Exchange-Rate Policies and the European Monetary Union: Past, Present and Future

E. Cuenca Garcia
University of Granada

The Economic and Monetary Union (EMU) has gone through various stages before arriving at the creation of the Euro. It has had to overcome many problems during the past thirty years. It is an unfinished project, due to the fact that three of the partners failed to implement policies needed to meet the macroeconomic criteria of Maastricht. An overview of the exchange rate policy of those countries is analysed here. Most of them have pegged their currencies to the Euro and aim to join it as soon as possible. Nevertheless, others are either still closely linked to the currencies of the international monetary system or their exchange rate policy is still far from meeting the objectives of the Euro exchange-rate in the short term.

1. Introduction

When the project of creating a single currency in Europe arose, few believed it was realistic from a political point of view and others felt that it was technically impossible as well as economically dangerous. The results reveal that the first two suspicions were not very well founded and we will have to wait a little longer to clarify those doubts surrounding the third one.

Since its beginnings in 1970 with the drafting of the 'Werner Report', the Economic and Monetary Union (EMU) has gone through different stages to obtain a single currency. Achieving this goal has involved considerable political, economic and social effort and is proof that Europe continues to move forward. After having achieved the free circulation of people, goods and capital, it is now paving the way for new common policies and progressing with expansion, internal security and foreign policy.

The euro has now been adopted over an enormous and diverse area which is working to control levels of inflation, public deficit, and employment in which growth is responding adequately. The circulation of the euro has affected all economic activities and has had a great impact on the societies of those countries which have adopted it, with consequences that extend beyond their borders. The single currency has become a symbol of union that should, among other objectives, bring the European Project closer to the citizens and produce a common economic and cultural basis.

With regard to the future, consideration must be given to whether the euro will function in an area that does not constitute an optimal monetary zone. Internally Europe is not as economically homogeneous as the United States; it does not enjoy the same labour mobility, neither is the job market as flexible. It will not be possible to judge its success until a complete economic cycle has been experienced and the economies included in the project function with a single monetary policy. In relation to this challenge, the EU must respond to the economic situation and the necessary structural reforms (especially in the labour market and the service sector) with greater coordination of its policies.

As far as the exchange-rate policy is concerned, this article will focus on giving an account of monetary union in Europe, the creation of the euro, and the attempts to consolidate its influence in international markets by transforming it into a clear and safe alternative to the dollar. This alternative is based on the credibility that instils its economies.

On the same note, we are going to analyse the exchange-rate policy of the countries of the European Union that have not joined the euro and of those countries that, as of May 2004, became members of the European Union. An empirical analysis of the exchange rate series of affected currencies, including the US dollar and Japanese yen, will offer some conclusions about future trends.

2. Events prior to the implementation of the euro

2.1. From The Werner Report to The European Monetary System (EMS). Between 1960 and 1968 there was very little progress made in monetary matters. It was a period of stability in the international monetary system with Bretton Woods and the International Monetary Fund.

The devaluation of the pound sterling in 1967, the revaluation pressures on the German mark and the collapse of the international monetary system which occurred between 1968 and 1974, were factors that brought about the need to improve economic relations among Europeans countries, especially in a closer control of currency fluctuations. A Committee was created to study the creation of a single European currency, which culminated in the Werner Report in 1970. The EEC launched its first attempt at harmonising exchange rates following the recommendations made in the Report. The mechanism adopted was the so-called 'snake in the tunnel' whereby participating governments were required to restrict the fluctuations of their currencies within a range of +/- 2,25 percent against each other. The value of the group currencies (the snake) was also maintained within a range of +/- 2.25 percent against the US Dollar (the tunnel). However, this forerunner of the European Monetary System did not last long.

The pressure on those currencies that had already been struggling to hold their values within the snake was intensified as a result of oil crisis in 1973. As a result, oil prices quadrupled over the following six months period. During the next two years, most of the participating countries were forced out of the snake, eventually leaving only West Germany, the Benelux countries and Denmark. In 1973 the European Fund for Monetary Cooperation was set up to support monetary policy in the short run and to manage the monetary reserves of the member countries. It had two aims: to promote the convergence of economic policies and to attain stability, growth and full employment

The next step towards Economic and Monetary Union was the European Council on 5 September 1978 where the European Monetary System was created to establish the basis of a stable monetary zone among its members. At the core of this system was the European Currency Unit (ECU). The value of the ECU was derived from a weighted basket of all the participating currencies with the greatest weight against the West German mark. All currencies had a central parity with the ECU (pivotal rate) and with all other currencies (bilateral pivotal rate). They had to be held within a band of +/-2.25 percent of their original value against the ECU and the central bank of the country would be expected to intervene

TABLE 1. Readjustments in the European Monetary System

Date	Deutsche mark	Dutch guilder	French franc	Belgian/ Luxembourg franc	Italian lira	Danish krone	Irish Punt	Spanish peseta	Sterling pound	Portuguese escudo	Austrian Shilling	Finnish markka	Greek drachma
24/09/1979	2	-	-	-	-	-2,9	-						
30/11/1979	-	-	-	-	-	-4,8	-						
23/03/1981	-	-	-	-	-6	-	-						
05/10/1981	5,5	5,5	-3	-	-3	-	-						
22/02/1982	-	-	-	-8,5	-	-3	-						
14/06/1982	4,25	4,25	-5,75	-	-2,75	-	-						
22/03/1983	5,5	3,5	-2,5	1,5	-2,5	2,5	-3,5						
22/07/1985	2	2	2	2	-6	2	2						
07/04/1986	3	3	-3	1	-	1	-						
04/08/1986	-	-	-	-	-	-	-8						
12/01/1987	3	3	-	2	-	-	-						
19/06/1989	-	-	-	-	-	-	-	ENTRANCE					
08/01/1990	-	-	-	-	-3,68	-	-	-	-				
08/10/1990	-	-	-	-	-	-	-	-	ENTRANCE				
06/04/1992	-	-	-	-	-	-	-	-	-	ENTRANCE			
14/09/1992	3,5	3,5	3,5	3,5	-3,5	3,5	3,5	3,5	3,5	3,5			
17/09/1992	-	-	-	-	TEMPORARY EXIT	-	-	-5	TEMPORARY EXIT	-			
23/11/1992	-	-	-	-		-	-	-6		-6			
01/02/1993	-	-	-	-		-	-10	-		-			
14/05/1993	-	-	-	-		-	-	-8		-6,5			
02/08/1993	WIDENING OF THE FLUCTUATION BANDS												
09/01/1995	-	-	-	-		-	-	-		-	ENTRANCE		
06/03/1995	-	-	-	-		-	-	-7		-3,5	-		
12/10/1996	-	-	-	-		-	-	-		-	-	ENTRANCE	
25/11/1996	-	-	-	-	REENTRY	-	-	-		-	-	-	
16/03/1998	-	-	-	-	-	-	3	-		-	-	-	ENTRANCE

Source: Commission of the European Communities if the country reached the limit of it allowable range, by buying or selling its own currency on the foreign exchange markets.

Assessing the performance of the EMS, we can conclude that it was a success despite its twenty six readjustments. First of all, it succeeded in creating a stable zone in a period where the international monetary system was under great pressure following revaluation of the US dollar at the beginning of the 1980s, the international debt crisis, and the EMS crisis in September 1992. Secondly, all the readjustments were in accordance with the EU's Council of Ministers and were not unilateral.

In 1989, J. Delors presented his proposals for the implementation of a single currency. The Delors Report suggested a three-stage plan to obtain economic and monetary union through the following recommendations:

- governments were to ensure the free movement of capital between member states and convergence in economic policy.
- the development of a European System of Central Banks to integrate policies and the ways national central banks operated.
- exchange rates were to be fixed with the creation of the European Central Bank to decide monetary policy in euro zone countries.

2.2. Convergence criteria. In order to make the union stable and credible, only those countries whose management was economically correct were to participate. To achieve this, the member states promised to improve their economic performance and to make it converge with the levels obtained by the most efficient countries.

With the objective of evaluating whether the degree of convergence was sufficient, the Maastricht Treaty established the so called 'convergence criteria' or rules that a member country had to follow in order to participate in the monetary union. These criteria (the so-called Maastricht Criteria) refer to the principal economic indicators - price stability, long-term interest rates, exchange rate stability, public deficit and public debt - which had to be met by countries wishing to participate in the EMU. More specifically: the annual budget deficit was not to exceed 3 percent of GDP; total government debt was not to exceed 60 percent of GDP; the inflation rate was to be kept be within 1.5 percent of the average best three performing countries and interest rates within 2 percent of the best three performing states; lastly the currency was to remain within its required band of EMS for two years prior to the launch. The compliance of these criteria was made obligatory for all those members who wished to take part in the third phase of economic and monetary union.

Several observations can be made about these criteria. By 1996 and 1997 all countries except Germany and Luxembourg had reduced their deficit in relation to GDP, although the reduction had not been sufficient to satisfy the criteria. Yet, in 1998 it continued to be one of the least fulfilled criteria by member countries even though a lot more countries had met the criteria the previous year. The exchange-rate stability criteria were the dilemma around which arguments for and against abandoning the system revolved. In August 1993, the ministers of the European Union decided to widen the bands of fluctuation from 2.5 percent to 15 percent. By the end of 1996 seven countries had not met the criteria: the United Kingdom and Italy, who had abandoned the EMS at the end of 1992, Spain and Portugal who had devalued their currencies in March 1995 and Greece and Sweden who did not belong to the exchange rate mechanism. Italy rejoined the EMS at the end of November 1996.

In 1998 important measures were taken to prepare for the introduction of the euro. In February, fourteen of the fifteen EU countries complied with the convergence criteria necessary for participation in the final stage of the monetary union. The final stages of the euro took place in 1998 when the EU officials and heads of state in Brussels announced which countries were going to adopt the euro. It was only Greece who had failed to meet the criteria by this stage.

Shortly afterwards on 14 March 1998, Greece made a decisive step towards its future incorporation into the euro by joining the EMS with a parity per ECU, which meant a devaluation of 14 percent on its last exchange rate. On the same day the Monetary Committee decided to appreciate the Irish punt by 3 percent.

Finally Greece was incorporated into the European Union on 3 January 2001.This was a very rapid process, with a lot of effort and support from the Greek population, Greece was able to be among the group of countries who adopted the euro in 2002 with an irrevocable exchange rate with the euro.

The UK and Sweden were in the group of temporarily self excluded countries. Neither of them completed the formalities for participating in the European Monetary System (EMS); furthermore Sweden failed to comply with the rule regarding the Central Banks autonomy. On 5 June the European Council of Eleven countries was created, formed by the economic and finance ministers of countries that had complied with the convergence criteria and had agreed to implement the euro. On 1 July the European Central Bank (ECB) began functioning in Frankfurt, replacing the EMI (European Monetary Institute). Finally, on 1 January 1999 the euro began operating in foreign-exchange markets, competing with the dollar and the yen.

Together with the euro, the new EMS (EMS bis or ERM II) was left comprising only two currencies, the Danish krone and the Greek drachma. The British pound and the Swedish krona did not participate, as the former left the EMS in 1992 and the latter had never participated. ERM II maintained two fluctuating bands of +/- 2.25 percent (that the Danish krone accepted) and the 15 percent that applied to the drachma.

The third and final stage of EMU was implemented on 1 January 1999 when the euro appeared on the foreign-exchange markets competing with the dollar and the yen. On 1 January 2002, euro notes and coins were put into circulation in the 12-euro zone countries. At the beginning there was a dual circulation period alongside national currencies. National currencies ceased being legal tender in these countries at the latest by the end of February 2002.

3. The euro and the third countries currencies

3.1. The Exchange Rate Mechanism (ERM) II. EMR II was presented at the Council of Dublin, approved in June 1997 in the Treaty of Amsterdam, and ratified on 1 September 1998 to replace the EMS when the third phase of the EMU began. Its principal provisions were: ERM II members should continue to work for convergence and to avoid producing disturbances affecting EU stability; participation was voluntary (Greece and Denmark joined at the moment of its constitution, while the UK and Sweden stayed out); exchange rates could not fluctuate beyond 15%

either way with the possibility of readjustments to be carried out on mutual agreement (Denmark decided to restrict the margin to +/- 2.25 percent); coordinated inter-marginal actions were possible; a very short-term intervention mechanism would be implemented, expiring after three months

ERM II began to operate on 1 January 1999 with the euro as its anchor currency through central interest rates and fluctuation margins. As participation in ERM II does not ensure nominal convergence, the participants must complete the Stability Pacts. At any time a country will be able to call on the Council to examine its economic situation and, if it agrees, approve its adherence to the EMU.

With the entry of the Greek drachma into ERM II, the established margin of fluctuation amounted to +/- 15 percent of its value. In the event of exceeding these limits the central banks would have to intervene. At the same time it was decided to revalue the Irish punt by 3 percent to stabilise it and allow the Central Bank to lower interest rates which were nearly 6 percent, the highest of the single-currency candidates.

Even though in the 1998 Convergence Report the Commission considered that Greece had not met the established criteria, the country managed to participate in the EMU as its twelfth member on 3 January 2001, with a fixed exchange rate per euro. This progress had been rapidly achieved and was the culmination of an effort that had met with wide support from the population.

Presently, all the countries that had wanted to enter the euro zone are already prepared. There are three remaining countries that did not have the necessary political commitment or enough support from citizens and have not yet been incorporated.

In addition to the decision taken on 27 June 2004 regarding the euro's central rates in EMR II for the Estonian *kroon*, the Lithuanian *litas* and the Slovenian *tolar*, the intervention rates for these currencies were established effectively on 28 June 2004. The central rate of the Estonian kroon was set at 1 euro = 15,6466, the Lithuanian litas at 1 euro = 3,4528 and the Slovenian tolar at 1 euro = 239,64. The standard fluctuation band of plus or minus 15 percent will be observed around the central rate of all of them. The Cyprus pound, the Latvian *lats* and the Maltese lira were included on 2 May 2005.

3.2. Countries that did not participate in the last phase. The UK, Denmark and Sweden did not join the euro, remaining excluded from the rights and obligations of the EMU, which meant that they cannot co-direct the monetary policy of the Union but can be sanctioned if they exceed the public deficit limits.

These circumstances may give rise to special situations which merit several considerations. Generally speaking, the countries must make efforts not to lose sight of their partners' situations. Staying on the edge of the process should not be seen as a pretext for relaxing discipline which could affect convergence with all other countries. Secondly, it is not clear that with their rejection of the euro they are going to obtain much more independence in practice, either from the monetary point of view or in budgetary policy. Thirdly, excluded countries will not benefit from the advantages of the euro, and could suffer some inconveniences resulting in the devaluation of their currencies, with possible consequences such as forfeiting capital and tensions over exchange rates. Finally, regarding their future inclusion these countries will be subject to the same convergence criteria as those that entered with the first wave. However, the conditions will not be exactly the same but can be modified slightly. The currencies of the countries that wish to adopt the euro will have to keep within the fluctuation margins of ERM II for two years.

3.2.1. Denmark's attempt. Although it fulfilled the convergence criteria and had a long tradition of belonging to the EMS, Denmark decided to stay out of the euro zone but participate in ERM II. It is a small country, relatively united but it has difficulties making a definitive commitment, more in the political field than the economic one.

In 1992, another referendum had already caused a crisis in European integration when Denmark refused to ratify the Maastricht Treaty. To succeed in getting the Danes to accept it a year later, four extensions had to be sought from Brussels about: the single currency, the common defence policy, citizenship and legal cooperation.

After the voters initially rejected the Maastricht treaty in a referendum in June 1992, Denmark obtained an opt-out on joining the euro. Denmark has a very euro-sceptic population, and on 29 September 2000, the Danish people voted not to adopt the euro: 53.1 percent of the Danish people voted against joining the single currency and 46.9 percent in favour. The Danish currency still belongs to ERM II and is pegged within a 2.25 percent band against the euro. Denmark usually finds it has to simultaneously raise or cut interest rates with the European Central Bank. For this reason, joining the euro would at least allow them to vote on when and whether to alter rates.

In December 1992, Denmark announced at the Edinburgh European Council that they would not join in the third phase of the EMU. Denmark is an exception because out of all the countries that do not now wish to join, it would have been the only one welcomed due to its compliance with all convergence criteria.

Although several attempts have been made to review the situation, the citizens of Denmark rejected adherence to the EMU in a referendum on 28 May 2000, with a turnout close to 86 percent. A total of 53.1 percent voted against it, following the formation of an alliance between the moderately euro-sceptical left, the radical anti-globalists and the national right-wing party which was able to defeat the votes in favour of EMU with a collective lead involving 80 percent of the country's political class, trade unions, employers and practically all of the media.

The fear of losing national identity and sovereignty and the concern that a Central European State would arise in Brussels were the reasons that mostly mobilised the adversaries of the European currency.

3.2.2. Sweden's position. Sweden was beset by several economic problems, perhaps as a consequence of it not adhering to the EMS and the instability of its exchange rate. Even though in 1991 the krona was fixed to the ECU, in the so-called 'Scandinavian storm' of September 1992 it abandoned this concept and floated the krona as a policy for reducing inflation and the public deficit.

Sweden joined the EU in 1995 with no opt-out on adopting the euro. On 10 October 1997 Sweden declared that it was not going to join the euro. At that moment it did not fulfil the criteria of nominal convergence due to the exchange rate and public deficit mentioned above, although the latter variable had come close to meeting the required criterion. The Bank of Sweden did not comply with the independence requisite either, nor does it clearly define 'price stability' as a principal aim of monetary policy in its statutes. Furthermore, the possibility of parliamentary and governmental participation in Central Bank decisions is being considered.

In the 1998 Convergence Report, the Commission considered that Sweden met three of the convergence criteria (prices, public finances and interest rates), but not that of the exchange-rate. The Swedish krona had never participated in the EMS nor in ERM II. In the years in question it had fluctuated independently against the currencies of ERM II and the euro, which reflects among other things the absence of a coordinated objective for the exchange rate.

In the general election of 20 September 1998 the governing party won with a 36.5 percent drop in the number of seats gained. The 161 representatives elected in 1994 fell to 131 after the elections, which obliged it to govern alongside the left-wing parties and to reconsider adopting the euro, even though government members had already shown their rejection of the EMU several times, including European Union membership.

However, while everything points to there not being any changes in the Swedish situation, some government representatives are starting to consider integration into the euro zone once the necessary technical preparations have been made. Furthermore, most Swedish multinational firms have already incorporated the euro into their respective strategies and investment plans on the continent, and are only waiting for the government's political decision in this regard.

The Swedish government announced in January 2002 a referendum that was held on 14 September 2003 where the population said "No" to the euro. It can be perceived that Sweden's business interests want the single currency. Swedish companies have made big investments in Europe and North America in recent years, particularly in telecommunications, pharmaceuticals, and the manufacture of household appliances.

3.2.3. The importance of the United Kingdom. The British pound has been the greatest absence in the creation of the euro. The UK comfortably completed the convergence criteria except for the one referring to exchange rates, as the pound did not participate in the EMS after September 1992, nor did it have the intention to be in ERM II. Its exchange rate will continue to fluctuate freely with respect to the new European currency and the rest, with a profile more linked to the dollar than to the currencies of its EU partners. More stability exists with the US due to the similarities between the two economies and their economic cycle is linked more to the American economy than to the European.

The integration of the British pound would be a big step towards strengthening the European currency in the international monetary system as it is one of the strongest operating currencies. Nonetheless, on 30 October 1997 the British government notified the E.U Council of Ministers from the start that they were not going to join in the third phase of the EU, and that future participation would be decided by Parliament. On 2 November 1998 the Chancellor of the Exchequer announced the "National Plan of Change" published in January 1999, outlining the necessary steps for adopting the euro, the most important consequences for firms, along with a series of practical recommendations.

Regarding political arguments, great obstacles are posed by the Conservative Party, some of the media and the euro-scepticism that characterises the population. The UK's great economic liberalisation compared to the rest of Europe, the government's autononomy and the lack of flexibility of the euro have been the most popular arguments raised by the disparaging British.

British Prime Minister Tony Blair has described the decision over whether to join the euro as 'the most important for a generation'. For the majority of British people the debate over whether to adopt a single currency has yet to begin and the decision will not be an easy one.

There are those who argue that the introduction of a single currency is merely the next logical step in the development of a truly single market which will lead to greater economic prosperity, stability and security for Europe's inhabitants and by joining the euro, Britain would gain a voice in what could eventually become the world's most powerful economic zone.

Others believe that a successful common market is not dependent on the adoption of a single currency which they see as merely another irrevocable step towards the political union of Europe. This, they say, will lead to a loss of national sovereignty. The arguments on either side are complex and compelling.

Convincing the British public may be somewhat more difficult as a recent opinion poll statistic demonstrates that 7 out of 10 people are against doing away with the pound and joining the euro. The majority say that they would argue against the euro even if the value of the currency were to rise substantially against the pound. It has even reached the extent to where one third of those questioned believed that Britain should leave the European Union.

Regarding economic arguments, a single currency means that there would be an erosion of power to control interest rates and exchange rates. A new Bank has been set up which conducts a Europe-wide monetary policy, in particular the setting of interest rates. Britain could risk having to accept rates inappropriate to her phase in the economic cycle (too high in times of recession and too low in times of boom). The constraints placed on the euro-zone countries by the "one-size-fits all" interest-rate policy and the criteria regulating stability and growth will remove freedom to react to changes in economic circumstances at a national level.

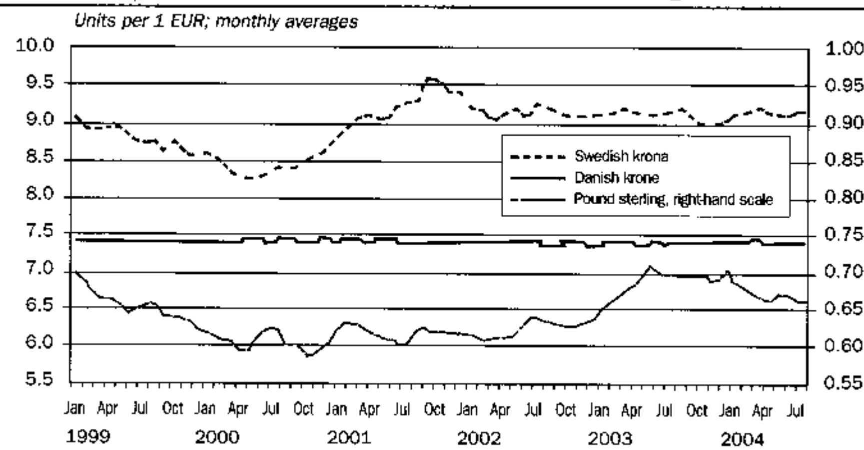
It can be argued that this freedom has long been abused. In the past decisions have been made to suit short-term political goals of the political party in power rather than the long-term health of the national economy. If they were controlled by economic experts in the European Central Bank there is far more chance that policies will lead to long-term growth and prosperity and not for political gain.

Another argument in favour of EMU is that the lowering of interest rates to bring about short-term relief often leads to inflation causing the boom and bust cycle. Too much is made of the power countries possess to control their economies using interest rates. It would be much better to be part of a larger, more stable economy, which is less vulnerable to suffering shocks from outside.

Britain will benefit from a fixed exchange rate with its single biggest trading partner, the euro zone. The greatest advantage of this is it can more accurately predict future costs of producing goods in the UK for European markets because it removes the factor of potential volatile exchange rates between the pound and the euro. This predictability and stability will lead to confidence, more investment and jobs. This is also good for multi-national companies who want to know that the value of the goods and services they are selling to the UK will not decrease due to fluctuations in the exchange rate. Eliminating transaction costs and currency risk associated with conversion removes the final barriers to free trade and this will lead to greater economic prosperity and encourage cross-border investment. The investment will also be based on the competitiveness of a business rather than its nationality, as there is more price transparency and ease of comparison.

The arguments are very complex and both economists and politicians are unable to decide. However the euro will soon be one of the strongest currencies in the world along with the US dollar and the Japanese yen and the second most important reserve currency after the US dollar.

FIGURE 1. Exchange-rate of the Euro with regard to the Danish krone, the Swedish krona and the pound sterling



Source: European Central Bank and own source

British acceptance of the euro will have positive repercussions on its political weight within the European Union. British citizens, who are divided equally between those in favour of the euro and those against it, must remember that they are already members of the EU and that the policies undertaken profoundly affect their economy, and that their government will have more influence in this development when it is more integrated.

On the contrary, not joining would have very negative consequences. The Bank of England will not participate in the Council of ECB Governors which has the task of defining the monetary policy in the euro-zone. That is to say, the UK will be absent from the organisations that will decide the single monetary policy, yet they will be conditioned by it.

4. The euro against the dollar and Japanese yen

The twentieth century has been the era of the dollar but now things are changing. On 1 January 1999 the euro began to be quoted as a currency on the stock markets. From this moment it sparked special attention over its rivalry with the dollar. In general terms, its quotation was the result of the differences marked by phases in the cycle affecting both economic blocs and of the international economic situation.

On 4 January 1999 the euro appeared in international markets with a quotation of 1 euro = 1.1667 US dollar, and since then it has followed a descending trajectory so that in three years it has depreciated by more than 20 percent. The dollar still has a place in the central banks of European countries but the purchase of euros is gradually increasing as an international currency.

There are geopolitical arguments for the relationship between the euro and the dollar. It is also very probable that in the future oil will be traded in euros. This will have a profound effect on the position of the euro. At this moment (November 2004), the rise of the euro can be ascribed to the uncertainty facing the evolution of the United States economy. The euro is also peaking against the yen, the Swiss franc and the British pound sterling (see *Figure 2)*.

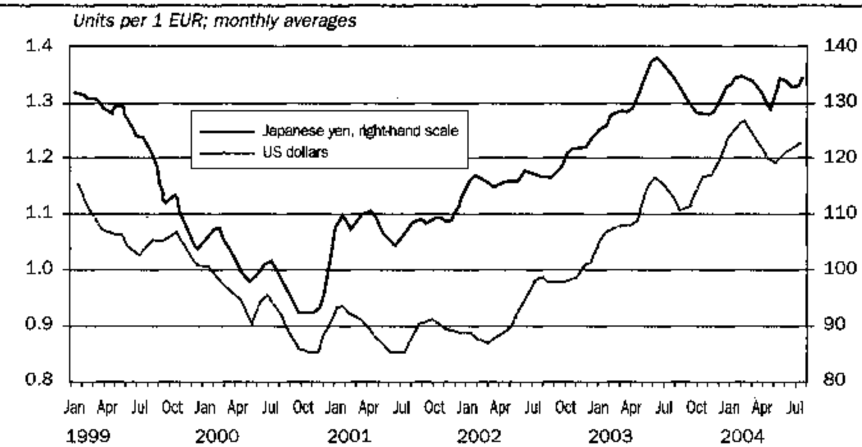
Today, the US dollar, the euro and the Japanese yen are the main currencies in the international monetary system with which most of the countries in the world set up their exchange-rate arrangements.

5. The euro and the new member countries of the European Union

According to the EU membership criteria, new members must be able to demonstrate their ability to accept the obligation of membership including adherence to the aims of political, economic and monetary union. Future members are thus expected to adopt the euro when they are ready to do so, but not immediately upon accession.

To join the euro, the new ten member countries must attempt to satisfy the convergence criteria and once they participate in ERM II they must avoid exchange rate regimes that are not compatible with the economic basis of the integration. The choice of an appropriate exchange rate to enter ERM II is very important. The mechanism seeks to speed convergence of the currencies of those countries that want to join the euro zone. The fluctuation margin is a standard band of plus or minus

FIGURE 2. Exchange-rate of the Euro with regard to the US dollar and the Japanese yen



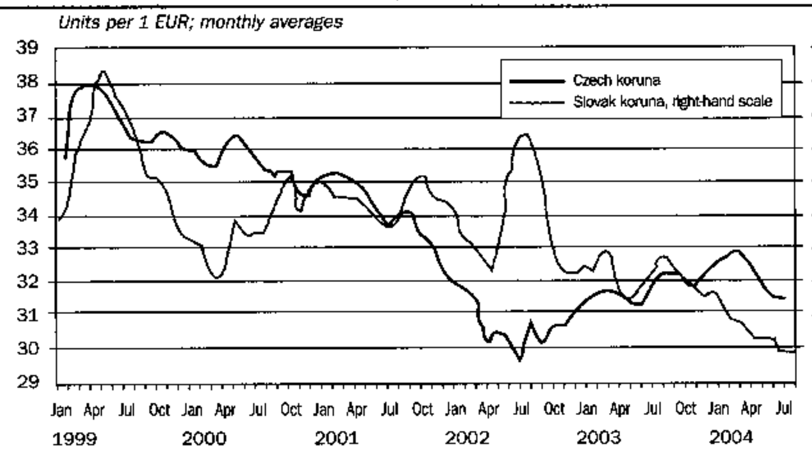
Source: European Central Bank and own source

15 percent. The stability of this system depends on the macroeconomic stability of each of the currencies involved.

In the Slovak Republic the bands were gradually widened during 1996 to +/- 7 percent by early 1997. Its currency has fluctuated within +/- 15 percent margins of the euro which began to function in 1999, which will accelerate entry into ERM II and it is quite probable that will plan to integrate quickly. Nevertheless after the elections in 2002 the appreciation has been continuous due to differences in the interest rate with the euro zone.

In the Czech Republic, exchange-rate flexibility was introduced in February 1996 when a peg was replaced by a +/- 7.5 percent band. From 1999, a managed floating arrangement was introduced based on the German mark, and from 1999 on the euro, with an inflation target. This arrangement aimed to control excessive volatility. Nevertheless the exchange rate has widely fluctuated due to the large inflow of foreign capital which has appraised the koruna until summer 2002. For this reason, at the end of 2001 the government tried to check this trend with a massive intervention. Since 2002 the Czech authorities have shifted to headline inflation targeting with a continuous linear and declining target band. Hence, the Czech koruna

FIGURE 3. Exchange-rate of the Euro with regard to the Czech and the Slovak koruna



Source: European Central Bank and own source

can now also be regarded as a managed currency. Finally, to join EMR II the Czech Republic must change its exchange-rate arrangement.

In January 2002 Lithuania shifted its dollar peg to the euro peg. Until its full integration in the EMU, the authorities wish to keep the currency board within floating bands of 0 percent taking into account its experience in the last years. Estonia has a currency board arrangement linked to the euro. (Both countries joined EMR II on June 2004)

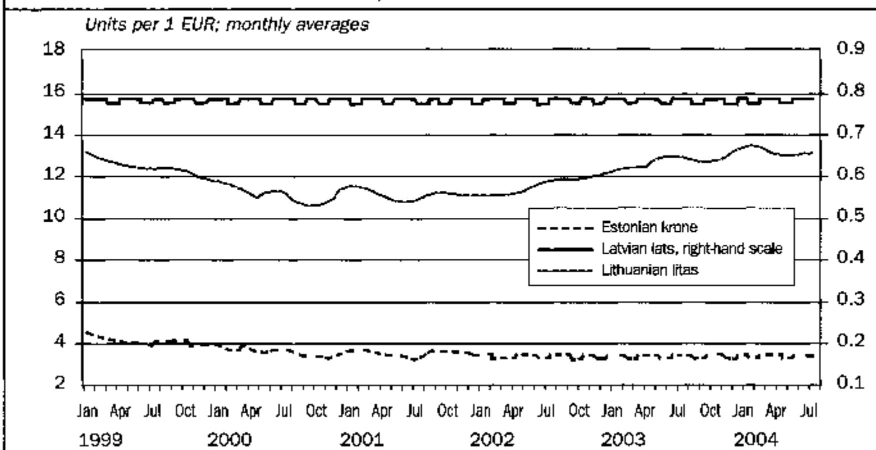
Latvia was the only country that is not linked to the euro and its exchange rate policy has been linked to the SDR since 1994. (The Latvian *lats* join EMR on 2 May 2005).

The *forint* appreciated after the crawling peg was abandoned, but since autumn of 2002 this process has been completely reverted again with interventions. Hungary maintains its exchange rate within a +/- 15 fluctuation margin with an exchange-rate arrangement totally compatible with ERM II.

The Polish *zloty* appreciated until May 2001, since then it has depreciated so that its euro rate is today weaker than that of January 1999. This country is therefore the biggest free floater in the area.

Since the January 1999, Slovenia has maintained a managed floating rate and does not officially use the euro as a reference. Its currency has

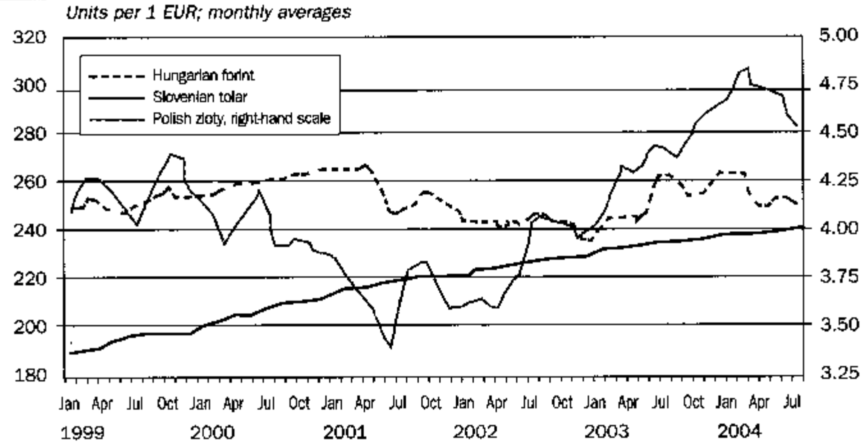
FIGURE 4. Exchange-rate of the Euro with regard to the Estonian krone, Lithuanians litas and Latvian lat



Source: European Central Bank and own source

undergone constant depreciation, a tendency that should be halted; its exchange rate arrangement should be changed. (On 27 June 2004 the Slovenian *tolar* joined ERM II).

FIGURE 5. Exchange-rate of the Euro with regard to the Hungarian forint, the Slovenian tolar and the Polish zloty



Source: European Central Bank and own source

TABLE 2. Exchange-Rate Arrangements among the new members of Central and Eastern Europe

Country/Years	95	96	97	98	99	00	01	02	03
Czech R	3	6	7	7	7	7	8	8	8
Estonia	2	2	2	2	2	2	2	2	2
Hungary	6	6	6	6	6	6	4	4	4
Latvia	3	3	3	3	3	3	3	3	3
Lithuania	2	2	2	2	2	2	2	2	2
Poland	6	6	6	6	6	8	8	8	8
Slovak R	3	6	6	7	7	7	7	7	7
Slovenia	7	7	7	7	7	7	7	7	7

Source: IMF and Schnabl, G (2004).

1. Exchange rate arrangements with no separate legal tender
2. Currency board arrangements
3. Other conventional fixed peg arrangements (within a band of most +/- 1 percent)
4. Pegged exchange rate arrangement within horizontal bands (al least +/- 1 percent)
5. Crawling peg (with small, pre announced adjustment).
6. Exchange rates with crawling bands.
7. Managed floating with no pre-announced path for the exchange rate.
8. Independent floating (market-determined exchange rate and independent monetary policy).

In August 2002, the monetary authorities decided to revise the weight of the currencies in the Maltese lira basket in order to pursue exchange-rate stability by pegging the Maltese lira to a basket of currencies belonging to the country´s major trading partners. This review was aimed at updating the weight of the three currencies in the basket - the euro, the US dollar and the British pound sterling - so that these reflected more closely current trends in Malta's foreign trade.

The euro's increased weight in the Maltese lira basket will help to attenuate fluctuations in the exchange rate of the lira against the euro, and thus have a beneficial impact on trade between Malta and its European partners as well as on domestic price levels. As a result of this review, the new weighting was as follows: euro 70 percent, British pound sterling 20 percent and US dollar 10 percent.

Malta is no longer a tax haven. Nine years ago it had a big offshore sector, with some 3000 offshore registered companies.

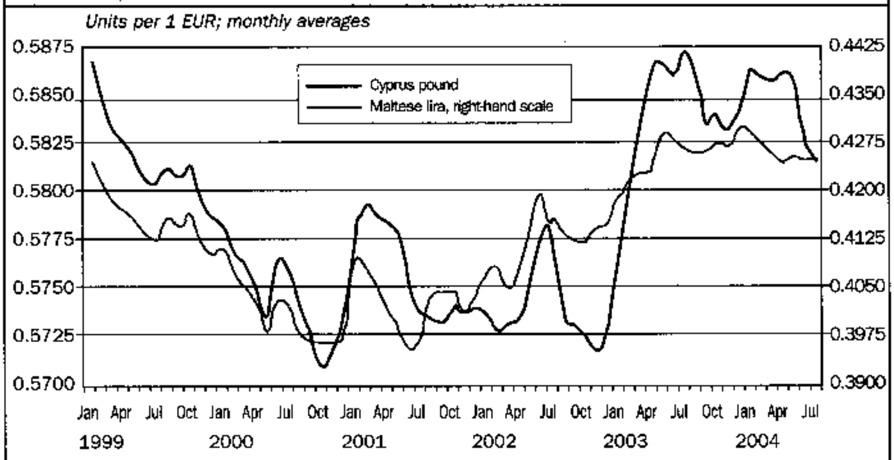
Following the successful ecu-peg policy, the Cypriot pound was pegged to the euro on January 1st 1999, the first day of the introduction of the new European currency. Initially, the fluctuation margins were also maintained at +/-2.25 percent. On 1 January 2001, however, wider bands of +/-15 percent were introduced, in order to enable the Central Bank to absorb any shocks from possibly destabilising capital movements and deter speculative capital flows, particularly as capital account liberalisation progresses. At the same time, the narrower "softer" bands of +/-2.25 percent were temporarily maintained to help anchor prices and expectations.

In particular, following the abolition of restrictions on medium-term and long-term borrowing with maturities of over two years by residents, as of 1 January 2001, capital inflows have risen significantly, as private individuals and firms increased their borrowing in foreign currency, mostly in euros, taking advantage of the interest-rate differential between euro-denominated and pound–denominated loans. This exerted upward pressure on the exchange rate, but also exposed these borrowers to increased exchange-rate risks.

The decision of 13 August to abolish the narrower fluctuation margins was taken concurrently with another important decision to reduce interest rates by 50 basis points which were perceived necessary due to the anticipated negative impact of the seemingly prolonged global economic slowdown on the Cypriot economy. The decline in interest rates in Cyprus also reduced the interest-rate differential between euro-denominated and pound-denominated loans. Interest rates were reduced further in September and November 2001 by 50 basis points each time.

The demanding challenges of the exchange - rate policy in Cyprus are expected to continue in the future, particularly as the capital account

FIGURE 6. Exchange-rate of the Euro with regard to the Cyprus pound and the Maltese lira



Source: European Central Bank and own source

TABLE 3. Exchange-Rate Arrangements in the new countries in 2004
Czech and Slovak koruna - Managed floating
Estonian krone and the Lithuanian litas - currency board with euro.
Latvian lat - Conventional fixed peg with SDR.
Hungarian forint - Peg to the euro within a range of +/- 15 percent.
Slovenian tolar - Exchange rate within crawling bands.
Polish zloty - Independent floating.
Cypriote pound - Peg to the euro within a range of +/- 15 percent.
Maltese lira - Pegged to a basket - euro, US dollar an sterling pound.
Source: Own source.

liberalisation progresses. It is envisaged that Cyprus will remain committed to the current exchange-rate policy framework and that, with the help of disciplined fiscal and monetary policies, it will be successful in its efforts to eventually adopt the euro at the earliest possible time and in an orderly manner. (The Cyprus pound, the Latvian lats and the Maltese lira were included in ERM II on 28 June 2004).

All these countries must avoid inconsistent exchanges rates with the fundamental characteristics of economic integration. Choosing the right exchange rate on entering ERM II is very important.

6. Trends in currencies *vis à vis* the euro

With the series of European Central Bank exchange rates from 1999 to 2004 (1st semester) for the new member countries of the European

TABLE 4. Summary statistics

	Mean	S.D.	max	Min	Kurtosis*	asimmetry**
Czech koruna	33.68	2.27	37.99	29.73	**-1.18**	0.18
Slovak koruna	42.57	1.34	45.90	39.90	-0.26	0.12
Estonian krone	15.65	0.00	15.65	15.65	**-2.06**	**-1.02**
Latvian lats	0.60	0.04	0.67	0.53	**-1.37**	0.12
Lithuanian litas	3.67	0.32	4.64	3.41	0.84	**1.41**
Hungarian forint	253.39	7.68	266.99	236.07	-0.86	-0.08
Polish zloty	4.10	0.35	4.86	3.39	-0.62	0.17
Slovenian tolar	218.13	15.17	239.90	189.07	**-1.12**	-0.34
US dollar	1.02	0.12	1.26	0.85	-0.99	0.42
Japanese yen	117.57	12.53	138.05	92.74	**-1.12**	-0.19
Cypriot pound	0.58	0.00	0.59	0.57	-0.93	0.49
Maltese lira	0.41	0.01	0.44	0.39	**-1.18**	-0.05
Danish krone	7.44	0.01	7.46	7.42	-0.74	0.64
Swedish krona	8.98	0.32	9.67	8.24	-0.14	-0.64
Pound sterling	0.65	0.03	0.71	0.59	-0.99	0.43

* The kurtosis is the elevation or flattening of a distribution, compared with normal distribution. A positive kurtosis indicates a relatively high distribution, while a negative kurtosis indicates a relatively flat distribution. Values outside the interval ±1 are significant differences from normal distribution.
** It refers to the degree of asymmetry of a distribution with regard to their media. Positive asymmetry indicates a unilateral distribution that extends toward more positive values. Negative asymmetry indicates a unilateral distribution that extends toward more negative values. Values outside interval ±1 are significant differences from normal distribution.

Source: Own calculation.

Union and the primary currencies related to the euro (US dollar, Japanese yen, Danish krone, Swedish krona, Pound sterling), we have estimated the correlations and the factors which have determined the exchange rate policy of the new countries before they became members of the European Union. The following results were obtained:

The Estonian krone, the Latvian lats, the Czech koruna, the Maltese lira and the Slovenian tolar were the currencies with the most significant variations compared to normal distribution in the period under study. This shows that they have not had normal distribution and that they were possibly subject to intervention on the part of the economic authorities (see kurtosis values).

The Estonian krone and the Lithuanian litas also show an asymmetrical distribution. Alter the series standardisation,[1] a factorial analysis was applied (based on the principal components factor). The Estonian krone was eliminated due to its fixed exchange rate with the euro.

The results shows that the three factors obtained explain 87.52 percent of the global variance. After rotating the factors, the results appear in the following table:

Table 5 indicates that, in the first factor column, the currency rates with more weight are the Latvian lats, the Polish zloty, the USA dollar, the Japanese yen, the Cypriot pound, the Maltese lira and the British pound, among which the correlation is very high. In this group we find the currencies less linked to the euro at the moment and connected to the US dollar, the SDR or with independent floating. In the second factor column, the Czech koruna, the Slovak koruna, the Lithuanian litas and the Slovenian tolar, which are more linked to the euro, have higher currency rates. Finally, in the last factor column, the Hungarian forint, the Danish krone and the Swedish krona have the highest rates, the latter being a little bit lower .

The remaining currencies where uniqueness is the percentage of variance for the variable that is not explained by the factors) are very low. This means that the model fits quite well except for the Slovak koruna and Swedish krona which are also not very high.

[1] The standardised values of a variable allow us to obtain a new variable with mean zero and typical deviation 1 through the formula , where x is the mean of the variable and is its standard deviation. This transformation allows us to carry out at a homogeneous comparison between different currencies with very different nominal values.

The correlation matrix *(Table 6)* shows a close link between the Latvian lats and the currencies in the SDR basket (the pound sterling, the US dollar, the yen); the Polish zloty is closely correlated with the US dollar while the Cypriot pound and the Maltese lira are closely linked to other no-euro-zone currencies.

Taking account of the trends emerging from the previous series analysis, and considering the dates these countries would be joining the euro, the consensus of the European Commission is that Cyprus, Slovenia, Estonia, and Lithuania will probably join the euro in 2006/07, Latvia not before 2007, Malta in 2007/08, Slovakia Republic not before 2008/09 and the Czech R, Hungary and Poland not before 2009/10.

7. Conclusions

It could be said that the euro has been a huge success. This is, indeed, the case when considering the introduction of euro notes and coins, a landmark achievement in the history of economic integration. This was

TABLE 5

	Rotated factor loadings			
	1	2	3	Uniqueness
Czech koruna	-0.05	**0.86**	0.42	0.07
Slovak koruna	-0.40	**0.71**	-0.19	0.31
Latvian lats	**0.98**	-0.03	-0.13	0.01
Lithuanian litas	0.20	0.95	-0.02	0.05
Hungarian forint	0.09	0.11	**0.89**	0.19
Polish zloty	**0.90**	-0.07	0.20	0.15
Slovenian tolar	0.25	-0.95	-0.11	0.02
US dollar	**0.98**	-0.11	0.01	0.03
Japanese yen	**0.85**	-0.21	-0.41	0.07
Cypriots pound	**0.87**	-0.24	0.06	0.17
Maltese lira	**0.96**	0.16	-0.16	0.02
Danish krone	-0.40	0.06	**0.81**	0.18
Swedish krona	0.14	-0.50	**-0.59**	0.38
Pound sterling	**0.93**	-0.10	-0.16	0.10

*varimax rotation
87.52 percent proportion cumulative explained

Source: Own calculation.

a massive operation requiring enormous organisational, logistical, technical and economic effort. It was hitch free due to the meticulous planning and preparation for the transition.

There has been a greater degree of wage moderation that has contributed to the dynamism in job creation together with widespread product and labour market reforms in most euro-area countries. However, the progress of reforms has been uneven and there is still high structural unemployment in some member states. It is still too soon to draw concrete conclusions about the impact on investment, but the policy framework is likely to positively affect the major determinants of investment such as profitability and real interest rates. It has also increased the allocation efficiency of investment through reduced exchange-rate risk.

The euro zone accounts for some 16 percent of world GDP and around 20 percent of world trade in goods and services. This is very important in terms of its ongoing integration in world capital markets. It

TABLE 6. Pairwise correlations matrix

	Cz K	Slov.K	Lat L	Lith L	Hun F	Pol Z	Slov T	US D	Jap Y	Cyp P	Mal L	Dan K	Swe K	Brit P
Cz K	1													
Slov K	0.52	1												
Lat L		-0.39	1											
Lith L	0.80	0.53		1										
Hun F	0.46				1									
Pol Z		-0.48	0.86			1								
Slov T	-0.88	-0.70	0.29	-0.87		0.28	1							
US D		-0.50	0.98			0.92	0.35	1						
Jap Y	-0.38	-0.37	0.90		-0.28	0.64	0.46	0.84	1					
Cyp P	-0.22	-0.46	0.84			0.72	0.43	0.84	0.80	1				
Mal L		-0.24	0.97	0.35		0.82		0.93	0.84	0.77	1			
Dan K	0.44		-0.49		0.69	-0.29	-0.25	-0.39	-0.63	-0.28	-0.49	1		
Swe K	-0.62		0.23	-0.39	-0.40		0.59		0.52	0.29		-0.41	1	
Brit P	-0.21	-0.33	0.92			0.74	0.36	0.88	0.89	0.87	0.92	-0.49	0.33	1

Pearson correlations
Displaying coefficients for 10 percent significance level
Bold for 5 percent significance level

Source: Own calculation.

is providing less currency risk and more stability across Europe. It has led to a bigger and more competitive market by increasing price transparency. At an international level, the euro has become the second most widely used currency after the dollar. As we have mentioned earlier, the euro is now competing strongly with the dollar.

In conclusion we can say that the euro has been a success with many achievements behind it. However, many challenges still lie ahead; in particular there are three member countries who have not yet accepted the euro and the position of the recent new member countries has still to be fully clarified. The euro brings many benefits to the participating countries. It eliminates exchange rate risks between the countries that adopt it, thereby lowering interest rates, and allows countries to enjoy the benefits of price stability, which is the primary objective of the ECB. It also paves the way for a large, liquid and integrated capital market among countries that adopt it. The enlargement of the euro area means that a larger number of EU member states can enjoy these benefits. Furthermore, some of the economic advantages of monetary union, such as the elimination of exchange-rate uncertainties, increase with the size of the euro area. However, in order to be able to fully exploit the benefits, a country must be ready for the euro.

Currently 10 new countries from Central, Eastern and Southern Europe are members of the European Union. Integrating such a large number of new applicants will be an enormous task for all the parties involved due to the significant differences in economic conditions in most of these countries in relation to current member states. However, given the turbulent history of the euro these are challenges that can easily be overcome.

Lithuania, Estonia, Slovenia, Latvia, Cyprus and Malta have already joined ERM II in order to be eligible for EMU membership in 2006 or 2007. Poland, Hungary and the Czech Republic would have to redefine their exchange-rate strategy in order to avoid macroeconomic problems on their path towards the euro. Hungary and the Czech Republic have already adopted a more active exchange-rate management in the last few months. All of them have expressed their preference for joining EMR II at a later date.

REFERENCES

BRETON, P. (2002), 'The Economic Impact of Enlargement on the European Economy: Problems ands Perspectives', (Center for European Policy Studies – CEPS, Working Document 188, Bruxelles).

BUBULA, A. and Ötker-Robe (2002), *The Evolution of Exchange Rate Regimes Since 1990: Evidence from the Facto Policies,* (International Monetary Fund. Working Papers, Washington).

BUITER, W. and Grafe, C. (2002), 'Anchor , Float or Abandon Ship: Exchange Rate Regimes for Accession Countries During The Run-up to EMU', (CEPS, Discussion Paper 3184, London).

CA´ZORZI, M. and De Santis, R. A. (2003), *The Admission of Accession Countries to an Enlarged Monetary Union: A Tentative Assessment,* (European Central Bank, Working Paper 216, Frankfurt).

CENTER FOR EUROPEAN POLICY STUDIES (CEPS) (2002), *The Euro 25: Special Report on Enlargement,* (CEPS Paperback book, Brussels).

DEGRAUWE, P. and SCHNABL, G. (2003), *National Versus Real Appreciation with Respect to EMU Accession . How to cope with the Belassa-Samuelson Dilemma?.* mimeo

DEUTSCHE BANK RESEARCH (2000), *Eastern Europe and EMU: Economic Relations and Outlook on Membership,* (EMU Watch 82).

EUROPEAN CENTRAL BANK, (2000), *Annual Report,* (Frankfurt).

EUROPEAN CENTRAL BANK, (2001), *Annual Report,* (Frankfurt).

EUROPEAN CENTRAL BANK, (2002), *Annual Report,* (Frankfurt).

EUROPEAN CENTRAL BANK, (2003), *Annual Report,* (Frankfurt).

ISSING, O. (2002), "On Macroeconomic Policy Co-ordination in EMU", *Journal of Common Market Studies,* vol 40, number 2.

LAHRESHE-REVIL, A (2002), 'L´élargissement monétaire de l´Union', *La tettre du CEPII,* novembre.

NUTI, M. (2000), *The Cost and Benefits of Euroisation in Central-Eastern Europe Before or Instead of EMU Membership,* (Center for New and Emerging Markets, Discussion Paper 8).

SCHNABL, G. (2004), *De jure versus de facto Exchange Rate Stabilization in Central and Eastern Europe,* (Department of Economics and Business Administration, Tübingen University, Germany).