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Lessons to be Learnt from the ERM and their Applicability to the Accession Economies Seeking to Join ERM2

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**Lessons to be Learnt from the ERM and
their Applicability to the Accession
Economies Seeking to Join the ERM2**

January 2004

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Executive summary

Sooner or later all the accession economies will have to join the ERM2 – a mandatory framework for all those countries that face the challenge of joining the EU. Entering the eurozone will be an unprecedented achievement. The achievement will be all the more remarkable given the unique environment in which those economies previously operated, so very different to the conditions prevailing among the current members of the European Economic and Monetary Union (EMU). That notwithstanding, a case can be made for trying to find certain similarities between the ERM and ERM2. As far as the ERM is concerned, the degree of heterogeneity among its members was sufficient to be able to distinguish between different groups of countries. Of those groups, one bore certain similarities to the accession economies; it mainly comprised the so-called Mediterranean countries (Spain, Italy, Portugal and Greece), all of which faced some of the problems that should sound familiar to at least some of the accession economies. The main issue revolved around finding an appropriate level of central parity that could ensure them long-term competitiveness. A task made all the more difficult in an environment of full capital mobility where high interest rates designed to reduce inflation to the levels required by the Maastricht criteria were curbing major capital inflows, thus exerting upward pressure on domestic currencies. Although the Mediterranean countries managed to achieve their goal, their success was also attributable to a combination of fortunate circumstances in the final stage of their bid. Throughout the entire convergence period, the countries resorted to high interest rates. The aim was to compensate investors for the risk of holding currencies that were regarded as less secure owing to their poorer economic record compared to other more mature ERM members, Germany in particular. The degree of variation in interest rates hinged on the fortunes of the German mark (which was seen as an anchor for the ERM as a whole) and its performance on money markets. Detailed analysis of the performance of the German mark against the US dollar clearly shows that upward pressure on the mark created problems for the ERM member states. A rising demand for the mark forced peripheral countries to raise their domestic interest rates still higher in order to guard against major disruption to their exchange rates. The fortunes of the Mediterranean countries were mixed. A surge in the value of the German mark in the early nineties led to the ERM crisis which exposed the fragility of the convergence achieved to date and set back the countries' aspirations. With the benefit of hindsight, that fragility can be said to have been the result of serious flaws in the monetary policy mix pursued at the time. One of the main reasons for those flaws was an overvalued exchange rate; though aimed to foster the disinflation process, it ultimately proved counterproductive. The second attempt, however, proved successful; favourable conditions on global money markets contributed significantly to that success.

All those problems are not unfamiliar to the accession economies. Higher interest rates brought about inflows of foreign capital and thus the appreciation of domestic currencies in both real and (in some cases) nominal terms. The Balassa-Samuelson effect cannot wholly explain the domestic currency appreciation that ultimately affected some states' competitiveness. It proved simple to maintain the value of domestic currencies at a comparatively stable level against the euro (which took over from the German mark the role of reference point for the new peripheral countries on their entry into the EMU) when the euro was performing weakly on global money markets. However, once the euro started to recover at a palpable rate, it proved much more difficult to preserve exchange rate stability. The Polish zloty dropped more than a quarter in value, while the Hungarian authorities opted for devaluation.

Yet given those very similarities, it is worth taking a closer look at the strategies pursued in the very final stages prior to the Mediterranean countries ultimately locking their exchange rates. Spain and Greece resorted to a strategy best described as pre-emptive devaluation; it was meant to preserve competitiveness following the advent of the euro. The experience of Spain and Greece stands in stark contrast to the strategy adopted by Portugal and Italy. The latter country even opted for nominal appreciation of the lira which ultimately proved excessive. Not surprisingly both Italy and Portugal currently face economic difficulties which have come under close scrutiny by Brussels (within the context of the Growth and Stability Pact), although it would be overdoing things to blame this situation on an overvalued exchange rate alone. None the less, failing to adopt a pre-emptive devaluation strategy did not help either.

The Mediterranean countries' bid to join the eurozone and the current efforts on the part of the accession economies are but a decade apart. In the history of the international monetary system, however, a decade is a very long time. Drawing similarities calls for a high degree of prudence. Yet seen from the standpoint of pre-emptive devaluation, it makes sense to take a closer look at the lessons to be learnt from the experience of the Mediterranean countries.

Keywords: *ERM, exchange rate, central parity*

JEL classification: *F 31, E5, F 15*

Lessons to be learnt from the ERM and their applicability to the accession economies seeking to join the ERM2

1 Introduction

For the accession economies entry into the European Monetary Union (EMU) is predicated on accepting the Exchange Rate Mechanism, Mark 2, (ERM2) as the mandatory policy framework. To date only two countries have joined the ERM2. Denmark is one of them; its experience, however, would seem slightly irrelevant. Not only is Denmark an economy that has converged well, but since the mid-eighties its exchange rate has hardly changed against the German mark. In the period 1992-1993, the Danish crown successfully repelled all speculative attacks. Throughout it has been trading within a narrow band set by the ERM2. Greece is the other country; its case is most interesting and during the country's association with the ERM2 it has been extremely fortunate.

This paper will focus on those circumstances that contributed to Greece's meeting the criteria relating to exchange rate stability. Given the special circumstances that Greece enjoyed, it makes more sense to go further back in time. It is more appropriate to review the last of the ERM countries to establish central parity on entering the EMU.

The paper is structured as follows:

- The first part presents the similarities and differences between the ERM and the ERM2, followed by a brief history of the former.
- The second part will focus on a group of Mediterranean countries (Spain, Italy, Portugal and Greece) and their experience of the exchange rate.
- The third part will deal with the sensitivity of the ERM towards the DEM/USD cross rate and assess whether a similar sensitivity (towards EUR/USD) will persist in the ERM2.
- The fourth part will include lessons and recommendations for the present accession economies.

1.1 Brief description of the ERM and ERM2

Exchange rate regimes in the international monetary system can be qualified in a variety of ways. According to Corden (1994), they can be categorized as follows:

- An exchange rate regime can be symmetrical or asymmetrical. In a symmetrical regime all members enjoy the same rights and privileges. In an asymmetrical regime, one member reserves the right to pursue an autonomous monetary policy which the others have to follow.

- An exchange rate regime can be loose or fixed. In a loose regime, the exchange rate can be sanctioned by virtue of an agreement signed by the minister of finance or central bank. Sanctions can thus be imposed immediately. In a fixed agreement, the exchange rate requires that the sanctions be imposed at the constitutional level. In other words, any changes have to be approved by a parliamentary majority.

Given these two distinctions, four alternatives present themselves:

- an asymmetrical and fixed regime entailing the establishment of a currency board;
- an asymmetrical and loose regime offering a combination of a fixed, but adjustable peg and, *inter alia*, crawling peg designed to shadow other currencies: a regime that fits well with the ERM₂;
- a symmetrical and fixed regime constituting the best example of a monetary union;
- a symmetrical and loose regime, of which good examples are hard to find. The Louvre Agreement¹ of 1987 is sometimes cited as an example.

Table 1

Symmetrical and asymmetrical exchange rate regimes

	Symmetrical	Asymmetrical
Fixed	Monetary union	Currency board
Loose	Monetary cooperation among G-3	Fixed-but-adjustable peg, ERM2

Source: W.M. Corden (1994).

The ERM came into effect on 13 March 1979 with eight currencies. The only currency not included in the system was pound sterling. The main aim was to preserve stability; stability being defined as a situation under which the weakest currency could not deviate from the strongest by more than 2.25%. The only exception was the Italian lira. Given the far higher rate of inflation in Italy, the lira was granted a broader band of +/- 6%.

It is difficult to position the ERM precisely. Opinion differs whether it is a symmetrical or asymmetrical regime. Before tackling that issue, it is essential to review the history of the ERM.

The ERM was the distinguishing feature of the European Monetary System (EMS) set up in 1978. Intended as an improved version of the currency snake introduced as part of the Werner plan, it ultimately ended in disarray in the mid-seventies.

¹ An agreement signed in February 1987 by G7 countries aimed at stabilizing the exchange rates of the main currencies. With a brief exception at the end of 1987 and beginning of 1988 – the result of the Wall Street crash – the agreement proved quite successful. The cooperation established under this agreement lasted until late 1989.

The first four years of the ERM were very turbulent; no less than seven adjustments were required to restore stability. However, after the adjustment in March 1983, the ERM proved more efficient. Although further adjustments were still needed, they were not as frequent as in the period 1979-1983. One of the key tools used to maintain the system's stability was capital controls. The adjustment made in January 1987 proved crucial; it marked the beginning of a long period of exchange rate stability lasting more than 68 months.

The ERM proved a success and encouraged politicians to take one more step towards monetary union. They drew up the Delors plan which paved the way towards a single currency. At the same time new members joined the ERM. Spain entered in June 1989, followed by the United Kingdom in October 1990 and Portugal in April 1992.

Despite long-lasting stability, the participant countries incurred imbalances which brought about a severe ERM crisis in 1992. The main reason for the crisis was the so-called 'impossible trinity'². Capital controls were dismantled on 1 July 1990: an event that bore major repercussions for the ERM members. Countries had to choose between independent monetary policy and fixed exchange rates, yet most of the members wanted to enjoy both privileges at the same time. That proved difficult as Germany (the country that determined ERM monetary policy) was hit by an asymmetric shock (re-unification). As a result, it had to resort to a specific monetary policy that ran counter to the interests of the remaining countries. Hence the insistence of some members on resorting to autonomous policy and fixed exchange rates inevitably ended in a crisis. It was sparked off by a referendum in Denmark in June 1992 and the Danes' rejection of the Maastricht Treaty which raised fears about the ultimate fate of the monetary union.

The crisis led to Italy and the United Kingdom suspending their membership, while Spain, Portugal and Ireland were compelled to devalue their currencies. The crisis peaked in July 1993. The only possible solution was to broaden the central parity band. *It was thus expanded from 2.25% to 15%* (the sole exception being the DEM/HFL cross rate where the previous band was maintained). That measure restored calm to the system. In 1995 Austria joined the ERM. A year later Finland entered and Italy returned, while in March 1998 Greece joined as the next (and to date last) member of the ERM.

The ERM ceased to exist in December 1998 when all its members except Greece and Denmark set up the EMU. The success of the ERM had encouraged the EU to create a successor mechanism which would link all those currencies that had expressed a wish to enter the EMU at some future juncture. The idea of the ERM₂ first surfaced at the EU summit in Dublin in 1996, but it was not approved until the Amsterdam Treaty. The first two

² A situation in which authorities endeavour simultaneously to pursue an independent monetary policy, maintain fixed exchange rates and ensure full capital mobility. By definition, this combination is unsustainable.

members were Denmark and Greece. Whereas Denmark opted for a return to the pre-1993 band width of 2.25%, Greece decided to retain with the +/- 15% central parity band. On entering the EMU on 1 January 2001, Greece withdrew from the ERM₂ and thus left the Danish crown as the sole member.

In the literature, both the ERM and ERM₂ regimes are described as fixed, but adjustable bands. In theory, however, the ERM was supposed to be symmetrical and thus did not fall into the group of fixed, but adjustable regimes. In the latter regime, one currency imposes hegemony which must be observed by the others. However, in order to counter this and ensure symmetry, the European Currency Unit (ECU) was introduced. All EMS currencies (not merely the ERM currencies) set their central parities against the ECU. A certain degree of variance in terms of symmetry was to be observed within the EMS as each individual currency was permitted to deviate to varying degrees from central parity against the ECU. The extent of that deviation from central parity depended on the currency's percentage share in the ECU basket. The greater the domestic economy's share in the overall GDP of the EEC, the higher its share in the ECU basket. Obviously the largest share went to the German mark, followed by the French franc and pound sterling. The greater the share in the basket, the slighter the deviation from central parity. The mechanism was designed to ensure long-lasting stability by avoiding major fluctuations of key currencies.

Another feature of the ERM was the parity grid; it granted each currency central parity against the other members and set maximum permissible deviations upwards and downwards. The main aim of the mechanism was to prevent deviations from the strongest and weakest currency exceeding 2.25%. In order to ensure the grid's feasibility, a new formula had to be devised for the calculation of those maximum permissible deviations.

It runs as follows:

Let's assume central parity for DEM/FFR set at the level P. The extent of the deviations in both directions will be denoted as X. The same must apply to the inverse relationship, i.e. FFR/DEM will be denoted as 1/P

	-2.25%	+2.25%	
(1) Upper limit equal to PX	----- P	-----	Lower limit equal to P/X
	+2.25%	-2.25%	
(2) Upper limit equal to X/P	----- 1/P	-----	Lower limit equal to 1/PX

If it is further assumed that the difference between the lower limit of the band and the upper limit of the band is twice the size of the deviation permitted (set at 2.25%), the following formula can be derived. It is done for (1).

$$\begin{aligned}
 XP - P/X &= 0.045 P & /*X \\
 X^2P - P &= 0.045PX & //P \\
 X^2 - 1 &= 0.045 X \\
 X^2 - 0.045X - 1 &= 0 \\
 \Delta &= 0.002025+4 \\
 \Delta &= 4.002025 \\
 \sqrt{\Delta} &= 2.0005066185944 \\
 X &= (0.045 + 2.0005066185944)/ 2 \\
 X &= 1.0227531
 \end{aligned}$$

And for (2):

$$\begin{aligned}
 X/P - 1/PX &= 0.045(1/P) & /*X \\
 X^2/P - 1/P &= 0.045X(1/P) & /*P \\
 X^2 - 1 &= 0.045X \\
 X^2 - 0.045X - 1 &= 0 \\
 \Delta &= 0.002025+4 \\
 \Delta &= 4.002025 \\
 \sqrt{\Delta} &= 2.0005066185944 \\
 X &= (0.045 + 2.0005066185944)/ 2 \\
 X &= 1.0227531
 \end{aligned}$$

The ERM also featured what is termed the *divergence indicator*. It was supposed to send warning signals, should a currency get too close to the upper or lower threshold. Furthermore, it gauged the exact distance to which a currency might deviate. It was strictly tied to the weight of each currency in the ECU basket. As the currency could not deviate from its share in the basket, the extent of the deviation had to be adjusted by that weight. Under these circumstance, maximum deviation (M) was calculated in the following manner:

$$M = 0.025 (1-w), \quad \text{where } w \text{ denoted the weight of each currency in the basket}$$

Having calculated M, it was possible to obtain the divergence indicator

DI = (d/M) (-100), where d denoted the currency's current deviation from the ECU. The following simple rule was the outcome: the greater the currency's weight in the ECU basket, the swifter the warning signal.

Countries participating in the ERM enjoyed access to a number of tools designed to preserve systemic stability:

- Foreign exchange interventions
- Changes in monetary policy (mainly interest rates) aimed to reverse undesirable exchange rate movements
- Adjustments of central parity

Three special funds were set up in an effort to coordinate monetary policy:

- Very Short-term Financing Facility
- Short-term Monetary Support
- Medium-term Financial Assistance

Although much was done to maintain symmetry in the ERM, it transpired in practice to be an asymmetrical system, with the German mark playing a pivotal role. As it will be shown later, in the final years the decisive factor was the exchange rate of the domestic currency against the German mark, which policy-makers considered the reference point.

If the ERM turned out to be asymmetrical, the statement that the ERM₂ is likewise asymmetrical will come as no great surprise. ERM₂ is a typical example of a fixed, but adjustable band. No efforts have been made to maintain any degree of symmetry. The euro is the only reference currency with a wide corridor on both sides of the central band. The width of the corridor is supposed to be +/-15% in each direction. Furthermore, it lacks any parity grid, thus granting the authorities even greater leeway in conducting monetary policy. Hungary is a case in point. At the time, central parity was set at HUF/EUR 276.1³. Given the 15% deviation provided for in the ERM₂, the parity grid formula will have to be applied once again, according to which:

$$\begin{aligned}XP - P/X &= 0.30 P & /*X \\X^2P - P &= 0.30PX & //P \\X^2 - 1 &= 0.30 X \\X^2 - 0.30X - 1 &= 0 \\ \Delta &= 0.09+4 \\ \Delta &= 4.09 \\ \sqrt{\Delta} &= 2.022374842 \\ X &= (0.3 + 2.022374842) / 2 \\ X &= 1.161187421\end{aligned}$$

Based on those calculations, the following thresholds for the HUF are obtained:

³ In June 2003 it was shifted to HUF 282.36

Table 2

Intervention thresholds

	Intervention threshold under parity grid	Intervention threshold without parity grid
Upper limit	237.773	234.685
Central parity EUR/HUF	276.100	276.100
Lower limit	320.605	324.824

Source: Own calculations.

Had the parity grid been in place in the case of Hungary (a country that pursues an exchange rate regime very close to the ERM₂), the central bank would have had to step in and prevent the market rate exceeding the level of HUF 237.773. Without a parity grid, however, it was HUF 234.685 – more than one additional percentage point from central parity.

Remaining within the broad band, however, may not be enough to qualify for entry into the EMU. According to the Convergence Report 2002 and hints made by Pedro Solbes, a country wishing to meet the exchange rate criteria needs to keep its currency within a narrow band. If the domestic currency drops below 2.25% from central parity, it may be considered a case of ‘severe tension, thus possibly restricting entry into the EMU. More on this issue will be presented later.

1.2 Detailed reasons for the instability of the ERM in the 1990s

As already mentioned, the ERM countries experienced a round of major volatility in the nineties. The countries were exposed to something best described as ‘the yo-yo effect’. Much of the pressure had been downward. Currencies were losing value against the German mark, which at the time was regarded as the best reference point. As a matter of fact all currencies in Western Europe (with exception of the Netherlands and Austria) registered a drop in value against the mark. The net result was an overvalued mark.

The nineties coincided with a massive drop in inflation. At the beginning of the decade, inflation was far from eliminated. Although during the second half of the eighties substantial progress had been made towards disinflation, it proved in many cases to be unsustainable. A second run at disinflation had to be taken – given the tarnished credibility, accomplishing the task was not easy. Moreover, disinflation was achieved at the expense of fiscal policy which deteriorated quite substantially, further to which the convergence process was interrupted by the ERM crisis. All those factors combined to cloud the prospects of implementing the EMU. Several currencies fell victim to downward pressure.

One of the reasons governing the failure to maintain disinflation in the late eighties was the attitude adopted towards exchange rate policy. Premature pegging against the ECU or German mark led to major problems. In many cases, domestic currencies were pegged at too high a level. The monetary authorities had many reasons for pegging their domestic currency at a comparatively high level, one being the general perception that a high exchange rate might help in the bid to reduce inflation. In the catching-up countries, capital inflows (in line with the convergence process) led to sharp appreciation. The pronounced intensity of those inflows led people to believe that appreciation on this scale was sustainable.

The ERM (and in particular events in the nineties) cannot be discussed without referring to the state of the international monetary system. Throughout its history the ERM was highly susceptible to developments in the monetary system - and the DEM/USD cross rate in particular. More will be presented later; suffice it to say at this stage, that it was a major determinant in the volatility that the ERM faced in the early and mid-nineties.

The sensitivity of the system to changes in DEM/USD exchange rate was clear to see in the seventies and eighties. It is no exaggeration to claim that one of the reasons for setting up the EMS was to counter all the negative effects in the wake of the dollar's decline in the seventies. This held particularly true for the German economy.

The convergence process which started in the mid-eighties had gathered momentum by the end of the decade, a contributory factor being the stability of the monetary system. The late eighties marked the heydays of monetary cooperation between the G7 countries. Between early 1987 (when the Louvre Agreement was concluded a few weeks after the final realignment in the ERM) and late 1989, the main exchange rates were relatively stable. A stable international monetary system usually encourages investment in 'risky' currencies. In this particular case the 'risky' currencies were for the most part Mediterranean currencies, whose interest rates were higher than those prevailing in the 'hard core' Europe countries.

Lack of any excessive tensions in the international monetary system in the late eighties helped to safeguard stability within the ERM. In the nineties, promotion of the convergence process was supposed to continue. The bands were to be reduced to +/-1% prior to being irrevocably fixed. But that was not to be.

On 1 July 1990 all countries except those with a special derogation (of the Mediterranean countries, Italy was the only country not to have derogated) were supposed to lift all capital controls. These controls had been another element helping to preserve at least in some countries systemic stability. With increased capital mobility, however, the ERM was even more susceptible to shifts in the DEM/USD cross rate.

Despite remarkable progress throughout the second half of the eighties, the convergence process was far from over. The atmosphere of calm within the ERM had also been underpinned by the Basle-Nyborg agreement which bolstered the financing of interventions by central banks, thus enhancing the latter's credibility. It was that systemic stability which led people to believe that the convergence process was almost complete. It proved otherwise and even the increased efficiency of foreign exchange interventions could not avert the crisis.

Since the beginning of the nineties, major imbalances (for want of complete convergence) started to accumulate. Political reasons inhibited any shift to swift adjustment as attaining monetary union rapidly became a priority. To make matters worse, the ERM countries were about to face the largest asymmetrical shock to date. The unification of Germany seriously affected business cycles throughout Western Europe. The dilemma of the 'impossible trinity'⁴ became increasingly evident. Unification compelled the authorities to pursue a policy mix (loose fiscal policy and tight monetary regulations); by definition this brings about a rise in currency values. After being considered an undervalued currency for decades (up until the mid-eighties), the German mark started to soar upwards. In the years after 1985 the German mark appreciated so much that within the space of a few years it quickly became overvalued. With other countries inside the ERM willing to keep up the pace, the threat of a drop in competitiveness loomed large.

The policy mix proved unsustainable and major adjustments were called for. The cumulative adjustments were extensive for a number of reasons:

- Large-scale misalignments could not be overcome by small-scale adjustments.
- Economic robustness suffered as recession hit all countries in the early nineties.
- The monetary authorities lost credibility on abandoning the fixed exchange rate policy.

There seemed to be only one way of overcoming the insoluble 'impossible trinity'. With a return to capital controls seemingly impossible and the pursuit of independent monetary policy lacking any credibility, the sole solution lay in a corrective adjustment to the exchange rate. With the economy in deep recession and the authorities' credibility shattered, depreciation seemed to offer the only feasible solution. However, the key problem was the extent of that adjustment; unanimity could not be reached on the issue. Italy which was forced to suspend its membership in the ERM lay down no limits where depreciation of the lira was concerned, whereas in the early stages of the crisis Spain had tried to keep adjustment to the minimum. Two reasons governed this approach:

⁴ An endeavour to achieve three things at one and the same time: free movement of capital, independent monetary policy and fixed exchange rates.

- The smaller the adjustment, the less pronounced the damage to credibility;
- The larger the adjustment, the greater the threat of undoing all the gains secured in the period up to 1992.

The whole issue related to the rate of inflation. At the time, the rise in prices was still perceived as posing a major challenge to the authorities. Even the economic slowdown in late 1992 had not sufficed to dispel the perception of inflation as the main threat (a far cry from the current situation, where similar circumstances would surely lead to fears of deflation)

Spain opted for limited adjustment. The imposition of capital controls was designed to restore exchange rate stability. With capital controls proving futile and the extent of adjustment insufficient, Spain had to undergo two more adjustments: each adjustment greater than its predecessor. It was not until a cumulative loss of almost 20% had been reached that investors took a more favourable view of the peseta. The three adjustments between September 1992 and May 1993 not only reversed the gains of peseta from the period from 1987-1991 (in nominal terms some 10% against the DM despite significant inflation differentials), but they also seemed to bring levels more in line with fundamentals. A fourth devaluation took place in 1995, but more about that later.

Italy opted for a different approach. As already mentioned, Italy had been forced to suspend its ERM membership. On 14 September 1992 the lira was devalued by 7%, yet only two days later that relatively large realignment (by ERM standards) was unable to prevent the lira from leaving the ERM. With the lira unable to return to the ERM parity grid despite a 7% devaluation, Italy had no other choice but to float its currency. The float lasted more than four years: 17 September 1992 – 21 November 1996. Surprisingly the lira rejoined the ERM at an exchange rate against the peseta almost identical to that prior to devaluation in 1992. It thus makes sense to compare the experience of those two countries. Whereas the extent of adjustment was almost the same, the manner of implementation and the time-line were far different. It is also reasonable to ask whether the peseta and lira were overvalued to the same degree in mid-1992. The size of adjustment would seem to suggest this. However, that would have been the case, had the parity rate at which both countries joined the EMU been equal to the equilibrium exchange rate. Several signs point to the Italian lira being overvalued to a much greater degree. The indications will be described later.

The drop in value was not confined solely to the peseta and lira. Both Portugal and Ireland opted for the Spanish approach and adjusted the external value of their currencies. Both the escudo and the Irish punt were devalued inside the ERM. Furthermore, both devaluations had every appearance of being forced devaluations. The escudo had to

follow the peseta, whereas the punt could not remain immune to the 15% slide in the value of the pound sterling. Finland, Sweden and Norway were three other countries where the shift from a fixed peg regime to a free float translated into a drop in value.

The case of Portugal is interesting as some (albeit limited) parallels can be found with Spain. Portugal joined the ERM in April 1992. Up until October 1990 it adhered to the crawling peg formula. However, its departure from the crawling peg engineered in the twelve months preceding the country's entry into the ERM resulted in a modest appreciation (some 5% in nominal terms). As in the case of Spain, this appreciation occurred despite a much higher rate of inflation. The high exchange rate was also used as a tool to combat inflation. The extent of overvaluation was smaller than in the case of Spain and the time-horizon was shorter. Portugal thus managed to withstand the pressure during the crisis in September 1992 and keep the escudo within its band. Nevertheless, in November 1992 Portugal joined Spain in devaluing its currency. It repeated the operation in May 1993 –although to a lesser extent (6.5% at the time).

The case of Ireland is interesting, yet hardly pertinent from the standpoint of the accession countries. The correlation between pound sterling and the Irish punt had been extreme. The three prior adjustments to the punt (1986, 1993 and 1998) were the outcome of major swings in the value of the British currency. The extent to which fundamentals had been misjudged was not as significant as in case of Spain, Portugal and Italy.

2 Case studies

2.1 Spain

Spain joined the EEC in 1986. Entry coincided with a reversal in the fortunes of the Spanish economy. The ten years preceding entry into the EU are commonly known as the lost decade. The catching-up process which had started in the sixties came to the end in the mid-seventies: when economic transition set in following the end of Franco's regime. In the period 1975-1985 the country's per capita income fell from 79.2% to 70.4% of the EEC average. In the post-entry period the Spanish economy started to grow very rapidly. The peseta dropped in value in keeping with the inflation differentials. The slide in the value of the peseta came to an end in early 1987. Major capital inflows coupled with high interest rates brought about strong appreciation. From early 1987 to early 1989, the peseta gained more than 11% against the German mark despite persistent inflation differentials (during the first three years of EEC membership, inflation in Spain 1989 was three times higher than in Germany).

GDP increased by more than 5 % per year in the period 1987-1989 and led to large current account deficits. The deficits were easily financed, thus creating the impression that they

could be sustained. In 1991 the economy overheated. None the less, the fragile state of the economy had little impact on the peseta. Not until the summer of 1992 did the peseta start to drop in value. On 16 September 1992, the first devaluation took effect. Two subsequent adjustments were aimed at erasing the imbalances which the economy had incurred at the turn of both the eighties and nineties.

The corrections to currency values carried out over the period September 1992-May 1993 were not the last in the series. One more followed in March 1995. However, a distinction has to be made between the first three devaluations and the final adjustment, the main reason being the ERM reform which had taken place in the interim period. Up until the end of July 1993, the currencies were allowed to move within narrow bands ($\pm 2.25\%$ for all countries but Spain and Portugal which enjoyed a spread of $\pm 6\%$). As already noted, in August 1993 the ERM underwent an internal reform as a result of which the band width for all currencies (except the DEM/HLF cross rate) was extended to $\pm 15\%$. That notwithstanding, these broad bands could not prevent either the peseta or the escudo being realigned in March 1995.

The first realignment following the widening of the bands had been preceded by a marked rise in the value of the German mark as a result of massive dollar sales. Tension within the monetary system was further heightened by the outbreak of a currency crisis in Mexico which provoked a flight to quality. A drop in the value of the dollar invariably led to stress and strain within the EMS; this time round was no exception. However the magnitude of the change was even greater as the members of the ERM enjoyed still more latitude in terms of deviating from central parity. Downward pressure was not confined solely to the peseta and escudo; it had an impact on other currencies as well. Divergence in the case of the French franc was larger than it had been in August 1993. The peseta had been devalued by 8% just two and a half months before the bands were broadened. None the less, divergence of the franc was dangerously close to the 6% threshold on 31 July 1993. After August 1993, the peseta exchange rate never returned to central parity; in 1994 the deviations looked as though they were permanent. The average deviation for the whole of 1994 was at about 5.2% and from mid-October of that year, it stood at well above 6%.

One of the factors contributing to the peseta's weak performance was loose fiscal policy. The inflation record was far from good. As of mid-1994, inflation started to accelerate owing to temporary supply-side factors (OECD 1996). An increase in VAT was one of the factors exerting upward pressure; in 1995 it exceeded 5%. Circumstances favoured an attack on the peseta in early March. On 10 January 1995 divergence already exceeded 10%. When the peseta deviated by more than 12.5%, the authorities decided to devalue by yet another 7%. In total, the adjustments against the German mark amounted to more than 30%; adjustments on such a grand scale had not been seen since the early eighties.

The fourth depreciation, however, cannot be ranked with the three preceding downward adjustments over the period September 1992-May 1993. Economic activity in 1995 was much stronger than it had been in the last quarter of 1992 and the first quarter of 1993.

Table 3

Changes in Spanish GDP

Devaluation 1992-1993		Devaluation 1995	
1992-IV	0.6	1994-IV	2.8
1993-I	0.0	1995-I	2.6
1993-II	-2.0	1995-II	2.8
1993-III	-1.3	1995-III	2.8

Source: Bank of Spain.

The same can be said of the external balance. Over the period 1989-1992, the current account deficit rose on average by 3.5%. In 1993 a combination of strong recession and significant depreciation of the peseta led to the deficit being reduced to 0.6%. The recovery in late 1993 (the result of an aggressive cut in interest rates enabled by the widening of the band in August 1993) was only able to nudge the deficit in 1994 up to 0.8%. The average size of the deficit in the period 1993-1994 was thus barely one fifth of that recorded in the period 1989-1992.

Even after carrying out a fundamental analysis, it is quite difficult to justify the fourth devaluation of the peseta. Factors obtained which should have deterred the authorities from devaluing; one such factor was rising inflation. The surge in inflation coincided with the decision to grant independence to the Banco de Espana. Since becoming independent, Banco de Espana has opted to pursue inflation targeting. The 7% devaluation could have put the target at risk and dealt a further blow to the credibility of the newly independent central bank.

As subsequent events showed, the decision to devalue did not harm the economy. Inflation fell sharply after 1995. The largest drop occurred at the turn of 1996— at the very point in time when the economy felt most the impact of the devaluation carried out in 1995.

All the above goes to show that the fourth devaluation of peseta can be considered a pre-emptive measure. Although it is hard to say whether the decision to devalue the peseta was deliberate, it appears to have been imposed by the market since there were no fundamental reasons for devaluing the currency. The downward adjustment was due to speculation pressure: the result of fiscal and monetary problems and the weakness of the DEM against the USD. The Spanish authorities did not reverse the measure once the situation had calmed down. Spain might thus be seen to have entered the EMU at a

slightly undervalued rate in 1999. Regardless whether it was deliberate, the strategy seemed to work. In the late nineties, the Spanish economy entered a phase of strong growth which, by definition, had to bring about a rate of inflation higher than the EMU average. The undervalued peseta would have accommodated a higher inflation rate in the economy. Hence the devaluation in 1995 can be described as pre-emptive devaluation: an issue to be addressed later on in this paper.

Spain's experience of combating inflation is interesting from the point of view of exchange rate policy. Two attempts were made to bring inflation under control. The first attempt was made at the turn of the eighties. During that period, the authorities decided to take a risk and resort to currency appreciation (in both nominal and real terms). That step not only failed to generate lower inflation, but it also led to overheating which culminated in recession. It is interesting to note that even recession together with an unemployment rate of more than 22% failed to induce a lower rate of inflation.

The second attempt – a successful endeavour – took place under totally different circumstances. The peseta had dropped more than 20% in value without yielding any major inflationary impact on consumer prices. However, other factors were at play which helped to push the inflation rate up to the levels required by the rules on convergence. Granting independence to the central bank was an important factor. That notwithstanding, only when the Banco de España proved its credibility by attaining the inflation target, was the turning point reached. The most important factor, however, was the authorities' commitment to the objective of meeting the convergence criteria before the EMU came into effect. Under those circumstances, the final downward adjustment of the peseta had little impact on inflation.

2.2 Italy

Up until the late eighties, the Italian economy performed well within the fixed, but adjustable peg regime imposed by the ERM framework. Frequent devaluations (the last taking place in July 1985) helped to mitigate the effect of higher inflation. GDP growth was high and the balance of payments under the control. The situation started to deteriorate after 1988, following on the final adjustment in January 1987. Although disinflation was under way, the process was far from complete. After staying unadjusted within the wide bands of the ERM for almost three years, the authorities decided to narrow the band. At the same time central parity was adjusted downwards. The new central parity within a 2.25% wide band was set at the market rate prevailing at the time. The overall adjustment, however, was less than 2.5%. With such a small adjustment, it proved impossible to address properly all the imbalances which started to accumulate in the economy.

The imbalances were not only due to an overvalued exchange rate. Several authors point to loose fiscal policy and its impact on the non-tradable sector. Fiscal spending seriously affected the so-called 'internal exchange rate': the relationship of tradable goods to non-tradable goods. It rose even faster than in the inflation-prone seventies. Depending on the yardstick applied, at the turn of 1991 overvaluation of the lira was estimated to range from 6.5% to more than 10%

As already noted, Italy was compelled to leave the ERM in 1992. Adjustment was thus both swift and far-reaching. Within seven months, the lira dropped almost a quarter in value. The fall in the exchange rate was not only attributed to the previous overvaluation. The lack of political stability also heightened the uncertainties surrounding the lira.

The decision to float the lira led to a relaxation of monetary policy. That notwithstanding, Italy failed to avert recession (albeit mild) in 1993. Low interest rates quickly helped to spur growth. Depreciation of the lira led to a dramatic improvement in the balance of payments. Up until the second half of 1994, inflation did not pose a challenge to the authorities. After a sharp drop in value over the period September 1992-April 1993, the lira stabilized at around ITL/DEM 970.

Nevertheless, even by 1994 adjustment was far from over. The cyclical relaxation – which had begun with the country's exit from the ERM - came to an end in early 1994. Several indicators in mid-1994 hinted at a rise in inflation. The Bank of Italy thus faced the task of raising interest rates. With its credibility damaged and little progress in terms of fiscal consolidation, the lira remained vulnerable. Further uncertainties concerning pension reform combined with yet another collapse in the value of the dollar on foreign exchange markets led likewise to another drastic fall in the value of the lira. Within two months (February and April 1995), it plummeted more than 15% in value. On 19 April 1995 it fell to ITL/DEM 1266 – a plunge of 40% if one takes as reference points the previous central parity in the ERM and the rate at which the lira had been trading as recently as March 1992: in brief, a classic case of currency overshoot. Although the lira swiftly recovered from that historic low, the actual impact of such a drastic drop on the equilibrium exchange rate is quite unclear.

The drastic fall in the lira exchange rate (temporarily) affected the inflation rate which rose to more than 6%. Even without this surge, the annual level was still twice as high as that of Italy's major trading partners. This inflation rate divergence also had an effect on the real exchange rate.

Italy rejoined the ERM in November 1996. The new central parity was set at DEM/ITL 990, the level at which it had last traded in the first half of 1994. This rapid recovery in the value of the lira raised suspicions that Italy might have entered at an overvalued rate. Weak

economic growth combined with prospects of benign inflation registered after entry into the EMU merely confirmed fears about the lira being overvalued.

In the wake of the decision to float the lira, the exchange rate commitment was abandoned before the inflation rate had fully converged to the level of other industrial countries. (Detragiache and Hamann 1997). As a result of the lira's exit from the ERM, inflation soared, albeit only temporarily. In the last quarter of 1995 it had reached 5.9%, but within twelve months it fell to 2.7%: a level that sufficed for a return to the ERM. The question thus arises as to the measures that had been taken in order to avoid higher inflation in the absence of the exchange rate anchor. According to Detragiache and Hamann (1997), at least three factors had a bearing:

- An effective end to the monetization of the debt launched in 1992
- A substantial reduction in wage indexation (*scala mobile*)
- Political consensus on the need to pursue fiscal discipline

It is also worth emphasizing that the economy displayed certain tendencies that helped appreciably to contain the rate of inflation. During the first sixteen months after the lira float, the economy was in recession. Apart from that, there were no signs of any substantial negative supply shocks comparable to those in the seventies and the eighties which tend to destabilize an economy.

2.3 Comparison of Spain and Italy

Many parallels exist between Spain and Italy. Both countries failed to sustain low inflation at the end of the eighties and both currencies were devalued. None the less, close analysis of the two economies may well reveal some differences.

The lira would appear to have been far more overvalued than the peseta. This was due to an uneven rise in prices for non-tradable goods in Italy. Close scrutiny of the balance of payments in the two countries prior to the ERM crisis would seem to indicate more rapid deterioration in the case of Italy.

According to Barry Eichengreen (1997), the overvaluation of the lira was more evident than that of the peseta. All three indicators (multilateral and bilateral unit labour costs (ULC) and the relationship of traded goods to non-traded goods) provided conclusive evidence of a deterioration in Italy's competitiveness. In the case of Spain, analysis of the real exchange rate is much more difficult to describe. Although the real exchange rate deteriorated to very

much the same extent, part of that increase has to be attributed to the Balassa-Samuelson effect⁵. That effect does not hold in the case of Italy.

Table 4

Current accounts deficits in Italy and Spain, 1988-1992

Current account					
	Italy (ITL billion)	% change		Spain (ESP billion)	% change
1988	-8620		1988	-429.2	
1989	-16205	87.99	1989	-1362.1	217.36
1990	-20378	25.75	1990	-1719.6	26.25
1991	-29337	43.96	1991	-1736.3	0.97
1992	-34225	16.67	1992	-1878.6	8.20

Source: Central banks of Italy and Spain.

The pre- and post-crisis behaviour of both currencies proves that the lira had been overvalued to a much greater degree.

- The lira's deviation from central parity turned positive (as the lira weakened) almost 10 months before the crisis. The peseta remained above central parity up until 25 August 1992;
- The forward exchange rate of the lira left the band after 3 June 1992, when Denmark rejected the Maastricht treaty. However, even before the Danish referendum the forward rate had struggled to remain within the band. The forward exchange rate of the peseta remained well within the band up until the end of August 1992;
- As observed earlier, a 5% devaluation in Spain was enough to return the peseta (at least temporarily) to the parity grid. In Italy even a 7 % devaluation proved insufficient to prevent the lira from leaving the ERM. Although the peseta had to undergo further necessary adjustments were needed, unlike the lira it did not go into free fall.

For all the reasons mentioned above and given the Italian economy's much poorer performance (compared to the Spanish economy), the hypothesis that the lira entered at an overvalued rate would appear substantiated. Italy's experience may be a warning for the accession economies. The decision-making process concerning the level of central parity should not be confined to the euro alone. The external value of the euro against other currencies (and the dollar in particular) is of paramount importance. Up until the introduction of the euro, all European currencies were susceptible to the DEM/USD cross rate. With the advent of the euro, the remaining European currencies would appear to be under the sway of the EUR/USD cross rate. This issue will be discussed later.

⁵ The Balassa-Samuelson effect consists of an uneven rise in productivity of both tradable and non-tradable goods which brings about either higher inflation or real appreciation of the exchange rate.

2.4 Portugal

Although Portugal joined the EEC at the same time as Spain, its entry into the ERM was delayed by almost three years. Portugal joined the ERM on 6 April 1992. Almost immediately (on the very first trading day) the escudo started to track the Spanish peseta soon to become the strongest currency along with the peseta in the entire system. Perhaps for reasons of geographical location and close trading links, people began to view the escudo as a currency that usually shadowed the peseta's trajectory. Although the two currencies bore some similarities, they also displayed some differences stemming from the countries' different structures. Spain was the larger economy; by definition, the impact of exchange rate changes was quite different to those in a small economy such as Portugal.

The greatest obstacle to Portugal's joining the ERM was the high rate of inflation. Two years prior to entry into the EEC, inflation had soared to almost 30%. The disinflation process was comparatively swift as by 1987 the authorities had managed to bring inflation rate down to less than 10% (9.3%): a level still far too high to permit entry into the ERM. To make matters worse, Portugal experienced a setback to its disinflation bid at the turn of eighties. Although Portugal was not the only country to experience an upward inflationary trend at the time, the situation was made worse by an overheated economy and less favourable international price developments. In 1990 the CPI rose to 13.4%.

Surprisingly in 1990 Portugal decided to modify its exchange rate policy. It abandoned the crawling peg policy with the help of which the authorities had offset the inflation differentials between domestic economy and the country's main trading partner.

Dismantling the crawling peg regime was designed to end the predictability of the exchange rate: a factor in the stimulation of major capital inflows. Those inflows were the outcome of the recently introduced capital liberalization. In the period preceding Portugal's entry the ERM and once the crawling peg had been dismantled, the domestic currency started to appreciate slightly against other currencies -- mainly on account of capital inflows. As a result, the escudo entered a phase identical to that of the peseta in late 1987. The upward pressure might have also been attributable to the policy mix of loose fiscal policy and tight monetary regulations. Although the rise in the value of the escudo was modest in nominal terms owing to persistently significant inflation differentials, that same rise expressed in real terms amounted to 15%.

As stated earlier, Portugal entered the ERM in April 1992 with a wide band (of +/- 6% in each direction) around central parity set at ESC/DM 86.94. On entering the ERM, the escudo appreciated markedly; its exchange rate can thus be said to display some signs of overvaluation. The escudo's rise in value in the first few months of the membership was attributed mainly – as in the case of Spain – to high real interest rates, thus exposing even more the currency's overvaluation. In the period January 1991-June 1992, the escudo rose

almost 8% against the German mark: all that despite a high rate of inflation, which for much of the period stood well above the psychological threshold of 10% - the highest level of all ERM members.

In late August 1992 the escudo started to drop in value quite quickly in the wake of the tensions within the ERM. Despite the exit of both the United Kingdom and Italy and, more importantly, the 5% devaluation of the Spanish peseta, Portugal repelled all the speculative attacks. It was not until the peseta was devalued a second time that Portugal decided to adjust the central parity of the escudo downwards. Its ability to withstand devaluation in September 1992 paved the way for the further appreciation of the escudo against the neighbouring peseta.

It was not until 21 November 1992 when Portugal decided for the first time since joining the ERM to devalue the domestic currency by exactly the same amount as Spain. Both currencies were devalued by 6%. In May 1993, less than six months later, the escudo was devalued yet again. Prior to that second downward adjustment, the escudo itself had not been under any undue downward market pressure; the adjustment was triggered by downward pressure on the peseta. Portugal could not afford the luxury of remaining indifferent to events in Spain – its major trading partner and a competitor on third-country markets. Certain similarities obtain with the United Kingdom and Ireland when sterling's drop in value triggered off the devaluation of the punt. However, this time round the escudo was not devalued to the same extent as the peseta. The latter was devalued by 8% while devaluation of the escudo was set at 6.5%, thus giving the Portuguese monetary unit more space in which to appreciate against its main trading partner. For an open and small economy, any downward adjustment of the exchange rate bears the risk of higher inflation. Hence, the Portuguese authorities tried to minimize each downward adjustment associated with the devaluation of the peseta.

A similar situation occurred in March 1995. This time the difference in the scale of devaluation between the peseta and the escudo was even wider. The peseta was devalued by 7% and the escudo by only 3.5%, thus reducing the escudo's cumulative depreciation to a little less than 17%. Over the same period of time, the cumulative extent of the peseta's adjustment within the ERM was more than 28%.

Despite efforts on the part of the Portuguese authorities, attempts to delink the escudo from the peseta were to no avail. The only thing the Portuguese could afford was to reduce the scale of the exchange rate correction triggered by Spain. However, that strategy also bore the risk of a loss in competitiveness. In the period July 1990-March 1995, the escudo appreciated more than 16% – a significant adjustment against the main trading partner. Fortunately, the fourth devaluation of the peseta proved to be the last in the series and bore certain features of what can be termed 'pre-emptive devaluation'. Thus, by not

following the Spanish move entirely, Portugal did not expose its economy to serious consequences.

The escudo could afford a lesser degree of exchange rate adjustment, as its overvaluation at the beginning of the nineties was not as high as that of Spain. Moreover, the time horizon played a role. Whereas the Spanish peseta started to appreciate strongly in the late eighties, Portugal maintained the crawling peg formula up until late 1990; this at least partially mitigated the negative effects of real appreciation.

Although several papers claim that the real appreciation of the escudo at the turn of both the eighties and nineties hardly affected the competitiveness of the real economy (Carkovic, Halikias, Levy and Paiva, 1997), it is open to question. If it were the case, it can be said to be due to the exchange rate adjustments which took place between 1992 and 1995. Even if the exchange rate level set in 1995 proved competitive, the subsequent significant increase in the current account deficit in the late nineties may support the argument that Portugal had to pay a certain price for having resisted adjusting its exchange rate to the same extent as its main trading partner.

2.5 Greece (a case of typical pre-emptive devaluation)

Up until 1993 Greek attempts to stabilize the economy met with little success. Inflation remained at two digit levels, budget deficits were high and economic growth sluggish. 1994 marked an about-turn in policy; it was the year of far-reaching foreign exchange liberalization. The implementation of the policy led to some exchange rate turbulences as the market expected the lifting of restrictions to be coupled with a devaluation of the drachma. The sharp rise in the intervention rate and the imposition of additional surcharges on bank overdrafts combined to curb capital outflows. However, in order to avoid a similar situation re-occurring, a credible economic policy programme was needed. The main priority was to combat inflation inertia which inhibited efforts to reduce CPI to less than 10%. In 1994, a ban on funding public sector borrowing requirements was announced in an attempt to improve the fiscal situation. In 1993 the deficit had exceeded the threshold set in the Maastricht Treaty by a factor of four. The authorities decided to introduce a 'hard drachma' policy. From that point on, the currency was to appreciate in real terms. For 1995 (the first year of the new policy) the depreciation rate against the ECU was set at 3%; this was well below the projected inflation rate of 8%. Apart from the exchange rate anchor, the M3 growth rate was set as a new target. In 1995 it was set at 7-9%. The initial results of the new policy were far from encouraging. In 1995 inflation once again exceeded the target, only to re-occur in 1996. It was not until 1997 that the policy became more efficient. In that year the CPI fell to 4.7%: only slightly above the target of 4.5%. That was close enough for Greece to consider entering the ERM.

The 'hard drachma' policy ultimately proved a roaring success. Disinflation did not take place at the expense of output. Average GDP growth in the period 1995-1997 was 2.8% compared to 1% in the period 1991-1994. The fiscal record was even more encouraging; within the space of three years the deficit was more than halved. It fell from 10% in 1995 to 4% in 1997. The drachma gained in strength; its downward adjustment in 1997 was less than 1%. Other challenges, however, still had to be faced. The 'hard drachma' policy led to deterioration in the balance of payments. Within four years (1994-1997) it shifted from being in balance to a deficit of 4%. The inflation rate recorded in 1997 was still above the EU average. Thus, entry into the ERM posed a major challenge. The only solution lay in devaluing the drachma pre-emptively. The devaluation which preceded entry into the ERM in mid-March 1998 was – according to Carganas – both backward- and forward-looking. It was backward-looking in that it took into consideration past inflation differentials between Greece and the rest of the EU, as well as fears of a growing current account deficit. It was forward-looking in that it gave more space to accommodate subsequent inflation differentials following Greece's decision to join both the ERM and EMU. The drachma was duly devalued by 12.3% and joined the ERM rate at a parity of GRD/ECU357

The decision to devalue the drachma was not an easy one. The scale of devaluation could well jeopardize the disinflation process. In the first three months, it leapt to a level of 5.3%. However, by the end of the year, the trend had been more than reversed. Apart from internal factors which helped to keep inflation under control, some external factors also came into play. The period was marked by a sharp fall in oil prices. Greece thus experienced what the West European countries had been through in the early nineties when devaluation had not given rise to the inflation. The factors that helped to curb inflation included the stability of both the financial and banking sectors.

The drachma exchange rate after devaluation proved highly competitive. Demand (stimulated by high interest rates) helped to push it well above central parity. Transition from the ERM to the ERM₂ had little impact in terms of monetary policy. Still it is worth noting that the currency underwent a technical realignment, as a result of which the drachma appreciated by more than 1%. Parity for the purposes of the ERM₂ was set at GRD/EUR353.109 on account of the changes that had occurred within the ERM during the period March 1998-December 1998. In March 1998 the German mark (which was the reference currency) stood slightly below central parity against the ECU. As the mark recovered and approached central parity over the remaining months of 1998, the drachma also appreciated against the ECU⁶.

The rising drachma posed a major challenge to the authorities. They introduced some measures to reduce divergence from central parity, among others:

⁶ For more see The Annual Report of Bank of Greece for 1999, p. 33

- (a) When divergence approached 10%, the authorities decided to intervene on foreign exchange markets.
- (b) The authorities resorted to temporary credit controls. In April 1999 non-remunerated deposits were introduced and not dismantled until March 2002.

All these measures, however, did not prevent Greece from making an adjustment in the ERM2. In addition to revaluation, Greece had to resort to some administrative measures designed to contain inflation. The case of Greece (and that of Ireland earlier) points to participation in the ERM exposing members to a possible trap. If at the time of entry either into the ERM or ERM2 the rate of inflation in a new member state exceeds the rate set by the Maastricht Treaty (and in case of Greece it was 900 basis points above the reference point), a high interest rate policy is pursued in order to combat inflation. If the policy is credible, an inflow of capital will most probably occur. The combination of the two factors exerts upward pressure on the value of the domestic currency. Failing that, the convergence process which is supposed to bring interest rates down to the level set by the ECB and exchange rates to central parity (something that often implied a depreciation of 10%) may well prove dangerous – all the more so in a country lacking long term commitment to low inflation. Greece was not the only country to be caught in that trap.

The same happened to Ireland which decided to revalue the punt less than ten months before joining the EMU. Greece resorted to the same measure by revaluing the drachma by 3.5%. On 14 January 2000 central parity was shifted from GRD/EUR 353.109 to EUR/GRD 340.75 – and that despite the country running up a large current account deficit (amounting to 7% of GDP in 2000). The main reason for this adjustment was to counter the effect of the trap inherent in the ERM2.

The drachma was revalued less than two years after it had been depreciated by 12.3%. A sequence of events of this kind may well place in question the strategy of adopting a forward-looking approach as had been pursued by the authorities at the time of ERM entry.

It is debatable whether it makes sense to devalue and then simply reverse the adjustment less than two years later. It would seem reasonable on two counts:

- Pre-emptive devaluation helps to deter speculative attacks. If the attacks are on the stronger side of the corridor, they are less dangerous since they can always be adjusted upwards: something that does not deter entry into the EMU.
- An economy can operate much more easily in an environment with an undervalued (as distinct from an overvalued) currency. Once all the tools designed to prevent inflation (as a result of undervaluation) have been exhausted, the value of the domestic currency can always be raised. Not only does that not inhibit entry into the EMU, but it also poses no real threat to the economic programme pursued by the monetary authorities.

None the less, pre-emptive devaluation does incur certain economic costs. Upward adjustment (which often seems indispensable following pre-emptive devaluation) may pose a threat to the economy's competitiveness. Although in both Ireland and Greece, the upward adjustment which preceded ERM entry was modest and hence relatively safe in terms of competitiveness, the threat was still there. The devaluation in March 1998 was supposed to serve a dual purpose: correct the overvaluation of the drachma and guard against assumed post-entry overvaluation. By revaluing within two years, upward adjustment may well threaten to erase the so-called 'forward-looking' features of devaluation. This applies mainly to pre-accession economies whose currencies may be endangered by any upward adjustment in value owing to the precarious state of their balance of payments.

2.6 Other examples of pre-emptive devaluation

As mentioned earlier, Greece was not the only country to resort to pre-emptive devaluation. The devaluation of the peseta in March 1995 can also be described in the same terms. The analysis above indicates that no fundamental reasons governed devaluation as such. Nevertheless devaluation took place. The question whether it was brought about by fundamentals seems quite irrelevant. Once the market situation returned to normal, the authorities did not rescind the adjustment. The experience of Spain stands in stark contrast to that of Italy. The undervaluation of the lira was reversed and thus brought back to equilibrium.

Table 5

Exchange rates of peseta and lira adjusted by the CPI, 1987-1996

	Min CPI	Italy	Differentials	Estimated exchange rate	Spain	Differentials	Estimated exchange rate
1987	100.20	104.70	1.04	765.92	105.20	1.05	
1988	101.30	105.10	1.04	794.65	104.80	1.03	63.32
1989	102.80	106.20	1.03	820.93	106.80	1.04	65.78
1990	102.70	106.40	1.04	850.51	106.70	1.04	68.35
1991	103.20	106.30	1.03	876.06	105.90	1.03	70.13
1992	102.40	105.10	1.03	899.16	105.90	1.03	72.53
1993	102.10	104.50	1.02	920.29	104.60	1.02	74.31
1994	101.70	104.00	1.02	941.11	104.70	1.03	76.50
1995	101.80	105.20	1.03	972.54	104.70	1.03	78.68
1996	102.00	104.00	1.02	991.61	103.60	1.02	79.91

Source: IMF.

Both the lira and the peseta faced downward adjustment on account of inflation differentials. In the case of Spain, large capital inflows only partially offset the effect of

those differentials. Table 5 shows nominal exchange rates adjusted by the differences in terms of the CPI between those countries and the best performing economies within the ERM. For Italy and Spain the exchange rates for 1987 and 1988 respectively have been taken.

As can be seen from Table 5, Italy returned to the ERM (ITL/DEM 990) at a rate that corresponded almost exactly to the inflation differentials over the period 1987-1996, the reference rate assumed for this analysis being the central parity of the lira set in early 1987. That was not the case in Spain where (as a result of the fourth devaluation) central parity (85,07 pesetas to the mark) was set well below the exchange rate calculated on the basis of inflation differentials⁷. Higher growth usually generates higher inflation. The difference between the central parity and the rate set on the basis of CPI differentials can be regarded as 'breathing space' for higher GDP growth. Unlike Spain, Italy had been denied that space. That may be another reason for the Italian economy performing poorly in the EMU.

3 ERM sensitivity to the USD/DEM cross rate

As already noted, the ERM was extremely susceptible to events taking place in the international monetary system: in particular, the DEM/USD cross rate. The reasons for this sensitivity are as follows. When the German currency was in great demand (as was the case when the dollar was weak), the EMS was exposed to major capital inflows. The investors' preferred currency was obviously the mark. However, in order to distribute all inflows evenly, the remaining partners had to raise their interest rates above the German rates. The higher the demand for the mark, the greater the need for higher interest rates in the EMS. Hence in periods marked by a chronically weak dollar, tensions arose within the mechanism. A strong dollar induced a drop in the demand for the German mark, thus easing the pressure on the other EMS members since their interest rates could return to the levels more in keeping with the fundamentals.

The ERM lasted almost 20 years. In terms of the system's susceptibility to the DEM/USD cross rate, that period can be divided into four sub-periods (see Table 6).

On closely examining the fourth sub-period (1995-1998), the US currency can be seen to have remained relatively stable until mid-1994 whereafter it started to depreciate. However, in early 1995 the drop in the value of the dollar increased in momentum, falling in spring 1995 to an all-time low against the German mark (Figure 1).

⁷ In case of Spain, the reference point for this analysis had been set at Peseta/DEM 63,32 – the market exchange rate at the turn of 1988 and 1989.

Table 6

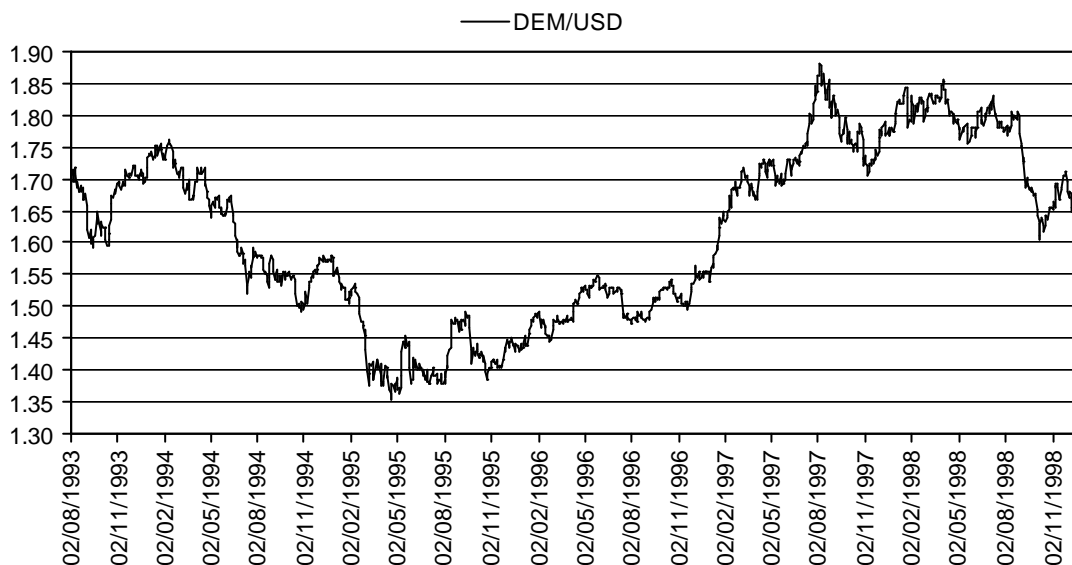
The history of the ERM

	Status of the dollar	Events in the ERM
1980-1985	Overvalued dollar	Several adjustments in the ERM owing to major divergence, with appreciation of the dollar helping to smooth the process of countering that divergence
1986-1989	Period of stability	Despite the two realignments required after the La Plaza Agreement, subsequent stability of the DEM/USD helped to foster convergence
1990-1995	Undervalued dollar	Tensions started to build up, ultimately leading to the 1992-1993 crises and making it necessary to widen the bands within the system
1995-1998	Dollar recovery	The rise in the dollar helped to achieve EMU

Source: Own source.

Figure 1

USD/DEM following the widening of ERM bands up until end-1998



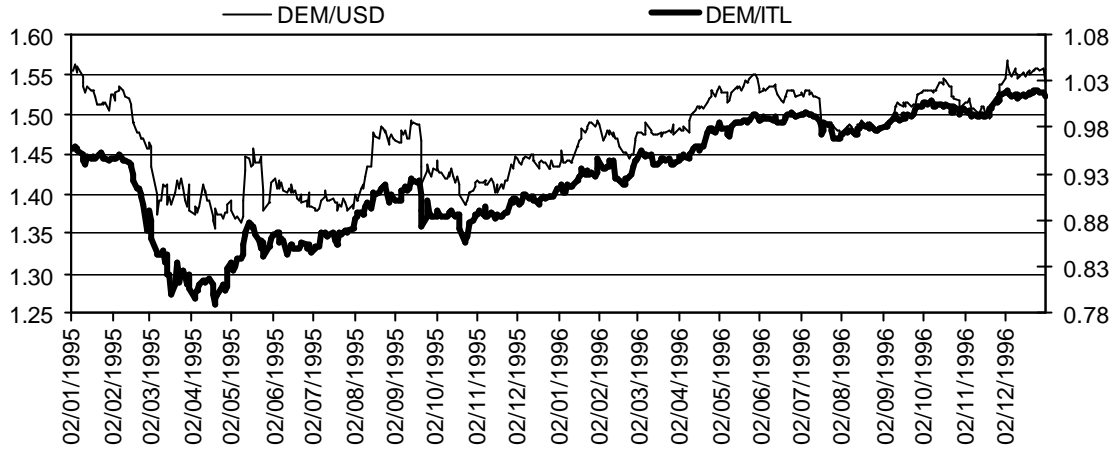
Source: Federal Reserve.

The dollar's marked decline led to tensions within the ERM. Summer 1995 proved to be a turning point as the dollar started to reverse its losses. Since then, apace with the recovery of the dollar, deviations with the ERM began to diminish significantly. The only notable exception was the Irish punt which was heavily influenced by the performance of the pound sterling. However, even in the case of Ireland, the upward surge in the value of the dollar (and sterling) led from deviations below parity to deviations above parity.

The most convincing demonstration of the correlation between the performance of the DEM/USD cross rate and the European currencies is given by the exchange rate of the lira during Italy's suspension from the ERM. The correlation is easier to denote by inverting the DEM/USD cross rate, i.e. USD/DEM. Although during the first few months following Italy's suspension this correlation was weak, it strengthened over time.

Figure 2

Susceptibility of the DEM/ITL to the DEM/USD cross rate, 1995-1996

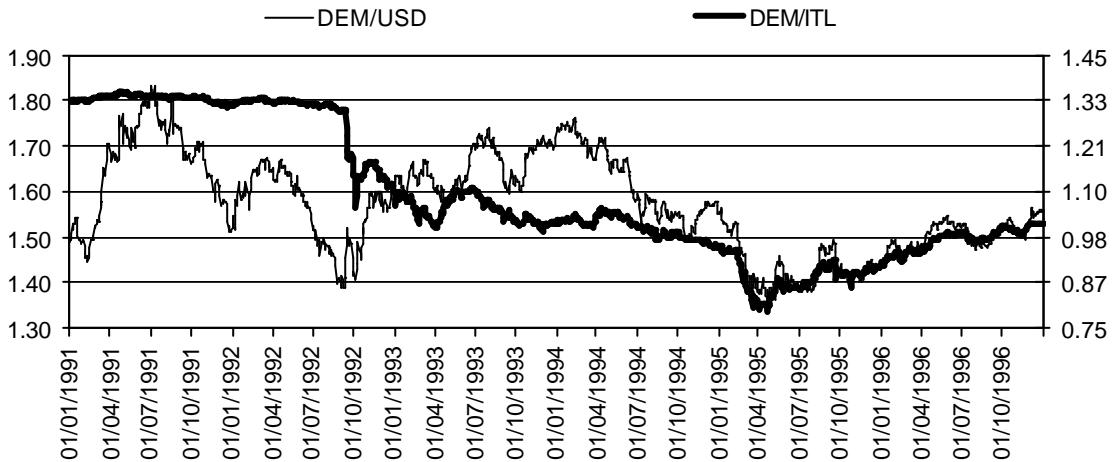


Source: Federal Reserve.

Over the period 1995-1996 the lira followed the DEM/USD cross rate very closely. The strengthening of the Italian currency after April 1995 was also induced by the gradual recovery of the DEM/USD cross rate.

Figure 3

Susceptibility of the DEM/ITL to the DEM/USD cross rate, 1991-1996



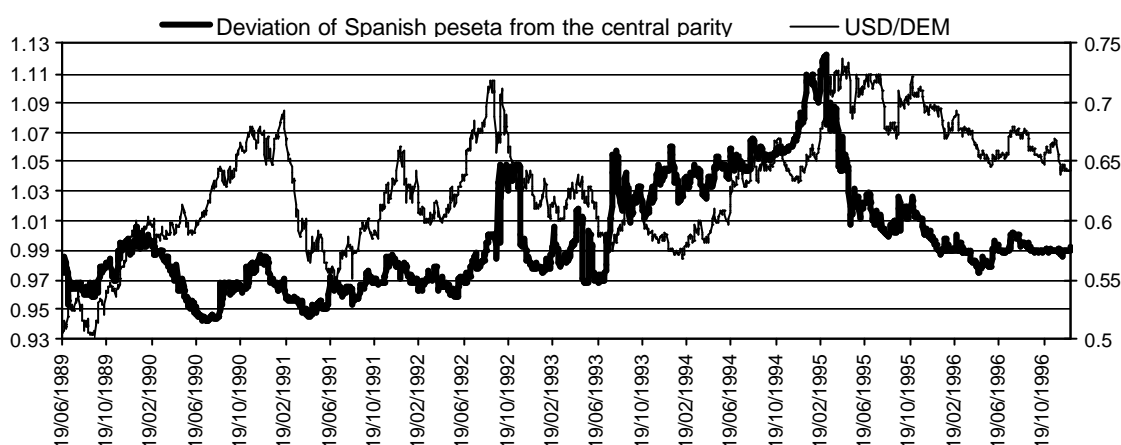
Source: Federal Reserve.

Within the ERM the evidence is not so strong. In the ultimate analysis, the obligation to intervene within the ERM led inevitably to destabilization. None the less, instead of watching the exchange rate of certain European currencies, it is worth noting the deviation of the same from central parity. The extent of the deviation seems to hinge to a certain extent on the behaviour of the DEM/USD cross rate.

Almost any major weakening of the US currency led to the peseta increasing its deviation below parity (thus weakening the peseta) Until the crisis in 1992, the correlation was comparatively weak (mainly owing to the convergence game which peaked in 1990). However, since 1992 it has been gaining in strength. If the weakening dollar was matched by a poor economic situation in Spain, a crisis was usually the outcome. That was the case with the third devaluation in May 1993 and in general for the final devaluation in March 1995.

Figure 4

Sensitivity analysis of the peseta's divergence within the ERM in terms of the DEM/USD cross rate, 1989-1996



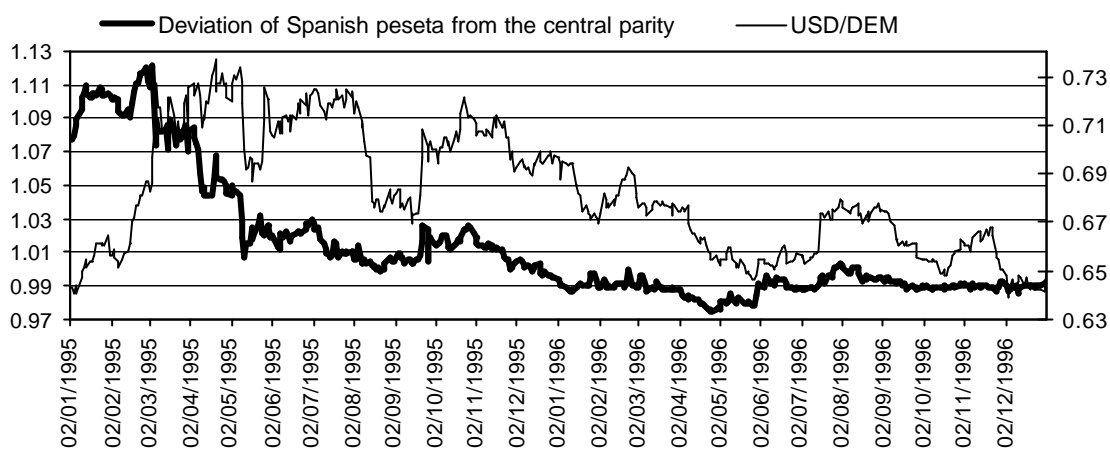
Source: Federal Reserve.

1995 was a good year for spotting the correlation between the DEM/USD cross rate and the deviation of the peseta. The 10% appreciation of the US dollar over the period April - August 1995 led to a similar gain in the peseta against the German mark. Over the same period, deviation of the peseta from the central parity disappeared completely (actually it fell below the parity) from a previous level of some 8% in early April.

When the peseta reached parity in mid-August 1995, it marked the end of its recovery. From then on, the peseta remained within a narrow band around central parity, fluctuating within that range up until the launching of the EMU.

Figure 5

Sensitivity analysis of the peseta's divergence within the ERM in terms of the DEM/USD cross rate, 1995-1996



Source: Federal Reserve.

That was not the case with the lira. By mid-August 1995 it had appreciated by 15%: almost twice as much as the peseta. That, however, was not the end to the lira's recovery. Over the following twelve months, the lira gained another 10%. Whereas the first appreciation (which lasted up until August 1995) can be interpreted as a reversal of the overshooting which had occurred in mid-April of the same year, the second appreciation is much harder to explain – at least in terms of fundamentals.

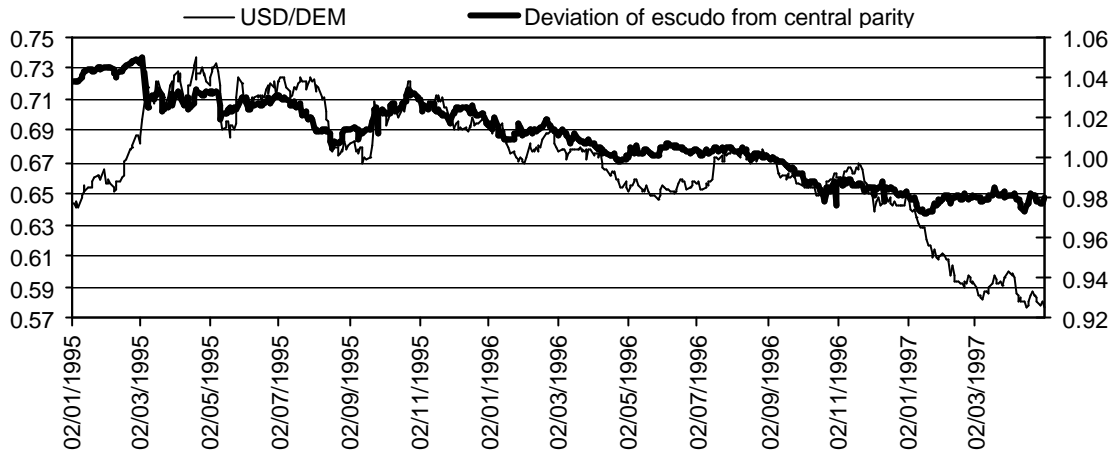
Sensitivity can be also illustrated by observing the divergence of the Portuguese escudo from central parity and the DEM/USD cross rate.

That Greek participation in both the ERM and ERM₂ was safe and secure can be attributed to the performance of the DEM/USD cross rate. Greece was extremely fortunate in that the country's tenure in both the ERM and ERM₂ coincided with a period during which dollar grew stronger almost continuously, the sole exception being the turn of the third quarter of 1998. The combination of the Russian crisis and the revelation of all the details concerning long-term capital management led to a brief weakness of the dollar against the mark. At one point, the 10% drop in the value of the dollar led to a decline in the deviation of drachma from central parity - from 10% to less than 5% (see Figure 7).

It remains to be seen whether the future members of the ERM₂ will display a similar sensitivity towards the EUR/USD cross rate. A major increase in the value of the euro against the dollar in 2002 and 2003 led to a weakening of certain accession country currencies, in particular the Polish zloty and Hungarian forint. A similar sensitivity towards the EUR/USD cross rate can thus be considered a first sign of that trend.

Figure 6

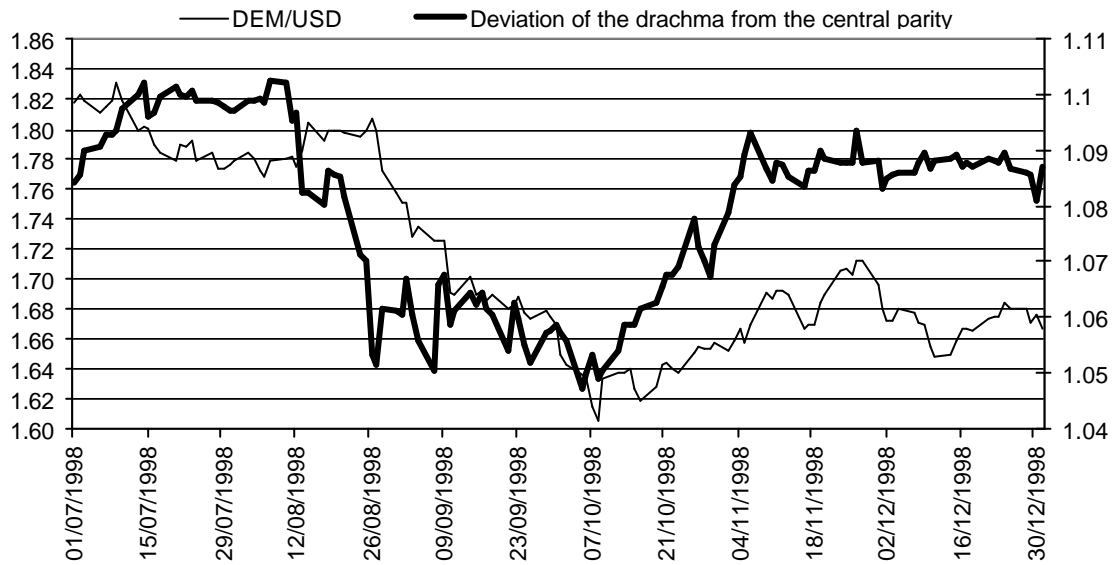
Sensitivity of the Portuguese escudo's deviations from central parity to DEM/USD



Source: Federal Reserve.

Figure 7

Sensitivity analysis of the drachma's divergence within the ERM to the DEM/USD cross rate, third and fourth quarter 1998



Source: Federal Reserve.

4 Conclusions for the current accession countries

Especial caution is called for when determining whether the experience of some of the founder members is applicable and/or of use to the accession economies. The environment in which the ERM countries operated differed quite substantially from the current setting. When defining the term 'different environment', the following issues should be taken into consideration:

- Capital controls
- Inflation
- Correct sequence of events
- Susceptibility of the ERM to the USD/DEM cross rate
- Political support offered by the EU

Up until the end of eighties, capital controls were the order of the day and thus helped to accommodate some imbalances in the economy. Although in most countries those capital controls had been lifted prior to the introduction of the first stage of the Delors plan, Spain, Portugal, Greece and even Ireland were still able to apply them long after 1 July 1990. Capital controls, however, are not the main issue governing the different environments. After all the accession economies have little room in which to implement certain controls. Moreover, no controls can be applied for more than six months at a time. The brevity of that period notwithstanding, the use of capital controls can offer an economy some degree of protection against the undesirable effects of financial turbulences.

A much more important issue is inflation. Inflation differentials can never be ignored. Combating inflation by means of an overvalued exchange rate is very often counterproductive. Capital inflows which help to plug holes in the balance of payments (the outcome of an overvalued exchange rate) are not an answer, especially if they are related to the convergence game. In the long run, overvaluation leads to a drop in FDI: something that Hungary is already experiencing.

A comparison of all the adjustments applied within the EMS in the nineties shows that the largest corrections were needed in the case of Italy and Spain. In both cases, correction was of the order of 25% and far exceeded that in Ireland and Portugal. The extent of adjustment can be also attributed to the degree of an economy's openness. The lower the degree of openness, the greater the need for major adjustment. That was always the case in the ERM. For large, and thus relatively closed, economies it was always more difficult to track the German mark, the only exception being France. That country, however, enjoyed special status and could thus rely on more generous assistance from the Bundesbank. Without France, the EMS ran the risk of becoming a currency area under the tutelage of the German mark, as shown by the fate of the currency snake in the latter half of the seventies. Thus, in order to preserve the European character of the system, France's

presence was needed. Despite its special status, however, France still had to undergo far-reaching adjustments of its central parity in the period 1981-1983. Within the space of 17 months, the French franc was devalued three times and the cumulative adjustment against the mark amounted to almost 30%. In the nineties, since they lacked support of this kind, both Spain and Italy experienced massive adjustments. That should be a warning to some accession economies, in particular Poland.

For the EMU members at that time, disinflation proved to be the greatest challenge. Two attempts were made to induce disinflation. The first attempt took place in the second half of the eighties and was stimulated by a positive supply shock (a drastic fall in oil prices in 1986). However, the low inflation achieved over the period 1986-1987 proved unsustainable. Of the several reasons for the monetary authorities' inability to keep inflation under control, one was a mini-crash on Wall Street in 1987 which led to a drastic loosening of monetary policies in the G-7 economies. The latter move was supposed to avoid an action replay of the crash on Wall Street in 1929 that led to a global recession. The loosening of monetary policies in the late eighties, however, proved to be over-excessive and caused several economies to overheat. The countries described in this paper were particularly hit by overheating. If one adds capital liberalization with all its consequences to that scenario, one can soon understand why those countries' monetary policies ended in disarray. As a result, control of inflation was lost, thus forcing those countries to repeat the disinflation process.

Right now inflation does not seem to pose a major problem for the monetary authorities in the accession countries. In several accession economies, the rate of inflation has already fallen below EU levels. At the beginning of 2003, the Czech Republic managed to register a negative price increase. Only a decade ago, a similar achievement would have been a reason for envy, but today it is not something to be proud of. Quite the contrary. Although at present rates long-term deflation seems remote, the scenario cannot be totally excluded: all the more so, if the accession economies decide at all costs to shadow the trajectory of the euro. With the German economy on the brink of deflation, shadowing the euro may lead to deflation being imported from Germany.

That notwithstanding, the threat of inflation in the medium and long term cannot be excluded since the rate of growth in the accession economies is supposed to be above the EU average. High growth should bring about higher inflation. Hence, the ERM experience with respect to disinflation should ultimately be of some pertinence to the accession economies, in particular where pre-emptive devaluation is concerned. Although this kind of devaluation incurs certain costs (hence it is not a completely 'free lunch' option), it still offers some breathing space to economies which are supposed to enjoy higher rates of growth. It cannot be ignored that it is much easier to combat all the negative effects of an

undervalued currency than the other way round. Germany may be the best example of the difficulties associated with alleviating the impact of an overvalued exchange rate.

The third important lesson to be learnt is that a country should have a mix of good fortune and a correct sequence of events on the path towards the EMU. For the Mediterranean economies in the nineties, the sequence of events was as follows. First and foremost, they had to improve their inflation record. They achieved that at the expense of economic growth and a worsening of their fiscal situation. As for growth, its contraction was so strong that even far-reaching downward adjustment in the value of domestic currencies could not pose the slightest threat to price stability. Whereas some countries may have considered themselves unfortunate on account of the recession they had to face in 1993, they were rewarded with better global economic conditions thereafter. As noted earlier, strong economic growth was a prerequisite for fiscal consolidation.

Most accession economies today face fiscal problems. Only a few of them are able to meet the fiscal criteria set by the EMU. At a first glance, the combination of extremely low inflation and a large fiscal deficit is easier to combat rather than a combination of high inflation and bad fiscal policy: by inflating modestly, the economy should stimulate growth and so improve its fiscal standing. This scenario seems hardly likely. Accession economies are afraid of blotting their low inflation records and seem intent upon keeping inflation down, cost what it may - even at the expense of lower economic growth, thus casting a long shadow over the prospects of achieving real convergence. The monetary authorities believe that the key to higher inflation growth lies in the supply side of economics, primarily in structural reform. This is a valid point, but reforms of that kind are much easier to implement in an environment featuring looser monetary policy. It is almost unachievable if shadowing the euro exchange rate is a policy priority.

The correct sequence of events leads to a fourth important conclusion best expressed in terms of the sensitivity of ERM towards the DEM/USD cross rate. Although the Mediterranean countries enjoyed a mixed bag of fortune along the path to the EMU, luck was on their side in the final and most important stage of the journey towards a common currency. The strong dollar (against the German mark) that had accompanied them throughout the latter half of the nineties invariably helped to preserve stability within ERM. The current drop in the value of the dollar lends credence to the fact that the sensitivity of ERM₂ to the performance of USD/EUR cross rate will persist. The recent weakening of the US currency does not augur well for the accession economies.

As far as the Mediterranean economies are concerned, their good fortune was not confined solely to a strong dollar and a booming economy in the final stages of the convergence process. More importantly, they enjoyed political support, without which entering the EMU would have been impossible. Thus, the fifth (and perhaps the most

important) conclusion can be drawn. At the turn of 1996, the EU leaders decided to forgo the concept of a two-speed Europe. As a result they started to opt for a concept whereby the more founding members there were in the EMU, the better it would be for the new currency. As a matter of fact, all those countries that had no wish to enter the EMU stayed outside. No one was left out. Even Greece, which had only started practising serious economic management in the mid-nineties, managed to get into the EMU with a mere two years delay. Support counted for a lot.

With the benefit of hindsight, it can be said that the EU was overgenerous in lending so much support to the ERM members. It has been alleged that Italy resorted to creative accountancy in order to fulfil all the criteria – and it was not alone in this endeavour. Portugal was among the first countries to break the psychological threshold of 3% fiscal deficit. As a result, support on a similar scale will not be offered in the foreseeable future. Quite the contrary. Pedro Solbes has already sent out a strong signal that a redefinition of the exchange rate criteria is projected.

The EU has countless reasons to believe that it would be desirable to delay the accession countries joining the EMU. The delay would give both parties more time to prepare for the process. As far as the EU is concerned, the admission of new entrants creates a need to redesign the way the European System of Central Banks (ESCB) works. It has to be admitted that the current configuration of the ESCB is far from perfect. Apart from that reform, the EU feels the entry of new accession economies may cause additional problems for the newly created monetary union. Although they are unable to specify the nature of the problem, extending the eurozone they feel may well create undue tension; hence their desire to delay things. Although no one wants to admit explicitly to the main reason for that attitude, it is becoming quite clear. The EU is beginning to realize that fulfilling the Maastricht criteria alone may not be enough to secure safe membership in the monetary union. Obviously no one will have the courage to say so outright, but it may well be the case. After all, the German economy is not the only one struggling in the EU. Apart from France, Italy and Portugal seem to be finding the Maastricht criteria too much to bear over the long term. Both countries entered the EU at the very last minute; a significant group of opponents were extremely sceptical about the rules applied during the verification process of the current EMU members. Today with euroland's performance far from impressive, the opposition groups are gaining in influence. The ESCB has encountered obstacles enough in its pursuit of credibility so that it can hardly afford the luxury of admitting new entrants with seemingly dubious credentials. Moreover, these doubts will not be dispelled once the Maastricht criteria are met. After all, in the case of Italy and Portugal compliance with the Maastricht criteria was not enough to avert the current problems.

Pressure is building up in favour of redesigning the Maastricht criteria. An operation of that kind is not a simple undertaking. Changing the psychological thresholds set by those

criteria (i.e. permitting a maximum budget deficit of 3%) would undermine the very credibility of those criteria. The EU will never voice its reasons as it may send confusing signals to the accession countries. *Moreover, a statement to that effect might also be regarded as an admission of defeat in terms of the policy pursued hitherto and could well be exploited to the full by the eurosceptics.* It might discourage the countries of Central Europe from pursuing further restrictive monetary policies. However, the lack of precision where the exchange rate criteria are concerned offers scope enough for modification.

What about the consequences of the message emanating from Brussels? Although the statements issued by the EU Commissioner for Economic and Monetary Affairs, Pedro Solbes, at the end of May and the beginning of June 2003 offered ample scope for all kinds of interpretation, the message can be explained in the following manner. By redesigning the exchange rate criteria, the EU wants to achieve following aims:

- (1) Send a clear implicit message to the accession economies urging them to exercise caution
- (2) Change the perception of the ERM₂

The redesign of the exchange rate criteria may bear far-reaching implications. It is quite clear that the majority of accession countries, except those that use currency boards, will be unable to meet the criteria. That implies postponing their participation in the EMU (but not necessarily their participation in the ERM₂). It is up to the accession countries to decide what they will do in the interim. Obviously they may adhere to the current policy directed towards ensuring compliance with the EMU criteria as soon as possible. They may also take the risk and enter the ERM₂ in the hope that over the next two years, the exchange rate will remain inside the narrow bands. The odds on success, however, are not very high. In order to maintain exchange rate stability within the narrow band, the convergence process has to be relatively far advanced. As a matter of fact only two countries, the Netherlands and Austria, were able to boast such an achievement prior to entering the EMU. The Netherlands was the only country to remain with the narrow band against the mark following the broader modification of the ERM in August 1993, yet it would be naive to expect of the accession economies a similar degree of resistance to fluctuations.

Under these circumstances instead of protesting loudly against the new EU stance, the accession economies should seize the opportunity to focus more on real convergence. More progress towards real convergence would help decisively to meet the recently modified exchange rate criteria. The accession economies have been focusing too much on nominal convergence. It is no exaggeration to claim that they have been short-sighted in terms of achieving nominal convergence and combating inflation in particular. Moreover, nominal convergence has been achieved at the expense of real convergence and proven harmful for the economies. It is hardly acceptable that in the catching-up countries the average unemployment rate is well beyond single digits; in some cases it is close to almost

20%. The same applies to the rate of investment which slumped more than 10%. As a result, redesigning the current policy mix is absolutely essential. It is perhaps possible that by redesigning the exchange rate criteria, the EU is trying to offer a clear indication of its unhappiness with the current policy mix pursued by many of the accession countries.

As far as the ERM₂ is concerned, the EU cannot tolerate it being viewed as a sort of waiting room. By changing the exchange rate criteria, the EU wants to persuade the accession countries (and not them alone) that the ERM should be seen as a useful framework: a framework that can promote the convergence process provided certain conditions are met. The conditions in question are:

- First, rather than being a waiting room, ERM₂ membership can boost a member state's credibility. After all, the powerful ECB stands behind it. Obviously the ERM₂ can provoke exchange rate crises, but adopting certain preventive measures can substantially reduce the risk thereof. Avoiding unrealistic targets in terms of the timing of entry and the level of central parity may be the key to success.
- Secondly, like its predecessor ERM, the ERM₂ is described in the international literature as a fixed, but adjustable regime. In other words, frequent adjustments to the exchange rate (in line with the needs of the economy) are required in order to ensure that the mechanism works properly. In its original version, the ERM proved extremely successful as long as the member countries pursued a policy of frequent adjustment. Abandoning that policy even though full convergence had not been achieved led to the ERM crisis in 1992. There is little evidence to suggest that the current degree of convergence achieved by the accession economies is greater than the convergence that prevailed in Western Europe at the beginning of the nineties.

In summary: for much of its existence, the ERM and its members operated in a completely different environment compared to the environment in which the accession economies will be operating within the ERM₂ framework. That also holds true for the global economic environment. None the less, the most important conclusion to be drawn from all this should be that the flexibility built into the ERM₂ cannot, under any circumstances, be considered a tool to accommodate imbalances in the economy. ERM₂ members should be encouraged to use the flexibility that the regime provides. A clamour for membership in the EMU is not desirable. First, by redefining the exchange rate criteria, the EU will make them harder to accomplish. Secondly, haste never pays off. The EMU is supposed to last for years. It makes sense to prepare for it as well as one can, even if this means delaying entry into the monetary union.

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