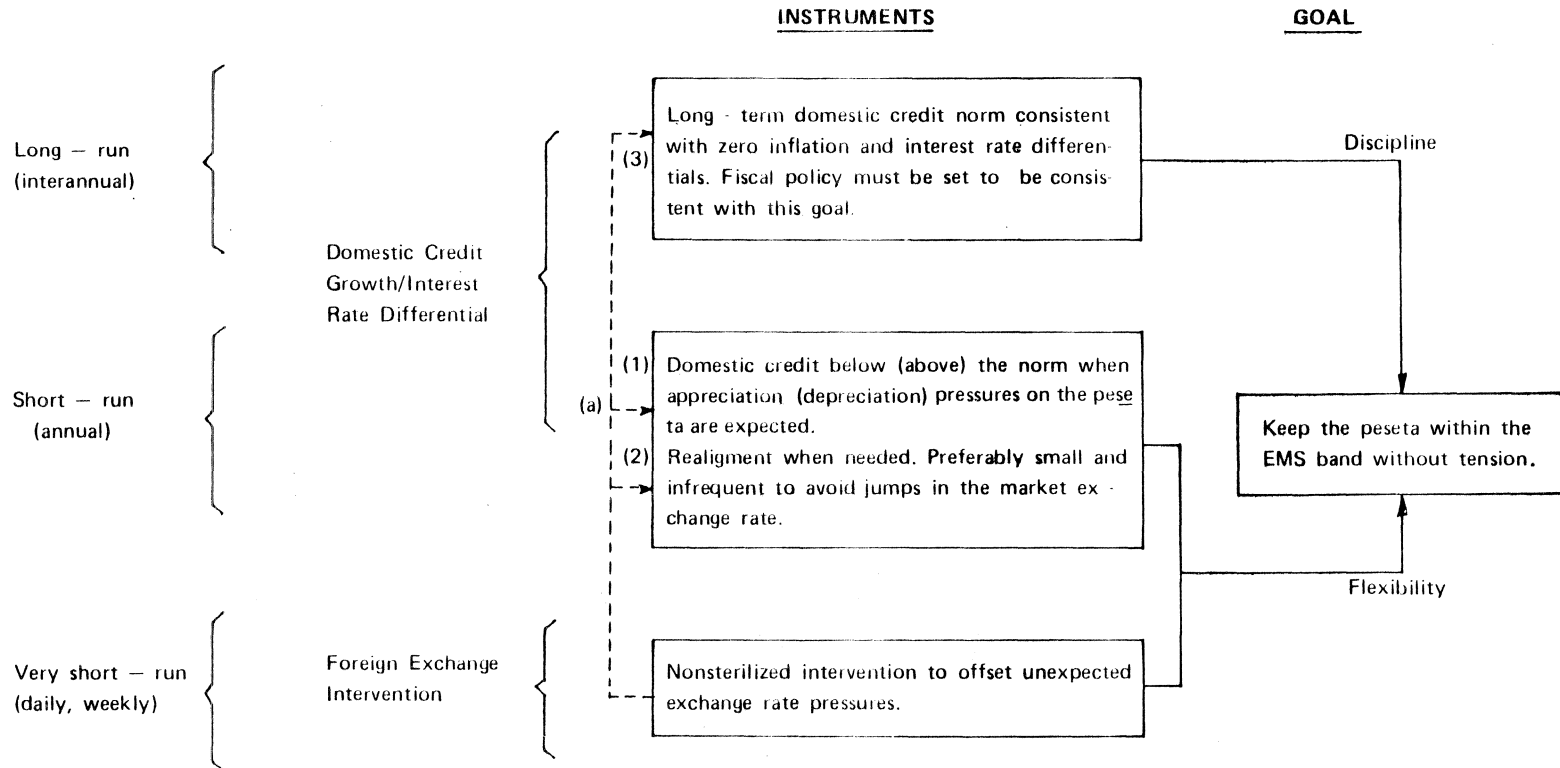
The long-run

Although the EMS is much more complex than a purely fixed exchange rate system, there are certain basic conditions that have to be simultaneously satisfied in the long-run in the context of free intra-Community capital flows: (a) equalization of national interest rates, (b) equalization of national inflation rates, and (c) external balance.

These conditions necessarily imply that Spanish money growth (m) should be set on average to finance domestic potential output growth (n) at the chosen inflation rate (p). Taking Germany as the anchor for price stability in the System, this means that average domestic monetary growth should be approximately equal to the sum of German inflation (p*) plus the potential real income growth of the Spanish economy times the long-run income elasticity of money demand (k). That is:

(1) $m = p^* + k.n$

At the same time, since in the long-run the current account balance and

Figure 5. MONETARY AND FISCAL POLICY FOR EXCHANGE RATE STABILITY

INSTRUMENTS

GOAL

Long — run
(interannual)

Short — run
(annual)

Very short — run
(daily, weekly)

Domestic Credit
Growth/Interest
Rate Differential

Foreign Exchange
Intervention

(a)

(3) Long - term domestic credit norm consistent with zero inflation and interest rate differentials. Fiscal policy must be set to be consistent with this goal.

(1) Domestic credit below (above) the norm when appreciation (depreciation) pressures on the peseta are expected.

(2) Realigment when needed. Preferably small and infrequent to avoid jumps in the market exchange rate.

Nonsterilized intervention to offset unexpected exchange rate pressures.

Discipline

Keep the peseta within the EMS band without tension.

Flexibility

(a). The observation of foreign exchange developments may lead to adjustments in short — run domestic credit growth (1), to realignments (2), or to changes in the long — run domestic credit growth norm (3).

the overall balance of payments must be in equilibrium, domestic credit growth (c) should be enough to achieve the desired money growth rate:

(2)   c = m.

Just to give an example of the orders of magnitude involved, if Spain's potential output is realistically expected.to grow between 2 and 4%, and if German inflation oscillates between 1 and 2%, while the long-run income elasticity of money demand[22] is approximately 1, average money growth in Spain should be roughly between 3% and 6%. If we compare this long-run norm with the actual money growth figures in Table 3, it is clear that the long-run sustainability of the peseta in the EMS needs further doses of monetary discipline.

However, as recent theoretical developments[23] have made clear, the desired long-run monetary growth rates will only be achieved if fiscal policy is set consistently. That is, when the real interest rate is higher than the real growth rate of the economy, fiscal deficits[24] cannot exceed certain magnitude if the public sector is to remain solvent. In fact, the long-run fiscal solvency condition can be formally expressed as:

(3) $f = (r-n)b - (p+n).h$

where f is the budget balance ($f \gtrless 0$), b is public debt, and h is money base, all as a fraction of income.

This familiar equation states that for the public sector to be solvent in the long-run (ie. for b and h to be bound), any sustained primary fiscal deficit (f<0) must be financed by the revenue collected from the inflation tax on bondholders at the rate [-(r-n)], and on base-moneyholders at the rate [(p+n)]. Therefore, with (p=p*, r=r*,n,b,h) given in the long-run, equations (1)(2) and (3) indicate that there is an (m,f) combination that is internally consistent. In other words, both

fiscal and monetary policy must be set to insure the long-run stability of the exchange rate (See Figure 5).

Specifically, if we assume a one percentage point differential between the real interest rate and the real growth rate of Spain, the same inflation and real growth rates as before, plus the condition that current public debt and base money (as a fraction of GDP) be kept constant at their 1986 values, the computations shown in Table 7 indicate that the maximum sustainable primary structural budget deficit should not exceed in Spain 0.9% of GDP in the most optimistic growth scenario. Since the primary deficit was 1.8% of GDP in 1986, and since about two thirds of the deficit are of a structural[25] nature, the actual primary structural deficit is around 1.2%; above the maximum sustainable figure.

Summarizing, while it seems that the EMS may help its members achieve more monetary discipline, its effect on fiscal discipline is a lot weaker. Therefore, as the above example makes clear, once in the EMS, Spain will need to establish also more fiscal discipline to guarantee the long-run stability of the peseta in the System.

The short-run

Although the long-run monetary and fiscal norms must be satisfied by the economy on average, there should also be some short-run monetary and fiscal flexibility to guarantee exchange rate stability in the presence of macroeconomic shocks.

For example, if at the beginning of the year the economic authorities foresee certain domestic or foreign shocks that tend to take the exchange rate away from its equilibrium level, the appropriate thing to do would be to modify the mix of annual monetary and fiscal policy in line with this goal. If the shocks are transitory in nature, and do not

TABLE 7: MAXIMUM SUSTAINABLE PRIMARY STRUCTURAL BUDGET DEFICIT

(in percent of GDP)

		Real Growth (in percent)	
		n = 2	n = 4
Inflation (in percent)	p = 1	0.3	0.7
	p = 2	0.5	0.9

Source: Bank of Spain.

Note: Calculated from equation (3) in the text, assuming r-n=1, and taking b = 26.87 and h = 19.31 (1986 values). Numbers have been rounded.

change the underlying values of potential growth, German long-run inflation, etc.., on which the calculations of the long-run monetary and fiscal policy norms are based, there should just be a transitory deviation of monetary and fiscal policy from their norms. Only when changes are fundamental -in the sense of affecting the above mentioned underlying values- will it be advisable to also revise the norm, and/or seek a realignment of the currency (See Figure 5). In other words, annual exchange rate stability should be mainly guaranteed by suitable policy adjustments (with occasional realignments), rather than by foreign exchange market intervention operations, as is the case now in Spain.

Regarding the relative sensitivity of the exchange rate to monetary and fiscal policy in the short-run, recent estimated equations for the peseta-mark exchange rate[26] seem to suggest that a 1% change in Spanish money growth during one quarter leads to a more than proportional depreciation -2.4%- of the peseta within the same quarter, and to a 1.2% depreciation within a year. On the other hand, non-monetized budget deficit increases lead to a minor appreciation of the peseta[27]. Consequently, monetary policy (ie. interest rate policy) seems to be the more flexible and powerful weapon to use to stabilize the peseta in the EMS in the short-run. Still, it would be desirable to improve the present quantitative knowledge about the effects of monetary policy on the peseta exchange rate.

The very short-run

In principle, the monetary and fiscal strategy described above could be expected to be sufficient to maintain exchange rate stability. It is a fact of life, however, that foreign exchange markets are continuously hit by all sort of "news" which, in turn, tend to alter exchange rates. In that case, it becomes necessary for the monetary authorities to intervene to keep the exchange rate on target. Consequently, (non-sterilized) intervention operations have an important role to play in guaranteing the stability of the peseta in the EMS.

In this regard, it seems that a reasonable rule would be to automatically intervene in the foreign exchange market to offset exchange rate pressures, and only think of altering monetary policy if tensions are strong and persistent[28]. Indeed, speculative capital flows will be smaller –and so will be the required policy changes– the stronger is the committment shown by the authorities to defend the parity. Only in the case of a shock that significantly changes the fundamentals of the economy will a realignment be needed (See Figure 5)[29].

But, will this kind of strategy make the intervention by Spanish authorities in the foreign exchange market even larger once the country is in the EMS? The answer is that this is not likely to happen as long as the policy recommendations made so far in this section are followed. Indeed, it is even posible that - once in the EMS - Spain will reduce the size of intervention operations as a result of the improved inner consistency between monetary and fiscal policy, and exchange rate targets.

V. CONCLUSIONS

As a new member of the EEC since 1986, Spain has also the option of joining the EMS. This paper has explicitly focussed on the issue of potential Spanish participation in the System and, in so doing, has come up with tentative answers to the following questions: why could it be in the interest of Spain to belong to the EMS?; what are the preconditions that sould be satisfied by the Spanish economy for a smooth entrance into the System?; and, what are the main economic policy changes that are likely to occur in Spain as a result of EMS membership?.

Several of the most important conclusions obtained are the following:

First, although the choice of exchange rate policy does not, by itself, alter the external restrictions to which the economy is subject, it does nevertheless affect the constraints within which economic policy operates. In this regard, Spain's entrance into the EMS may help rationalize and make economic policy more credible: by modifying the perceived tradeoffs of alternative actions by the government, by reducing the incentives that policymakers have to pursue inflationary policies, and also by allowing the authorities to introduce further complementary doses of fiscal and wage discipline. As a result, Spain's entrance into the EMS may not only consolidate and "lock in" the disinflation benefits made so far in the last decade, but may also help achieving a lower and more stable inflation rate in the future without having to bear the output costs that otherwise would emerge.

Second, while the EMS may not always provide the theoretically optimal exchange rate policy, it seems to provide a practically adequate exhange rate policy for its members. Specifically, the EMS performs a useful role by reducing the size of short-run, unpredictable, and self-reversing exchange rate fluctuations, and also -and mainly- by accommodating medium-run exchange rate movements. Since about 54% of Spanish imports, and 63% of Spanish exports are with EEC countries, and since a large portion of registered capital flows is also with the EEC, avoiding exchange rate misalignment costs through the EMS seems a rather significant benefit.

Third, by 1989, Spain's inflation differential vis-a-vis Germany, as well as the remaining part of the trade balance opening process to the EEC, will be small enough to allow Spain to join the EMS with the transitory 6% band. However, if nothing but the narrow 2.25% band is granted to the peseta, Spain should perhaps not rush in the EMS but rather wait until the remaining trade adjustment process is small enough to be accommodated by the 2.25% band.

Fourth, the central peseta-DM exchange rate should be set so as to give credibility to the anti-inflationary stance of the authorities.

On the other hand, the <u>actual</u> peseta-DM exchange rate should be put at the top of the transitory 6% band to insure the initial competitiveness of the Spanish economy.

Fifth, the proper strategy to insure the stability of the peseta in the EMS is through the pursuit of suitable <u>monetary</u> and <u>fiscal</u> policies both in the <u>short</u> and the <u>long-run</u>. Rather than playing a central role, foreign exchange intervention operations should play a supporting role, specially in the very short-run.

Sixth, while in the short-run monetary policy is powerful enough to achieve the stability of the peseta even if fiscal policy in Spain is too expansionary, this does not make such macro policy mix desirable. Moreover, since the EMS does not only constraint <u>current</u> policies but also <u>future</u> policies, exchange rate stability will not be sustainable in the long-run unless the fiscal deficit is compatible with a rate of monetary growth consistent with a zero inflation (and interest) differential between Spain and Germany. This, in turn, may call for additional reforms to foster fiscal discipline in Spain starting at the same time as EMS membership.

Finally, although it is true that the EMS is not without problems and that it probably needs to be reformed in light of the coming of the European internal market, membership is a necessary condition to achieve the <u>full economic integration</u> of Spain into the EEC. It could be thought, perhaps, that it would be advisable for Spain to postpone entrance until these reforms take shape. However, it would be desirable for Spain to participate as an EMS member in the process of negotiating such reforms in order that the Spanish position about the future of the System be taken into account.

Notes

1. Although Greece and the United Kingdom have their currencies in the ECU and, therefore, are technically in the EMS, they are not subject to the discipline imposed by the exchange rate mechanism (ERM).

2. When realigments are small enough, changes in the central rate will not be accompanied by jumps in the market rate on the day of realignment and speculators will not be rewarded.

3. See, among others, the papers by Henderson (1985) and Marston (1985a) on the issue of optimal exchange rate policy. In Marston (1985b), it is indicated that in an exchange rate union like the EMS the adjustment to asymmetric financial disturbances may be better with some exchange rate flexibility. This may be a reason why major dollar-mark tensions -an asymmetric disturbance- have often led to EMS realignments. Still, exchange rate fixity would be preferable with symmetric financial disturbances.

4. While the IMF (1983) survey study finds no evidence of the effects of exchange rate volatility on trade flows, the studies by Cushman (1986) and De Grauwe and Verfaille (1987) find some effect.

5. Table 1 shows a reduction in the variability of total movements in nominal and real exchange rates within the EMS. These findings are confirmed by the more sophisticated tests of Rogoff (1985b), Gros (1987a), Artis and Taylor (1987), and Russo and Tullio (1987).

6. See also the study by Baldwin and Krugman (1986) on the exchange rate hysteresis effect.

7. The recent paper by Frankel and Froot (1986) explains the behavior of the dollar in the 1980s as an irrational speculative bubble.

8. De Grauwe and Verfaille (1987) support this conclusion.

9. Monetary policy will be completely ineffective to influence real variables when there is perfect substitutability between domestic and foreign assets, and perfect capital mobility; or, alternatively, when prices are fully flexible.

10. For the role of real rigidities in Spanish labor markets see Dolado and Malo de Molina (1985), and Viñals (1983, 1986).

11. This is the well-known problem of dynamic inconsistency of optimal policies studied by Kydland and Prescott (1977), and by Barro and Gordon (1983a, 1983b). While governments think they can get away with playing the inflationary game, in fact, people's expectations adjust so that, on average, real output is where it would be without the expansionary policies while inflation is higher.

12. This condition is stressed by Artis and Miller (1986).

13. Collins (1987) examines the variety of different theoretical models of the EMS that result depending on the different assumptions made about the degree of cooperation and symmetry of the system.

14. See Giavazzi and Giovannini (1987) for a more complete discussion of the credibility issue.

15. See, among others, Rogoff (1985a), Collins (1987), Giavazzi and Giovannini (1987), Giavazzi and Pagano (1987) and Melitz (1987).

16. The simulations behind Figures 1 and 2 have been kindly provided by Gonzalo Gil. The method used to make these simulations is described in Gil (1985).

17. The evidence in Artis and Taylor (1987) suggests that this may indeed be the case. Even so, it is likely that national short-run interest rates will oscillate quite a bit in pre-realignment periods; oscillations that will be smaller -relative to those of Eurorates- the more intense are national capital controls.

18. Here we criticize this as an objection to membership. It is true, however, that this may be a valid reason for postponing membership as discussed later on the paper.

19. It is true, nevertheless, that the extreme austerity of German fiscal policy may act as a brake on the real growth of other EMS countries. In such case, a more expansionsary fiscal stance in Germany would be desirable.

20. For a contrast of views about the likely effects of removing capital controls see Rogoff (1985b), Driffill (1987), Gros (1987b), Gros and Thygesen (1987), Obstfeld (1987), Padoa-Schioppa (1987), Wyplosz (1987), and Viñals (1988). The last paper mentioned defends the need to make reforms that facilitate the full coordination of national economic policies to preserve exchange rate stability under the new circumstances.

21. The issue of Spanish membership has been discussed, among others, by Gil (1985), Eguidazu (1985), Kessler (1987), and Viñals (1987). The recent book published by Círculo de Empresarios (1988) gathers a useful set of views on the subject.

22. See the recent estimates in Dolado (1988).

23. See, for example, the pioneering article by Sargent and Wallace (1981).

24. Specifically, primary structural budget deficits.

25. See Raymond-Bara (1983) for an econometric estimation of the cyclical and structural components of the Spanish budget deficit.

26. Here we take the estimates in Viñals and Domingo (1987).

27. The complexities of the effects of fiscal policy on the exchange rate and the current account are discussed in Cuddington and Viñals (1986a, 1986b), and Viñals (1986).

28. This strategy is the one recommended by the Working Group on Exchange Rate Market Intervention.

29. Gros and Thygesen (1988) forcefully make this point.

30. These reforms are discussed in Viñals (1988).

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