

# SPAIN'S CAPITAL ACCOUNT SHOCK

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## ABSTRACT

### Spain's Capital Account Shock\*

The purpose of this paper is twofold: it analyses how far the external opening-up process of the Spanish economy that started with its integration into the EEC in 1986 has led to a higher effective degree of capital mobility; and it examines what kind of capital flows, exchange-rate pressures and monetary policy effects can be expected once capital controls are eliminated by 1993. The results suggest that, in spite of the extensive network of legal capital controls prevailing in Spain, the effective degree of short-term capital mobility – measured by covered interest-parity deviations – has in fact been lower since Spain's entry into the EEC than before. It is the case, moreover, that although capital outflows are more restricted legally than inflows, controls are at present binding for short-run capital inflows but not for outflows. Finally, it is also found that the disappearance of capital controls by 1992 will make it impossible to pursue money and exchange rate targets simultaneously. It will thus be necessary for the Spanish macroeconomic policy-mix to be altered in the direction of reducing interest rate and inflation differentials vis-à-vis other EMS countries.

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Keywords: capital account, capital mobility, interest rate differential, arbitrage

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## NON-TECHNICAL SUMMARY

Spain's integration into the European Community, which started in January 1986, will lead to the full opening up of the current and capital accounts of the balance of payments by the end of 1992. This paper focuses on the capital account and addresses the following questions: first, how far recent external liberalization of the trade account associated with the entry of Spain into the EC has been accompanied by an increase in the effective degree of capital mobility; and second, what sort of macroeconomic effects are likely to occur following the elimination of all remaining capital controls by the end of 1992.

The second section of the paper gives a brief overview of the reasons why exchange controls have typically been used in Spain for the last fifty years and analyses the most important economic characteristics of the present controls. Although these are controls on both long- and short-term capital flows, they are nowadays stricter on the latter. Moreover, controls on capital outflows are more numerous and stricter than those on inflows.

The third section looks at the impact of existing controls on capital flows both before and after Spain's entry into the EC. By measuring deviations from interest-rate parity, it is found that prior to EC entry, effective short-term capital mobility has been much higher than previously believed. Moreover, short-term effective capital mobility has been reduced following the entry of Spain into the EC, especially since 1987.

It must be pointed out, however, that controls have been binding since 1987 only on inflows but not on outflows, given the very substantial interest rate differentials favouring peseta-denominated assets. These differentials arise from a mix of easy fiscal and tight monetary policies. They required the introduction of controls on short-term capital inflows to avoid an excessive appreciation of the peseta or, alternatively, a domestic monetary overflow.

The simple Mundell-Fleming model indicates that as the degree of capital mobility increases, so does the effectiveness of fiscal policy relative to monetary policy in countries with pegged exchange rates. Since the peseta is now formally inside the European Monetary System, it can be assumed that an increase in the degree of capital mobility will make Spanish monetary policy less powerful – and fiscal policy more powerful – in affecting final domestic variables. Clearly, once capital controls are fully removed, Spanish authorities will find it impossible to achieve money and exchange rate targets simultaneously, so that domestic inflation objectives and exchange rate stability may not be so easily reconciled as in the current policy framework. Without capital controls, domestic and foreign interest rates will have to be closely linked, especially inside the EMS, which means that fiscal policy should be tighter than nowadays so as to facilitate

lowering domestic interest rates. Consequently, while it seems to be true that the removal of capital controls will lead to a loss of effectiveness of monetary policy in Spain, it may also have favourable results regarding the effectiveness of fiscal policy, and thus help achieve lower and more stable interest rates.

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## INTRODUCTION

Spain's entry to the EEC implies both the opening up of the trade and the capital accounts of the balance of payments. A major concern for Spanish policy-makers is to find out whether the major problems associated with this process are likely to come, mainly, from the opening up of the former or the latter<sup>1</sup>.

The paper has two objectives: First, to describe the system of capital controls in Spain prior to EEC entry in 1986 and to analyse its effective economic impact; second, to assess the likely consequences of the relaxing of controls envisaged in the 1986 Accession Treaty and in the recently approved EC Directive scheduling the complete elimination of controls by 1993. Capital controls have a long-standing tradition in Spain and are widely perceived to be a key structural feature of the economy. Therefore, it is necessary to have a rough idea of how their elimination may affect the autonomy of macroeconomic policy and future economic performance as and when full commercial integration exists between Spain and the rest of the EEC.

The paper is structured as follows: Section I gives a brief overview of the reasons often given to justify capital controls such as those existing today in Spain. Section II describes the current system of capital controls both at the time of EEC entry and thereafter. Section III examines how binding short-term capital controls in the 1982-1985 and in the 1986-1989 periods have been. Section IV presents a set of international comparisons. Section V assesses what kind of capital flows, exchange rate pressures and monetary policy effects can be expected once capital controls are completely eliminated by 1993. Section VI summarises the conclusions and policy implications.

### I. THE LOGIC OF CAPITAL CONTROLS

The origin of the Spanish system of capital controls dates back to the autarkic policy imposed by the authorities after the Civil War in 1939. Although the country started to open up to foreign

competition with the adoption of a package of reforms in 1959, it was not until the late seventies and, most importantly, until Spain's entry in the EEC in 1986 and the passing of recent EC legislation that the structure of capital controls has begun to be dismantled.

Since the use of capital controls in Spain has been - and still is - significant, it is important to consider the economic reasons for this. In this regard, one should start by pointing out the desirability of free capital flows in a world without distortions. As the literature on intertemporal open economy models demonstrates<sup>2</sup>, free capital mobility allows domestic residents to optimally reallocate resources over time so as to achieve the desired time path of consumption. Consequently, in an optimal world with perfectly functioning markets and fully flexible prices and wages, capital controls have no place. In reality, however, things may be quite different. In fact, both the short-run stickiness of wages and prices and other distortions may well explain why exchange controls have been and are still used by some countries. Some of the reasons often used to justify capital controls are the following<sup>3</sup>:

1. From a standard macroeconomic viewpoint, capital controls are very often used by countries pursuing pegged exchange rate policies, like Spain did until 1974, and again after 1985. As is known, if there are no impediments to capital mobility, short-term domestic interest rates move in line with foreign interest rates and with the expected rate of change of the currency. Moreover, in the absence of capital controls, the expectation of a discrete devaluation (revaluation) in a fixed or quasi-fixed exchange rate regime leads to significant increases (reductions) in domestic short-term interest rates, so that holders of domestic assets are adequately compensated for the expected capital losses (gains) arising from the change in the parity exchange rate. In these circumstances, policymakers may be tempted to use capital controls to avoid a high variability of short-term interest rates, preventing therefore disruptions in the term structure of interest rates. At the same time, if a significant portion of the budget deficit is financed by short-term debt, capital controls may help to keep the cost of debt relatively stable, and therefore improve the budget.

As is acknowledged, achieving simultaneously exchange rate targets and interest rate (or money) targets is only possible- in the presence of perfectly substitutable assets- by using capital controls. Consequently, capital controls are a way of reconciling the domestic and external goals of the authorities. Although this line of reasoning is not well grounded on explicit welfare criteria it is, nevertheless, one that it is very often used by policy-makers.

2. In a world of free capital mobility, the foreign exchange market can often be subject to strong speculative pressures. These are sometimes justified by the evolution of economic fundamentals, and sometimes take the apparent form of speculative bubbles. It is by now a well-established result that when the authorities pursue a policy of fixed exchange rates, speculative attacks lead to balance-of-payments crisis, with foreign reserves being depleted once speculators are convinced that the currency will be devalued<sup>4</sup>. Capital controls may be useful in such instances by limiting the amount of speculative capital and therefore avoiding dramatic foreign exchange losses<sup>5</sup>. If the speculative attack does not reflect a problem of economic fundamentals, capital controls help to avoid a balance-of-payments crisis or a devaluation which is not warranted by those fundamentals. If, on the other hand, the speculative attack is justified by economic fundamentals, capital controls may still perform the useful function of preventing balance-of-payments crises while policies are changed in the appropriate direction or, alternatively, while the exchange rate is adjusted so as to be consistent with the unchanged policies.

In cases where the authorities let the exchange rate fluctuate and the foreign exchange market is subject to speculative bubbles which are not related to fundamentals, capital controls may also help avoid socially costly exchange rate misalignments which divert the allocation of resources from the most productive uses. Even when foreign exchange markets are efficient, the exchange rate may still overshoot its long-run equilibrium level following monetary and financial shocks, due to the slow adjustment of goods market prices. If too much variability in the nominal and real exchange rate is judged to be damaging for economic decisions in the production and

consumption spheres, capital controls may reduce or eliminate the extent of nominal and real exchange rate overshooting<sup>6</sup>.

3. From a "second best" point of view, there may be market distortions associated with the tax system or banking laws leading to capital flows which merely seek to escape from the national legal system, even if the social rate of return on investment is higher at home than abroad. Such divergences between private and social costs, both from a static or dynamic (infant industry type) viewpoint may justify using capital controls when "first-best" policies are infeasible<sup>7</sup>.

4. Lastly, the existing literature on the order of economic liberalisation suggests that it may be advisable not to get rid of capital controls before the trade balance is substantially opened. Otherwise, the relatively faster speed of adjustment in assets markets relative to goods markets may cause significant short-term capital flows and exchange rate pressures that might jeopardise the whole liberalisation process<sup>8</sup>.

All of the above reasons have been -at different times- invoked to justify the system of Spanish capital controls. It is nevertheless important to remember that even permanent controls have only temporary effects, very much as safety-belts are only useful when there is a collision.

## II. THE STRUCTURE OF LEGAL CAPITAL CONTROLS IN SPAIN

As already mentioned in the previous section, Spain has had capital controls for the last fifty years. Broadly speaking, at the time of EEC entry, the Spanish network of capital controls had two main features. First, although controls were imposed both on long-term and short-term capital flows, they were much stricter on short-term capital flows. Second, although there were controls both on inflows and outflows, the latter were more numerous and stricter than the former, giving an asymmetric bias which favoured inflows<sup>9</sup>.

These features of Spain's system of capital controls are attributable to the almost chronic deficit of the trade and current accounts of the balance of payments -shown in Table 1- which had to be



Table 1: SPAIN'S EXTERNAL ACCOUNTS 1964-1985

(as a percent of GDP)

	<u>1964-1973</u>	<u>1974-1985</u>	<u>1964-1985</u>
Trade balance (a)	-10.0	-5.7	-7.7
Current account balance (b)	-0.3	-1.4	-0.9

Source: Banco de España.

(a) Real trade balance as a function of real GDP.

(b) Nominal current account balance as a function of nominal GDP.

financed by autonomous private capital flows if scarce (until recently) foreign reserves were not to be depleted. The uneven performance of the Spanish economy in the recent decades, coupled with the ultimately unsustainable former political system, made capital outflows more likely than inflows. That led the authorities to maintain stricter controls on capital outflows than inflows, and specially on short-run outflows.

Specifically, at the time of Spain's entry to the EEC: (a) direct investment was already substantially liberalised both for inflows and outflows; (b) real estate investment was much more liberalised for inflows than outflows; (c) portfolio investment was much more liberalised for inflows than outflows; (d) short-term capital outflows were more restricted than inflows; (e) commercial loans to non-residents were liberalised up to one year maturities, while loans to residents were only liberalised up to 90-day maturities; (f) financial loans to both residents and non-residents were severely restricted<sup>10</sup>.

Since then, most of the above-mentioned capital controls -and specially those on short-term flows- have started to be gradually relaxed in accordance with the clauses of the Accession Treaty. There has, however, been an exception. In 1987 and 1988 controls on inflows were re-introduced in order to stem the entry of massive short-term foreign capitals attracted by the very high domestic nominal interest rates and the favourable outlook for the peseta. In any event, by December 31, 1992 Spain will have completely dismantled the current network of capital controls in accordance with the recent EC Directives aimed at restoring free capital mobility in the Community. The Spanish economic authorities will only be able to apply safeguard clauses on short term capital flows under very restrictive criteria following prior authorisation by the Commission, and for a maximum duration of six months<sup>11</sup>.

### III. HOW BINDING HAVE CONTROLS ON SHORT-TERM CAPITAL FLOWS BEEN?

#### (a) Capital mobility in the 1982-1989 period

From the above description of the very strict system of Spanish capital controls (more than 150 legal norms, each with many clauses) one would suspect that domestic and foreign financial markets can not have been very integrated. Also, given that several short-term capital controls were introduced since 1986, one would also expect to observe a reduction in the effective degree of capital mobility after that year. In this regard, measuring the degree of effective openness of the short-term capital account in 1986 can help us assess whether the opening up process of the capital account balance dictated by EEC entry and '1992-related' EC Directives should be considered a 'large' or a 'small' shock.

The easiest and most appropriate way to measure the degree of capital mobility is to check the extent to which the data violate the benchmark of covered interest rate parity<sup>12</sup>. If covered interest parity continuously holds, there are no unexploited profit opportunities for investors and therefore they are indifferent as to placing their funds in domestic or foreign short-term assets. If, on the other hand, deviations from covered interest rate parity are found, there exist unexploited profit opportunities prevented by the existence of binding capital controls.

Specifically, let us define deviations from covered interest rate parity as:

$$D = (1+i) - (1+i^*)\frac{f}{e}$$

where  $i$  is the domestic short-term interest rate,  $i^*$  the Eurodollar short-term interest rate, and  $e$  and  $f$  the spot and forward exchange rates, respectively.

When  $D > 0$ , there is an incentive to borrow in the Eurodollar market and to invest in the domestic financial market. Alternatively, when  $D < 0$ , there is an incentive to borrow domestically and to invest in the Eurodollar market. Finally, when  $D = 0$ , covered interest rate

parity holds, there are no arbitrage opportunities, and investors are indifferent as to holding domestic or Eurodollar assets.

To test for deviations from covered interest rate parity, I have taken the 3-month peseta interest rate prevailing in the Madrid interbank market, the 3-month Eurodollar interest rate, and the 3-month forward premium of the dollar vis-à-vis the peseta, between January 1982 and June 1989. While the Euromarket and forward premium data correspond to mid-day quotations, the only available Madrid data is a daily weighted average of quotations<sup>13</sup>. Finally, all calculations refer to the last available day of each week.

Figure 1 represents the observed deviations from interest rate parity during the 1982-1989 (June) period. It shows, quite surprisingly, that the deviations from covered interest parity were quite small until 1987, especially given the extensive network of controls on international capital flows between Spain and the rest of the world described in section II of the paper. In fact, if one allows for a  $\pm 0.5\%$  band around covered interest rate parity to take account of transaction costs, it can be concluded that there is no hard evidence of very large unexploited profit opportunities until 1987<sup>14</sup>.

More precisely, Table 2 contains several useful statistics that show the sign, average size and standard deviation of measured covered differentials as well as the frequency with which these differentials have been in excess of  $\pm 0.5\%$ . As can be seen in the Table, the annual average covered differential was well below 1% in every year except in the 1987-89 period, and it has almost always been positive. At the same time, with the exception of 1982 and the 1987-89 period, the percentage of observed deviations in excess of  $\pm 0.5\%$  was relatively small. Therefore, it can be concluded that, except in the first half of 1982 and since the third quarter of 1987, the data do not show the existence of substantial arbitrage opportunities. In other words, capital controls do not seem to have been binding for a large part of the 1982-1989 period in Spain, ie. 63.2% of the time. It is, nevertheless, necessary to delve deeper into why Spain has had such an apparently large effective degree of openness on capital account transactions until recently.

FIGURE 1: DEVIATIONS FROM COVERED  
INTEREST PARTY  
( 3-month domestic — Eurodollar deposit rates)

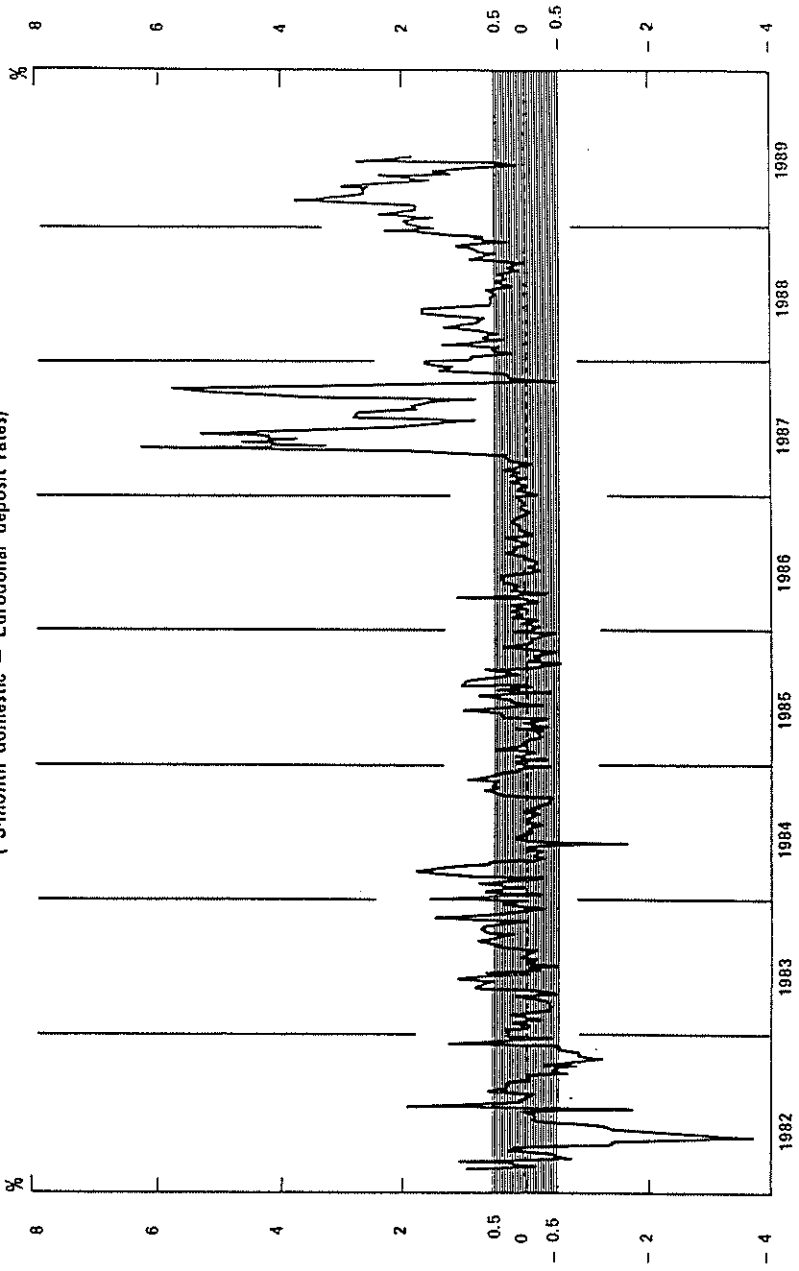


TABLE 2: COVERED INTEREST RATE DIFFERENTIALS BETWEEN PESETA AND EURODOLLAR

(3-month deposits, January 1982-June 1989)

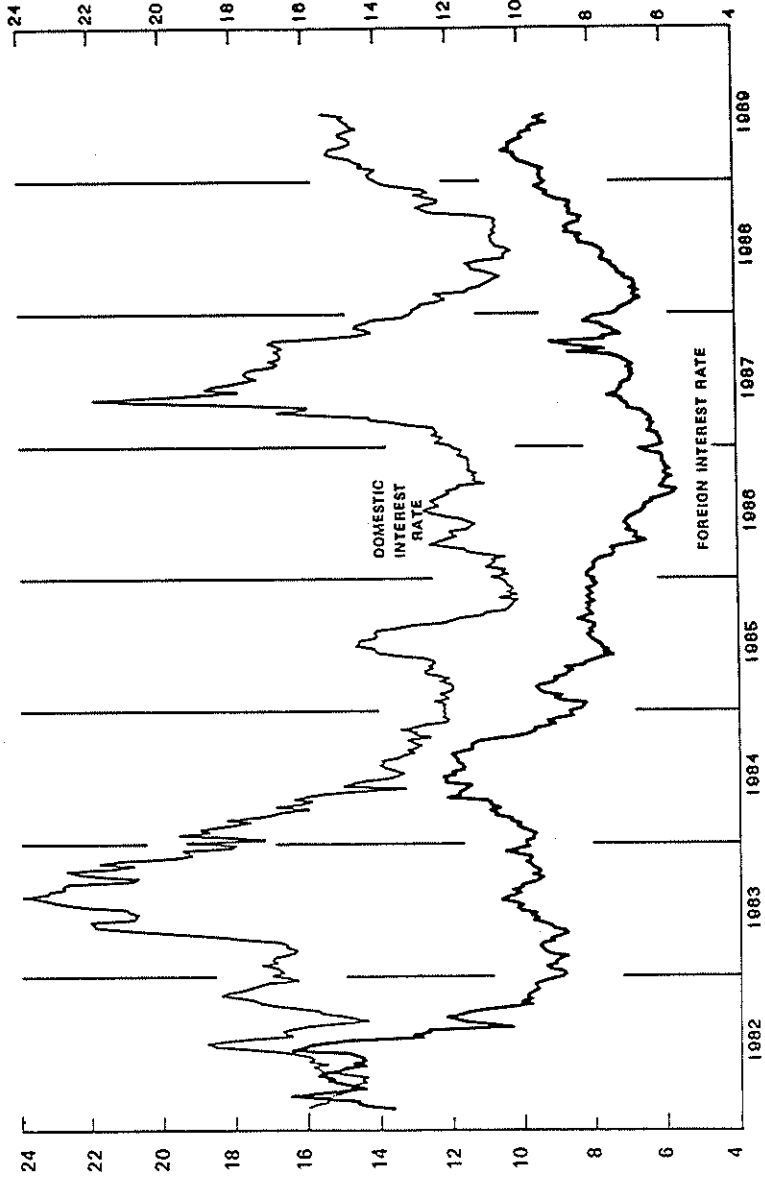
	1982	1983	1984	1985	1986	1987	1988	1989	1982-83	1984-85	1986-89	1982-89
Average	-0.41	0.20	0.19	0.10	0.10	1.74	0.75	2.04	-0.1	0.14	1.03	0.49
Standard deviation	0.99	0.44	0.58	0.39	0.22	1.79	0.49	0.82	0.83	0.50	1.28	1.13
Percentage of observations in excess of $\pm 0.5\%$ from covered interest rate parity	40.0	26.9	30.8	13.5	1.9	53.8	63.5	92.6	38.4	22.1	47.53	37.03
Total weeks	52	52	52	52	52	52	52	27	104	104	183	391

In this regard, it should be taken into consideration that the Spanish monetary authorities regularly intervened in the forward exchange market until February 6, 1984. This is relevant because the intervention forward rate was set so as to minimise deviations from covered interest rate parity. Consequently, the very small covered interest rate differentials observed between the peseta and the Eurodollar until 1984 were due not so much to the existence of unimpeded private capital flows but to official forward market interventions.

What still remains to be explained is why covered interest parity was so precisely satisfied from February 1984 to April 1987. Figure 2 provides the clue: between these two dates the differential between the peseta and the dollar interest rate remained rather stable and small when compared with the preceding and following periods. Against this background, exchange market tensions were relatively minor and the desired arbitrage operations probably took place thanks to the legal loopholes (over-invoicing and under-invoicing in foreign trade) and also to the lengthening and shortening of the maturity of commercial credits. It was only during periods where exchange market tensions were considerable and there was no official forward market intervention - as in 1987-89 - that the volume of potential arbitrage opportunities was large enough to grossly exceed whatever could be channelled through legal loopholes and commercial credit<sup>15</sup>. As is often said, "capital controls work only when they bite".

Consequently -as Figure 1 and Table 2 indicate-, Spanish entry to the EEC, and the gradual relaxing of many capital controls that came with it, has not meant, so far, a higher effective degree of openness of the short-term capital account. In fact, as already mentioned, new short-term capital controls were introduced at various times since 1987 to preserve the effectiveness of sterilised intervention operations, and therefore avoid both the appreciation of the peseta and the loss of monetary control in the presence of relatively high domestic interest rates. At the same time, it is curious to observe that in Spain such controls have not worked to reduce domestic short-term interest rate volatility below offshore interest rate volatility<sup>16</sup>. In fact, capital controls have made it

FIGURE 2: PESETA AND EURODOLLAR DEPOSIT INTEREST RATES  
(3 - Month)





possible for Spain to have, during many periods, a higher degree of variability of domestic short-term interest rates than that of foreign rates, as illustrated by Figure 2 and Table 3.

(b) Capital mobility in the 1986-1989 period

The former analysis might be criticised on the grounds that the computed interest rate differentials are not based on fully simultaneous observations, since the Madrid and London interest rates are not taken at the same time of the day. Also, not distinguishing between bid and offer rates for the domestic and foreign interest and exchange rates may have introduced some bias in the calculations.

While the above problems were due to the lack of data in the Madrid interbank market in the January 1982-August 1986 period, it is nowadays possible to properly measure covered interest differentials during the September 1986-June 1989<sup>17</sup> period. Since the only significant covered differentials in the former computations were observed in 1987, the new computations will be able to distinguish whether such differentials were just a measurement error or, rather, a reflection of binding capital controls. Finally, the data set used in the new test contains the onshore (Madrid interbank) and offshore (London Euromarket) 3-month bid and offer peseta rates at mid-day from September 1986 to June 1989. Observations correspond to the last business day of each week.

It is common knowledge that onshore-offshore short-term interest rate differentials can quite accurately approximate the extent to which capital controls are binding, since they measure the degree to which there are unexploited arbitrage opportunities<sup>18</sup>. More precisely, following Giavazzi and Giovannini (1989), let us call D1 the potential arbitrage profits generated by borrowing domestically and investing in the Euromarket, and D2 the potential arbitrage profits generated by borrowing in the Euromarket and investing domestically. Letting  $i$  and  $i^*$  be the onshore and offshore peseta interest rates,  $O$  the offer and  $B$  the bid rate, we have:

$$D1 = i_B^* - i_O \quad (D1 > 0 \text{ profit, } D1 < 0 \text{ loss})$$

$$D2 = i_B - i_O^* \quad (D2 > 0 \text{ profit, } D2 < 0 \text{ loss})$$

Table 3: ONSHORE AND OFFSHORE INTEREST RATES

(in percentage)

	Eurodolar		Peseta	
	<u>mean</u>	<u>S.D.</u>	<u>mean</u>	<u>S.D.</u>
1982	13.1	2.3	16.2	1.2
1983	9.6	0.5	20.0	2.4
1984	10.8	1.0	14.9	2.2
1985	8.4	0.5	12.2	1.3
1986	6.8	0.7	11.6	0.6
1987	7.1	0.7	15.8	2.4
1988	7.9	0.8	11.7	1.0
1989	9.7	0.4	14.7	0.4
1982-83	11.4	2.4	18.1	2.7
1984-85	9.6	1.5	13.5	2.3
1986-89	7.4	0.8	13.3	2.4
1982-89	9.1	2.3	14.6	3.2

If capital controls do not exist or are not binding, it would not be possible to observe unexploited profit opportunities. In such a case we would expect both  $D1$  and  $D2$  to be non-positive ( $D1 \leq 0, D2 \leq 0$ ). If, on the other hand, capital controls are only effective in preventing outflows we should observe ( $D1 > 0, D2 \leq 0$ ), reflecting the existing unexploited profits for outflows. Finally, if controls are only effective in preventing inflows we should observe ( $D1 \leq 0, D2 > 0$ ), reflecting the existing unexploited arbitrage profits for inflows.

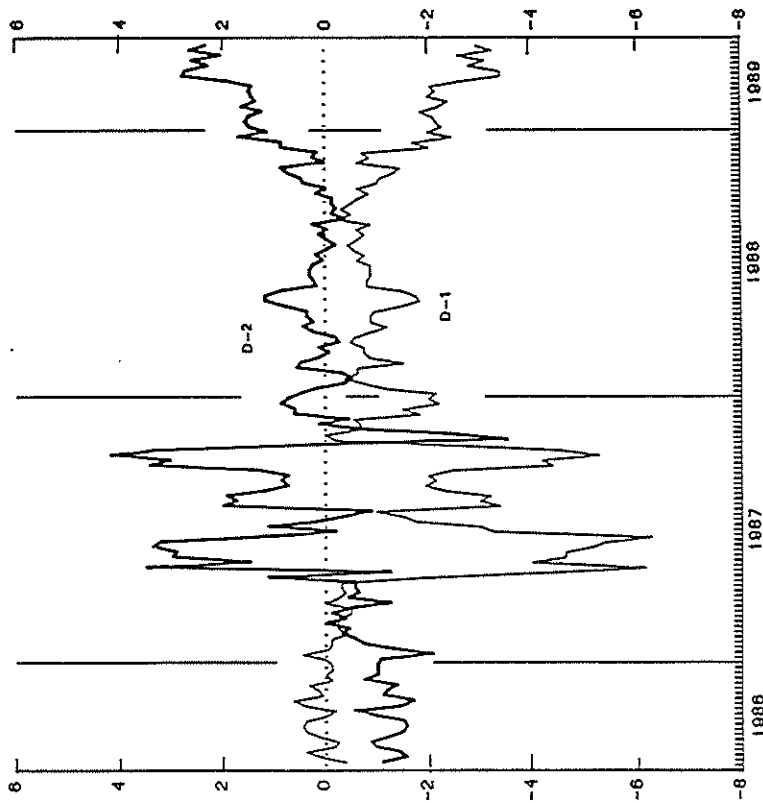
Figure 3 illustrates the evolution of  $D1$  and  $D2$  during the reference period.<sup>13</sup> As examination of the positive realisations of  $D1$  and  $D2$  shows, in the months of 1986 there were binding controls on capital outflows, with the offshore rate exceeding the onshore rate. Things seem to have changed, however, since April 1987, where there appear positive realisations of  $D2$  which indicate the existence of binding capital controls on inflows, no doubt related to the reintroduction of legal controls on inflows described in Section II of the paper. Lastly, while the potential profits from borrowing in the Euromarket and investing in Spain were largest in the central months of 1987, they persisted -albeit at a lower level- during most of 1988 and widened again in 1989, reflecting the relatively higher Spanish interest rates shown in Figures 4 and 5.

Table 4 gives a more precise idea of the importance of controls. It shows the percentage of cases where controls were not binding at all (A), binding only on capital outflows (B), or binding only on capital inflows (C). As can be seen, during the period of Spanish EEC membership, capital controls have not been binding in 31% of the cases, restricting capital flows -inflows or outflows- in 69% of the cases. Moreover, it should be noted that while in 1986 controls were binding only on outflows (in 55% of the cases), in 1987 they were binding more on inflows (in 55% of the cases), and in 1988 and 1989 only on inflows (in 69% and 100% of the cases respectively).

The Table also gives an estimate of the mean return<sup>14</sup> that could have been earned in the periods where controls were binding. Consequently, capital outflows would have earned a guaranteed profit of 0.29% during 1986, and 0.44% during the first months of 1987. In

FIGURE 3: ONSHORE - OFFSHORE INTEREST RATE DIFFERENTIALS

( 3-Month Domestic - European rates)



D-1 = Euromarket (bid) - Madrid (offer)  
D-2 = Madrid (bid) - Euromarket (offer)

FIGURE 4: ONSHORE (OFFER) AND OFFSHORE (BID) INTEREST RATES

( 3- Month peseta rates)

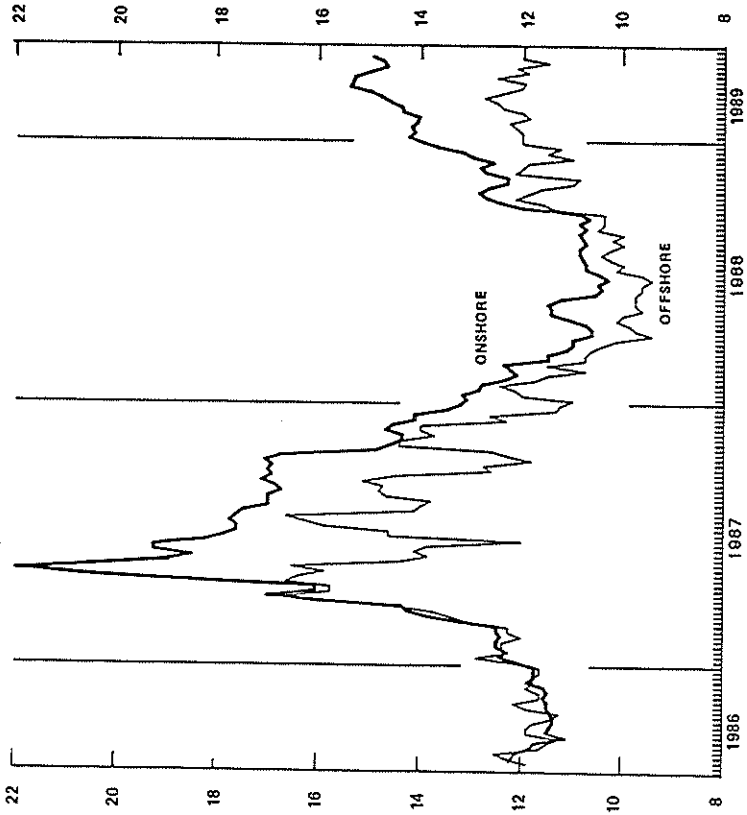


FIGURE 5: ONSHORE (BID) AND OFFSHORE (OFFER) INTEREST RATES  
(3 - Month parata rates)

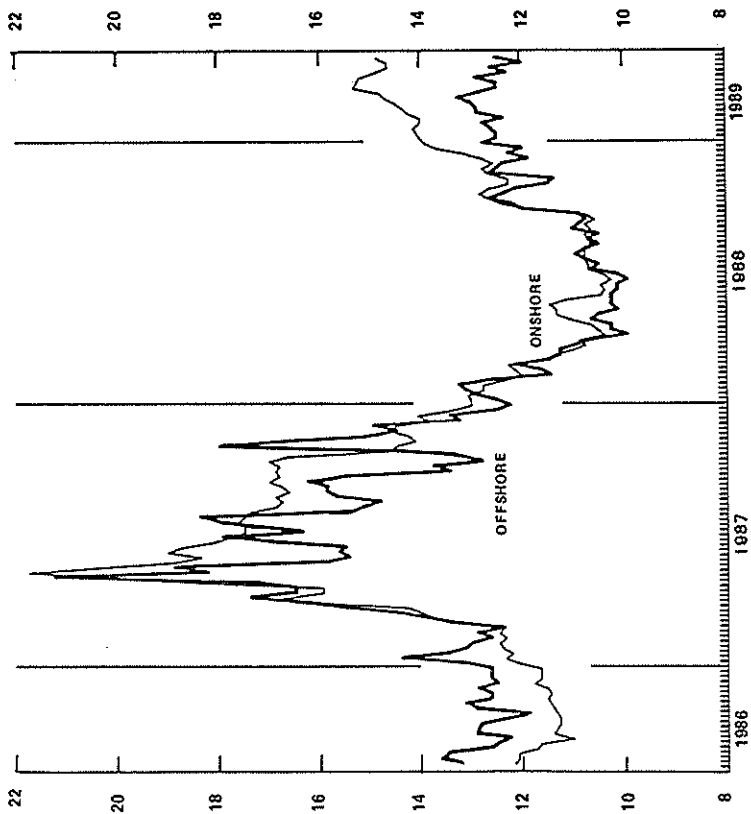


Table 4: THE EFFECTIVENESS OF CAPITAL CONTROLS

(in percentage)

	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1986-1989</u>
<u>Total number of weeks</u>	20	52	52	27	151
<u>Frequencies</u>					
A. % Weeks free of controls	45.0	43.1	30.8	0.0	31.4
B. % Weeks with controls on outflows	55.0	2.0	0.0	0.0	8.0
C. % Weeks with controls on inflows	0.0	54.9	69.2	100.0	60.6
D. % Weeks with controls on inflows or outflows (B+C)	55.0	56.9	69.2	100.0	68.6
<u>Mean return</u>					
B. Periods with controls on outflows	0.29	0.44	-	-	0.31
C. Periods with controls on inflows	-	1.74	0.51	1.95	1.22

turn, during the rest of 1987, 1988 and 1989, capital outflows could have earned a guaranteed profit of 1.74%, 0.51% and 1.95%, respectively. And during the whole period under study, capital outflows could have earned a guaranteed profit of 0.31%, and capital inflows a profit of 1.22%.

In short, the various tests presented in both parts (a) and (b) of this section confirm the existence of binding capital controls on inflows during the turbulent period of 1987, 1988 - to a lesser extent- and 1989, and the non-binding nature of controls on outflows since 1987. Paradoxically, it has been during the period of EC membership -where many legal controls were being relaxed- that controls have been more binding in practice.

Finally, Table 5 gives information about the means and standard deviations of the onshore and offshore interest rates. As can be seen, it confirms that -unlike the cases of other European Countries using capital controls- in Spain's case controls have led to a higher variability of the onshore than of the offshore rate.

#### IV. SOME INTERNATIONAL COMPARISONS

The analysis of the preceding sections has tried to provide some empirical evidence about the degree of openness of the short-term capital account in Spain. Our tentative conclusion is that although capital mobility has not been perfect in the 1982-1989 period, it has nevertheless been relatively higher than suspected until 1987, and lower since. In this section it is sought to put these findings into an international perspective by comparing our results with those obtained for other European countries with and without capital controls.

Table 6 compares the results for Spain with those in the literature for France, Italy and the Netherlands. For each country, the Table gives the percentage of observations where controls were respectively not binding, binding on outflows, or binding on inflows, and the mean return from arbitrage opportunities. Given that capital controls are binding mostly during periods of financial and exchange market turbulence, the Table distinguishes between representative "tranquil" and "turbulent" periods for each country<sup>21</sup>.



**Table 5: ONSHORE AND OFFSHORE INTEREST RATES**

[in percentage, means and S.D. (in brackets)]

	London		Madrid	
	<u>offer</u>	<u>bid</u>	<u>offer</u>	<u>bid</u>
1986	11.7 (0.3)	12.7 (0.4)	11.5 (0.3)	11.6 (0.3)
1987	13.9 (1.5)	15.3 (2.0)	15.8 (2.4)	16.0 (2.4)
1988	11.3 (1.0)	10.7 (0.9)	11.7 (1.0)	11.6 (1.0)
1989	12.6 (0.3)	12.1 (0.3)	14.7 (0.4)	14.6 (0.4)
1986-89	13.1 (2.2)	12.2 (1.8)	13.6 (2.6)	13.5 (2.6)

Table 6: THE DEGREE OF EFFECTIVE CAPITAL MOBILITY

	Representative Tranquil Periods		Representative Turbulent Periods
1. <u>Spain</u>	(1986: 8-1987:4 and 1987:11-1988:11)		(1987: 4-1987:1 and 1988: 12-1989:6)
A.	46		5
B.	14	(0.3)	0
C.	40	(0.4)	95
			(1.9)
2. <u>France(a)</u>	(1983: 4-1985:11)		(1982:10-1983: 3)
A.	17		0
B.	83	(1.0)	100
C.	0	(0.0)	0
			(0.0)
3. <u>Italy(a)</u>	(1983: 4-1985:11)		(1982:10-1983: 3)
A.	57		4
B.	1	(0.1)	92
C.	42	(0.6)	4
			(0.0)
4. <u>Netherlands(a)</u>	(1983: 4-1985:11)		(1982:10-1983: 3)
A.	100		100
B.	0		0
C.	0		0

Notes:

(a) From Giavazzi and Giovannini (1989).

A: % of weeks free of controls

B: % of weeks with controls on outflows

C: % of weeks with controls on inflows

Mean returns from arbitrage opportunities are within brackets.

As can be seen in the Table, except in the case of the Netherlands, all the countries have had a restricted degree of capital mobility, derived from the existence of legal capital controls in Spain, France and Italy during the reference periods under study. As expected, capital controls have also been more binding during turbulent than during tranquil periods. For example, while in the case of Spain 46% of observations were effectively unrestricted by capital controls during the tranquil period, the number dropped to 5% during the turbulent period. In the case of France, it dropped from 17% to 0%, and in the case of Italy from 57% to 4%. Finally, and most importantly, the comparison of frequencies with and without binding controls and of mean returns shows that Spain's capital account has been effectively as open as that of Italy and more open than that of France, both during tranquil and turbulent periods.

Table 7 contains a summary of the calculations by Frankel and MacArthur (1988) in a recent study. According to these calculations, Spain can be grouped together with France and Italy as a country with limited capital mobility during the 1982-88 period, as opposed to the perfect capital mobility, cases of Germany and The Netherlands. The Table also shows that the removal of capital controls envisaged in the future may be a much larger shock in the case of a country like Greece and Portugal than Spain, given the much more limited degree of capital mobility in the two former countries .

Finally, Table 8 summarises the variability of onshore and offshore Spanish, French and Italian interest rates. As observed, while capital controls have been effective in divorcing the variability of onshore and offshore interest rates, it is only in the Spanish case that the offshore rate has moved by more than the onshore rate. Consequently, while capital controls have been a vehicle of interest rate stability in the French and Italian cases, the opposite has occurred in the Spanish case.

#### V. CONSEQUENCES OF THE REMOVAL OF SHORT-TERM CAPITAL CONTROLS

The simple Mundell-Fleming model indicates that as the degree of capital mobility increases so does the effectiveness of fiscal policy relative to monetary policy in countries with pegged

Table 7: COVERED INTEREST DIFFERENTIALS 1962:9-1968:4

	Sample mean	Sample S.D.	95% band(a)
Germany	0.35	0.24	0.75
Netherlands	0.21	0.13	0.45
France	-1.74	2.68	7.18
Italy	-0.40	1.92	4.11
Spain	-2.40	3.66	7.95
Greece	-9.39	6.08	20.39
Portugal	-7.93	9.59	27.83

Source: Frankel (1989)

Notes:

(a) Size of a band around zero with contains 95% of the observations.

**Table 8: INTEREST RATE VOLATILITY**  
(3-month)

	<u>Spain(a)</u>	<u>France(b)</u>	<u>Italy(c)</u>
Onshore	2.8	0.5	1.8
Offshore	1.9	5.2	4.8

**Notes:**

(a) 1986: 8-1988:11

(b) 1980:10-1984:8; Taken from Giavazzi and Pagano (1985)

(c) 1980:10-1984:8; Taken from Giavazzi and Pagano (1985)

exchange rates. Since the peseta is now formally inside the Exchange Rate Mechanism in the European Monetary System<sup>22</sup>, it can be assumed that an increase in the degree of capital mobility will make Spanish monetary policy less powerful -and fiscal policy more powerful- in affecting final domestic variables.

Noteworthy, however, relative exchange rate stability has not been achieved in Spain through co-ordinated interest rate movements; rather the opposite is the case. In fact, the high domestic interest rates recently observed arise from a situation where a relaxed fiscal policy led to monetary tightening so as to keep inflation under control. Nevertheless, the existence of very substantial differentials between the domestic and foreign short-term interest rates in recent years and at present has been reconciled with exchange rate stability through capital controls and official intervention in the foreign exchange market (see figure 6). These interventions have, thanks to capital controls, been sterilised so as to achieve simultaneously money targets (Table 9) consistent with low inflation.

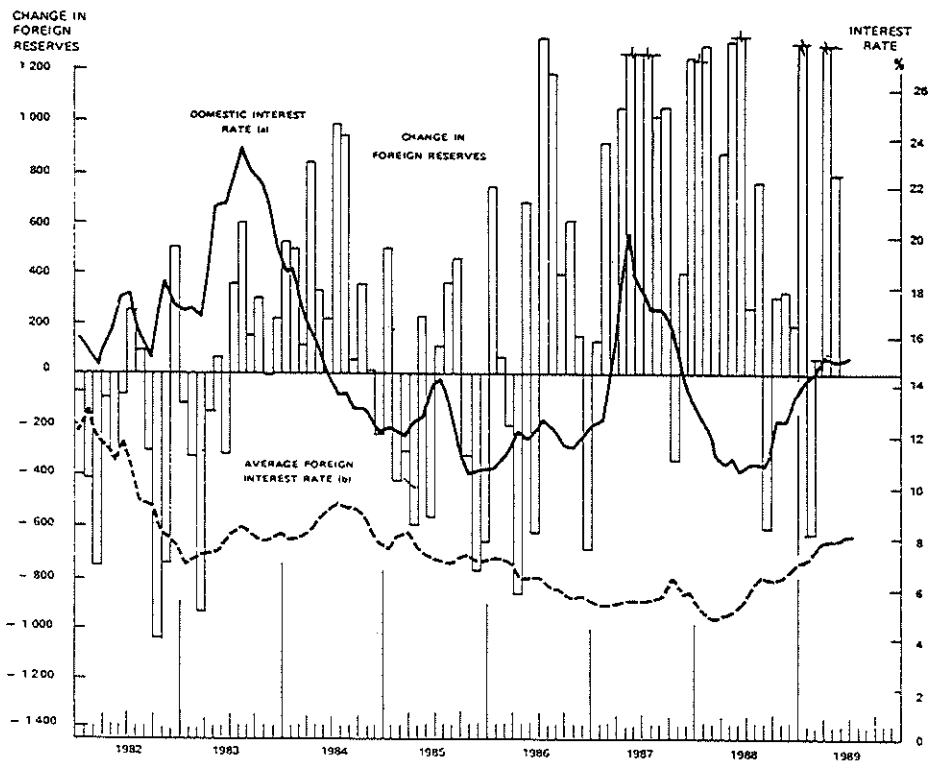
Clearly, once capital controls are fully removed, the Spanish authorities will find it impossible to simultaneously achieve money and exchange rate targets. As a result, domestic inflation targets and exchange rate stability may not be so readily reconciled as under the current policy framework. Without capital controls, domestic and foreign interest rates will have to be closely linked, especially inside the EMS. This means that fiscal policy should be tighter than at present so as to facilitate lowering the domestic interest rate.

Consequently, while it seems certain that the removal of capital controls will lead to a loss of effectiveness of monetary policy in Spain, it may also have favourable results as regards the effectiveness of fiscal policy, and help achieve lower and more stable interest rates.

## VI. CONCLUSIONS

This paper has studied the effective degree of openness of the Spanish capital account in order to assess whether the gradual liberalisation of capital flows envisaged by the Accession Treaty and

FIGURE 6: INTEREST RATES AND FOREIGN EXCHANGE RESERVES



Source: Banco de España

Notes:

(a) Madrid interbank 3 month rate

(b) Euromarket 3 month rates. Weighted according to the foreign currency composition of Spain's external debt.

Table 9 : TARGET AND ACTUAL MONETARY GROWTH

(annual rates of growth, in percentage)

	<u>Target(c)</u>	<u>Actual(c)</u>
1982(a)	13.5 - 17.5	15.3
1983(a)	11 - 15	12.8
1984(b)	10.5 - 14.5	14.4
1985(b)	11.5 - 14.5	13.3
1986(b)	9.5 - 12.5	11.8
1987(b)	6.5 - 9.5	14.0
1988(b)	8 - 11	11.0
1989(b)	6.5 - 9.5	11.3

(a) M3 for 1982 and 1983.

(b) A broader money definition (ALP) is used since 1984.

(c) December over December of the previous year.



recent EC Directives is likely to be a 'small' or 'large' shock for the Spanish economy. The conclusions can be summarised as follows:

(a) Long-term capital flows were already substantially liberalised by the time Spain joined the EEC in 1986. Short-term capital flows were, however, quite restricted, specially capital outflows.

(b) In spite of the highly complex and extensive network of capital controls, measured deviations from covered interest rate parity were relatively small -and certainly smaller than generally believed- in the 1982-1989 period, especially before 1987. In fact, 63% of the observations satisfy the criterion of covered interest parity.

(c) Deviations from covered interest parity have been larger since Spanish EEC membership than before. This is because, in spite of the gradual relaxing of capital controls pursuant to the 1986 Accession Treaty, the combination of a relatively expansionary fiscal policy and a relatively contractionary monetary policy caused large interest rate increases in Spain which led to huge capital inflows and the re-introduction of controls on capital inflows.

(d) Currently, capital controls are binding for inflows but not for outflows, in spite of the fact that outflows are rather more restricted legally than inflows. Since November 1982, higher domestic interest rates relative to those in other countries have led to capital controls being binding on outflows for only two weeks -in June 1984 and September 1985, respectively.

(e) For most of the eighties the degree of capital mobility in Spain has been similar to that in France and Italy. However, unlike the case in these two countries in recent years, capital controls have permitted Spanish short-term onshore interest rates to be more volatile than offshore rates.

(f) Although the degree of capital mobility is not low at present, nor is it so large as to expect that the complete elimination of controls envisaged by December 1992 will not have significant effects on the Spanish economy.

(g) The fact that, since the end of 1982, controls have been binding almost always on inflows but not on outflows should not be interpreted as implying that the removal of controls by 1993 will merely affect the former. The removal of controls will affect both potential outflows and inflows, and will actually affect inflows or outflows depending on the size and sign of the peseta onshore-offshore interest differential observed by then.

(h) The elimination of controls will seriously limit the room for manoeuvre of Spanish policy-makers. In fact, in the absence of capital controls, domestic and foreign interest rates will be closely linked inside the EMS. This, in turn, will most likely require that the Spanish fiscal-monetary policy mix be altered so that fiscal policy becomes less expansionary than at present, therefore lowering the domestic interest rate and inflationary pressures.

Notes

1. See Viñals et al (1990a) for an analysis of the effects of the EEC integration process and the 1992 Internal Market on the Spanish economy.
2. See, for example, Sachs (1982), Dornbusch (1983), and Svensson and Razin (1983).
3. See Adams and Greenwood (1985), Artis (1988), Claassen and Wyplosz (1982), and Giavazzi and Giovannini (1988) for a general presentation of the topic.
4. See, among others, Krugman (1979), Obstfeld (1986) and Wyplosz (1986).
5. A non-technical reference is Wyplosz (1988).
6. Dornbusch (1982) advocates the existence of controls in such instances. Basevi (1988) and Dornbusch (1988) defend the introduction of a dual exchange rate system.
7. See, for instance, Giovannini (1988).
8. Edwards (1984) provides a comprehensive survey of the problem.
9. For a general overview of capital controls in Spain at the time of EEC entry and at present, see Viñals (1985), Gil (1986) and Ortega (1989).
10. There are also limitations to the foreign currency positions of the private banking sector, which are described in Linde and Gil (1988).
11. The regulations governing the use of safeguard clauses by EEC countries will be reviewed by the end of 1992.

12. Although there are other alternatives, this is the most widely accepted and theoretically the most appropriate, as discussed in Frankel and MacArthur (1988). See also Gros (1987) and Giavazzi and Giovannini (1989) on modelling the capital account with capital controls.
13. In principle, this time discrepancy might systematically bias the calculations away from covered interest rate parity, as explained later in the paper.
14. From conversations with operators, this is the width of the band that seems to correspond to the Spanish market, broadly in line with those quoted in Levy (1984) and other studies.
15. Unlike in other countries, in Spain there are no separate records of inflows and outflows related to short-term commercial credit. Therefore, it is not possible to compute the proportion of short-term commercial credit relative to total short-term capital flows, as done in Giavazzi and Giovannini (1989) for France, Italy and Germany. Consequently, we cannot measure the relative importance of short-term commercial credit operations.
16. See Rogoff (1985).
17. The collection of separate data on Madrid bid and offer interest rates commenced in September 1986.
18. This methodology has been recently used by Giavazzi and Pagano (1985), and Giavazzi and Giovannini (1989).
19. In what follows, it is assumed that all transaction costs are appropriately taken into account by bid-offer spreads. We have accounted explicitly, nevertheless, for the existence of a cascade tax (Impuesto sobre el Tráfico de Empresas) until the beginning of 1986, where it disappeared.

20. Mean returns expressed as annual rates.
21. The importance of this distinction has been pointed out by Frenkel and Levich (1977), among others.
22. The peseta joined the Exchange Rate Mechanism of the European Monetary System on June 16, 1989. Although it joined with the wide 6% bilateral fluctuation band, this situation is to be regarded as temporary. See, Vinals (1990b) for an analysis of the effects of EMS membership on the Spanish economy and, in particular, on Spanish monetary and fiscal policies.

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