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CONVERGING TOWARDS AN ECU STANDARD

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1. INTRODUCTION

Any international monetary standard combines currency convertibility with some exchange rate arrangements. According to the so-called rules of the game, national currencies were convertible into gold at a fixed price. Most nations were on the gold standard -whose center was in the City of London - but there was another bloc of nations on a bimetallic standard - built around France. The main blocs of the convertible currency system which flourished in the three decades before World War 1 were centered in Europe. As the US economy rose, however, the core became Atlantic. The British national stake in Atlantic monetary standards became evident when Britain returned to pre-war gold parity in 1925. The dollar side became stronger after sterling became inconvertible into gold, in September 1931.

After World War 2, the Bretton Woods system of fixed but adjustable exchange rates was based on the dollar but sterling remained a reserve currency in the articles of agreement of the International Monetary Fund (IMF). According to these statutes, parity changes became a response to any "fundamental disequilibrium" rather than war or other well specified contingencies. Convertibility of participating national currencies required confidence in the convertibility of reserve currencies into gold. In the early days, known as those of the dollar gap, the extent of convertibility was weak, and generally confined to current account transactions. Later, with the dollar glut, confidence on the gold convertibility of the dollar eroded.

Supplementary international liquidity in the form of a basket of currencies was created at the annual meetings of 1967 of the IMF in Rio de Janeiro, Brazil. The so-called Special Drawing Rights. It did not, however, solve the confidence problem. Shortly thereafter, sterling devalued. The system collapsed on August 15, 1971 - when the dollar became inconvertible into gold. It devalued at year end. The Bretton Woods system ended after less than two years of inconvertibility. From dollar gap to dollar glut, it witnessed the recurrent appreciation of the Deutsche-mark.

Since 1973, several attempts have been observed at creating a convertible currency system in continental Europe, with fixed exchange rates. The last and most successful such arrangement is the European Monetary System (EMS). It began in early 1979 centered around the Deutsche-mark and functioned without

any realignments after January 1987. The progress accelerated in the late 1980s. At the Madrid European Council in mid 1989, the report of a Committee of Central Bank Governors chaired by the President of the European Commission was accepted as a basis for Economic and Monetary Union (EMU). A single currency was to be achieved in three phases, beginning July 1, 1990. Rather than relying on national reserve currencies, however, a basket called ecu (European Currency Unit) was chosen.

Shortly after the first phase began, Britain joined the EMS. Sterling appeared to trade its past allegiance to Atlantic standards for the continental bloc. This first experience lasted less than two years but it involved Britain in the design of multilateral surveillance procedures which turn out to be decisive for the credibility of the transition to the ecu standard.

The plans for EMU were agreed upon at the Maastricht European Council in late 1991. They were conditional upon progress on convergence and cohesion. The date for the second phase was set to be January 1, 1994 in the Treaty on European Union signed at Maastricht. The third phase was to begin after the 1996 revision of the Treaty if convergence was sufficiently high, and at the end of the century if not. The conditions on convergence are made explicit in criteria referring to certain nominal and fiscal variables. But convergence remains a relative concept in space and time. It implies that national economies tend to approach the best performing one and therefore narrow the dispersion around union averages for relevant economic and monetary variables. It also refers to medium term policy objectives, rather than to year by year variations in macroeconomic indicators.

In the Spring of 1992, when Portugal joined the EMS, all Community currencies except the Greek drachma were in the ecu parity grid. But the Atlantic dimension was very weak. Even in the presence of sterling, the continental bloc continued to be based on the Deutsche-mark. Indeed, the bloc included currencies of countries in the European Free Trade Association (EFTA) which were pegged informally to the Deutsche-mark. In September 1992, sterling and the Italian lira left the EMS. Until August 1993, political instability and speculative attacks on the grid interacted with the most severe recession and the highest unemployment the Community has ever witnessed. These adverse shocks led to a profound disbelief about the ability to establish an ecu standard before the end of the century. At least an ecu standard endowed with the

Atlantic dimension provided by sterling during the gold standard - and beyond. Yet the four implications from the Atlantic standards listed below suggest that convergence and cohesion are possible to combine in the transition to the single currency if the procedures of multilateral surveillance are effective. According to the Treaty, these procedures are to be reinforced during the current phase of EMU. Moreover they have been supported by all member states, including those - such as Britain - which are not committed to entering the third phase. The current emphasis on the excessive deficit procedure will reinforce medium term policy credibility in the transition.

2. IMPLICATIONS FROM THE ATLANTIC STANDARDS

The long term performance of the European economies under the convertible currency system centered in the North Atlantic area is no doubt appropriate to draw implications for the gradual transition towards an ecu standard. Except for wars, the Atlantic standards prevailed from the 1880s until 1973 and were successively called gold, sterling and dollar standard. The primary question that may be answered from one hundred years' experience with fixed and flexible exchange rates is whether or not following the rules of the game facilitated trade and growth. In the language of the Union Treaty, can the record of the Atlantic standards on convergence and cohesion be used to make a case for the ecu standard?

The first implication to be drawn from history refers to geography: a continental European system is being looked at, rather than a world system with a core in the North Atlantic. But even within the European continent, substantial spatial effects can be expected, so that more than one currency bloc is likely to be found. Barry Eichengreen and Marc Flandreau show that the geography of the gold standard featured several blocs each with a center and a periphery. The determinants of the structure in each particular bloc depended on the level of development, the availability of monetary base at the central bank, economic size, trade patterns and historical contingencies. Similarly in Section 3 below, the usual core periphery distinction has been replaced by convergence and cohesion blocs, also called clubs.

There is a recurrent European debate about whether multiple-speed convergence towards union objectives is possible and desirable. In the case of a single currency it is probably inevitable. Among the 12 or 16 members of the

European Economic Area (EEA), divergences exist and are likely to remain for some time to come. Since some national economies undoubtedly need a change in economic regime in the direction of price stability and sound public finances, the notion of a multi-speed transition implies that not all will succeed. It even suggests that not all will try.

But European construction has been a permanent negotiation among nation-states. Progress has been based on political will and national cohesion. The call for decisions taken "as closely as possible to the citizen" (Article A of the Treaty) and the restatement of the nation as the source of democratic accountability (Article F) insure that this will continue to be the case.

There are union states where convergence has only a regional dimension, like Germany or Italy, where the cleavages are between East and West and between South and North respectively. There are states where convergence is rather associated to national development, like Greece, Ireland and Portugal. There are also intermediate cases such as Spain: one half of the population lives in regions as poor as the Greek or Portuguese national average. Taking into account the expectations of countries in the European periphery where transition to democracy and market economy is most advanced, namely the Czech Republic, Hungary, Poland, Slovakia, Slovenia as well as the Baltic states increases the potential number of blocs. Looking beyond, towards Eastern Europe as well as towards the South of the Mediterranean, makes the mix of national and regional economic structures even more diverse.

If the first implication from the experience of the gold and dollar standards refers to geography, the second pertains to the rules of the game. Michael Bordo and Anna Schwartz emphasize the role a fixed exchange rate rule could play to enhance external credibility for the adjustment process of national economies, especially the ones that are at the periphery of a particular currency bloc. The existence of well defined contingencies under which escape clauses would function is a lesson from the gold standard which was only partly applied during the Bretton Woods period. As the credibility of the ecu standard requires an irrevocable commitment to a single currency, greater cohesion than in the Atlantic standards is necessary to avoid system instability <1>.

The evidence from 21 countries from 1880 to 1990 gathered by Bordo and Schwartz supports the notion that the gold and the dollar standard both can be

viewed as contingent rules. The sample includes most industrial countries of the North Atlantic, Australia and Japan. Argentina, Brazil and Chile form the Latin America group. The main division is between the extended core and the periphery where the latter is based on the IMF classification of the Group of Ten (the Group of Seven largest industrial countries plus Belgium, Netherlands and Sweden) plus a non-member, Switzerland. In the periphery, Bordo and Schwartz include Latin America, Australia, Denmark, Greece, Finland, Norway, Portugal and Spain (Austria and Ireland are not in the sample). The distinction between core and periphery remains crucial for the purpose of signaling the nation's policy stance to domestic and international investors. Similarly, in Section 4 below, the notion of medium term policy credibility emerges as essential in the evaluation of how the regime in the Treaty combines convergence and cohesion.

The quest for national policy credibility in an uncertain and volatile international environment is rendered more difficult by the hierarchy of financial markets, dealt with in Section 5 <2>. Where local financial monopolies exist, differences between interest rates at the core and at the periphery may endure, even in the presence of full currency convertibility and perfect capital mobility among core markets.

Belonging to the convertibility and stability club is nevertheless useful to the extent it signals to market participants that the country is keen on achieving external credibility without relying only on instruments it could control - and might therefore manipulate. In this sense therefore it is also attempting to buy domestic credibility for its efforts. This is the only way in which the national authorities could escape the adverse selection bias from which new participants in the internal capital markets have been shown to suffer <3>.

The third implication is on how political and social factors shape institutions. It is particularly relevant for the architecture of the ecu standard. An accurate perception of the past realities is essential to design a new system that may perform better than previous attempts. In this regard, the lessons of history often stress the importance of political factors. Two instances of these stand out, when myths and realities about the gold standard are contrasted. First, the origins of the gold standard. Second, how central banks followed the rules of the game in the presence of potentially disruptive short term capital movements.

The gold standard has been identified with economic development and, more importantly as it turns out, with the constitutional rule by the middle class. The gradual displacement during the second half of the 19th century of the bimetallic system proposed by France is based on the perception of the gold standard as a dynamic system rather than as one promoting convergence at the expense of cohesion and real economic growth. The way in which German public opinion changed in the 1870s from favoring silver to favoring gold is illustrative of the current debate about the role of the Deutsche mark in the ecu standard. At the same time, Alan Milward suggests further caveats about Europe's EMU when he predicts for the ecu the same predicament of the germinal franc, being replaced by an Atlantic standard.

An evaluation of how short term capital flows react to financial disturbances at the center, of how arbitrage occurred between domestic and foreign issued government bonds and of the way information about those spreads from domestic to international investors is presented by Marcello de Cecco. In contrast with the benign view of gold standard central banks acting as transmission belts of global free trade, what emerges from the evaluation is the importance of the bureaucratic politics of banking and diplomacy. These politics were of course at the heart of the Union Treaty negotiations, where central bank independence is a requirement for entry into the final phase of EMU. De Cecco also points out the relationship of banking with the media, a topic inseparable of fears about speculative attacks during the Treaty ratification process.

Fourth, empirical implications of currency convertibility are presented in Sections 6 and 7, stressing effects through time and space respectively. The Portuguese currency experience is revisited, drawing on earlier work and on the material presented by Maria Eugenia Mata and Nuno Valerio <4>. An historical perspective on political stability and economic development in the 148 years since the establishment of the Bank of Portugal in 1846 is presented in Section 6.1.

Two periods of stable monetary values are identified, from 1854 to 1914 and from 1931 to 1973, followed by two reversions into instability. This determines three regime changes in the direction of exchange rate and price stability. The first and the second involve the decision to join the gold standard in 1854 and in 1931. They are covered in detail by Jaime Reis and by Fernando Santos

respectively. The third instead involves the decisions to join the EMS and to restore full convertibility. It is described in Section 6.2. <5>.

If the long term implications are restricted to Portugal, the spatial effects refer to the three other union states (Greece, Ireland and Spain), Portugal is eligible to benefit from direct transfers under what the Treaty calls the Cohesion Fund. All four states are peripheral in the sense that the time distance between their capitals and the center is almost twice the kilometer distance, which is itself greater than average. A review of the performance of the four cohesion states during the first phase of EMU is presented in Section 7 below.

Lessons for the second phase are drawn with respect to both real and nominal convergence, and then evaluated by means of a "convergence diamond". The regime changes in Ireland and Spain, both of which were prior to the first phase, are briefly described. In the case of Greece, evidence is still absent of the prerequisites for the regime change.

The conclusion in Section 8 comes back to the rules of the game and stresses the public good element of an international currency standard. History and geography both suggest that peripheral - or cohesion- states can enjoy policy credibility in the regime set up by the Treaty. The lessons from history and geography therefore confirm the instability of any solution which would not be based on the national cohesion of the member states. Through permanent negotiation among member-states, this turns into union cohesion. The possibility of a nation state remaining in a slower speed of convergence against its national interest, expressed by majority vote, is therefore remote.

3. THE GEOGRAPHY OF THE ECU STANDARD

3.1. One Market One Money

The completion of the European single market is a prerequisite for the gradual transition towards an ecu standard, as called for by the Treaty. This was recognized in European Commission (1990). Achieving free trade in goods and services and assets, as well as free movements of people among twelve nation-states was the primary objective of the 1986 Single European Act. In turn the abolition of internal borders created market pressure for stable exchange rates and therefore for a single currency, the ecu.

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For the ecu to become the monetary standard of the emerging European economy, it must be stable. There can be no consistent policies at the national or union level without stable monetary values. To ensure this aim, the Treaty requires that public sector deficits and debts of the different national economies must converge to low levels before the single currency is established.

In addition, political stability or social consensus and national cohesion are decisive to achieve convergence. Social consensus implies, first and foremost, that social partners and public opinion understand and accept the medium term stance of economic policy. In particular, trade unions must recognize the perverse interaction between price and wage increases, which hurts the poor and unemployed disproportionately. With the feedback of wages into prices in operation, price stability will not be durable without wage moderation. The social acceptance of these norms can be turned into a factor of national cohesion if the government takes the leadership in wage negotiations for the public sector employees.

A single market with a single currency reflects a particular combination of private and public goods, determined by the mobility of the tax base and the availability of inter-regional or inter-national transfers. Article B of the Treaty refers to "the strengthening of economic and social cohesion" as instruments of "economic and social progress which is balanced and sustainable". Therefore, some income redistribution among nation states is supposed to correct the economic geography that market integration brought about <6>.

In European Commission (1993), it is shown that, contrary to traditional beliefs about fiscal federalism, cohesion need not increase the size of the Community budget as long as redistribution is effective. This in turn requires effective procedures of multilateral surveillance <7>.

3.2. Convergence Categories in 1993

The Treaty criteria for price stability include limits for prices and interest rates set as deviations from the three best performers, which should be less than 1.5% for annual increases in consumer price indices and less than 2% for long term interest rates. At mid-1994, this was equivalent to about 3% and 7% per annum respectively. The Treaty criteria also state a reference value for

government budget deficits and public debts as percentage of gross domestic product, 3% and 60% respectively. These convergence criteria are to be monitored regularly at national and union level, by means of procedures of multilateral surveillance.

The convergence criteria have become more exacting as negative output growth tends to increase public expenditure in relation to taxes, thus raising government deficits and public debts in most member states well above their reference values. The union averages in 1993 for government deficit and public debt are 6% and 66% respectively.

The convergence performance of EEA states - including the twelve plus four union applicants set to adhere on January 1, 1995 - is presented in Table 1. The 16 states are divided into three categories, according to whether convergence is deemed to be "high", "medium" or "low" in 1993. The table shows that only the four "high convergence" countries fulfill the deficit criterion. Within the union "low convergence" states fail the interest rate criterion. The exception is Sweden, which together with Italy belongs to the extended core defined by Bordo and Schwartz. Of the seven "medium convergence" cases (four of which in the core just mentioned), three fail two criteria and the remaining four fail only one criterion.

Table 1 shows how grouping the four cohesion states together may be misleading. Three belong to the "low convergence" and one to the "high convergence" categories mentioned. Even in the former group, Greece appears to be an outlier because, in spite of the recent decline, inflation remains in double digits. This appears to bring Spain and Portugal closer to each other, but again the real performances are very different. Aside from a much higher national unemployment rate, regional divergences in Spain appear to more pronounced than in Portugal. On the other side, the reputation for financial stability in Portugal is more recent than in Spain <8>.

3.3 Instability during the Second Phase

The growth outlook was favorable when the first phase of EMU began. In mid-1990, there was no expectation of financial turmoil and economic recession, only of the difficult negotiations that were about to take place in the twin intergovernmental conferences on EMU and on political union from which

Table 1
Convergence Performance in 1993

	Inflation (% p.a.)	Long Term Interest Rate (% p.a.)	Budget Deficit (% GDP)	Public Debt (% GDP)
Criterion	3,4	7,6	3,0	60
LOW				
Greece	13,7	28,0	16,3*	145
Spain	4,7	8,8	7,3*	56*
Italy	4,4	8,6	9,5*	118*
Portugal	6,7	9,0	7,1*	66*
Sweden	5,2	7,1	14,5	68
MEDIUM				
Belgium	2,8	6,4	7,0*	142*
Denmark	1,4	6,2	4,6*	80*
Germany	4,3	5,6	3,3*	49*
France	2,3	5,7	5,7*	44*
Norway	2,3	5,6	3,2	47
Finland	2,6	6,7	9,1	60
United Kgm	3,4	6,3	7,7*	48*
HIGH				
Ireland	2,3	6,5	2,3*	99*
Luxemburg	3,6	6,1	-1,4*	7*
Netherlands	2,1	5,6	2,9*	81*
Austria	2,1	6,0	2,9	57

Shaded cells: Convergence criterion not satisfied

Source: UBS Groupe Economic Research, Political Focus March 1994

* European Commission Update, Spring 1994 (for union states only)

Note: Within each one of the three categories, countries are ranked by alphabetical order in home language.

the Maastricht agreement emerged. Undoubtedly the demise of the Soviet Union shocked the system and created a more uncertain and less predictable environment for the 1990s than was believed at the time. The error in forecasting union output growth in 1992 and 1993 are among the highest on record. To the extent that forecasts are usually made on a calendar year basis, the fact that a further downturn occurred in the second half of 1992 reinforced the uncertainty of the economic environment.

Once the negotiations were concluded at Maastricht, the ratification of the Treaty took most of 1992 and 1993, and it involved public controversy in several member-states. The acceptance of the ecu as a single European currency by the end of the century will require additional efforts to avoid a solution where only a few national economies satisfy the criteria for price stability included in the Treaty as a precondition for entering the final phase of EMU, that is for the establishment of the ecu standard in Europe.

Over and above the coincidence of economic and political difficulties in 1992 and 1993, spectacular foreign exchanges crises involved the currency grid of the EMS. To put events in perspective, it can be said that the larger European economies had been spared a business downturn comparable to that of 1993 since the early 1930s. Similarly, there had not been such widespread turbulence in currency markets since the demise of the dollar standard in the early 1970s.

During the transition to a single currency, the main macroeconomic costs arise before the main microeconomic benefits are felt. This transition includes both the first and the second phase, during which convergence must be achieved under stable exchange rates, which the Treaty calls "normal fluctuation margins". With high capital mobility, this requires a speedy convergence process, especially as reflected in the indicators of budgetary discipline, which have become signals of sustained regime change.

Given that financial markets tend to exaggerate rather than to dampen such signals, apparent reversions during a relatively rapid convergence are also more liable to misinterpretation. The effects of signals of regime change on cohesion can also be misinterpreted, as the objective involves a degree of social awareness that may not be required with respect to the convergence of fiscal variables. In any event, whatever the credibility of national policies, it became apparent during the first phase that fast convergence was more difficult with slower growth.

The Treaty convergence criterion relating to exchange rate stability requires the observance of the "normal fluctuation margins" during two years, and the absence of any realignment during the same period. Maintaining the currencies within the parity grid is the result of more than intervention by participating central banks. It reflects the credibility of national policies especially in Germany, and also that of the entire EMS relative to major world currencies such as the dollar or the yen. The four quantitative criteria, especially the indicators of fiscal discipline, may reinforce or weaken the pressure on the ecu parity of any given currency, or, for the time being, on the bilateral parity with the Deutsche-mark.

If, in the final analysis, the exchange rate reflects the credibility of national policies over the medium term, it may do so with considerable noise if the entire parity grid is under attack. This is why little indication about the credibility of national policy can be gathered from the realignments which occurred during this period, which were a direct consequence of systemic turmoil. The realignments involved the three currencies of the cohesion states which are in the EMS, the Spanish peseta three times, the Portuguese escudo twice and the Irish punt once.

Speculative attacks had less to do with the credibility of national policies and the medium term resolve of national authorities in Ireland and Portugal, than with the reflections of turbulence observed in the neighbouring larger markets for sterling and the peseta. This can be described as the effect of "geographic" rather than "economic" fundamentals on the value of currencies. It threatens the reputation for financial stability in a small national market, to the extent that national policies become less relevant than the proximity to a turbulent large market. In the case of Portugal, the proximity factor can also be explained by the timing of the announcement that the currency was to become convertible. Indeed, the announcement was made on August 13, 1992, only weeks before the financial turmoil.

Even in a favorable and predictable environment, the preparation for the single currency can be inherently unstable during the second phase. Speculative attacks on more vulnerable currency parities will have more negative effects on the system if parities are already locked than if they continue to be flexible. Flexibility within a sufficiently wide band allows speculation not to be a one-way bet. That lesson was learned in the twelve months preceding August 2, 1993 when very wide bands of 15% replaced the normal fluctuation margins.

The temporary nature of the move notwithstanding, these new "normal fluctuation margins" eliminate the need for exceptional measures designed to deal with a protracted second phase <9>.

3.4. Deepening and Widening

The uncertain economic environment and the absence of medium term policy credibility are not the only threats to continued union deepening. Widening itself has contributed to making the union economy increasingly heterogeneous and has therefore made deepening more difficult. With German unification and the two most recent enlargements, the new north-eastern, south-eastern, southern and north-western fringes have joined the North Atlantic fringe, represented by Ireland, as low income areas in the union. Beginning January 1, 1994, most of the single market legislation has been widened to the EEA and four EFTA members are set to become union states in 1995.

Table 1 above shows that the applicants already comply with most of the convergence criteria. Therefore the transition to a single currency will be a process of simultaneous union deepening and widening. Indeed, the EEA includes nations with higher income per capita than the union average, so that the next enlargements will reduce heterogeneity.

In the meantime, the nearly single market within the EEA may have already induced enough trade to offset scale diseconomies in the peripheral nations or regions of Europe. Moreover wage convergence is more likely in each national or regional instance if the very prospect of a single currency tends to increase trade further. There has been wage convergence during the first phase, in spite of the recession and of turmoil in the foreign exchanges.

The limited extent to which workers move between the regions of Western Europe turns unemployment into a serious threat to economic and social cohesion within and between nation-states. This relative immobility of labour within the union stands in sharp contrast with the pressures for East-West labour migration, which in turn follow significant North-South labour flows in the 1960s originating in nations who are now states of the union. Given the degree of openness to trade in goods, services and assets, low labour mobility requires greater efforts by the union at securing economic and social cohesion among regions and even nations. To the extent that nations forego the use of monetary and exchange rate policy, direct transfers become the only way to

redistribute income among them. But low labour mobility also reflects reluctance on the part of voters to engage in ambitious schemes for the redistribution of income among nations and even regions.

Cohesion has been politicized at least since the reform of the Community structural funds in 1988 but - if multilateral surveillance is effective - it need not require a much higher budget than exists at present. In any event, the objective appeared in the negotiations of the EEA, of successive enlargements and of the ceiling on financial transfers decided at end 1992 until the end of the century. The latter negotiations were especially hard because they interacted with the difficulties in ratifying the Treaty in some member states as well as with recession in the European economy.

The emerging European economy already goes beyond the EEA. It certainly includes Switzerland, who did not join the EEA. Indeed, it is included in the extended core of the Atlantic standards by Bordo and Schwartz. Also, association agreements featuring trade liberalization have been signed with those nations of Central and Eastern Europe most keen on restoring multiparty democracy and a market economy after many decades under Soviet rule. These agreements and various forms of assistance to the economies in transition extend to Russia and other Republics of the ex-Soviet Union. Finally, there are various Mediterranean nations among the neighboring economies, including Turkey, which has already applied for membership, where a combination of trade liberalization and assistance to structural adjustment is in the making.

4. CREDIBILITY IN THE TRANSITION

4.1. Exchange Rate Stability and Surveillance

During the second phase, multilateral surveillance procedures designed to ensure convergence of national economies towards price stability and sound public finances become binding. The excessive deficit procedure, in particular, determines whether or not a member state can adhere to the ecu standard, when the third phase is decided upon. The terminal condition of convergence raises the issue of medium term policy credibility. On the other side, if not enough states satisfy the criteria, the terminal condition itself disappears. This uncertainty was greatest during the Treaty ratification process, but it is likely to remain until its 1996 revision.

If convergence is achieved in a majority of national economies, then the Council of Finance Ministers of the Union, the so-called EcoFin Council, can propose a starting date of 1997. Otherwise the beginning of the third phase when exchange rates will become irrevocably fixed is set for 1999. This means that the ecu will become the single European currency and that the Exchange Rate Mechanism of the EMS will disappear. Instead of a parity grid centered on the ecu, we will have an ecu standard in 1997 or 1999.

It is however possible that a revision of the Treaty, including the mandatory calendar, be agreed at the 1996 Inter Governmental Conference. As a consequence, expectations that the calendar will slip into the 21st century have become widespread. The severe recession which afflicted the European economies was perceived to have been caused by difficulties with the process of EMU and other aspects of the Treaty.

In particular, foreign exchange market turbulence began in late August, early September 1992 when dollar interest rates fell substantially. In the meantime, German short term interest rates remained high. Pressures for wage increases increased the reluctance of the Bundesbank in acknowledging that a European wide recession was imminent. The policy conflict led to realignments of the Italian lira and the Spanish peseta, as well as to the exit of the pound sterling and the lira from the Exchange Rate Mechanism. Turbulence lasted, on and off, until August 2, 1993.

The Spanish authorities requested two other realignments of the peseta, which also involved the Portuguese escudo. Even the parity of the Irish punt was also subject to realignments, and there were speculative attacks against the French franc, the Danish krona and the Belgian franc. The attack of July 1993 was so massive that an emergency meeting of the EcoFin Council including Central Bank Governors was convened and exchange rate fluctuation margins were broadened to 15% on each side of the parity. This replaced normal fluctuation margins of 2.25% , which are still observed between the Deutsche-mark and the Dutch guilder, as well as the wider band of 6% temporarily accepted by Portugal and Spain.

The 15% wide band has not been used by any participating central bank, so that the basic difference relative to the previously normal fluctuation margin is the absence of one-way bets on parities. The external discipline provided by the grid

is now absent and each central bank must decide whether or not to intervene within the old fluctuation bands. Most if not all have decided to do just that, so that, one year after, there is widespread agreement that the convergence process has not been hurt by the decision to widen the band. Many will go further and say the very wide band has actually helped convergence.

Nevertheless the public perception of a gradual narrowing of exchange rate fluctuations as a means of preparing for the third phase has vanished and this may delay the calendar agreed in the Treaty. The fact that the ecu standard is further away in the future than was thought when the Treaty negotiations were concluded may actually help prevent an excessively fast politicization of monetary policy. This politicization would increase the temptation to soften the excessive deficit procedure, raising fears that some governments will expect to be bailed out by the union, in contradiction to Article 104b of the Treaty. Once again, an effective multilateral surveillance is required.

4.2. Regime Change

Ensuring long run fiscal discipline through a stable and coherent macroeconomic framework which allows the removal of macro- and microeconomic obstacles to growth remains an essential element of national economic and social development, both at the core and at the periphery of system. This applies to Atlantic as well as to the ecu standards, even though it is only set up into legal texts in the latter case.

The initial cost of a change in the economic regime in the direction of price and exchange rate stability and sound public finances may appear to be larger at the periphery than inside the core of a currency bloc. The reason is that neither social partners nor the public administration may fully understand the benefits of the regime change announced by policy makers. Similarly information about the regime change may not be easily available in international financial markets. Then errors in policy appraisal unduly increase the cost of a medium term policy stance. Inducing repeated market tests of the commitment of the authorities to exchange rate stability and the defense of the parity grid will in the end establish a financial reputation, but the learning cost may be excessive and lead to policy reversals.

This is one reason why the Treaty requires in article 102 that broad policy guidelines be agreed by the European Council as a means making the medium

term policy stance better understood in the nation and abroad. This procedure was agreed upon in Brussels in late 1993. According to these broad guidelines for 1994 "the task of policy makers is to allow market forces to display their full potential".

To build up medium term policy credibility, the regime change should have taken place during the first phase of EMU. Until the annual rate of inflation perceived by the public - so called headline rate - is in single digits, no reputation for price stability is being revealed to the financial markets. The chances of a sustained narrowing of long term interest rate differentials relative to the numeraire currency are therefore small.

If what may be called rental moderation does not materialize, the output cost of disinflation is higher than if wage and rental moderation go hand in hand. This is why the Edinburgh European Council in late 1992 stressed that the growth initiative it approved should not be inflationary. This call did not prevent recession to strike in 1993 but it showed that the fight against inflation did not weaken until social partners included wage and rental moderation in their medium term strategies.

The outlook for deepening and widening depends on the economic environment as well as on convergence according to the Treaty criteria. If convergence reinforces cohesion, policy credibility applies in the medium term. If the convergence of wages, interest rates and productivity levels among the nations and regions of the union is a gradual process, the time profile of the costs and benefits of convergence may be unfavorable. One way to capitalize on the expected benefits as early as possible is for policymakers to acquire the reputation of reformers capable of sustained regime change.

The duration of a successful convergence process is difficult to ascertain a priori. Ten years are usually seen as the time needed for a nation to acquire a financial reputation provided the appropriate political, social and economic ingredients are already present. While this may be unduly strict, it makes an important point: it is better to take time and enter a virtuous cycle than to have a succession of failed attempts, which would amount to a "stop and go" convergence process.

To distinguish this from a gradual convergence process with possible temporary reversions involves an assessment of the reputation for financial stability. Differences in reputation can make a substantial difference in actual

outcomes, even taking into account the tendency of financial markets to exaggerate underlying economic trends, for example by giving undue regard to geographic proximity in assessing the prospects of a small open economy. This bias in the assessment of financial markets brings to the fore another reason why political stability is a necessary condition for convergence: stable government helps to counter the possible volatility of market appraisal of a national policy's reputation.

The same can be said about the social consensus in connection with the regime change. This is especially evident in the understanding - or lack thereof - among social partners with respect to the need for wage and rental moderation. This understanding is helped by a gradual process, even though temporary reversions will tend to be denounced as a breach of the social dialogue on the part of the government and perhaps of employers as well. In this regards, signals that policy has a medium term orientation may be important in the construction of a social consensus about the regime change.

One such signal included in the Treaty is the independence of the national and union central banks. Steps in this direction were taken during the first phase by Portugal and Spain, respectively before and after the Treaty was signed. The most relevant effect of bringing the national central bank statutes in line with the Treaty requirements before the third phase is that it shows the authorities wish to resist the temptation of excess policy activism and the danger of manipulating instruments it can control. It may also lessen the effects of financial market hierarchy, as shown below.

4.3. Initial and Terminal Conditions

The initial conditions for convergence of national incomes in the union are less favorable than among states in the US and comparable to that prevailing among Swiss cantons. Due to the size of the units being compared, the difference with the US is biased upwards, whereas cohesion in Switzerland is probably higher than in the Union. Accordingly, the program of structural interventions in favor of poorer union regions includes more and more regions belonging to nations with income higher than the union average.

The Treaty seeks to make intra-union redistribution enduring. To this end, it creates additional transfers directed to nations not regions. The protocol on economic and social cohesion specifies that interventions under the Cohesion Fund are reserved for projects in member-states with income per head less than

90% of the union. The protocol also introduces the important innovation that continued access to the Cohesion Fund is conditional upon the fulfillment of the convergence criteria for a single currency.

Aside from this conditionality, there are other interactions between the cohesion objective and convergence. Majority voting is required to decide what the concrete meaning of cohesion is, in terms of which public goods are provided at regional, national or union level. Voting on how public expenditure is financed may now be constrained by the restrictions on government deficits and debt imposed by the convergence criteria. Greater mobility of the tax base constrains the decision on expenditures even further, since it lowers the ability of regions, nations and even the whole union to raise revenue to a level determined by economic and political interdependence across tax domains. In such an environment, cohesion becomes the result of effective income redistribution among nations and regions.

Conversely, union deepening and widening will only facilitate cohesion if there is a change in economic regime in poorer nations and regions. The change in regime implies enduring structural reforms which involve a substantial redistribution of income and wealth among social groups, to be effected by the political system without undue strain to the social fabric of the poorer nations or regions. If a stable democratic government succeeds in implementing the reforms which sustain the change in economic regime and ensures convergence with the richer nations, the interaction can be described as a virtuous cycle. On the contrary, there is a vicious cycle if short-lived governments, fearing social conflicts associated with reforms, delay the regime change and impair convergence.

Initial and terminal conditions as well as changes in the environment may determine a favorable or unfavorable pattern. For example, the recent recession exacerbated the plight of the unemployed and thus made the social dimension of cohesion within nations and regions more salient than it was during the earlier period of expansion. By changing political majorities, potential social strife has made it harder for some governments to carry out reforms.

On the other hand, by showing the costs of labour market rigidities, and the need to restore competitiveness at the firm level, greater awareness about social cohesion within and between nations may actually hasten structural adjustment. If reforms are more enduring, the foundation for employment -

generating growth in the European economies will also be stronger. Terminal conditions such as an ecu standard in the future help reforms to the extent that they are credible <10>.

Conversely, if terminal conditions cease to be believed, this will induce a "stop and go" convergence process and ultimately hinder change. This perverse effect is magnified by the hierarchy of financial markets but it may be dampened by reputation. The balance between the two countervailing forces depends, once again, on the effectiveness of surveillance.

5. REPUTATION AND HIERARCHY IN FINANCIAL MARKETS

5.1. Periphery and Accountability

By definition of periphery, the most relevant barrier to market integration is not the initial difference in per capita income, but rather the so called economic distance. This includes not only the numbers of kilometers from the center but also traveling time and the cost and ease of communication, which may impose a further penalty. For example, in European Commission (1990), the time distance between Athens and the center is reported to be 1.9 times its kilometer distance. The corresponding penalty for Dublin is 1.8, for Lisbon and Rome 1.6 and for Madrid 1.4 .

Aside from the spatial effects derived from the traveling time penalty just described, there are unfavorable effects for the periphery due to the time profile of policy changes. The need for financial stability may imply initial costs to the cohesion objective which are more than offset by subsequent benefits. The question is again whether reforms will be reversed by the voting patterns. The acquisition of a reputation for financial stability, by anticipating some of the benefits, may be the best way to overcome this unfavorable time sequence.

An independent central bank is a reputation-building signal, even though it does not by itself connect the local financial market to the center. Effective prudential supervision of the financial system, together with other structural policies such as the defense of competition and consumer protection are also required to minimize the initial costs of nominal convergence. Since these policies will lower the difference between long term interest rates prevailing at home and in the financial markets at the center, their success implies what we called rental moderation. They are therefore essential to ensure medium term

policy credibility at national and union levels, especially if average interest rates are higher in the union than outside, as has been the case in the 1990s.

The issue of democratic accountability raised by the independent central banks at the national and union levels before the third phase of EMU may also be found in connection with independent courts in the framework of the cooperation in matters of justice and internal affairs envisaged in Title VI of the Treaty. The relation between the two in matters of money laundering is clear enough. Insider trading and banking supervision suggests another topic where the accountability of central bankers and judges may interact, but where the Treaty does not espouse any particular solution at the union level.

In the Bundesbank model, banking supervision does not belong at the central bank because it could endanger its independence with respect to monetary and exchange rate policy. The choice remains open in public discussion both within and outside the union, and especially in the US. Recent changes in central bank statutes adopted successively in Portugal, France and Spain suggest that the so-called "national superbank" model - including monetary and exchange rate policy as well as banking supervision - remains attractive, in spite of the weight of the German tradition.

Together with the hierarchy of financial markets, the lack of accountability on the part of regulatory institutions explains why reputation building at the periphery tends to be slower than at the center. It is in the periphery, however, that the acquisition of a reputation for financial stability is most required to sustain a regime change in the direction of price stability. Moreover, in nations whose currencies are inconvertible, this hierarchy may also affect the foreign exchange market and slow down the dismantling of exchange controls, thereby insulating the local market from the single market in financial services existing since at least January 1 1993.

Ireland and Spain tightened exchange controls in the Fall of 1992. Portugal kept the calendar of dismantling controls before year end which had been announced in August. Greece chose to retain existing controls. The hierarchy of financial markets is therefore another argument for an early regime change in the periphery: the negative reputation effects of temporary controls were greater in Spain than in Ireland, whose regime change had been achieved earlier. Portugal suffered because it was likened to the other two <11>.

The volatility of interest rate differentials shows that financial development and trade in assets tends to magnify the forces of real convergence or the widespread expectation thereof, but that they are no substitute for economic development and trade in goods and services, especially in local markets not well connected to the center due to controls or inadequate information.

5.2. Obstacles to the Competitiveness of Peripheral Firms

The problem of physical infrastructure, especially means of communication interacts with that of social infrastructure, capital and skills. The training of the labour force includes both general schooling and its specific applications to the firm so that it directly bears on productivity. This empirical approach to centers and peripheries looks at indicators of economic distance and at the determinants of labour migration. Relative to the average, firms located in central and prosperous regions tend to be more optimistic about the effects of a single market and a single currency, while firms located in central but declining regions tend to be more pessimistic.

In a survey conducted among 9000 union enterprises in 1989 by the Institute für Wirtschaftsforschung reported in European Commission (1990, p.219), firm managers were asked to list major obstacles to competitiveness among different national and regional factors. The results rank differences in the infrastructure endowment and the higher cost of credit as the two most relevant obstacles - and therefore as the most salient indicators of economic distance. In fact, they are seen as far more relevant than exchange rate changes in hindering the competitiveness of firms located in peripheral regions or nations.

Evidence from this survey points to the fact that a fixed exchange rate cannot by itself alter the hierarchical structure observed in domestic money markets. This structure is also at work in the emerging European-wide money market. Credit restrictions at the center have multiplier effects on the solvency of enterprises at the periphery due to the hierarchy existing between the central, outward-looking money market and the closed money markets of the periphery, on which local small and medium sized enterprises depend.

This hierarchy works to the detriment of such local enterprises because the monopoly power enjoyed by local financial intermediaries is reflected in an additional premium on the difference between their borrowing and lending rates, intended to compensate for what is perceived as the higher risk of local

investment projects but may well instead be a mere reflection of economic distance and the lack of alternative sources of financing besides local banks.

If local financial intermediaries charge their customers a premium in excess of a reasonable assessment of these local risks, then local depositors and borrowers will try to gain access to other sources. If enough succeed in finding alternatives, the monopoly rents at the periphery converge towards what is observed at the center: the reward to deposits will rise and the cost of credit will fall. In the case of a national money market integrating with others in transition to a single currency, the process of interest rate convergence may instead begin with the reduction in the currency risk premium allowed by eliminating exchange rate fluctuations, leaving local demand for and supply of deposits and loans unaffected. Indeed, if the effect of a fall in the interest rate at the center translated into domestic currency is a fall in the local deposit rate, the local loan rate has to rise so as to balance the local supply of and demand for funds.

This perverse outcome will be less likely if the fall in the risk premium is accompanied by greater access to external credit by local financial intermediaries, greater competition among them and better local investment prospects, as all of these will lower the advantage of local lenders in monitoring borrowers. Conversely, under circumstances of financial turmoil at the center, or of a fall in local income, the loan rate may rise in spite of the falling risk premium, and the deposit rate may fall, lowering local borrowing and investment, without decreasing the monopoly power of local financial intermediaries.

The link with a strong currency may thus aggravate the financial weakness of a particular nation at the periphery of monetary union. This is more likely to happen if banking competition, transparency of interest rates and consumer protection are not sufficient to give local firms a competitive access to credit, local depositors a competitive reward to savings, or both. While the macroeconomic benefits of a fixed exchange rate materialize first in the financial center, they also benefit the periphery, if the appropriate structural policies succeed in combining convergence with cohesion.

6. CONVERTIBILITY AND STABILITY: THE CASE OF PORTUGAL

6.1. Currency Experience

In eight out of every ten of the last 148 years, Portugal's currency has been stable relative to the Atlantic reserve currencies. The implied "long term commitment to pegging to a dominant currency" was explained in my (1980), written soon after the introduction of the crawling peg. I showed that episodes of exchange rate flexibility had been associated with "troubled times like the aftermath of the 1891 crisis, the hyperinflation of the early 1920s and the present difficulties" <12>. In the period following the 1931 stabilization, furthermore, an appreciating real exchange rate was associated with a current account surplus and a depreciating real exchange rate was associated with a current account deficit. With managed float, the relationship broke down in the late 1970s and nominal depreciation led to real appreciation.

"The solution of the paradox lies in the behavior of the government deficit. In effect the explosion in government borrowing from the central bank explains that the commitment to a fixed exchange rate or to a fixed rate of change of the exchange rate was accepted by monetary authorities widely different ideological values. Given the acceptance of the 'rules of the game', the episodes of external disequilibrium can be traced to disequilibria in the accounts of the public sector(p.343)." It seemed safe to conclude that "only an international impediment to the use of exchange rate policy could constrain the government". After the breakdown of the Atlantic standards, "the primary concern of exchange rate policy has been the average price of a basket of major currencies, where the D.mark and the French franc are as important as the former reserve currencies (p.312)."

This was called an "IMF standard" because the major policy constraint was external balance rather than government expenditure and the level of taxation. In fact, the budget deficit was only higher than the Union Treaty criterion of 3% of output during the 1914-24 hyperinflation (when it reached 6.3%) and since 1974 (8%). Hence the conclusion that threats to convertibility and stability originated above all from political and social instability. Instances of civil strife during the 20th century are evident in the fact that there were four victorious revolutions in Portugal: 1910, 1918, 1926 and 1974.

The British alliance was seen to be at the root of the "paradoxical invariance" of Portugal's exchange rate policy since 1854: the first and the last nation to join the gold standard. The contrast between both attempts is striking. The decision to join the gold standard as early as in 1854 was a pragmatic response to the monetary upheaval witnessed during the 1840s. On the contrary, the decision to join as late as July 1931 was in the nature of a grand design. It had been prepared since 1924 and became the cornerstone of medium term economic policy after the 1926 revolution made way for an authoritarian regime. The pragmatic decision lasted almost four decades. The grand design lasted 82 days but left an heritage of stability which lasted another four decades, until after the 1974 revolution.

Work on the Portuguese currency experience by Mata and Valerio, Reis and Santos confirms the claim I made in (1980) that exchange rate stability and fiscal discipline both were required for Portuguese economic development. It also shows that, even though the suspension of convertibility in 1891 was costly in terms of greater fiscal tightness and lower growth, convertibility did not turn out to be a necessary for stability. A commitment to restoring convertibility in the medium term sufficed.

On the other side, the heritage of stability without convertibility delayed the modernization of the operating procedures of the central bank. The successive nationalization of the central bank and of the domestic banking system in 1974-75 reinforced this effect. The fear of capital flight, which existed in both regimes, albeit for opposite reasons, may also have made it more difficult for the Bank of Portugal to restore convertibility after entry into the EMS in 1992.

The experience of Portugal from the 1840s to the 1990s includes three decisions to join the convertibility and stability club. The timing of these decisions differs from the usual reference groups, the European and the semi-developed nations. The 1854 decision was early and the 1931 and 1992 decisions were late relative to the European core. By comparison with semi-developed countries, however, Portugal's decision to restore full convertibility in early 1992 precedes that of Greece by two years and compares favorably with countries in Latin America and the Mediterranean, let alone Asia <13> .

The reversions into instability lasted from 1915 to 1931 and from 1974 to 1992. This is leaving aside the 8 year period intervening between the establishment of

the Bank of Portugal and the decision to join the gold standard. While the three regime changes could be dated at the beginning of the period of stability, the notion of a gradual regime change is more appropriate to describe the 1854 and the 1992 decisions. Moreover, a regime change is a necessary but not sufficient condition for stability. In 1931 and in 1992, the system itself was in turmoil shortly after the regime change.

The consequences of this identification problem are of course more severe when the change in regime is itself gradual, to the extent that policy credibility may not be established in as clear a way as otherwise. This particular example reinforces the importance of political decisions on the face of historical contingencies. It also points out to the effects of global disturbances on individual country decisions. Both in 1931 and in 1992, the international monetary system was about to enter into a turbulent phase when Portugal joined. In the latter case, the consequences of the 1992-93 recession are still being worked out. Even though the rationalization of the choice of stability is more difficult when the environment is unstable, the implication is the same.

The last 148 years can be divided into the 12 subperiods reported below, together with their duration in years (rounded percentage of the total in parentheses):

1846-50	Financial crisis: inconvertible and unstable	4	(3)
1850-54	Sterling standard; convertible and unstable	4	(2)
1854-91	Gold standard: convertible and stable	37	(25)
1891-14	Shadow sterling standard: inconvertible and stable	23	(15)
1914-24	Hyperinflation: inconvertible and unstable	10	(7)
1924-31	Gradual regime change towards convertibility	7	(5)
1931-74	Sterling and dollar standard: inconvertible and stable	43	(30)
1974-89	IMF standard: inconvertible and unstable	15	(10)
1989-92	Gradual regime change towards convertibility	3	(2)
1992-93	EMS: convertible and unstable	1	(1)
1993-94	EMS: convertible and stable	1	(0)

Ten of the subperiods indicated above are also covered by Mata and Valerio, who report data for the 136 years between 1854 and 1990. In Bordo and Schwartz, the sample begins in 1881, so that the gold standard subperiod is reduced from some thirty to ten years. Two subperiods are in contrast with the subperiods presented by Mata and Valerio from the case of Portugal. They attach monetary relevance to wars other than World War 1, that is to say World War 2 (1939-45) and the "colonial wars" (1961-74). The effect of either one of these events on budget deficits appears to have been negligible, however.

The average Portuguese deficit during World War 2 is reported at .9% of output, slightly higher than in the previous subperiod chosen, 1924-39, where it was .5%, but the same as the following subperiod chosen, 1946-60. As for the average deficit during the 1961-73 subperiod it is reported at 1.4% of output, higher surely than in the previous three subperiods chosen, but well below the sample average of 2.4%. The same can be said about external payments: they were in deficit during 1946-60 and in surplus during both of the excluded subperiods.

Inflation did rise to double digits in 1939-45 but the war effect did not last. As for the 1961-73 subperiod chosen, inflation rose from 1.1% to an average of 3.9%, well below the double digit average of the 1974-90 subperiod. Conversely, Mata and Valerio ignore the attempted restoration of convertibility in 1931, and therefore the 1924-31 gradual regime change, lumping it together with the 1930s.

Based on the dates indicated above, we define the combination between exchange rate stability and currency convertibility in a two by two matrix, and we get the following pattern for the percentage of time spent in each one of the four combinations:

	CONVERTIBLE	INCONVERTIBLE	
STABLE	27%	52%	79%
UNSTABLE	3%	18%	21%
	30%	70%	100%

The combination of stability and convertibility only occurred about one quarter of the time, whereas the opposite combination (inconvertibility and instability) was observed less than one fifth of the time. The combination of convertibility

and system instability was observed between 1850 and 1854 and in 1992-93, about 3% of the time. The combination of inconvertibility and stability, on the contrary, was recorded during over one half of the period. This means that the association between the two features is far from complete.

The Portuguese currency experience since 1846 suggests a strong preference for stability (over 80% of the time during which the system itself was stable), and an equally strong tolerance of inconvertibility (70% of the time). The reason for this paradox goes beyond the effect of government budget deficits. It may have deeper societal roots insofar as convertibility was not a sufficiently safe option for an authoritarian political regime. Portugal joined the IMF in 1960 and availed itself of the transitory status of inconvertibility.

Had the return to borrowing by the Republic on international financial markets which began in 1963 been followed by a gradual move to convertibility, as it undoubtedly could given the comfortable balance of payments position, then the relative importance of the first cell in the matrix above would have risen to 35%. Then the preference for convertibility would have been satisfied 38% of the time, a percentage more in line with the other small European economies.

But the financial system was deeply protected and the threat of external competition which would have been associated with a convertible currency was strong enough to prevent the move from being associated with the substantial trade liberalization which took place during the 1960s in the framework of the EFTA. As it turns out, convertibility was only possible over one hundred years after the exit from the gold standard and over ten years during which the exchange rate accommodated inflation differentials with the union.

Exchange rate stability is sustained by the convergence criteria, especially the annual inflation rate and the budget deficit as percentage of output. These are estimated at 5.5% and 2.3% respectively by Mata and Valério for their sample period 1854-1990. The first fails the current reference value of about 3% but the second is below the Treaty norm.

Comparing the two criteria for Portugal, for the extended core of Bordo and Schwartz, and for the Latin American periphery during the two periods of system stability shows a superior pattern on inflation and an intermediate pattern on fiscal discipline:

	1881-1913		1946-1970	
	DEFICIT	INFLATION	DEFICIT	INFLATION
PORTUGAL	1.2	.6	1.8	2.2
EXTENDED CORE	.4	.8	.5	3.5
LATIN AMERICA	2.3	4.0	3.1	25.0

Political and social instability slowed the pace of economic development during the entire period, even though data unreliability cautions against any serious attempt at growth accounting. The estimate of 2.4% annual growth over the entire period, provided by Mata and Valerio, is unquestionably low. In periods of stability, higher growth rates are recorded: 5.4% between 1946 and 1973, 4.4% entre 1924 and 1939 and 2.8% during the gold standard period, roughly the same as during the 1974-90 period.

During the shadowing of sterling under inconvertibility, between 1891 and 1914, growth slowed to less than 1% per annum. During the war and post-war inflation (1914-24) and during World War 2 output fell at a rate of 2.2% and 1.6% respectively. During the gold standard period defined by Bordo and Schwartz the comparison with the core countries and with Latin America is unfavorable, but the converse is true for the other periods, including the inter-war years:

GROWTH	1881-1913	1919-38	1946-70	1974-90
PORT	.6	3.8	4.8	1.9
CORE	1.6	1.4	3.8	1.9
LA	2.0	1.2	2.3	.4

Using the Bordo and Schwartz data set, which they graciously made available, it is possible to compute the average rate of inflation and of real growth in the states of the EEA (excluding Ireland) and express the results in terms of differences between Portugal and the European average:

CONVERGENCE	1881-14	1915-24	1925-31	1932-73	1974-88
NOMINAL	1.7	22.3	-1.6	.8	10.8
REAL	-.9	-2.4	7.3	.5	.5

During the entire period 1881-1990 the rate of real convergence is as low as .2% per annum, whilst the inflation differential reaches 4.4% per annum. This unsatisfactory performance reflects the absence of stability and convertibility

together since it reduces the gold standard period to one third of its length. It may also be a product of incorrect data, as the difference between the data set of Bordo and Schwartz and that used by Mata and Valerio suggests.

What emerges from the long term convergence is that the positive effects of monetary and exchange rate stability are wasted in an environment of real or financial protectionism. This is of course why the European Commission (1990) and (1993) stressed from the very beginning that a condition for the success of the single currency was the success of the single market and that no large union budget was necessary for cohesion.

6.2. The 1989-92 Regime Change and Its Aftermath

The third regime change towards stability and convertibility since Portugal established a central bank almost 150 years ago began with the reversal of a constitutional ban on privatizations in the Summer of 1989. Paradoxically, it coincided with a reversal of the strong disinflation of 1986-88 so that the implications for price stability and sound public finances were not immediately apparent. Moreover, in 1990 and 1991, capital controls were tightened so as to discourage excessive inflows, attracted by the high interest rates of public debt.

The reinforcement of financial protection sought to prepare banks for the increased competition that was expected from the single market in financial services. It also helped prevent inflationary pressures from accelerating. Given the brisk pace of economic activity and the very low level of unemployment, however, there was a strong upward pressure on wages, which the government fueled with a reform of the public sector wage determination scheme. As public expenditures also increased, and deficits rose as a percentage of output, the only instrument which served as an anti-inflationary tool was the exchange rate.

The passive crawling peg was discreetly replaced by a shadowing of the Deutsche-mark on the eve of the first phase of EMU. In October 1990, new statutes provided the Bank of Portugal with a greater degree of independence and greater powers of banking supervision. Policies featured financial liberalization alongside a multi-annual fiscal adjustment strategy. The budgetary consolidation program presented in 1990, called QUANTUM, aimed at convergence on the medium term. The financial system remained protected, however, and inflation was still in double digits when the incumbent government won the October 1991 elections.

Budgetary consolidation was immediately set in a framework of exchange rate stability. In line with the procedure of multilateral surveillance initiated by Italy, a Convergence Programme (dubbed Q2) was examined at the December Ecofin, on the eve of the Portuguese presidency of the Council <14>. As stated in Q2, the 1992 Budget eliminated monetary financing and broadened the tax base by eliminating the zero rate of VAT.

Entry into the EMS was decided a few days after the Budget was voted in Parliament at a rate defined in terms of ecus (1 ecu=180 escudos). The agreed rate was slightly stronger, and it allowed a lessening of exchange controls and a reduction in interest rates. Nevertheless, the Bank of Portugal was reluctant to dismantle controls, so that the currency did not become convertible until after the turmoil had begun in international financial markets.

Similarly, the procedure of shadowing the Deutsche-mark in the narrow band, which began in the Spring of 1990, made it difficult to incorporate other currencies such as the French franc to carry out the stabilization with respect to the ecu. The operating procedures based on shadowing the Deutsche-mark seem to have remained in place until the Summer of 1993. This is over one year after the escudo entered the ecu parity grid but after less than one year experience with full currency convertibility.

At that time, differences between the government and the central bank became visible over the issue of banking supervision. In line with the single market in financial services, the government wanted more effective monitoring of competition among banks and of the rules on transparency of the cost of credit to firms, especially small and medium sized enterprises. The central bank, used to restrict its attention to prudential supervision, was adjusting to the banking law introduced on January 1, 1993. The adjustment was speeded up because it interacted with the process of privatization of state-owned banks and the enforcement of limits on foreign equity in such banks.

Privatization and regulation in the financial system raised issues of accountability, supervision and competition at national and union level which became quite salient in reference to Spanish banks. Like in the gold standard practices revealed by de Cecco, leaks to the financial press exaggerated the differences between the private and public parties involved, especially the government and the central bank.

In this environment, even minor institutional differences were liable to reinforce the negative effects of financial market hierarchy. Nevertheless, the global bond issue of the Republic in dollars, launched in September 1993 after successful yen and Deutsche-mark notes, was well received. It consolidated the upgrading of the states's foreign debt from A+ to AA-, the first such move since Ireland was upgraded in 1989. A global bond issue in ecus followed in early 1994.

In contrast to the wage hikes of 1991, Q2 stressed the leadership role of the public sector in wage negotiations. The signals of wage moderation in the 1992 price and incomes agreement were still weak, due to resistance to wage moderation on the part of trade unions and resistance to rental moderation on the part of banks. Given the relatively low rate of unemployment, the limited competition in the financial system and the recent experience of high inflation, these corporatist resistances may not be surprising. Nevertheless, they threaten social consensus.

The failure to agree on an incomes policy for 1993 was more serious because it increased the vulnerability of the national economy to the European recession. Similarly the change in tax collection procedures due to the single market and the greater mobility of the tax base lowered tax receipts substantially in 1993. Both events led to expectations of an output cost of disinflation well above the predictions of Q2 not because external developments were worse, which they were, but because of alleged domestic policy reversions.

The preferred data for the end of the gradual regime change is 1992 due to several reasons. Specifically, the gradual nature of the multi-annual fiscal adjustment strategy, the reversions in 1990-91 and the fact that the currency became convertible before year end. The new convertible currency was tested in the first months of 1993, but there was no difficulty in defending the parity given the extraordinarily high level of reserves and the limited experience of convertibility on the part of market participants.

Even though the nominal expenditure ceiling in Q2 was met, a supplementary budget was necessary, where the deficit was feared to be close to 9%. Due to several revisions, however, a more comparable figure is about 6%, that is to say the same as in 1994 and below the figure for 1991. The gradual convergence path is visible in the performance for 1993 and 1994, as well as in the approval

of a Revised Convergence Program in Brussels shortly before the 1994 Budget was voted in Parliament.

7. THE FIRST PHASE IN THE COHESION STATES

7.1. Convergence Performance

Among the four cohesion states, Spain's size stands out: the population is twice as large as the other three taken together. Nevertheless, one half of the Spanish population lives in regions as poor as the Greek or Portuguese national average, a regional problem like the ones faced by Italy or Germany <15>. The economic principles at work are the same. The fact that the development challenge faced by Greece, Ireland and Portugal is national rather than regional only makes the interaction between convergence and cohesion more salient politically.

In what follows we describe the convergence performance of each one of the cohesion states and of the union average during the first phase of EMU (seven semestres, from July 1, 1990 to December 31, 1993) and during the first two years of the second phase, based on the Commission forecasts for 1994-95.

The indicators are presented in Table 2. Column 1 reports gross domestic product per capita, adjusted for purchasing power standards, as a percentage of the union average. Real convergence was stronger in Ireland and Portugal than in Greece and Spain. In 1994-95, Greece remains at one half of the average, whilst Portugal reaches almost two thirds. In Ireland and Spain, gross domestic product has reached close to 80% of the union average, even though German unification lowered the average itself by 2 to 3 percentage points. The same grouping emerges from Column 2, where the rate of unemployment as a percentage of the civilian labour force is reported. In Spain and Ireland, unemployment is almost twice the union average, in Greece it is at the average and in Portugal, it is almost one half of the union average. A comparison of the two time periods shows that unemployment is worsening everywhere but that the deterioration is particularly severe in the two countries where the level was already high.

Column 3 reports output growth. The effect of the recession is apparent in the data for the first phase, in comparison with the forecast for 1994-95, set at close to 2% for the union average. In both periods, the fastest growing country is Ireland. In Greece, growth is always below the union average. Spain and

TABLE 2
Convergence Indicators

	GDP per head (%)	Unem. (% civilian lab. force)	GDP growth (% p.a)	Balan crt trans (% GDP)	Budget Deficit (% GDP)
	Forecast for 1994-95				
Greece	50	10.4	.8	-4.0	17.8
Ireland	83	17.5	4.3	5.1	2.4
Portug	62	6.6	2.1	-.4	5.8
Spain	77	23.4	1.7	-.8	6.3
Union	100	11.6	2.1	.6	5.4
	Average During First Phase				
Greece	49	8.5	1.0	-4.6	15.4
Ireland	76	17.1	4.1	3.2	2.2
Portug	61	4.3	1.2	-2.4	5.6
Spain	78	18.3	1.1	-3.2	5.3
Union	100	9.6	1.1*	-.7	5.1

Source: European Commission, Spring 1994 Forecasts. Union Average includes ex-GDR in data beginning 1991. (1992 when starred *)

Note: Commission estimates need not follow the same methodology as national sources. First phase average of seven semesters constructed from annual data 1990-1993.

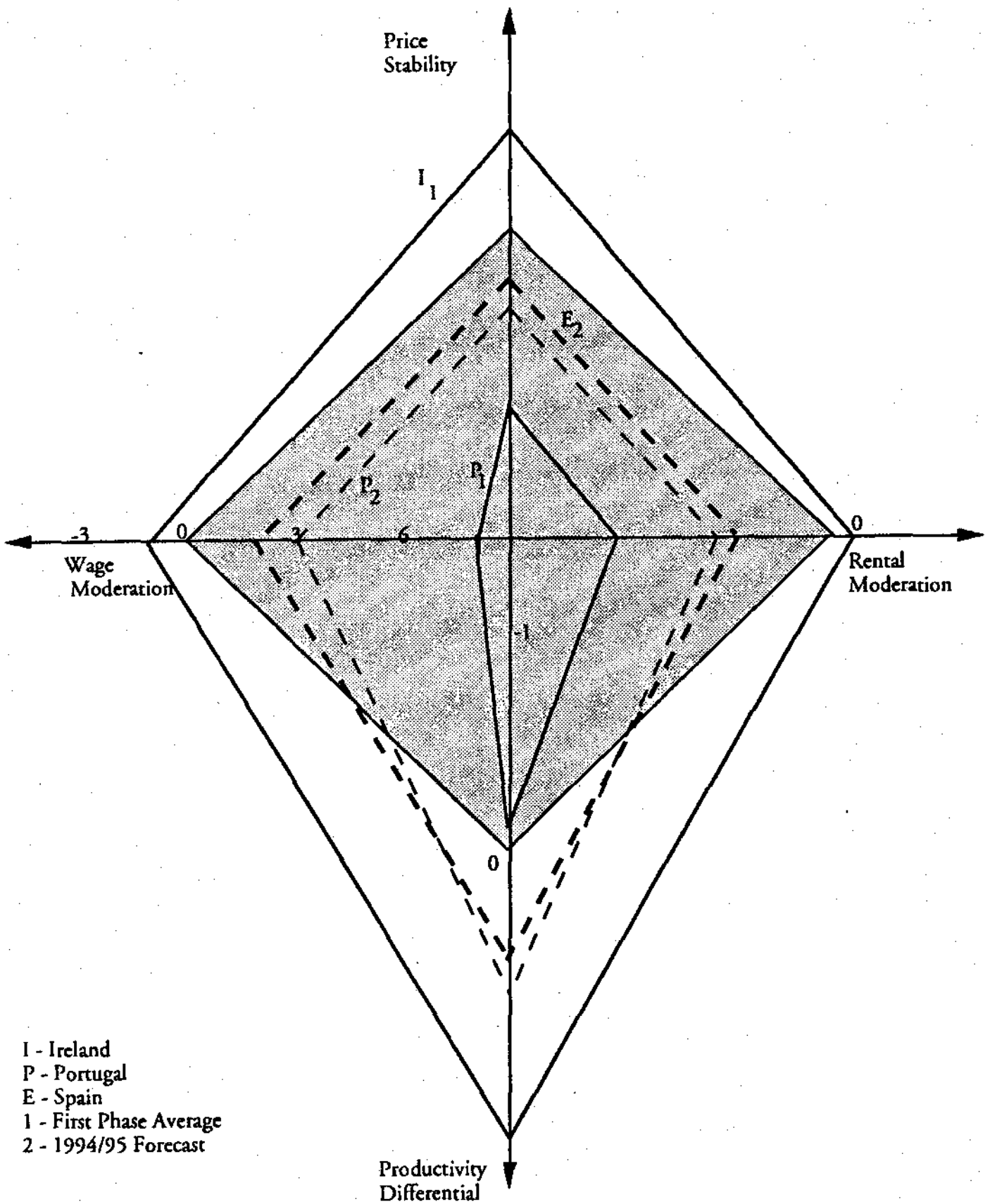
Portugal manage to grow at about the average during the first phase and the pattern remains in the forecasts for 1994-95 <16>.

Columns 4 and 5 focus on external and public accounts respectively. The latter summarize the link between real and nominal convergence, as excessive deficits are the ultimate cause of payments difficulties, inflation or both. The former provide a signal of the sustainability of a stable exchange rate during the convergence process. Too large a current account deficit, because it implies excess borrowing from abroad, may bring pressure to the foreign exchange market. This will be the case if the deficit is perceived as unsustainable and therefore difficult to finance, and the signal will be especially strong if the public sector is also spending too high a share of domestically generated resources. The two extreme cases are Ireland with a large and consistent surplus and Greece with a substantial deficit. Portugal and Spain report moderate deficits as a share of gross domestic products, less than 1% in the forecast for 1994-95. As for public accounts, Portugal and Spain report budget deficits which are half Greece's, but over twice the value for Ireland. Nevertheless, Ireland and Portugal show similar interest payments over output because of the high Irish public debt, reported in Table 1 above.

Focusing now on prices, wages and interest rates relative to union averages, given relative trends in labour productivity, we obtain the so called "convergence diamond" pictured in Figure 1. All variables are presented as deviations from the union average. The forecast for long term interest rates in 1994-95 assumes that corresponding real differentials with the union average remain at the first phase average level. Following the Commission's assumption about short term interest rates in Germany at end 1994 of 4.5% and of 4% at end 1995, an estimate of a real rate of 2.5% for the union is obtained. Higher relative productivity gains tend to be associated to a more durable reputation for financial stability. They are the best indicator of the relative improvement in the economy's well being and determine the warranted rate of real wage increases in the run up to a single currency. Most available estimates are unfortunately unreliable.

It is interesting to note from the Figure that the forecast of the four variables for 1994-95 in Ireland is uniformly less favorable than it was during the first phase and that the difference is especially pronounced with respect to productivity growth. In Spain, the forecast for 1994-95 shows a slight improvement in nominal convergence and a slight deterioration in relative productivity gains.

Figure 1
Convergence Diamond



I - Ireland
P - Portugal
E - Spain
1 - First Phase Average
2 - 1994/95 Forecast

The greatest improvement between the first phase average and the forecast for 1994-95 refers to Portugal.

7.2. Policy Evaluation

Based on the evidence presented, a policy evaluation can be provided. In particular a guess about the existence, the date and the sustainability of a regime change can be made by combining that evidence with some assessment of the medium term credibility of the policies implemented by the different national authorities. In Ireland, Spain and Portugal the change in macroeconomic regime change is evident in the contrast between nominal magnitudes during the first phase average and the forecasts for 1994-95.

The first year during which the average rate of increase of consumer prices went into single digits provides an indication about the duration of the reputation for financial stability. In Ireland it was 1983, in Spain 1985 and in Portugal 1992. The previous instance of single digit inflation was 1972 in Greece and Spain, 1973 in Portugal and 1978 in Ireland.

Looking at the policies pursued, no one doubts the vigorous budgetary consolidation exercise, which occurred in Ireland after the August 1986 devaluation involved a regime change. Now this did not materialize until the 1987 Budget and was carried out in an environment of great uncertainty about the future course of economic policy <17>. It is worth recalling that the change in fiscal regime towards lower taxes and control on spending occurred thirteen years after accession to the Community and seven years after pegging the exchange rate in the EMS.

In Spain, the regime change was signaled by entering the EMS in mid 1989. Even though the severity of fiscal imbalances at regional level was not foreseen until the recession was already in progress in 1992, the convergence process was never in danger of being abandoned by the authorities. Given the remarkable political stability, the absence of a social consensus about wage moderation in Spain has not prevented a substantial fall in long term interest rates. But structural reforms in the labour market have been delayed by the absence of a social dialogue between trade-unions, employers and the government.

The convergence criteria set in the Treaty together with measures of real convergence give clues about the sustainability of anti-inflationary policy. Comparing the experience of France and Spain during the 1993 financial

turmoil reveals the difference a change in regime makes to the sustainability issue. The trade-off between nominal and real convergence became an electoral issue in both states but in France the stability of the exchange rate against the Deutsche mark was agreed among the two contenders. In Spain, the bi-partisan agreement was not perceived by the markets and this threatened the stability of the currency both at home and in Portugal. The effect on neighbouring markets was also observed in the case of Ireland and the United Kingdom, after sterling left the EMS.

In the case of both Portugal and Spain, EMS entry was the crucial signal of regime change, whereas budgetary consolidation was decisive in Ireland. All three states lifted the last restrictions on capital movements on the eve of the single market, thus making their currencies fully convertible.

In Greece, the process of nominal convergence has hardly begun and its significance has been offset by a continued real divergence. The lack of a social consensus about wage and rental moderation has been exacerbated by political instability. Even though the economy has been under the strict supervision attached to medium term financial assistance since the first tranche of a Community loan was disbursed in April 1991, no one claims a regime change may have taken place. This remains true after Greece removed all remaining capital controls in May 1994.

With a low unemployment, and sizable migrants remittances, together with a less favorable tax treatment of foreign investment and a very low external debt, Portugal's gross domestic product is already closer to Ireland's than to Greece's. Including factor income and unrequited transfers to obtain the resource potential available to residents, we obtain a positive difference, small in Spain, larger in Greece and even larger in Portugal. The difference is negative in Ireland, where of the dual structure of labour and capital markets has become more apparent than it was during the earlier period.

Measures of supply response confirm that Portugal has managed to attract foreign investment without undue increase in unemployment. On the other side, the pattern of trade specialization in Portugal and Greece is more dependent on low relative wages than in Spain and Ireland. This makes the industrial structure more vulnerable to adjustment costs but also more likely to gain from increased trade.

8. CONCLUSION

A single currency will bring real income and inflation rates closer together across regions and nations if credible policies are followed at regional, national and union level and if income redistribution mechanisms between nations reflect prevailing values about desired social cohesion. If policies are not credible, because they are not supported by a voting equilibrium, then the convergence process may be reversed, threatening social cohesion and therefore political union.

The regime change criterion is related to the ability to maintain a stable exchange rate and low inflation over several years and this requires more than budgetary consolidation. In effect it requires a reputation for financial stability which Ireland, Spain and Portugal acquired in 1986, 1989 and 1992. This is three, four and zero years respectively after inflation fell to single digits; it is six, three and zero years before the currency became fully convertible.

The rule of exchange rate stability does not necessarily follow from membership in the EMS as, under the current very wide band, discipline must be domestically generated. Still, the ability to stabilize a convertible currency is the best single indicator of sustained regime change. Greek inflation is still in double digits, the currency remained inconvertible at the beginning of the second phase and no change in the central bank statutes is foreseen. This makes convergence in Greece less stable and more reversible than called for by the objectives of the Treaty.

On the contrary, the other cohesion states managed to acquire a reputation for financial stability in less than ten years and have survived the test of an uncertain environment in 1992-93. If the regime change endures, their convergences experience can provide important externalities to nations outside the Union, as cases of successful interaction between national and union policies for cohesion in the emerging European economy.

The ecu standard, just like the gold standard, is a public good. Stability is provided by the largest national economy in ways that are often determined by national traditions and institutions. The role of treasuries and central banks from Britain, America and Germany have a lot to do with some of the features of the gold, dollar and ecu standards. The provision of the international public good is also in the national interest, which in this case is often represented by

institutions sensitive to the needs of the tax payer and therefore more prone to understand and fight against the incentive of each one of the member countries to free ride.

The incentive to free ride on the public good is indeed greater for the small countries but without a decision to join which can be domestically supported, the benefits of convertibility and stability are also less apparent. This is why Portugal managed to reap the benefit of exchange rate stability even when the currency was inconvertible. This is also why Portugal was able to maintain the medium term credibility of policy in spite of two realignments of the peseta which were partly followed by the escudo in 1992-93.

Far from being a difficulty, Portugal's specific timing to join the Atlantic and ecu standards ends up reinforcing the idea that external credibility may be necessary for medium term policy credibility of any nation-state but that it is never sufficient.

European construction has been a permanent negotiation among nation-states where political will and national cohesion have determined the speed with which union policies and regulations have been adopted and adapted at home. Hence the change in economic regime in the direction of price stability and sound public finances may be faster or slower depending on history and geography. It is better to take time and enter a virtuous cycle than to have a succession of failed attempts, which would amount to a "stop and go" convergence process.

The Union Treaty is consistent with this view: Articles A and F state respectively that decisions should be taken close to the citizen and that nation-states are the source of democratic accountability. With this understanding, all nation states are encouraged to converge at their own preferred speed, so as to avoid breaches in national cohesion and maximize the benefits of union cohesion to their citizens.

ENDNOTES

<1> Eichengreen (1994) argues that the contingent nature of the gold standard rule helped what we call its Euro-Atlantic dimension.

<2> This feature has been stressed by Branson (1990) in connection with EMU but can also be found in the US experience. In a related analysis, Eichengreen (1993b) addresses central bank accountability issues in connection with monetary policy. See Section 5.1.

<3> It draws on insights of Stiglitz and Weiss (1981), which have been applied to financial development by McKinnon (1988) and Macedo (1988).

<4> Macedo (1980).

<5> Torres (1994) presents the political economy of EMS membership, drawing on his other work, namely the contribution to Williamson (1994). In Macedo (1988), the section *Delayed financial decontrol in Portugal* provides some background to the third regime change. Also the contribution to Bliss and Macedo (1990).

<6> Nevertheless, according to CEPR (1993) the difference in per capita income levels among Swiss cantons matches that among union states.

<7> Eichengreen (1993a) questions the efficiency implications and prefers a political economy explanation of the single currency. His main argument against the success of the endeavour appears then to be the small size of the Community budget. Torres and Giavazzi (1993, p.2) see another inconsistency in the current approach to the ecu standard. "The Maastricht approach, as the Werner plan 20 years earlier, is a product of the French vision of money being the driving force in politics and in economic fundamentals. But gradualism is inconsistent with that vision: if the *fait-accompli* of a single currency is deemed to provide sufficient discipline to force economic convergence, then waiting for fundamentals to converge is wrong". Our own stress on effective multilateral surveillance is derived from doubts about the ability of a national economy to import policy credibility without the necessary domestic adjustment, especially in the fiscal front.

<8> Comparisons between policy reforms in Portugal and Spain (together with Poland and Turkey) are presented in Williamson (1994).

<9> Eichengreen (1994) proposes a temporary tax on foreign exchange transactions in this context.

<10> They are called "promised land syndrome" in Williamson (1994).

<11> Eichengreen (1993b, p.101).

<12> Macedo (1980, p. 342)

<13> Work by Klein and Marion on 16 Latin American countries and Jamaica during the 1957-91 shows the median duration of a dollar peg to be less than one year.

<14> The medium term policy stance in early 1992 is reviewed by Braz (1992).

<15> Using data from the late 1980s, Panic (1992, p.140) stresses that regional disparities within the union are much greater than within its member states. He identifies 13% of the population (about 43 million people) whose income would have to be raised for the union disparities to match the highest domestic level (observed in Holland). Except for 8.5 million Italians, all of those live in the cohesion states.

<16> An error in the reported growth rate for Ireland in Table 1 of Macedo (1994), from which this is updated, has been corrected.

<17> Walsh and Leddin (1992), p.133. I owe this reference to Frank Barry.

REFERENCES

Bordo, Michael and Anna Schwartz (1994), *Fixed Exchange Rates as a Contingent Rule 1880-1990*, Chapter 2 in this volume.

Branson, William (1990), *Financial Integration, Macroeconomic Policy and the EMS*, in Bliss and Macedo (1990), pp.104-130.

Bliss, Christopher and Jorge Braga de Macedo editors Unity with Diversity in the European economy: The Community's Southern Frontier, Cambridge: Cambridge University Press.

Braz, José (1992), *Portugal from P1 to Q2 A strategy of sustained regime change in A Single Currency for Europe Monetary and Real Aspects*, London: CEPR and Bank of Portugal. Report of a Conference held in Estoril whose Proceedings are in Torres and Giavazzi (1993).

CEPR (1993), Making Sense of Subsidiarity: How Much Centralization for Europe?, London: Monitoring European Integration.

De Cecco, Marcello (1994), *Short-Term Capital Movements*, Chapter 3 Section 2 in this volume.

Eichengreen, Barry (1993a), *European Monetary Unification*, Journal of economic Literature, vol.XXXI September.

Eichengreen, Barry (1993b), *International Monetary Arrangements for the 21st Century*, Berkeley Center for International and Development Economics Research Working Paper, September.

Eichengreen, Barry (1994), *Deja Vu All Over Again: Lessons from the Gold Standard for European Monetary Unification*, Berkeley Center for International and Development Economics Research Working Paper, January.

Eichengreen, Barry and Marc Flandreau (1994), *The Geography of the Gold Standard*, Chapter 1 in this volume.

European Commission (1990), *One Market One Money: An Evaluation of the Potential Benefits and Costs of Forming an Economic and Monetary Union*, European Economy, n° 44, October.

European Commission (1993), *Stable Money: Sound Finances Community public finance in the perspective of EMU* European Economy, n° 53.

Marion, Nancy and Michael Klein (1994), *Explaining the Duration of Exchange Rate Pegs*, paper presented at the 1994 NBER Summer Institute.

Macedo, Jorge Braga (1980), *Portuguese Currency Experience: An Historical Perspective*, in Estudos em Homenagem ao Prof. Doutor J.J. Teixeira Ribeiro, vol. IV, Coimbra: Boletim da Faculdade de Direito, pp.311-52.

Macedo, Jorge Braga (1988), Comment on McKinnon (1988), pp.411-415.

Macedo, Jorge Braga (1994), *European Union and Cohesion*, in Europäische Antagonismen, Zurich: Schweizerisches Institut für Auslandsforschung, pp.33-57

Mata Maria Eugenia and Nuno Valerio (1994), *Exchange Rate Stability, Fiscal Discipline and Economic Development*, Chapter 4 Section 1 in this volume.

McKinnon, Ronald (1988), *Financial Liberalization in Retrospect: Interest Rate Policies in LDCs* in Gustav Ranis and T. Paul Schultz editors The State of Development Economics Progress and Perspectives, New York: Basil Blackwell, pp. 386-410.

Milward, Alan *How It All Began*, Section 3.1 in this volume.

Panic, M. (1992), European Monetary Union Lessons from the Classical Gold Standard, London: St.Martin's Press.

Reis, Jaime (1994), *First to Join the Gold Standard, 1854*, Chapter 4 Section 2 in this volume.

Santos, Fernando (1994), *Last to Join the Gold Standard, 1931*, Chapter 4 Section 3 in this volume.

Stiglitz, Joseph and Andrew Weiss (1981), *Credit Rationing in Markets with Imperfect Information*, American Economic Review, 71, June.

Torres, Francisco and Francesco Giavazzi (1993), Adjustment and Growth in the European Monetary Union, Cambridge: Cambridge University Press.

Torres, Francisco (1994), *Portugal and the EMS. On the Politics of Economic Integration*, Catholic University of Portugal, Center for European Studies Working Paper.

Walsh, Brendan and A. Leddin (1992), The Macroeconomics of Ireland, 2nd Edition, Dublin: Gill and Macmillan.

Williamson, John (1994) editor The Political Economy of Policy Reform, Washington: Institute for International Economics.