

THE EURO AT 25

SPECIAL REPORT OF THE CEPS MACROECONOMIC POLICY GROUP

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BRUSSELS**

This report presents the findings and recommendations of the CEPS Macroeconomic Policy Group (MPG), a select body of highly respected economists who have undertaken to carry out independent, in-depth research on current developments in the European economy. CEPS gratefully acknowledges financial support from Deutsche Bank, London and UBS, Zurich for the work of the MPG. The views expressed in this report are those of the authors writing in a personal capacity and do not necessarily reflect those of CEPS or any other institution with which the members are associated.

ISBN 92-9079-384-4

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PREFACE

IT is a particular pleasure to present this special report from the CEPS Macroeconomic Policy Group. On the occasion of the European Council meeting in Copenhagen, our distinguished group of economists has come together to produce a thorough analysis of the key implications of enlargement which has been solemnly finalised in Copenhagen.

This special report differs from our previous regular reports (four issued to date), which usually concentrate on macroeconomic issues, in particular issues pertaining to monetary policy. This report deals with the longer-term implications of enlargement for the European Central Bank. It asks how euro-area membership by the UK will affect the way in which monetary policy will work and what reform of the Governing Council of the ECB is needed in light of the accession to the EU of the 10 candidates from Central and Eastern Europe.

The difficulties the European Central Bank had in taking a position on the latter issue is indicative of how politically sensitive this issue is. The final decision lies of course with the European Council. Our report provides an independent contribution to the debate, which, to our regret, has been dominated by arguments dictated by political expediency on the part of the large and the small countries. We also hope that our contribution will help bring into the open an issue that has largely been discussed behind closed doors. The public should know that important decisions are being taken these days on monetary governance.

A special thanks again to Deutsche Bank (London) and UBS, Zürich for the financial support they provide the CEPS Macroeconomic Policy Group. We are also grateful to Leonor Coutinho and Ben Crum for useful comments.

Daniel Gros
Brussels

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Policy Conclusions

1. Entry of the UK into EMU will make the monetary pillar even less reliable.

In the UK financial system, it is even more difficult to distinguish between money and other assets than it is in the eurozone. The UK will contribute an ill-defined and volatile mass equal to about 30% of the money supply of the eurozone, thereby making this indicator an even less reliable basis for monetary policy.

... but it will also increase the usefulness of careful analysis of financial market developments.

UK consumers are more likely to be influenced both by stock markets (via defined contribution pension systems with short-term displays of net asset values) and real estate prices (via highly leveraged mortgages at variable rates).

2. There is no need to change the convergence criteria, including adherence to the Stability and Growth Pact (SGP), for the new CEEC members (or the UK).

The more flexible approach currently followed in the UK might work well at a particular time at the national level, but it cannot be a blueprint for the euro area consisting of many countries. The only way to preserve the credibility of the SGP is to maintain the rules and enforce compliance.

... but the basis for calculating the maximum allowable inflation rate for a candidate for the euro area should be changed to “at most 1.5% above the average of the euro zone”.

It is widely feared that the Maastricht criterion concerning inflation might create problems for the candidate economies whose price levels are catching up to that of the current EU-15. This problem is manageable provided the technical basis for this criterion is changed from its original formulation of “at most 1.5% above the three best performing member

countries". This calculation made sense at the time EMU was first constituted, but it is no longer appropriate. The larger the number of member states in the EU, the higher the probability that the three best performing members have extremely low values (and might actually not be even part of the euro area). Already within the EU-15, the average of the three best performers is often 1% below the euro-area average.

3. Despite the fact that the Governing Council of an enlarged eurozone of 25 members would number more than 30, the composition of the Governing Council can be maintained provided it restricts its deliberations to the strategic orientation of monetary policy, and leaves the day-to-day implementation to the six-member Executive Board.

Reform of the ECB decision-making procedures is nevertheless inevitable. The smaller group from the Executive Board, which works at the centre of the system, is better placed to observe and react rapidly to fast-moving financial market shocks. The continued presence of the presidents of national central banks ensures that all countries feel represented and that local information is incorporated into the decision-making process.

Executive Summary

1. UK entry: A more market-friendly euro area?

Adoption of the euro by the UK would imply major changes for EMU, as a result of the relative size of the United Kingdom, the role played by London in international financial markets and the economic and structural features of the UK economy, which make it more similar to the US than to the rest of the EU. The UK represents over 20% of EMU's GDP, while the integration of all the other candidate countries, accounting for only 5% of the EU-12, will have a much smaller economic impact. With the eventual integration of the UK into EMU, the euro area will look different from a structural, economic and financial point of view. It would then consist of 80% "old world" economies and 20% "new world". This should at least make it a bit more dynamic.

The integration of an economy with a very high stock market capitalisation relative to GDP would mean that Euroland would on average have a stronger equity culture. The enlarged euro area should also become the world leader in the foreign exchange and derivatives market with a daily turnover double that of the US market.

Overall, UK entry should help improve the performance of the euro relative to the dollar. The entry of the UK into the euro area will reduce EMU's vulnerability to oil price shocks, raise expectations of economic growth in the eurozone and slightly lower the Euroland-wide inflation rate. Analysis based on past data suggests that these developments should strengthen the euro vis-à-vis the dollar. Capital flows between EMU and the US will nevertheless continue to be the driving factor behind the euro/dollar exchange rate. With the integration of the UK into EMU, bilateral capital flows between the US and the enlarged EMU will increase significantly and the euro/dollar exchange rate is likely to become even more sensitive to trends in capital flows across the Atlantic.

The UK's favourable regulatory environment significantly contributes to its high degree of attractiveness to foreign investment. In terms of labour and product market regulations, the UK is broadly similar to the US. With the elimination of the exchange-rate risk, the UK is likely to attract an even larger share of foreign investment flowing into the euro area. This development could increase the pressure on other European governments to introduce more incisive reforms in labour and product markets, resulting finally in a reduction of the competitiveness gap with the US.

Is this to say that there would be no downside? There is one, but it is not of a strictly economic nature. We see a potential conflict over the framework for monetary and fiscal policy-making in the euro area. This conflict might arise from the perception in the UK that the EU framework is too rigid in comparison to the one operating in the UK today, coupled with the perception that the UK framework has so far produced a better track record.

2. How quickly should the CEECs join EMU?

Ten of the 13 candidate countries now have a virtual guarantee to become full EU members by mid-2004. This implies that they would also become eligible for membership in EMU. Although a large number of the candidate countries have expressed a desire to join the euro area as quickly as possible, adoption of the euro is conditional on their compliance with the Maastricht convergence criteria. Among these criteria is membership in the European Exchange Rate Mechanism (ERM II) for at least two years. Hence, the earliest possible date for entry by the CEECs into the euro area is 2006.

A brief comparison with the Club-Med countries (whose qualifications for EMU were also long held in doubt) indicates that most of the

candidate countries could be able to satisfy the conditions in the medium-term and introduce the euro relatively quickly.

Many EU observers, however, especially those in financial circles, are calling for prudence and a slower-track approach. Although it is acknowledged that a monetary union can sustain income differences among its members, too fast a compliance with the nominal convergence criteria is often perceived as a threat to achieving real convergence.

Fulfilment of the fiscal criteria should not represent a problem for the candidates and cannot be said to inhibit real convergence, but this is not necessarily the case for the inflation criterion (if viewed together with the exchange rate stability criterion). Due to the so-called Balassa-Samuelson effect, the candidate countries may be faced with the dilemma of either implementing restrictive policies to contain inflation during the qualification period for EMU, or accept a delay in being able to adopt the euro.

Our analysis suggests that these problems should be manageable, provided that the criterion regarding inflation is adapted to the fact that EMU now exists. The existing formulation of the price stability criterion says that a candidate for EMU can have an inflation rate at most 1.5% above the three best performing member countries. This original formulation was understandable at the time EMU was first constituted, but its application no longer makes sense in the context of a new member joining a 12-or-more member EMU. The larger the number of member countries in the EU, the higher the probability that the three best performing member countries will have extremely low values (and they might actually not even be a part of the euro area). Already within the EU-15, the average of the three best performers is often one full percentage point below the euro-area average.

The basis for calculating the maximum allowable inflation rate for a candidate for the euro area should therefore be changed to “at most 1.5% above the average of the euro zone”. This would allow the candidates to enter EMU without having to artificially depress demand because the 1.5% margin roughly corresponds to our estimate of the Balassa-Samuelson.

In addition, membership in the ERM II might force some candidate countries into a vulnerable exchange rate regime, combining capital mobility and “fixed but adjustable” exchange rates. Currency boards should be officially recognised as full equivalents of ERM membership. The EU could also reassess its position towards unilateral euroisation,

which has to date been extremely negative, to help eliminate some of the risks associated with the traditional path *à la Maastricht* to the euro area.

3. The euro area at 25: How will ECB decision-making work?

Euro-area membership might soon expand considerably once the ten countries that are scheduled to join the EU by 2004 qualify for the euro. Under current rules this would imply that the highest decision-making organ of the Eurosystem, the Governing Council, could soon have close to 30 members – far more than any other central bank and possibly far too many to conduct an efficient monetary policy.

Any proposal to make monetary policy decision-making more efficient in an enlarged euro area encounters the immediate challenge of ensuring representation for all member states, which in the ECB statutes is clearly defined as “one member-one vote” (EU 1992, Article 10.2). This report argues that a trade-off between efficiency and representation does not necessarily have to be made. The solution would not be to change the composition of the Governing Council (which could thus continue to include the presidents from all national central banks) but to confine that body’s remit to formulating the strategic orientation of monetary policy. In that case, the full Governing Council would need to meet less frequently, i.e. at most once a quarter, leaving the day-to-day implementation to the six-member Executive Board. The members of the latter body are better placed at the centre of the system to observe and react rapidly to financial market shocks, whereas the presidents of national central banks are better placed to evaluate the state of the real economy. Hence the proposed solution, while ensuring representation, is also the most efficient.

Unfortunately other solutions, such as rotation, are being advanced in some circles as the appropriate response to the challenges posed by enlargement. Provided all countries rotate equally, rotation could create a situation where some large countries do not have a governor of their central bank in the Governing Council. Given that the largest countries account each for about 25-35% of the euro-12 economy, such a situation would be awkward. How would a controversial decision of the Governing Council be justified if it had been taken without the participation of someone who, while not a representative of the country in question, would at least be the best qualified to judge the state of this large part of the euro area? Differentiated rotation, i.e. rotational schemes that distinguish between large and small countries, might avoid this problem, but would encourage governors of national central banks to consider themselves as representatives and defenders of national interests.

CHAPTER 1
THE IMPACT ON THE EUROLAND ECONOMY
OF THE UK'S ENTRY INTO EMU

1. Introduction

Almost four years since the launch of the euro in January 1999, EMU might experience its first enlargement to the West. Should the UK government decide to go ahead with EMU entry – after a positive assessment of the five economic “tests” set out by the UK Treasury in 1997 – a referendum is likely to be held in the fall of 2003.

The eventual entry of the UK into EMU will have an impact on the structural, financial and policy features of the recently created monetary union. Together with France, Germany and Italy, the UK is one of the largest European economies (in 2001, the UK’s GDP accounted for about 23% of Euroland’s total gross domestic product). London is one of the most important financial centres in the world and by far the most developed in Europe, and the UK is actively taking part as an EU member in the reform of the regulatory framework of European financial markets.

The UK has experienced nine years of sustained non-inflationary growth, the longest such expansion in more than 30 years. In 2001, despite a deceleration of output following the global slowdown, the UK grew at a faster rate than any other G-7 economy. In 2002, according to recent forecasts by the EU, the UK is expected to outperform Euroland. A strong policy framework, sound macroeconomic policies and sustained structural reforms were the keys to this remarkable performance. The UK resembles the American model in terms of financial structure and labour and product market regulations to such an extent that economists often refer to the “Anglo-Saxon” model to describe the British and American model of capitalism as opposed to the “continental” model of capitalism. With the eventual integration of the UK into EMU, the euro area will therefore look different from a structural, economic and financial point of view.

Current policy debate in the UK mainly focuses on the assessment of the convergence of the UK’s business cycle with the business cycle in Euroland and the “correct” exchange rate at which the UK should enter EMU in order not to harm the British manufacturing sector. According to

the most recent evidence (UBS, 2002), the convergence between the UK economy and the other major euro area economies has increased since the latest Treasury assessment in 1997, but it is still questionable whether the UK could live comfortably with the euro interest rate on a permanent basis.

This paper adopts a different approach. It investigates the likely effect of the eventual entry of the UK into EMU on different features of the Euroland economy. In particular, it focuses on four key issues: Euroland financial markets, structural characteristics of the euro area, economic policy implications and the consequences for the euro-dollar exchange rate.

The chapter is organised along the following lines. Section 2 analyses how the integration of the UK's financial sector will impact Euroland financial markets. Euroland financial markets have developed rapidly since the launch of the new currency, and the integration of London into EMU is going to produce several effects, including a significant increase in depth and liquidity. In section 3, we investigate the extent to which the UK differs from the euro area in terms of structural features and the likely impact on the euro area. The UK integration could in fact be perceived as a further step in the evolution of the European economy towards the "American" economic model. Section 4 looks at the macroeconomic effects of the eventual entry of the UK into EMU. In particular, we focus on the implications for the transmission of monetary policy within Euroland and the recent debate on the reform of the Stability and Growth Pact (SGP). Some have suggested in fact that the UK model should be adopted in order to make the SGP less rigid and more oriented towards economic growth. Finally, in section 5 we examine the potential effects of the sterling entry into EMU on the euro/dollar exchange rate. In the final section, we draw some conclusions.

2. The impact of the UK's entry on Euroland financial markets: A further boost

In the context of the major structural and policy changes occurring in European financial markets, the eventual integration of the UK into EMU will produce several effects. First of all, given the size and importance of the City of London in world financial markets, euro area financial markets will receive a further boost after the positive effects already produced by the introduction of the euro. The international role of the euro is also likely to be positively affected by the UK's entry. Secondly, it will have an impact on the on-going reform process of EU financial markets due to the stronger influence that the UK – once a member of

EMU – will be able to exercise on other member countries. Finally, it is likely to produce some portfolio effects similar to those produced when the euro replaced the legacy currencies from the Exchange Rate Mechanism (ERM) in 1999. Before discussing these different effects in detail, we briefly review the main changes that have occurred in Euroland financial markets since the introduction of the euro in January 1999.

2.1 Developments in Euroland financial markets since the introduction of the euro

In less than four years since the introduction of the euro, the effects on European financial markets are already notable. The elimination of exchange rate risk and the setting up of a common monetary policy framework acted as a catalyst to trigger certain trends in European financial markets, such as the gradual move of on-balance-sheet financing into capital and risk markets, the increasing corporate focus on managing the cost of capital and hedging the risks inherent in business activities and the marked phenomenon in which wealth accumulation is driving institutional assets.

To date, the impact of the euro on financial markets can be summarised as follows:

- The euro established itself as the second most important currency in international financial markets. This is not surprising given the relative weight of the aggregated euro area in economic and financial terms. The euro has been more successful as a currency of international finance (evidenced by an increase in the issuance of euro-denominated international bonds) than of investment as suggested by the cautious attitude of investors and asset managers towards assets denominated in the newly created currency. To date, the dominant position of the US dollar as the most important vehicle international currency has not been affected by the introduction of the new currency.
- As a result of the elimination of intra-EMS foreign exchange trading, the global FX market turnover decreased by nearly 20% between 1998 and 2001. In April 2001, the euro entered on one side of 38% of global FX transactions. The dominant position of the US dollar as a vehicle currency remains unchanged. Fears of a decrease in the liquidity of FX markets following the introduction of the euro proved to be unfounded, also because the effect of eliminating intra-EMS FX trade has been compensated for by technological changes and business concentration.

- An integrated money market emerged almost immediately after the introduction of the single currency. The fast development of an effective euro money market provides evidence of the importance of the existence of a unique clearing and settlement infrastructure such as the TARGET system (Trans-European Automated Real-Time Gross Settlement Express Transfer).
- Corporations have been able to raise capital in the bonds and equity markets at a level well above the pre-EMU period. This conclusion is supported by the strong growth of the corporate debt market and the gradual increase in the number of companies listed on European stock exchanges. Bank loans nevertheless still play the major role in the financing of European corporations. According to estimations by Morgan Stanley, in 2001 the percentage of large European corporate borrowing mix covered through bonds was 29%, as opposed to 43% and 52% in the UK and US, respectively.
- The introduction of the euro supported the growth of the global European derivative market which in 1998-2001 grew in the euro area more than any other market in the world. The euro led to the creation of a large and liquid market in the interest rate segment of the derivative market. The euro-denominated swap curve has become the new benchmark for European fixed income markets.
- Investors and asset managers have taken a pan-European perspective by reallocating funds on a sector basis rather than on a country basis. The share of mutual funds with a pan-European perspective has been constantly growing in the last few years (from about 10% in 1997 to around 30% by the end of 2001 according to estimates by the ECB). In sum, the introduction of the euro has decreased the *home bias* of European equity investors in search of diversification once the intra-ERM exchange risk disappeared in January 1999.

The physical introduction of the euro has also made the legislative and regulatory barriers to financial integration in Euroland more visible. This has raised the stakes of the reform of the European regulatory framework currently under way at European level (the so-called Financial Sector Action Plan or FSAP). Market segments where the existing infrastructure was more flexible or more harmonised gained liquidity and depth very quickly. And conversely, those market segments that rely on structures characterised by strong national idiosyncrasies have not experienced the same transformation. The main gaps we identified are the following:

- The development of a pan-European collateral money market has been hampered by different national legal and taxation frameworks

and diverging market practices. This represents a serious impediment to the growth of a market that plays a key role in the United States in funding the operations of corporations and favours a switch from bank loans as the major source of financing of corporations' operational capital.

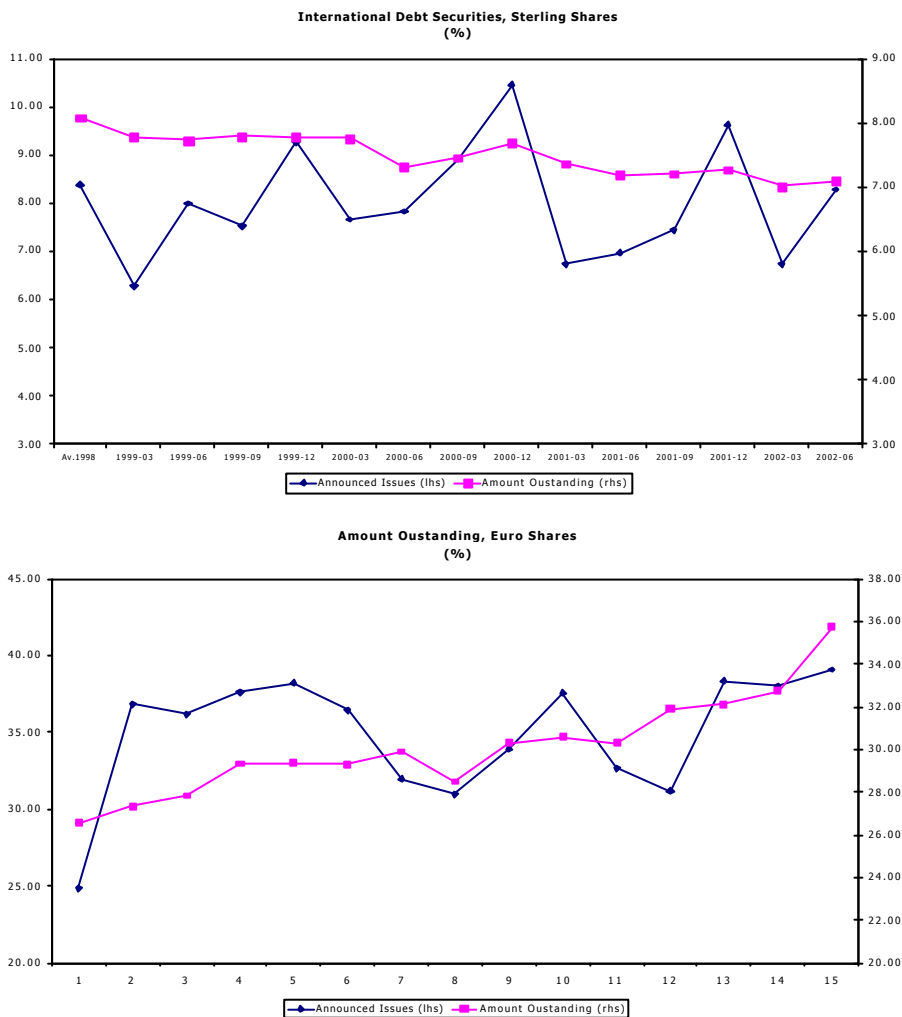
- The European government remains segmented. The liquidity premium is still large, which limits this market's capacity to perform traditional functions, such as acting as a benchmark for pricing other fixed income securities, and its usefulness for hedging interest rate risk.
- The fragmented infrastructure for cross-border clearing and settlement of securities transactions makes direct and indirect costs of cross-border transactions more expensive in Europe than in the US. This particularly affects the equity market where transactions are mainly carried out through organised exchanges rather than over-the-counter.

2.2 The impact of the UK's entry into EMU on the international role of the euro

By the end of 2001, sterling denominated international debt securities (bonds, note and money market instruments) represented about 7.5% of the total amount outstanding (Figure 1.1). Since the launch of the euro in January 1999, there has been a gradual though relatively small decrease in the issuance of sterling-denominated debt. This decrease might reflect interest differentials between major economies and exchange rate fluctuations. However, it might also reflect the competition exercised by the euro versus the sterling in international financial markets. In fact, the share of euro-denominated international debt issuance has been gradually growing since 1998 and it is now almost comparable to the share of dollar-denominated debt issuance in international markets.

Should the UK enter EMU, the euro would challenge the dollar as the leading world currency in the international debt market. Based on June 2002 data, the announced issuance of international debt by euro area residents (including the UK) would increase to over 45% of world total and would surpass the share denominated in US dollars. According to a more refined measure of the international role of a currency, i.e. the so-called narrow measure (Detken and Hartman, 2000), the US dollar would remain the dominant world currency with a share of total world announced issued above 50%.

Figure 1.1 Sterling- and euro-denominated debt securities as a % of world total



The currency share of international debt issuance is a good indicator of the so-called finance role of an international currency, i.e. the extent to which a currency is used by institutions to finance themselves. As mentioned above, while the euro has been relatively successful as a financing currency, its first few years of existence as an international investing currency have been less so. The investing role of a currency measures the appeal of its assets denominated in that currency to

investors. It is therefore interesting to see what effect the entry of the UK into EMU would have on the investing role of the euro. This issue is particularly interesting in light of the argument advanced by some (Galati and Tsatsaronis, 2002) that the weakness on the euro vis-à-vis the dollar during 1999-2001 was also due to the discrepancy between the popularity of the euro as a financing currency (which increases the supply of euro-denominated assets) and its "unpopularity" as an investing currency (which decreases the demand for euro-denominated assets).

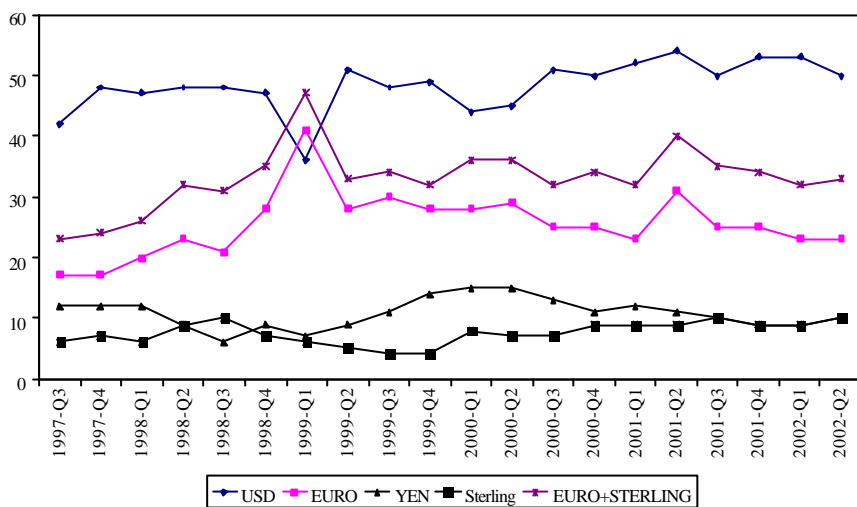
One way to measure the investing role of a currency is by analysing how international investors allocate capital between different currency areas. A good source of information is the poll carried out by *The Economist* among international asset managers about their bond and equity investments by currency areas. One can see quite clearly in Figure 1.2 that before the introduction of the euro, international investors shifted funds from the US dollar and sterling areas versus euro-area bonds and equities based on the optimistic expectations about the new currency and its potential effects on the euro-area's growth prospects. But the attraction of the euro as an investing currency was short-lived and vanished very quickly during 1999 (though the average share of euro-denominated assets remained above the pre-changeover period). Since the second quarter of 1999, fund allocation in euro-denominated assets has constantly been under-weighted in comparison to its so-called neutral position (which reflects the share of euro-denominated bonds/equities in total bonds issued or listed shares).

On average, in the last four years sterling-denominated assets attracted about 4% of total world fund allocations into bonds and over 9% of world allocations into equities. One relevant difference between the UK and the euro area is that the former is relatively more attractive for international investors than the latter, according to its weight in world financial markets. As a result, considering the June 2002 figures (and assuming that following the integration of the UK into EMU the allocation of assets in the other currency areas remain unchanged¹), the euro-area share of international capital allocation would rise by 5% in the fixed-income segment of the market. The effect would be much stronger in the equity market given the high stock capitalisation of the UK: the euro share would increase by more than 10%.

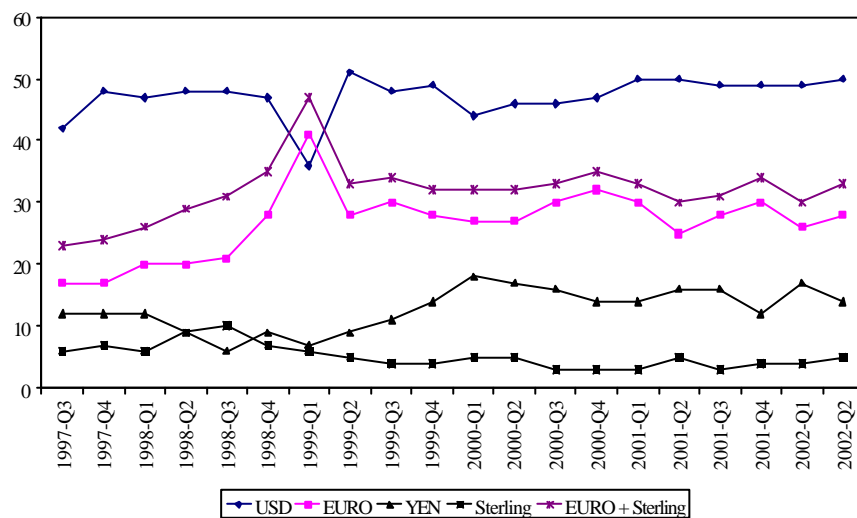
¹ Of course, this is a gross simplification. International asset investors would re-allocate their portfolio following the integration of the UK into EMU as a result of their search for diversification.

Figure 1.2 Bond and equity holdings by currency of denomination

Equity Holdings, %



Bond Holdings, %



A final remark concerns the effects of the eventual entry of the UK into EMU on the currency breakdown of currency reserves held by central banks around the world. This indicator is often used to measure the official international use of a currency. According to the IMF, the euro was the second-most important world reserve currency in 2001 with a share of just over 13%, well behind the US dollar (which had a share of 68%). According to the Washington-based institution, since 1999 the role of the euro in official reserves remained almost unchanged and is now comparable to the role played by the Deutsche mark, thereby supporting the prevailing view among central bankers in the run-up to EMU that no major changes in the composition of official reserves would occur in the short term. The integration of the UK into EMU would raise the euro share by a percentage that is quantifiable at about 4%, i.e. the 2001 share of official reserves denominated in the British currency.

2.3 The impact of the UK's entry into EMU on Euroland financial markets

The City of London is the financial centre of Europe. When the euro was launched in January 1999, it looked peculiar at the least that the leading financial centre of an economic power such as the EU lay outside the euro area. London has more foreign bank branches, subsidiaries and representative offices than any other European financial centre (408 in September 2001, as opposed to 266 in Paris and 276 in Frankfurt based on estimations by the Bank of England). Cross-border interbank lending represents more than 30% of total assets as opposed to less than 7% in the major continental European countries. UK banks' business with non-residents is denominated 27% in euro, 42% in dollars, 16% in sterling and 15% in other currencies.

London's market share of underwritten euro-denominated Eurobond issuance in 2001 was over 60% and the share of secondary trading in the Eurobond market is around 70%, according to International Financial Services. In other words, a European company issuing debt in the Eurobond market is likely to use a financial institution based in London in almost two cases out of three. In more than two cases out of three, a transaction in the Eurobond market is likely to be carried out by a trader sitting in a financial institution based in London.

By the end of 2001, the total market capitalisation of the London Stock Exchange was \$2,176 billion, more than 50% of the market capitalisation of all stock markets in EMU countries. More foreign companies are currently listed on the LSE than any other exchange (464 by the end of 2001). In 2001, over 40% of equity trades reported to the LSE were

reported in euro and over 52% of global foreign equity turnover is currently reported to the LSE.

Table 1.1 Selected financial market indicators: EMU, the UK and the US (end 2001)

	EMU	UK	EMU+UK	US
1. Money aggregates				
M3 (seasonally adjusted), \$ bn	4801.3	1481.5	6282.8	8027.5
M3, % of GDP	79.7	103.3	85.3	79.6
2. Bond market				
Domestic (Public Sector), amount outstanding, \$ bn	3185	411	3596	8519
Domestic (Financial Sector), amount outstanding, \$ bn	1680	289	1969	4336
Domestic (Corporate Sector), amount outstanding, \$ bn	358	220	578	2434
Domestic (All issuers), amount outstanding, \$ bn	5223	921	6144	15289
International, announced issues \$ bn	335.3	102.6	437.9	208.1
International, amount outstanding, \$ bn	2303.1	756.8	3059.9	2394.3
3. Equity market				
No of listed companies	6,131	2,891	9,022	7323
Stock capitalisation, \$ bn	4297	2176	6473	13766
Stock capitalisation, % of GDP	72.0	154.0	89.0	146.0
Value of share trading, \$ bn	8669	4550	13219	22964
4. Foreign exchange				
FX average daily turnover, \$ bn	252	504	754	254
FX average daily turnover, % of world total	15.6	31.1	46.7	15.7
5. Derivatives market				
FX derivatives, average daily turnover, \$ bn	179.4	390.3	569.7	169.1
FX derivatives, average daily turnover, % of world total	15.1	32.9	48.0	14.2
Interest rate derivatives, average daily turnover, \$ bn	256.6	237.8	494.4	115.7
Interest rate derivatives, average daily turnover, \$ bn	37.9	35.1	73.0	17.1
6. Mutual fund industry				
Investment funds, \$ trillion	3522	332	3854	7024
Investment funds, % of world total	23.0	2.9	25.9	49.3

Sources: FEFSI, BIS, International Federation of Stock Exchanges and IMF.

The City of London dominates the world's foreign exchange business with nearly one-third of the global market. In the last few years, London has lost its dominant position in the derivatives market both in exchange-traded derivatives (Eurex, the derivatives exchange run by Deutsche Börse and Soffex currently dominate the European derivative market) and in over-the-counter (OTC) derivatives. But the volume of business in the derivatives market is still very large in comparison to the whole EMU.

Should the UK join EMU, Euroland financial markets would therefore grow significantly in size. As far as the domestic bond markets are concerned, the re-denomination of outstanding sterling-denominated public and private bonds would increase the euro area bond market by more than 15%. In particular, the euro domestic corporate bond market would increase by more than 60%, because of the higher exposure of the UK corporations to capital markets, thus further feeding the growing trend away from banking towards capital market financing that started in the second half of the 1990s with the launch of the euro. The US corporate domestic market, however, would still remain by far the largest domestic corporate bond market in the world – four times the size of the corporate debt market in an enlarged EMU.

In the last quarter of 2001, euro-area residents were the largest issuers of international debt – well above the UK and US. The integration of the UK into EMU would further boost the dominance of euro-area residents with an issuance more than double that of US residents. The stock of debt issued by euro-area residents – as a result of the UK's entry – would become larger than that issued by US residents.

The financial market segment where the UK's entry would have the largest impact is the equity market. The number of (domestic and foreign) companies listed would surpass the number of companies listed in the New York Stock Exchange and NASDAQ and the euro-area stock capitalisation would increase by more than 50%. It would still, however, be only just less than half the stock capitalisation of the US, where most of the world's largest listed corporations are located. In the foreign exchange and derivatives market, the enlarged euro area would become world leader with a share of the world market oscillating between 47% and 73%, depending on which segment of the derivative market is considered. The integration of the UK into EMU will therefore reinforce the equity culture in continental Europe after the positive developments already experienced during the second half of the 1990s.

2.4 Policy effects

One of the main features of the changes occurring in European financial markets since the introduction of the euro is that markets that were less fragmented at a national level have grown faster than those markets that continue to rely on structures still characterised by strong national idiosyncrasies. The regulatory, legal and taxation factors hampering further financial integration in Europe are clearly identified and addressed in the Financial Service Action Plan (FSAP). The Lamfalussy Committee was created in 2000 to assess how the mechanisms for regulating securities markets in the European Union could be speeded up in order to respond in a timely manner to on-going developments in the European financial markets. In February 2001, the Committee presented its report highlighting that the current system is unable to respond adequately to the challenges posed by rapidly changing financial markets.

According to the plan, the regulations concerning the securities market within the European Union should be fulfilled by the end of 2003 and the whole FSAP should be finalised by the end of 2005. Since the FSAP came into effect, the Commission has remained within its self-set timeframe in more than 90% of the cases.² In general, however, the process of implementation of proposed legislative measures for financial services is very slow – with an average period between the adoption of the proposal by the Commission and its transposition into national law of about three years. Recently, several officials from the ECB have drawn attention to the lack of significant further progress in the integration of euro-area financial markets after the initial positive developments in 1999-2000.

The eventual integration of the UK into EMU is likely to have an effect on the on-going policy debate and the speed of the reform process. It is true that the decision-making process about the reform of the European financial markets regulatory framework takes places at EU-15 level and the UK is already a very active participant in this debate. Britain's

² In the past 12 months alone, the EU has agreed on a common European standard for disposing of collateral in the event of bankruptcy, defined the boundary between legal stock market trades and illegal insider trades, agreed to adopt a pan-European accounting standard by 2005, set rules for selling mutual funds across borders and for the fund to invest across borders, and began taking steps to allow pensions earned in one country to be paid out in another. Nevertheless, delays have occurred at the level of the EU Council and the European Parliament. A case in point is the takeover code, a bill that would have set pan-European rules for corporate defences against hostile takeovers. After 12 months of negotiations, the European Commission withdrew the bill.

decision to remain outside the Economic and Monetary Union however does not add to its negotiating power,³ but should it decide to join EMU its influence within the EU is likely to grow.

The UK's competitive advantage in financial services is likely to remain intact should the UK decide to join EMU. Actually, one might argue that the outsider status of the UK is currently functioning as a source of weakness in the ability of the British financial sector to attract euro-denominated business (but there is no firm evidence supporting this argument). Should its outsider status disappear, the UK's competitive advantage is likely to attract additional business from minor financial centres across the euro area and thus further reinforce the position of the euro area in world financial markets. Once Euroland contains a global financial centre like London, the reform of the euro-area financial market regulation framework will become even more urgent.

2.5 Portfolio shift effects

The switch from the European legacy currencies to euro assets has not been one-for-one because securities that were considered previously foreign assets (because denominated in other European legacy currencies) became domestic after 1998. In order to maintain the same allocation between domestic and foreign assets, demand for assets denominated in other currencies (including the dollar) increased. The effect might have partly caused the depreciation of the euro vis-à-vis the other currencies.

Portfolio shift effects should be considered when one takes into account the potential effects of the UK's entry into EMU. All sterling-denominated assets will be converted into euro, thus increasing the share of domestic assets versus foreign assets in the funds. UK fund managers will have to shift part of their funds into non-euro-denominated assets thus depressing the price of euro-denominated assets. Considering the already scarce appeal of euro-denominated assets to foreign investors and given the relatively large size of sterling-denominated assets in total world assets, there might be a negative effect on the euro/dollar exchange rate.

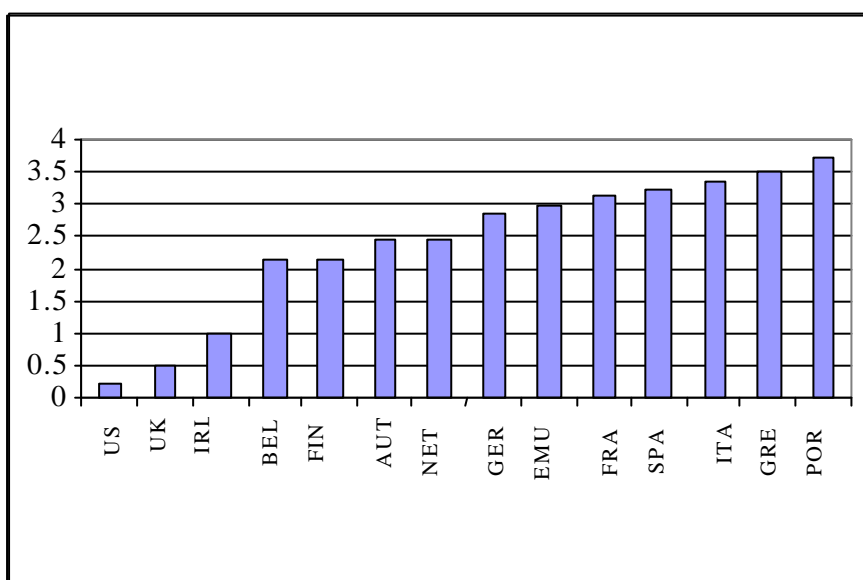
³ The resolution of existing conflicts within the FSAP mentioned above is also very likely to be the result of a political compromise that might well take place within the euro group where the UK (together with Denmark and Sweden) are not represented. This is based on the argument that there is much greater growth of cross-border financial transactions in the euro area than in the EU-15 area.

3. Structural factors: Will the UK's entry facilitate labour and product market deregulation across continental Europe?

In general, the UK (together with a handful of other EU members) supports a less regulated and more market-oriented economic model when compared to countries like Germany and France. Indeed, one of the major arguments against joining EMU is the avoidance of excessive EU regulation and the maintenance of a competitive advantage towards continental Europe. According to the opponents of EMU, the UK's outsider status therefore represents a shield against continental Europe's dirigistic model of capitalism.

From this point of view, Britain's current outsider status weakens the liberal, market-oriented coalition in the EU at the expense of the dirigiste front. The UK's self-imposed exclusion from EMU diminishes the chances that EMU will work as a wedge for structural reforms that are badly needed to take full advantage of the recently introduced common currency.

Figure 1.3 Labour market regulation indicators

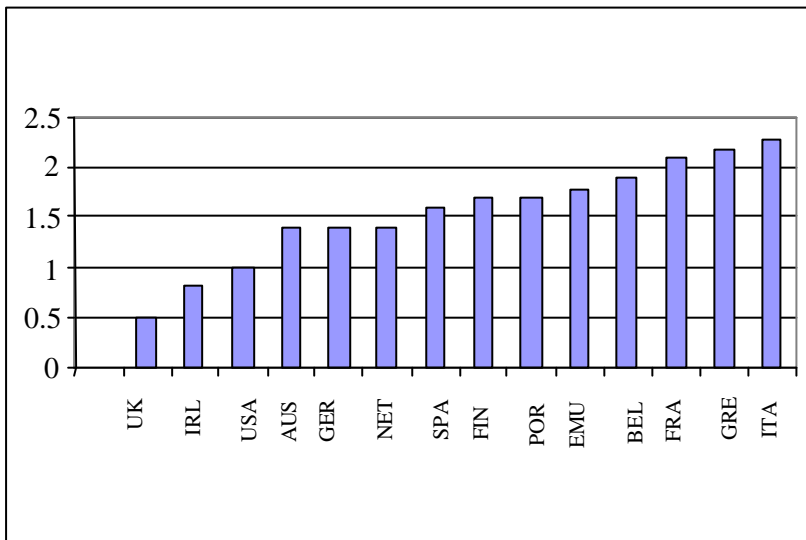


Structural rigidities in Euroland's labour markets include working time regulation, regulation of time-limited contracts, employment protection legislation and minimum wage regulations. In Figure 1.3, we present an indicator that focuses on only one of those aspects, employment

protection legislation. This is an indicator for regulations on regular and temporary contracts. The English-speaking countries (the UK, the US and Ireland, plus Canada, New Zealand and Australia) are on one end of the spectrum with relatively lax employment protection legislation systems. On the other end we find EMU's Mediterranean countries (Spain, Italy, Greece and Portugal). EMU's continental countries (Germany, France, Belgium and the Netherlands) have an intermediate level of stringency in their employment protection legislation system but still much higher than in the US and the UK.

According to this indicator, EMU as whole has an employment protection legislation system that is two times more stringent than that of the English-speaking countries. The gap between the US and the UK and the EMU countries reduced slightly during the 1990s but in 1998 – just before the launch of the new currency – it was still significant. The flexibility of the UK labour market is often referred to as one of the key structural factors behind the relatively better economic performance of this country (i.e. a higher sustainable growth rate) in the last few years.

Figure 1.4 Product market regulation indicator



Within EMU, liberalisation of product markets has been slow and uneven among member countries. Many European governments are unwilling to allow market forces to operate unfettered. European firms are slower than US firm in embracing new information technologies, which have boosted

US productivity in the last few years. Rigidities in the Euroland product markets are clearly reflected in the product market regulation indicator presented in Figure 1.4. This indicator is calculated by the OECD and it is a synthetic indicator taking into account key features of product market regulation, such as state control, barriers to entrepreneurship, barriers to trade and investment, economic regulation and administrative regulation. The picture that emerges from the comparison between the US and the UK on the one side and EMU countries on the other is very similar to the earlier portrayal of employment protection regulation. The UK, Ireland and the US have very low scores reflecting low state control and few barriers to entrepreneurship (the US score for barriers to entrepreneurship is relatively higher due to some complexities in administrative procedures and anti-trust exemptions when compared to the UK).

Among the largest EMU countries, France and Italy are those showing the highest score in product market regulation. Italy's score is the highest because it has both the highest state control and the highest level of barriers to entrepreneurship. Despite large privatisations in the last few years, state-controlled enterprises are still numerous and recourse to "command and control" regulations and price controls in competitive industries is still frequent relative to other countries. France has high barriers to entrepreneurship caused by the complexity of administrative procedures and heavy administrative burdens on business start-ups.

There is no doubt that in the last few years progress has been made at European and national level to make the European labour and product markets less regulated and more flexible. Nevertheless, there is the perception that many reforms are marginal and piecemeal, aimed primarily at removing some structural rigidities without adopting comprehensive and broad reforms. From this point of view, it is very likely that the perception of a never-ending "eurosclerosis" has not been significantly affected by the recent reforms in the labour and product markets. This explains why the current competitive position of several EMU countries is still low and why the most innovative companies tend to concentrate in the US and other regions of the world rather than in continental Europe.

The entry of the UK into Euroland might be perceived as a reinforcement of European policies aimed at deregulating labour and product markets with a positive impact on the growth prospects of the area. One should also take into account the competition forces that will come into play. Should the UK join EMU without incurring an exchange-risk, it is very likely to attract more foreign investments from companies searching for a foothold in Euroland markets. According to the latest data on FDI from

UNCTAD, non-EMU European countries have lost ground in terms of FDI inflows since the launch of the euro. Between 1998 and 2001, FDI inflows increased in the euro area as a whole whereas they decreased in Sweden, Denmark and England. This might be due to the uncertainty surrounding the entry of the UK and the other two Northern European countries into EMU and the level of the sterling-euro exchange rate.

Should this uncertainty disappear as a result of a positive decision by the UK to participate in EMU, the growing trend might start again even stronger than before considering the more favourable British labour and product market regulations. This might put further pressure on European governments to carry out broader and more incisive reforms in their labour and product markets.

4. Economic policy implications of the UK's entry into EMU

Much of the current debate about the eventual entry of the UK into EMU (from the UK's point of view) focuses on the potential impact on the UK economy. This is not surprising given the approach of June 2003, when the five tests set out by the UK Treasury as the basis for deciding whether to join EMU will be re-assessed. See the box below.

Box 1.1 Five economic tests for UK entry

1. Are business cycles and economic structures compatible so that we and others could live comfortably with euro interest rates on a permanent basis?
2. If problems emerge, is there sufficient flexibility to deal with them?
3. Would joining EMU create better conditions for firms making long-term decisions to invest in Britain?
4. What impact would entry into EMU have on the competitive position of the UK's financial services industry, particularly the City's wholesale market?
5. In summary, will joining EMU promote higher growth, stability and a lasting increase in jobs?

Source: UK Treasury.

UBS has recently carried out a comprehensive assessment of the five tests in question (UBS, 2002). In summary, the conclusions are that the level of convergence between the UK economy and the other major euro-area economies has increased since the time of the Treasury's 1997 assessment. The timing of the UK cycle has moved more closely into line with that of continental Europe, whilst also remaining closely aligned

with the US. The UK labour market is exhibiting clear signs of flexibility and the differential between UK interest rates and those in EMU has fallen substantially. However, the level of demand pressure appears to be higher in the UK than in EMU and it is questionable whether the UK could live comfortably with the euro interest rates on a permanent basis.

The current debate in the UK is also unsurprising when one considers the economic performance of the UK in comparison to continental Europe. As noted in the introduction, the UK has experienced nine years of sustained non-inflationary growth, during which time output growth has averaged almost 3% a year. Unemployment halved during the 1990s and inflation is currently 2% below the EMU average.

There are three keys to the remarkable performance of the UK:

- The decrease in overall public balance from a deficit of around 5% of GDP at the time of sterling devaluation in the beginning of the 1990s to a surplus of over 1% in 2001 and the adoption of a medium-term-oriented fiscal framework have helped to boost confidence.
- The strengthening of the inflation-targeting framework when the Bank of England was granted operational independence and a symmetric 2.5% inflation target.
- And last but not least, the labour market and welfare reforms carried out since the 1980s which favoured employment growth and a non-inflationary fall in the unemployment rate.

From the euro area's point of view, the eventual entry of the UK into EMU will therefore represent the integration of a country with a higher growth potential and an apparently more effective fiscal and monetary policy framework. It is not surprising that in the current debate about the appropriateness of the euro-area economic policy framework the UK's "economic policy model" is often referred to as one of the possible options. In particular, the adoption of a fiscal rule similar to that currently in force in the UK – the so-called golden rule – is often mentioned as a possible alternative to the SGP. This issue is discussed in section 4.1 below.

The eventual integration of the UK into EMU will also represent a first test for the monetary policy framework currently implemented by the ECB. The UK has some particular economic and financial features that produce a monetary transmission mechanism somewhat different from the rest of Europe. This second issue is briefly discussed in the final part of this section (section 4.2).

4.1 Is the UK-style “golden rule” a valid alternative to the SGP?

The frustrations behind the recent debate on the “stupidity” of the Stability Pact are well captured by Figure 1.5 which describes the relative stance of real short-term interest rates and structural deficits in EMU, the US and the UK throughout the period 1999-2003.⁴ The euro area as a whole was running a structural deficit in 1999-2001, whereas the US and the UK were running surplus or almost balanced positions during the same period. In 2001, as a result of tax cuts in some euro-area member countries, the EMU structural deficit widened marginally. Through 2002 and – according to the IMF’s estimates – into 2003, the policy stance in the US and the UK has been loosened and will stay loose as a result of a sizeable reduction in the interest rate and a shift in the structural budget balance. By contrast, the policy stance in the euro area has been tightened in 2002 and is expected to remain tight in 2003 mainly as a result of the constraints imposed by the SGP on the European countries that have already breached (Germany and Portugal) or are very likely (France and Italy) to breach the 3% upper limit.

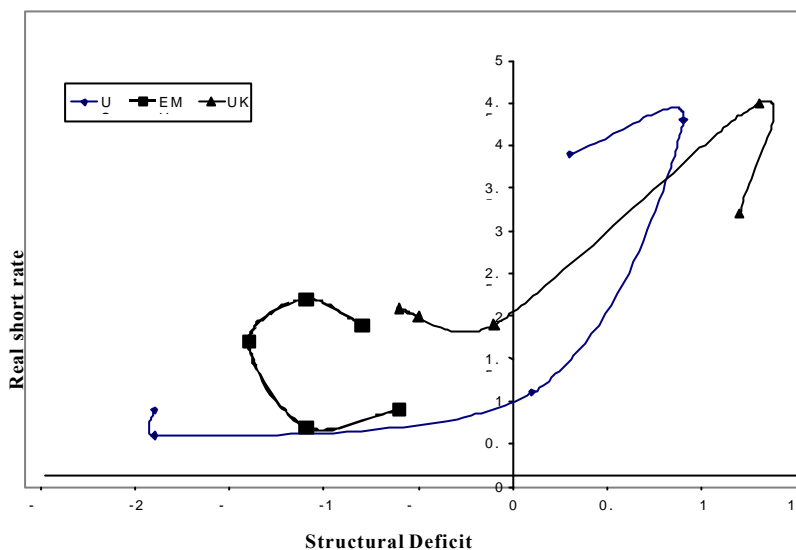
Given the current weakness in the global economy, many would argue that it is indeed “stupid” if not dangerous from a macroeconomic point of view to force countries to cut public spending or to raise taxes. Would it not make sense for the euro area as a whole if Germany were to adopt a loose fiscal stance (thus going well through the 3% upper limit) rather than cutting spending or increasing taxes as proposed by the recently appointed new government? Most economists would probably answer in the affirmative considering the relatively low debt-to-GDP ratio in Germany and the current level of interest rates in the euro area. Germany might loosen fiscal policy to support its economy and the whole euro area in the current global economic environment and later – once the world economy is back on its sustainable growth path – go back to its original stability programme aiming at a balanced budget in the medium term.

Do the current economic and fiscal circumstances prove that the SGP is flawed and therefore needs to be revised? The SGP consists of two parts: a) budget deficits cannot be larger than 3% of GDP (except under exceptional circumstances) and b) each country should aim for a medium-term objective of a budgetary position “close to balance or in surplus”. In practice, the two rules together require that each member to choose a budgetary target in cyclically adjusted terms and let automatic stabilisers or discretionary actions operate. An obvious implication of the

⁴ The 2003 estimates are from the latest IMF *World Economic Outlook*.

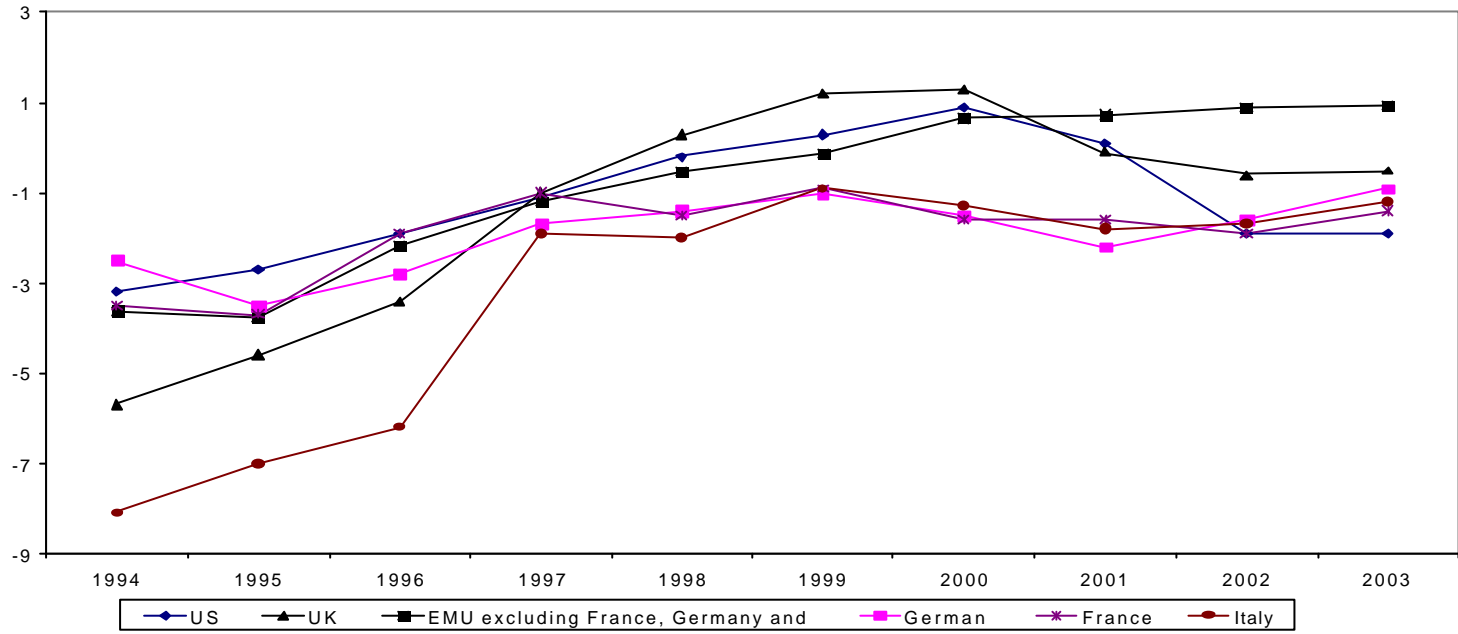
two rules is that the lower the structural budget target (with respect to the 3% limit), the wider the margins for counter cyclical policy.

Figure 1.5 Policy Mix in EMU, the US and the UK



The nature of the problem currently faced by the largest European countries can only be correctly understood when one considers the two rules together. During 1998-2002, Germany, France and Italy have not fulfilled the second rule by leaving the process of fiscal consolidation started in the first half of the 1990s unfinished. As a consequence, in the current economic circumstances they risk going over the 3% limit and they cannot rely on discretionary fiscal policy. The nature of the problem is well described in Figure 1.6. Throughout the 1990s, the US and the UK moved from significant deficits to surplus and by 2001, they were capable of using discretionary fiscal policy to counterbalance the global economic slowdown. Within the euro area, the largest countries have not lived up to the rules. In 2001, their structural deficits were more or less similar to those that existing before the launch of the new currency. By contrast, the smallest EMU countries (except for Portugal) have continued their consolidation throughout 1998-2001 and they now would have room for discretionary fiscal policy actions to support a weak economy. Had Germany, Italy and France completed the structural fiscal consolidation, the current debate on the need for reform of the SGP would not need to take place.

Figure 1.6 General government structural balances (% of GDP)



In the current circumstances, one of the alternatives put forward by economists is the *golden rule* of public finances, according to which public expenditure excluding investments should not exceed revenues over the economic cycle. The UK adopted the golden rule in 1997 when the Code for Fiscal Stability was introduced by the new government to counteract the *bias* against capital expenditure of the previous system. It should be pointed out, however, that the golden rule is only one of the two fiscal rules currently followed by the UK government. The second rule is the so-called *sustainable investment rule*, according to which net debt as a proportion to GDP will be held stable over the business cycle at a prudent level (currently 40% of GDP). The rationale of the combination of these two rules is, on one hand, to avoid crowding out investments by increases in current expenditure or declines in tax revenues and, on the other, to ensure sound public finances over the longer term.

The UK is living comfortably with the golden rule because of its low debt-to-GDP ratio (currently around 32%) and in fact the sustainable investment rule is currently not binding. In the context of EMU, the golden rule would be an obstacle to both deficit and debt reduction. Given the ratio of public investment as a percentage of GDP, the long-run equilibrium level of government debt could be very high, especially in an environment of low inflation. In the high-debt countries, there would be a very slow pace of debt re-absorption whereas in the low-debt countries, the debt ratio would rise. In addition, the application of the golden rule would also create perverse effects because countries would have an incentive to classify current expenditure as capital spending and would make the multilateral surveillance process more complex.

The introduction of a predetermined limit for annual deficits in a framework based on the targeting of a balanced budget over the cycle is motivated by moral hazard issues. One of the main features of EMU is that while there is a single currency and a single monetary authority, the fiscal policy is decentralised so that individual member countries can free-ride in terms of excessive indebtedness. When moral hazard issues are important, credibility becomes a major factor. Should some countries be allowed to diverge from the SGP, the credibility of the Pact would be seriously damaged and would increase the likelihood of opportunistic behaviour by individual countries.

The UK experience shows that its recent economic success does not depend on the adoption of a fiscal framework based on the golden rule, but rather on the consolidation of its fiscal deficit and the implementation of structural reforms in labour and product markets. The main lesson to be learnt from the UK experience is that in the current environment the

lifting of the SGP – even temporarily – would decrease the pressure on the largest European countries to continue their efforts in fiscal consolidation and to introduce more radical structural reforms. That is why we recommend the maintenance of the current rules.

4.2 Transmission in monetary policy in an enlarged EMU

Asymmetries in the transmission of monetary policy depend on differences in the industrial structure (share of manufacturing in GDP), in the financing mix of private firms – ratio of bank loans to total liabilities – and in the balance sheet of households – share of mortgage loan payments out of total payments (Mihov, 2001).

The share of manufacturing in GDP is positively correlated with the magnitude of the output response to monetary policy innovations. This is due to the fact that the manufacturing sector produces durable goods which are more sensitive to interest rate changes. Compared to France, Italy and Germany, the United Kingdom has a lower share of manufacturing in GDP. From this point of view, in the UK higher interest rates should be required to close the gap between current and trend output. The opposite is true in Germany which has the highest response to monetary policy change given the higher share of manufacturing in GDP.

In the previous section we highlighted the major differences in capital markets between the UK and some EMU countries. In particular, we noted that the financial system of countries such as France and Germany is centred around banks whereas in the Anglo-Saxon model firms have access to alternative sources of financing in capital markets. A higher dependence of continental firms on bank credit implies that monetary policy will have a large impact via interest rates (Dornbush, Favero and Giavazzi, 1998). Therefore, a change in monetary policy is likely to have a larger effect in continental firms via the credit channels than in the UK. From this point of view, the UK economy should be more capable of smoothing the effects of interest rate changes than its European partners.

European mortgage markets retain strong national characteristics. This is reflected in large differences in the type of lenders, type of products granted, type of mortgage interest rates and loan-to-value ratios. In United Kingdom, Germany and the Netherlands, for example, the volume of residential mortgage loans outstanding is equivalent to 50% of GDP or more in contrast to other countries such as Italy and France, where it is equivalent to less than 20%. A contractionary monetary policy in the UK would therefore affect household spending more than in other EMU countries where mortgage payments exhaust a smaller part of disposable income. The United Kingdom is also characterised by a prevalence of

mortgages with variable interest rates in contrast to continental Europe where fixed interest rate mortgages are more diffused (although this is changing fast). According to estimates from the Council of Mortgage Lenders, in the UK four-fifths of the outstanding stock of mortgages is currently financed on a variable rate basis. In Germany and France – for instance – the share of outstanding mortgages financed on a variable rate is below 50%.

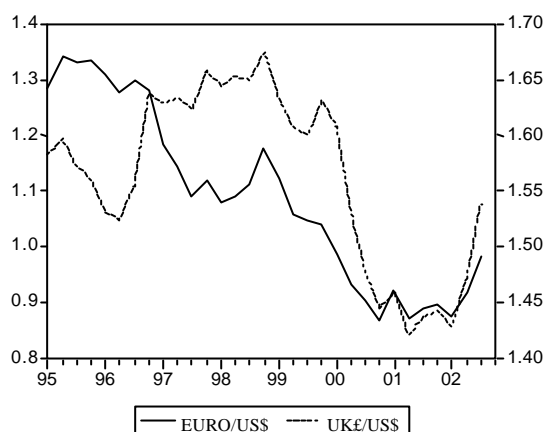
According to empirical evidence, the United Kingdom has a relatively larger response to monetary policy innovations. Based on what was discussed above, it looks like the main reason behind the greater responsiveness of the UK to interest rate changes is the higher exposure of households to floating rate mortgage lending. The eventual integration of the UK into EMU would therefore entail a risk for the UK (and the euro area as whole) given the current boom in the UK housing market and the current positive interest rate differential between the UK and EMU. Early membership of EMU could worsen the existing balance in the UK economy.

5. The impact of the UK's entry on the euro/dollar exchange rate

Figure 1.7 shows the quarterly movements in the bilateral nominal exchange rates euro/dollar and sterling/dollar throughout 1995-2002. The euro has been declining steadily vis-à-vis the dollar since the last quarter of 1995. Before the launch of the new currency (1997Q3-1998Q4), the synthetic euro went through a period of relative stability and, just before the launch, it even appreciated slightly vis-à-vis the dollar. The strength of the euro was a short-lived blip, however. Against expectations, during 1999-2001 the euro fell against the dollar by over 20%, i.e., by more than the entire cumulated fall during 1995-98. Since early 2002, a reversal in the long-term decline of the euro/dollar exchange rate is visible.

The experience of sterling has been somewhat different. After the devaluation in 1992 following the exit of sterling from the ERM, the British currency has remained relatively stable with respect to the dollar oscillating in a range of 1.50/1.60 until the launch of the euro. Since 1999, sterling has started to fall against the dollar clearly reflecting the strengthening of the dollar with respect to most world currencies rather than a weakening of the British currency. However, the fall of sterling with respect to the dollar has been relatively smaller than the fall of the euro (around 11% which is less than half of the cumulated fall of the euro), and during 2002, sterling appreciated more than the euro against the dollar. In short, sterling has been a relatively stronger currency than the euro vis-à-vis the dollar.

Figure 1.7 Euro/dollar and sterling/dollar, 1995-2002



Should the UK decide to join EMU, what are the potential effects on the euro/dollar exchange rate? Most of the recent empirical research has focused on the effects of the eventual UK's entry into EMU on the UK economy. Barrell (2002), for instance, using the NiGEM model, show that EMU membership could imply more volatility in output for the UK, mainly as a result of the fact that the UK would not be able to rely on the interest rate to offset shocks. In terms of price stability, on the other hand, the UK would benefit from joining EMU. In another piece of research by Oxford Economic Forecasting (2002), similar conclusions are drawn.

All these studies are based on large macroeconomic models, which take into account the linkages between the UK, the euro area and the rest of the world. Given the UK's relative economic size, its integration in the euro area is likely to alter the economic fundamentals of EMU; therefore, a full-scale macro model comprising the euro area and the UK is in fact required to estimate the macroeconomic effects of the eventual UK's entry into EMU. By the same token, an estimation of the likely effects of the integration of the UK into EMU on the euro/dollar exchange rate would also require a large macro economic model to estimate the changes occurring in the economic fundamentals associated with the euro/dollar bilateral exchange rate.

But, taking into account that it is extremely difficult to find an econometric model that is robust and consistently outperforms a naïve random walk in predicting the behaviour of exchange rates, we will not attempt to do that. Instead, the analysis will take a more modest approach, which should be only taken as an indication of the potential factors that

may play a role in affecting the euro exchange rate in the future. Based on quarterly data during 1990-2001, we identify economic and financial variables that have been correlated with the euro/dollar and sterling/dollar bilateral exchange rates. These correlations have changed in the past and could change again with enlargement, but assuming that they are informative to some extent, one can have a qualitative idea of the possible impact of the UK entry on the euro/dollar exchange rate by analysing how UK integration will affect the relevant euro-area aggregates.

5.1 Economic and financial fundamentals associated with fluctuations of the euro/dollar and sterling/dollar exchange rates

In Table 1.2 below, we present the list of variables considered in the analysis, indicating whether they were found to be significantly correlated with the euro/dollar and sterling/dollar exchange rate changes (see the annex to this chapter for more details). The variables which seem correlated (in the expected direction) both with the euro/dollar and the sterling/dollar bilateral exchange rates are oil price changes, interest rate differential with US, productivity differentials with US, net capital flows into US and expected growth differentials with US.

Table 1.2 Relationship between fundamentals and euro/dollar and sterling/dollar bilateral exchange rates (1990: Q1–2001:Q4)

<i>Fundamentals</i>	<i>Euro/dollar exchange rate</i>	<i>Sterling/dollar exchange rate</i>
	<i>Coefficient</i>	<i>Coefficient</i>
Inflation differentials EMU-US (1)	**	/
Current account balance (2)	/	/
Productivity differentials (3)	**	*
Oil price (4)	**	**
Short-term interest differential (5)	*	**
Long-term interest differential (6)	**	*
Net corporate bond flows (7)	*	*
Net agency bond flows (8)	/	*
Net corporate stock flows (9)	*	*
Net FDI (10)	*	*
Expected growth differential (11)	**	**
Stock return differential (12)	*	**
Stock capitalisation differential (13)	/	*

Notes to Table 1.2

* Indicates that the coefficient is correctly signed and statistically significant.

** Indicates that the coefficient is correctly signed but statistically insignificant.

/ Indicates that the coefficient is incorrectly signed. The dependent variable is the change in the logarithm of the bilateral exchange rate euro/dollar and sterling/dollar, respectively. The equation regresses the dependent variable on a constant and the contemporaneous bilateral value of the economic variable. The sample period is 1990-2001.

¹ Differential in the CPI growth rate between EMU/US and UK/US.

² Quarterly change in bilateral current balances EMU/US and UK/US.

³ Differential in growth rate of labour productivity EMU/US and UK/US.

⁴ Quarterly change in oil price index.

⁵ Quarterly Change in the differential in three month interest rate EMU/US and UK/US.

⁶ Change in the differential in 10-year bond interest rate EMU/US and UK/US.

⁷ Quarterly change in net flow in US corporate bonds from EMU and UK.

⁸ Quarterly change in net flow in US agency bonds from EMU and UK.

⁹ Quarterly change in net flow in US corporate stocks from EMU and UK.

¹⁰ Quarterly change in Net FDI into US from EMU and UK.

¹¹ Differential in expected growth according to Consensus Forecast data in US, EMU and UK.

¹² Quarterly change in the differential of stock indexes EMU/US and UK/US.

¹³ Differential in Stock capitalisation (as a percentage of GDP).

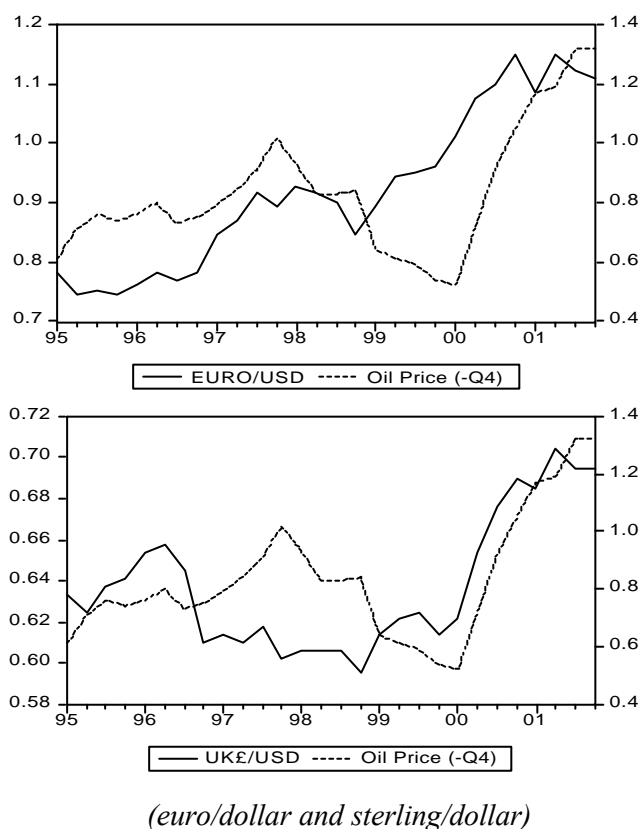
As found in other empirical research on the euro/dollar exchange rate (Brooks et al., 2001, Deutsche Bank, 2002 and Meredith, 2001), other “traditional” fundamentals, such as current account balances or price differentials (as far as UK is concerned), do not seem to be able to explain movements in bilateral exchange rates throughout the 1990s. Instead, “alternative” factors such as expected growth differentials, capital flows, stock return differentials and productivity differentials appear to be correlated with movements in bilateral exchange rates. In the sections below, we look at how UK membership may affect EMU’s fundamentals, both “traditional” and “alternative”, to try to gauge its potential impact on the value of the euro.

5.2 Oil prices

Oil price changes represent a shock to the terms of trade of a country, potentially affecting the exchange rate via the current account balance. The shock to the terms of trade determines a loss in terms of competitiveness so that a depreciation of the domestic currency is warranted to sustain exports. According to this rationale, countries that are more dependent on oil imports would experience a larger impact on their exchange rates.

A graphic analysis confirms the existence of a relationship between increases in oil prices and the devaluation of the euro and sterling with respect to the dollar captured by our regressions (Figure 1.8). A simple regression (see the annex) also indicates that movements in oil prices were more strongly correlated with movements in the euro exchange rate than with the behaviour of sterling. This is coherent with the high dependence of Euroland on oil imports and the net oil exporting position of the UK. The eventual integration of the UK into EMU should – *ceteris paribus* – decrease the magnitude of the negative effect of oil price shocks on the euro/dollar exchange rate because, by integrating a net oil exporting country, the “enlarged” EMU would be less dependent on oil imports.

Figure 1.8 Oil price index and bilateral exchange rates



5.3. Expected growth differentials

If traditional exchange rate models based on trade flows and price differentials fail to explain the recent movements in euro/dollar and sterling/dollar bilateral rates, one has to consider alternative explanations. Recent literature has put emphasis on capital flows and expected growth differentials (Brooks et al., 2001). According to this orientation, movements in bilateral exchange rates would be determined – in the medium term – by expected growth differentials and net portfolio flows, and the strengthening of the dollar during the second half of the 1990s would be based on the relatively stronger economic performance of the US compared to the Euroland.

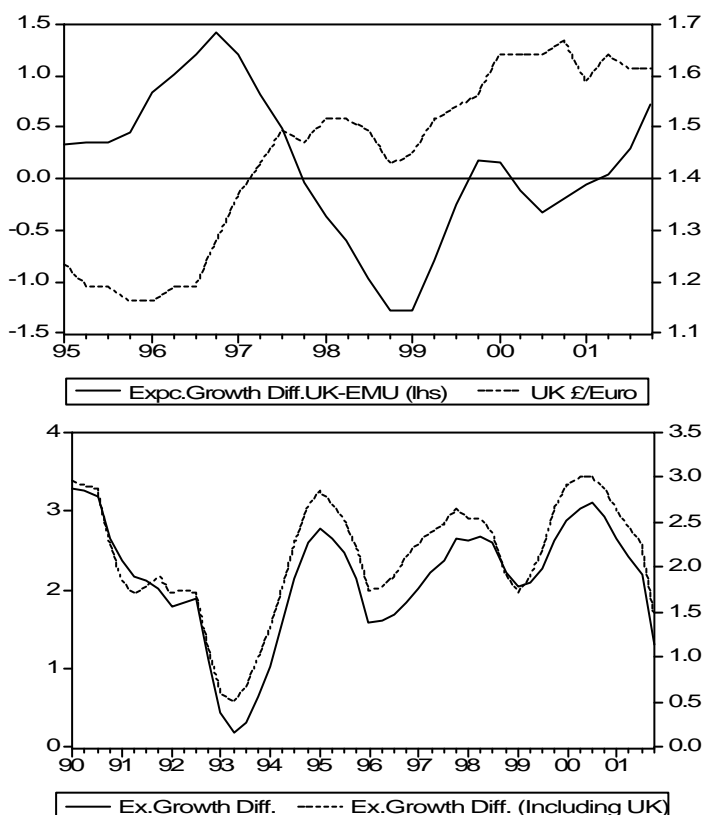
Our regressions suggest that net capital flows and both the US and Euroland and the US and the UK expected growth differentials could play a role in explaining the fluctuation of the euro/dollar and sterling dollar bilateral exchange rates during 1990-2001. Since 1995, the US economy has outperformed Euroland and the UK, thus creating an imbalance between demand and supply of capital. The gap between demand and supply of capital in the US has been partly filled through an inflow of capital from the rest of world. When the expected growth differential has been momentarily in favour of the euro area – as occurred in the period just before the launch of the new currency – the bilateral rate euro/dollar improved slightly. Since the launch of the euro in 1999, however, the expected growth differential has turned in favour of the US and the euro/dollar exchange rate has worsened significantly.

The case of the UK is similar. Sterling appreciated vis-à-vis the dollar during the period when the expected growth differential US-UK was in favour of the UK (1996-98). After 1998, the expected growth differential moved in favour of the US and sterling started to fall with respect to the dollar. This trend slowed down only in 2001, when the expected growth rate in the UK was higher than in the US, similar to the case of Euroland during the same period.

Figure 1.9 illustrates the relationship between the expected growth rate differential between the UK and Euroland and the bilateral rate sterling/euro. The appreciation of sterling with respect to the euro is mirrored by the better economic performance of the UK compared to continental Europe. Except for the period just before the launch of the new currency, when the expectation was for more economic growth in Europe and a strengthening of the euro against the major world currencies, the UK economy was almost constantly expected to outperform Euroland in terms of economic growth. This could therefore

be one factor behind the appreciation of sterling in relation to the euro throughout the period under consideration.

Figure 1.9 Expected growth differential (UK-EMU and sterling/euro exchange rates)

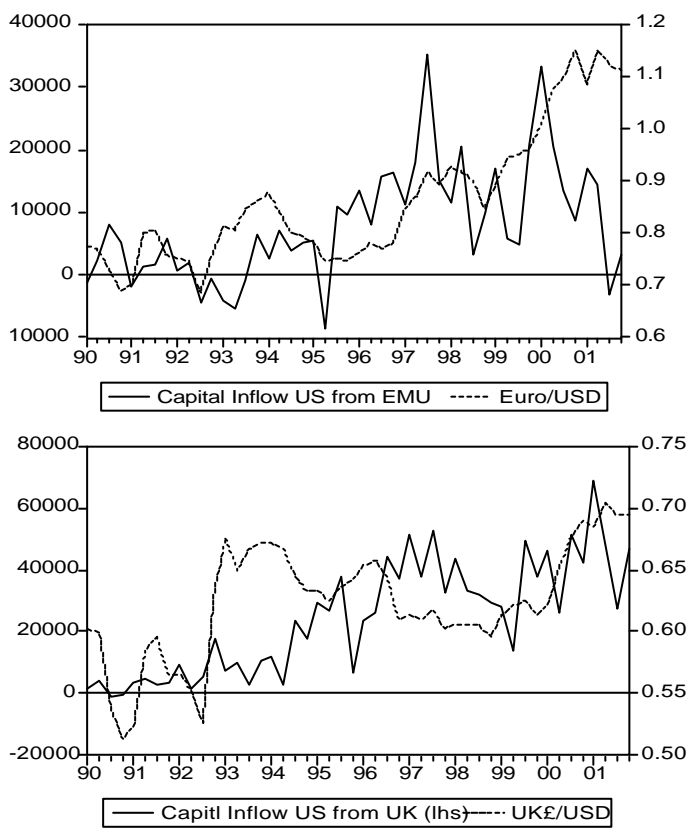


What would be the effect of the integration of the UK into Euroland in terms of the EMU-US differential in expected growth rate? We have recalculated this differential assuming that the UK was integrated into Euroland. Given the positive economic performance of the UK compared to EMU in the last few years, the relative position of EMU versus the US in terms of expected economic growth would result improved. Assuming that the relatively better economic performance of the UK will persist – as looks likely based on the most recent trends and forecasts – the eventual integration of the UK into EMU might increase the expected growth rate of the enlarged Euroland, thus strengthening the euro with respect to the dollar.

5.4 Capital flows

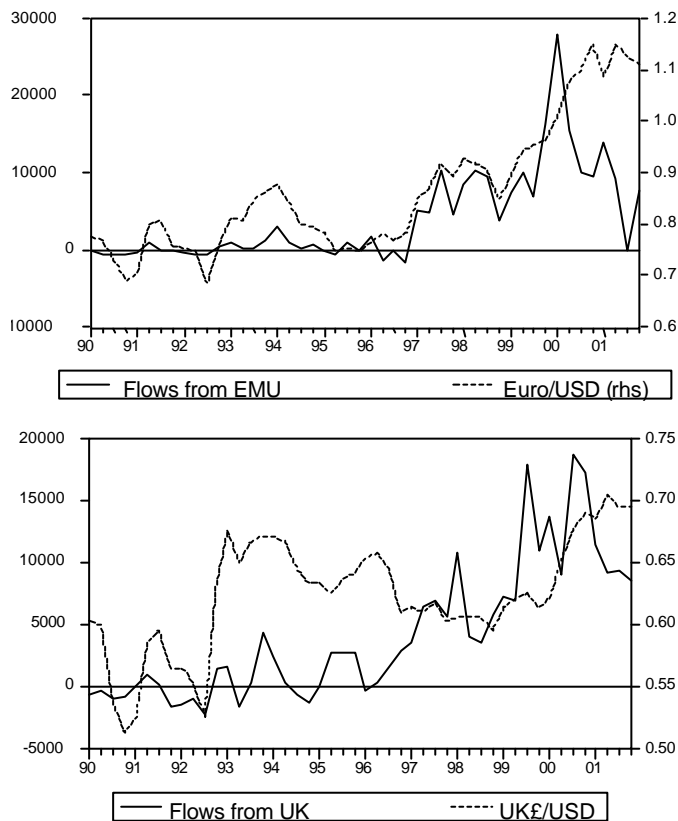
The relatively better economic performance of the US has been associated with a large inflow of capital into the US. In Figure 1.10, we plot the net capital inflow into the US from EMU and the UK throughout 1990-2001. In both cases, there seems to be a relationship between the inflow of capital into the US and the strengthening of the dollar vis-à-vis the euro and sterling. The short-lived appreciation of the euro in 1998-99 coincided with a slowdown in the inflow of capital into US assets (in 1997 there was the Asian crisis and in 1998 the Russia/LTCM crisis) and the slowdown in the inflow of capital into the US from EMU in 2000-01 is associated with a stabilisation of the bilateral rate euro/USD.

Figure 1.10 Net capital flow to US from EMU and UK



As far as the UK is concerned, one can note that whereas in Euroland there is a slowdown in the outflow of capital to the US in 2000-01, in the UK this is not the case. This might well reflect the role of the City of London in international financial markets. Capital from the rest of world transits through London towards its final destination (including the US). This argument is reinforced by the very similar trend between total world inflow into the US and UK inflow into US assets. More than a third of total world capital inflow into the US passes through the UK's financial centre.

Figure 1.11 Net inflow into US corporate bonds and stocks



In cursory regressions, fluctuations in the bilateral euro/USD and sterling/USD exchange rates have shown some correlation between capital flows into US corporate bonds and stocks. From 1997-2000, their foreign demand increased significantly, with aggressive buying by

European citizens. During this period, more than a third of the total foreign demand for US corporate stock/bonds came from Euroland. It is during this period that there is a strong appreciation of the USD against the euro. The picture for the UK is similar, with the demand for US Treasuries peaking in 1997-98, followed by the sudden increase in the UK's demand for US corporate stocks.

What would be the effect of the UK's entry into EMU on the bilateral capital flows between Euroland and the US? In 2001, based on US Treasury data, the combined net capital inflows into US corporate stocks from the UK and EMU would represent about two-thirds of world capital inflows into the US. It is very likely, however, that a significant share of the funds recorded as outflow from the UK to the US concerns funds passing through London used as an offshore financial centre. This means that – should the UK decide to join EMU – capital flows between Europe and the US are likely to become even more important to the fluctuation of the euro/dollar exchange rate. On the other hand, Euroland is also likely to benefit because it would integrate a financial centre with one of the largest inflow/outflow of capital in the world.

5.5 Productivity differentials

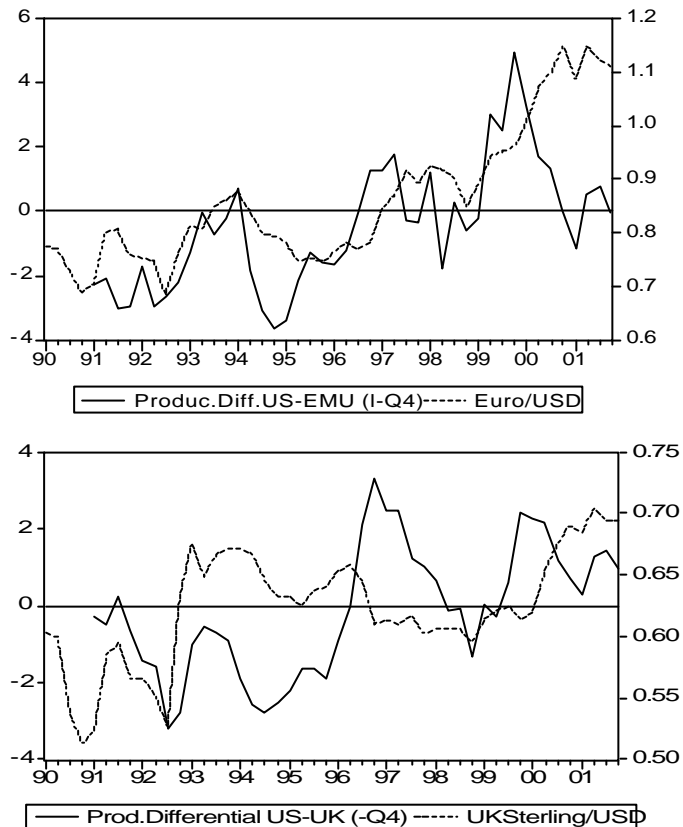
The US-EMU productivity differential also seems correlated with euro/dollar exchange rate fluctuations in the 1990s. This relationship would be coherent with popular explanations linking information and telecommunications technology (ICT) investments in the US to a permanent increase in labour productivity (CEPS, 2001). Productivity increases would affect the exchange rate via the so-called Harrod-Balassa-Samuelson effect (Alquist and Menzie, 2002).

Since 1995, US productivity growth has exceeded EMU's productivity growth with a peak of nearly 5% in the last quarter of 1998. The short-lived appreciation of the euro in 1998-99 followed a period in which the (non-cyclically adjusted) US-EMU productivity differential turned momentarily negative before peaking again in 1999-2000, when the euro devalued sharply vis-à-vis the dollar.

The experience of the UK has been somewhat different. Historically, the UK has had a lower productivity growth rate when compared to other European countries (during the 1970s and 1980s, the UK average annual growth rate in productivity was 1.5% as opposed to 2.3% in the eurozone). However, according to recent research (Oulton, 2001), the UK's performance in the second half of the 1990s resembles that of the United States in terms of the contribution of information and communications technology (ICT) to capital deepening. This has

improved the performance in productivity of the UK relative to its European partners as clearly shown in the lower differential with the US in the second half of the 1990s when compared to EMU-US differential.

Figure 1.12 Productivity differentials US-EMU and US-UK



Nevertheless, the magnitude of the productivity improvement in the UK is not comparable to the performance in the US. From this point of view, the eventual entry of the UK into EMU will not raise significantly the productivity level of Euroland when compared to the US. However, given that the UK is ahead of continental Europe in terms of the ICT share in GDP, it is very likely that the eventual integration of the UK into EMU will lead to an increase in the contribution of ICT capital to economic growth in the enlarged EMU. In the medium term, this might contribute to increased productivity in the enlarged Euroland as a result of the

integration into Euroland of a country that is ahead of other European countries in terms of ICT contribution to capital deepening.

6. Summary and conclusions

The eventual integration of the UK into Euroland would be the first enlargement of EMU after the launch of the euro in January 1999 and the physical introduction of the new currency in January 2001. This enlargement represents a major step for EMU considering the relative size of the UK, the role played by London in world financial markets and the economic and structural features of the UK economy that make it more similar to the US than to continental Europe. With the eventual integration of the UK into EMU, the Euroland economy will consist of 80% "old world" and 20% "new world".

The first issue we investigated in this paper is the likely effect of the integration of the UK into EMU on European financial markets. To a large extent, the success of a currency depends on the level of development and the efficiency of its domestic capital markets. The integration of the UK's financial sector into Euroland financial markets will produce several effects, some occurring in the short term and others in the medium to long term. The short-term effect will be the diversification and portfolio shifts that will be caused by the conversion of sterling-denominated assets into euro. The conversion will increase the share of domestic assets in the UK funds and will therefore produce an additional demand for non-euro-denominated assets. As already happened in 1999-2001 after the introduction of the euro, the enlargement of EMU to UK might have a negative effect on the euro vis-à-vis other world currencies.

The integration of the UK into EMU will further reinforce the international role of the euro. Based on figures for June 2002 with the UK into Euroland, euro-denominated issuance in the international debt market would amount to nearly 50% of total debt issuance and would surpass the issuance of dollar-denominated international debt. The integration of the UK into EMU might also increase the success of the euro as an investing currency because of the relatively higher attraction of sterling-denominated assets (with respect to its weighting in world financial markets). The effect would be particularly strong in equity markets given the high stock capitalisation in UK.

The eventual integration of the UK into EMU will also have an impact on the size and structure of Euroland financial market and the on-going reform of the EU financial market regulation framework. By integrating with a country with the highest capitalisation-to-GDP ratio, Euroland's

equity culture would further be boosted after the positive effects exercised by the bull market of the second half of the 1990s. Based on end-2001 figures, the total number of companies listed in the European stock exchange would increase to over 9,000 which is more than the number of companies listed in the US stock exchanges. The euro-area domestic corporate bond market would also increase by over 60% as a result of the integration of a country where corporations rely more on capital markets than on banks for their financing. An enlarged Euroland would also become the world leader in the foreign exchange and derivatives market with a daily turnover that would be the double that of the US market.

At a policy level, the on-going reform of the Euroland financial market regulation framework – the so-called Financial Services Action Plan (FSAP) – aims to make European financial markets fully integrated so that the benefits of monetary union can be fully exploited. There is an on-going conflict between the “continental” dirigistic financial market philosophy of Germany and France and the market-oriented philosophy of the United Kingdom and Ireland. When the UK decided to stay out of EMU, the liberal, market-oriented coalition in the EU was consequently weakened. The eventual integration of the UK into EMU will reinforce the market-oriented coalition within Europe, thus exercising more influence on the on-going reform process.

The eventual entry of UK into EMU might be perceived as a reinforcement of the European policies aimed at further liberalising labour and product markets. Earlier in this chapter, we presented some summary indicators that show how the UK resembles the US more than continental Europe from a structural point of view. Should the UK decide to join EMU, the elimination of the exchange rate risk is likely to boost foreign investments in this country, thus putting further pressure on the largest European countries to carry out badly needed reform in their labour and product markets.

In addition to the labour market and welfare reforms carried out since the 1980s, the remarkable economic performance of the UK during the second half of the 1990s was also due to two other key factors: a) fiscal consolidation and the adoption of a medium-term-oriented fiscal framework and b) the strengthening of the inflation-targeting framework. The eventual integration of the UK's into EMU will therefore represent the integration of a country with a higher growth potential and an apparently more effective fiscal and monetary policy framework than in EMU. Given the current difficulties faced by the largest European continental countries, some have called for reform of the Stability and

Growth Pact and the adoption of the so-called golden rule. In Section 4, we noted that the UK's remarkable economic performance does not depend on its adoption of the golden rule but rather on the consolidation of its fiscal deficit carried out through the 1990s. In the largest European continental countries – on the other hand – fiscal consolidation slowed down significantly after the introduction of the euro in 1999, which is the main reason behind the current difficulties faced by these countries. An eventual lifting of the SPG would decrease the pressure on these countries to complete fiscal consolidation and carry out more radical structural reforms. The golden rule would become an obstacle to further deficit and debt reduction in high-debt countries.

The final issue we address is how the eventual integration of the UK into EMU could affect the euro/dollar exchange rate. Since predictions about exchange rate behaviour are very difficult to make, we simply try to identify some factors that seem to have been correlated with changes in the euro-dollar and sterling-dollar exchange rates during 1990-2001. The variables that seem statistically correlated with the euro/dollar and sterling/dollar bilateral exchange rates are productivity differentials, interest rate differentials, oil price changes, expected growth rate differentials and capital net flows into the US (particularly net corporate bond flows).

Trends in these explanatory variables might explain why sterling has performed relatively better than the euro versus the dollar. As far as the effect of oil price changes are concerned, the UK is less dependent than Euroland on oil imports (in fact, the UK is a net oil exporter). Therefore, the doubling of oil prices during 1998-2001 is likely to have had a smaller effect on the sterling/dollar exchange rate. Being outside EMU (and in a different economic cycle position), the UK could adopt a higher interest rate than the EMU countries during 1995-2001, and this might have contributed to supporting the British currency. In the last few years, the UK economic performance has also been better than that of Euroland (as reflected in the positive expected growth differential UK-EMU in 1995-2001) reflecting a less regulated institutional environment, which makes investments into the UK more attractive than in continental Europe. However, the better performance of the UK has not matched that of the US, and the UK has also suffered a net outflow of capital into the US, which has weakened sterling, albeit less than the euro. The sterling/dollar exchange rate is likely to have been affected by the differentials in stock exchange returns, which might reflect the large capital movements existing between the US and the UK and the role played by London in international financial markets.

The eventual integration of the UK into EMU would affect some of the possible factors driving the euro/dollar exchange rate. The UK's entry will make EMU less dependent on oil price shocks, could raise EMU's expected economic growth and could slightly lower the Euroland inflation rate. These changes in the underlying fundamentals of the euro/dollar exchange rate could contribute to an improved performance of the euro against the dollar. Capital flows between EMU and the US, however, also seem to have played some role as a driving factor in the euro/dollar exchange rate. With the integration of the UK into EMU, bilateral capital flows between the US and the enlarged EMU will represent (based on end 2001 data) about two-thirds of total world capital flows into the US. Therefore, the euro/dollar exchange rate is likely to become even more sensitive to trends in capital flows across the Atlantic.

Capital flows are mainly determined by the expected return on capital, which depends on the productivity performance and the relative degree of attractiveness of direct and portfolio investments of one area versus another. Accordingly, the future performance of the euro versus the dollar is likely to depend on the ability of Europe to make investing in Euroland more attractive to investors. According to recent OECD estimations, the gap in the return on capital between the US and Europe has increased from 10% in 1990 to 15% in 2001. It should come as no surprise that the share of US investments financed by foreign investors increased from 7% in 1995 to 25% in 2001.

Given the high level of foreign investment flowing into the UK, the integration of the UK into EMU should raise the relative degree of attractiveness of foreign investment into Euroland. By integrating the UK into Euroland, EMU will attract more capital from third countries thus improving the net capital position of the area and ultimately supporting the euro/dollar exchange rate. The UK's high degree of attractiveness of foreign investment is mainly determined by its favourable regulatory environment. In terms of labour and product market regulations, the UK is broadly similar to the US and the other English-speaking countries. The UK entry into EMU will therefore be perceived as a shifting towards the Anglo-Saxon model of capitalism. As a result of the elimination of the exchange rate risk, UK will attract an even larger share of foreign investment flowing into Euroland and this is likely to increase the pressure on other European governments to introduce more incisive reforms in the labour and product market. The final outcome of this process might be that Euroland will look more similar to US and other English-speaking countries, thereby reducing the competitiveness gap with US.

Annex 1

Econometric Tests on Euro/Dollar and Sterling/Dollar Bilateral Exchange Rates

A.1 Data and econometric methodology

Economic literature usually focuses on multilateral exchange rates. In this paper, we prefer to carry out the analysis on a bilateral basis for three reasons. First, a lot of attention has been focused on the dollar/euro exchange rate, which has become the most important bilateral rate in international financial markets. Therefore, it makes sense to concentrate the analysis on this bilateral exchange rate. Second, we want to stress the relative performance of sterling in relation to the euro and the likely effect of the integration of the British currency in EMU on the strength of the euro against other world currencies. By comparing the trend in the bilateral rates euro/dollar and sterling/dollar and associated explanatory variables, we can identify major differences, particularly during the EMU period (1999-2001). By using bilateral data, it will also be easier to "isolate" the effects of the eventual entry of sterling on the key explanatory variables identified in the analysis below.

The period covered in the analysis is 1990-2001. This is a period long enough to capture major changes in economic fundamentals and compare the 1990-95 period (which was characterised by relative stability of the euro/dollar exchange rate) with the 1995-2001 period when the dollar appreciated vis-à-vis most of the world's currencies. As far as the pre-EMU euro/dollar and euro/sterling exchanges are concerned, we use a so-called "synthetic" value of the euro extended to 1990. Before 1999, the exchange rate is based on the values of the constituent currencies. Recent empirical work shows that the use of a synthetic euro does not lead to biased results when compared, for instance, to the use of the Deutsche mark/dollar rate for the pre-EMU period (Meredith, 2001). All data sets are quarterly.

From an empirical point of view, the co-determination of most of the factors underlying movements in the exchange rate demands sophisticated statistical methods. Several approaches can be adopted depending on the time horizon under consideration. The estimation of the effects of the UK entry into EMU on the euro/dollar exchange rate would require a model that measures the changes in the fundamentals following EMU's enlargement and their interrelation with the euro exchange rate. Such an approach has been used for instance by Barrel (2002) to assess the likely effects of the UK's entry into EMU on volatility in economic

growth and inflation in the UK and in EMU countries. Simulations show that joining EMU reduces price-level variability and raises output variability in the UK whereas EMU output, inflation and price-level variability are reduced. The results for the UK mainly reflect the removal of shocks to the euro sterling exchange rate and the UK's adoption of the ECB "two-pillar" ECB monetary policy approach. Final results are also dependent on the assumption that the UK economy is more sensitive to interest rate changes so that if the UK enter EMU, any change in interest rate by the ECB would produce a larger deviation from trend.

An alternative and more simplified approach is to use a variable-by-variable analysis to identify the variables that are statistically significant. Subsequently, we can test whether the correlations of interest still hold in a multivariate regression. We will also carry out some tests in terms of stability. The analysis of the relationship between the euro/dollar exchange rate and possible explanatory factors will suggest potential directions for the development of the exchange rate. This will make it easier to analyse the effects of the UK's entry into EMU on the euro by looking at the changes in each individual fundamental following the integration of the UK into Euroland. For instance, a lot of emphasis has been put on the role played by financial flows from Euroland to the US to explain the recent weakness of the euro versus the dollar. Should the UK join EMU, what would be the effect in terms of capital flows from the enlarged Euroland to the US and how would the change affect the exchange rate euro/dollar?

A.2 Potential determinants of bilateral exchange rates

According to the variable-by-variable approach, in Table A.1 we present the list of bilateral variables that have been used as potential determinants of the euro/dollar and sterling/dollar bilateral exchange rates. In order to avoid "spurious" results in the regressions due to the some series being I(1), we have worked with the first differences of variables or with growth rates that are stationary according to standard significance levels.

Table A.1.1 Unit root tests, 1990:1-2001:4

	ADF Test Statistics*					
	EMU/US			UK/US		
	Level	First Difference	Growth Rate	Level	First Difference	Growth Rate
1. Dependent Variable						
Bilateral Exchange Rate	-0.71	-4.11	-3.89	-1.68	-4.72	-4.44
2. Explanatory Variables						
Price Differentials (1)	-2.18			-4.18		
Bilateral Current account (2)	0.22	-2.34	-6.21	1.05	-3.19	-4.98
Productivity differentials (3)	-1.44	-3.90		-1.47	-3.47	
Oil price (4)	-4.28	-3.04		-4.28	-3.04	
Short-term interest differential (5)	-1.38	-2.09		-2.52	-2.39	
Long-term interest differential (6)	-1.38	-4.23		-1.13	-2.73	
Net Treasury Bond Flow (7)	-1.73	-3.81		-2.28	-4.13	
Net Corporate Bond Flows (8)	-1.57	-3.80		-0.87	-4.24	
Net Agency Bond Flows (9)	-1.59	-3.93		0.03	-4.50	
Net Corporate Stock Flows (10)	-1.05	-4.30		0.82	-3.99	
Net Bond Flows (11)	-2.36	-3.84		-2.27	-3.20	
Net FDI (12)	-1.35	-3.75		-1.87	-4.23	
Stock Return Differential (11)	-3.59			-4.53		
Stock Capitalis. Differential (12)	-1.97	-2.89		-1.96	-4.57	
Relative expected growth (12)	-3.67			-2.04	-3.44	

* ADF statistic with constant including 4 lags of first difference. Coefficients in bold indicate significance at the 5% MSL. (1) Differential in the CPI growth rate between EMU/US and UK/US (2) Bilateral current balances EMU/US and UK/US (USD bn) (3) Differential in growth rate of labour productivity EMU/US and UK/US (4) Crude oil price index (1995=100) (5) Differential in three month interest rate EMU/US and UK/US; (6) Differential in 10-year bond interest rate EMU/US and UK/US; (7) Net Treasury Bond Flows to US from EMU and UK, (8) Net corporate bonds Flows to US from EMU and UK (9) Net Agency Bond Flow to US from EMU and UK; (10) Net Corporate Stocks flows to US from EMU and UK; (11) Net Total Bond Flows to US from EMU and UK; (12) Net FDI to US from EMU and UK (11) Quarterly change in the differential of stock indexes EMU/US and UK/US; (12) Stock Capitalisation (% of GDP) Differential EMU/US and UK/US; (13) Expected growth rate differential according to Consensus Forecast data in US, EMU and UK (Expected growth rates are calculated by taking a weighted average of the expected current and future year growth rate from the Consensus Forecast)

A.3 Identification of significant and correctly signed determinants of bilateral exchange rates euro/dollar and sterling/dollar in 1990-2001

In this section we present the results of the regressions of the bilateral exchange rate euro/dollar and sterling dollar on the explanatory variables illustrated above. Each equation regresses the change in the logarithm of the bilateral exchange rate on a constant term and the contemporaneous value of the explanatory variable. We carried out regressions for three sample periods: 1990:1-2001:4, 1995:1-1995:4 and 1995:1-2001:4. The sub-periods have been selected according to trends in the euro/dollar and sterling/dollar exchange rates. In 1995, the euro/dollar and sterling/dollar exchange rates did not appear to be too overvalued by historical standards. Most of the appreciation of the dollar with respect to the other world currencies took place during the second half of the 1990s. Unfortunately, we cannot assess whether the relationship between exchange rate and explanatory variables changed after the launch of the euro because of the insufficient number of observations in the sub-period 1999:1-2001:4.

Table A.1.2 Bilateral exchange rate euro/dollar*

	1990:1 - 2001:4		1990:1 - 1995: 4		1995:1-2001:4	
	Coefficient	R ²	Coefficient	R ²	Coefficient	R ²
Inflation Differentials EMU-US	-6.230 (-2.86)	0.15	-9.94 (-3.22)	0.33	-3.65 (-1.27)	0.058
Current Account	0.012 (1.24)	0.033	0.008 (0.670)	0.017	-0.02 (-1.207)	0.053
Prod. differential US- EMU (lagged 4 Q)	-0.008 (-2.487)	0.118	-0.009 (-0.932)	0.018	-0.009 (-2.61)	0.208
Oil Price (lagged 3 Q)	-0.167 (-3.59)	0.237	-0.147 (-2.06)	0.180	-0.186 (-2.80)	0.231
Short-term Interest Differential US-EMU	0.0013 (0.417)	0.060	-0.0065 (-1.51)	0.098	0.015 (2.34)	0.17
Long-term interest differential US-EMU	-0.008 (-1.89)	0.066	-0.007 (0.387)	0.0066	-0.0108 (-1.97)	0.10
Corporate bonds flows	-0.021 (-1.11)	0.026	-0.025 (-2.33)	0.277	-0.013 (-1.139)	0.04
Agency Bonds flows	0.0806 (1.73)	0.075	-0.016 (0.116)	0.0006	0.0826 (2.368)	0.17
Corporate stock flows	-0.062 (-0.769)	0.004	-0.01 (0.181)	0.001	-0.0417 (-1.410)	0.071
FDI	-0.003 (-0.638)	0.08	-0.018 (-1.047)	0.049	-0.0015 (-0.367)	0.005
Expected Growth Differential US-EMU	0.011 (-1.87)	0.071	-0.0082 (-1.124)	0.037	-0.053 (-3.33)	0.32
Stock Return Differential US-EMU	0.1224 (0.868)	0.017	0.217 (0.972)	0.043	0.0019 (0.121)	0.015
Stock Capitalization Diffe. US-EMU	-0.0157 (-0.57)	0.008	-0.012 (-0.205)	0.002	-0.023 (-0.94)	0.032

*Coefficient in bold are statistically significant

Table A.1.3 Bilateral exchange rate sterling/dollar*

	1990:1 - 2001:4		1990:1 - 1995: 4		1995:1-2001:4	
	Coefficient	R ²	Coefficient	R ²	Coefficient	R ²
Inflation Differentials (UK-US)	-0.853 (-1.08)	0.02	-1.274 (-1.27)	0.052	0.559 (0.77)	0.101
Current Account	-0.007 (-0.21)	0.001	-0.014 (-0.205)	0.002	-0.0039 (-0.097)	0.003
Productivity differential (lagged 4Q)	0.0024 (0.402)	0.003	0.00267 (0.250)	0.003	-0.0033 (0.756)	0.021
Oil Price (lagged 3Q)	-0.102 (-2.27)	0.111	-0.108 (-1.393)	0.097	-0.091 (-2.51)	0.196
Short-term InterestDiff. US-UK	-0.042 (-4.81)	0.33	-0.060 (-4.49)	0.48	-0.015 (-1.72)	0.102
Long-term interest diff. US-UK	-0.0057 (-0.260)	0.01	-0.026 (-0.600)	0.001	0.014 (0.999)	0.03
Corporate bonds flows	-0.0008 (-1.515)	0.005	-0.0009 (-2.51)	0.28	-0.0004 (-0.179)	0.006
Agency Bonds flows	-0.0125 (-0.663)	0.009	-0.042 (-0.768)	0.027	-0.00508 (-0.545)	0.011
Corporate stock flows	-0.0014 (-0.301)	0.002	-0.051 (-1.72)	0.12	0.0009 (0.403)	0.006
FDI	-0.0005 (-0.155)		0.0321 (0.908)	0.037	-0.00147 (-0.737)	0.02
Expected Growth Differential US-UK	-0.0216 (-2.714)	0.10	-0.0318 (-1.79)	0.183	-0.0123 (-1.57)	0.06
Stock Return Differential US-UK	-1.21 (-4.55)	0.330	-1.48 (-3.95)	0.373	-0.34 (-1.108)	0.048
Stock Capitalization Differential	0.0045 (0.389)	0.003	0.0034 (0.200)	0.002	0.007 (0.479)	0.008

*Coefficient in bold are statistically significant

A.4 Confirmation of results in a multivariate framework and stability test

According to the results illustrated above, the economic and financial variables associated with the fluctuation of the euro/dollar exchange rate are oil price changes, productivity differentials, capital flows EMU-US

and expected growth differentials. In order to confirm our results, we present in the table below the results of the regression of the log change of the euro/dollar bilateral exchange rate on its identified determinants. The results are quite robust considering that:

1. The significance levels of the coefficients remain relatively good; and
2. The sign of the coefficients do not change compared to univariate regressions used for the identification of the key determinants of the euro/dollar exchange rate.

Table A.1.4 Regression euro/dollar exchange rate

Dependent Variable: Log of euro/dollar exchange rate				
Method: Least Squares				
Sample(adjusted): 1992:1 2001:4				
Included observations: 40 after adjusting endpoints				
Convergence achieved after 11 iterations				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
Constant	0.017	0.012	1.426	0.163
Oil Price Change	-0.179	0.071	-2.517	0.017
Productivity Differ.	-0.009	0.003	-2.807	0.008
Net Capital Flows*	-0.001097	0.000754	-1.454765	0.1549
Expected Growth Diff.	-0.020	0.007	-2.713	0.010
AR(4)**	0.255	0.133	1.914	0.064
R-squared	0.405	Mean dependent var		-0.010
Adjusted R-squared	0.318	S.D. dependent var		0.042
S.E. of regression	0.035	Akaike info criterion		-3.753
Sum squared resid	0.041	Schwarz criterion		-3.500
Log likelihood	81.06	F-statistic		4.637
Durbin-Watson stat	2.631	Prob(F-statistic)		0.002

*Net purchase of corporate stocks + corporate bonds + treasury bonds by EMU residents (in US\$ bn); ** AR(s) is the autoregressive error term according to the following formula:
 $y = f(x) + u_t$ where $u_t = \phi u_{t-s} + \varphi_t$

One of the key assumption of our results is that there is no structural break following the introduction of the euro. The stability of our results is good considering that:

1. Running the same multivariate regression for different sub-periods (including 1990-98 and 1999-2001), does not lead to large changes in significance levels and the sign of the coefficients.

2. In the table below we report the results of the Chow test for stability which indicates that there is no structural break following the introduction of the euro in Q1 1999.

Table A.1.5 Results of Chow test for stability

Chow Breakpoint Test: 1999:1			
F-statistic	0.187	Probability	0.978
Log likelihood ratio	1.568	Probability	0.955
Chow Forecast Test: Forecast from 1999:1 to 2001:4			
F-statistic	0.404	Probability	0.946
Log likelihood ratio	7.971	Probability	0.787

As far as the sterling/dollar exchange rate is concerned, we already mentioned that the results are less satisfactory than in the case of the euro/dollar exchange rate. However, as far as the variables identified to be significant for the sterling/dollar exchange rate – oil price changes, expected growth differentials and stock return differentials – are concerned, we present in the table below the results of the multivariate regression. Once again, the results are quite robust both in terms of significance level and expected signs.

Table A.1.6 Regression sterling/dollar exchange rate

Dependent Variable: Log of sterling/dollar exchange rate				
Method: Least Squares				
Sample(adjusted): 1991:1 2001:2				
Included observations: 42 after adjusting endpoints				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
Constant	0.006	0.007	0.993	0.327
Oil Price Change	-0.099	0.041	-2.440	0.020
Expected Growth Diff.	-0.015	0.007	-2.004	0.052
Stock return Diff.UK-US	0.882	0.294	2.995	0.005
R-squared	0.372	Mean dependent var		-0.008
Adjusted R-squared	0.323	S.D. dependent var		0.041
S.E. of regression	0.034	Akaike info criterion		-3.827
Sum squared resid	0.044	Schwarz criterion		-3.661
Log likelihood	84.36	F-statistic		7.511
Durbin-Watson stat	2.333	Prob(F-statistic)		0.000

CHAPTER 2

THE CEECs' ROAD TO THE EURO AREA

1. Introduction

This chapter examines the likelihood that the candidate countries of Central and Eastern Europe will join the euro. Over the last decade, these countries have come a long way. Eight of them (the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, the Slovak Republic and Slovenia) are likely to join the EU in 2004. The two remaining Central and East European countries (CEECs), Romania and Bulgaria, will not be able to join in 2004, but they are not lagging far behind, and 2007 seems now a realistic date for their accession. This implies, as explained in more detail below, that by the end of this decade all 10 CEECs could have joined the euro area, which is then likely to have more than 20 members and potentially as many as 25.

When could the euro area expand to the east? EMU membership requires compliance with the Maastricht convergence criteria, which includes membership of the European Exchange Rate Mechanism (ERM II) for at least two years. Thus, even if the candidate countries became members of the EMR II upon their entry in the EU, they would still have to wait for at least two years after joining the EU before they could start distributing euro notes and coins to their citizens. The first enlargement of the euro area to the East could thus be in 2006.

Membership of the Economic and Monetary Union is an integral part of the *acquis communautaire*, and the candidate countries have accepted this as a political commitment with all its implications. This means they are bound to become members of the eurozone at some point in time. Until then, they will be EMU members with a derogation for introducing the single currency. From a legal point of view, they would be in the same category as Sweden at present. No candidate has requested an opt-out clause as did Great Britain and Denmark.

However, the soon-to-be new members still have to make a number of crucial decisions towards making their way to the euro. What would be the right moment to join the ERM II in order to achieve the optimum balance between the costs and benefits of introducing the single currency? How can they make sure that the way is smooth? Answers to these questions are far from easy since opinions on these issues vary widely.

Thus, membership in EMU involves a number of complex issues of timing. Many have voiced fears concerning the premature adoption of the euro. The group of “early-euro” sceptics includes such prominent EU players as the European Central Bank and the European Commission, whereas the academic community seems to be split on this issue.

This chapter addresses the prospects of the candidate countries to become member of the eurozone and identifies potential pitfalls along the way. It is organised as follows: Section 2 provides an overview of the latest macroeconomic developments in the candidate countries, while section 3 assesses their progress towards real convergence. Section 4 considers issues of external stability of the candidate countries that might become highly relevant during the transition to the euro area. Section 5 explores the level and prospects of nominal convergence as defined by the Maastricht Treaty. And finally, structural issues, relating mainly to financial markets, are dealt with in Section 6.

2. Latest macroeconomic developments and prospects in the CEECs

The growth performance of the candidate economies over the last few years suggests that they can withstand adverse external developments and that they might continue with moderate but stable growth rates even if the EU is close to stagnation. As long as the EU economy does not pick up – which currently takes two-thirds of their exports – economic growth will have to be driven by domestic demand.

Considerable current account deficits, often above 5% of GDP, have over the last years accompanied the transformation process. In 2001, the average deficit was slightly below 5% of GDP, and this level seems to be sustainable provided the strong capital inflows continue (see below for an analysis of potential problems). The overall level of current account imbalances is not expected to deteriorate in the coming period, despite the negative effect of the global slowdown on exports of the candidate countries, due to the lower price of imported commodities and especially oil. Rapid development in the export of services, especially tourism, is another factor working to reduce the current account imbalances.

In line with the slowdown in growth, inflation rates have continued to decline in most CEECs (the average inflation rate declined from 12.3% in 2000 to 9.2% in 2001). The average inflation rate for the 8 CEECs scheduled to accede in 2004 would actually be around 6%. Most candidate countries are thus already close to price stability, but they might find it difficult to achieve further reductions in inflation due the so-called Balassa-Samuelson effect according to which the process of

catching-up implies higher inflation even at constant exchange rates (for more see below).

Table 2.1 Basic indicators of the candidate countries (2000)

	Popula- tion	GDP per head		Inflation	Unem- ploym.	Gross capital form.	FDI	
	Millions	Curr. prices	PPS	%	%	% of GDP	Stock per capita	Net inflow % of GDP
EU-15	378.4	22,520	22,400	2.1	8.2			
Bulgaria	8.2	1,600	5,400	10.0	16.4	16.2	239	7.1
CR	10.3	5,400	13,500	3.9	8.8	28.3	2213	9.0
Estonia	1.4	3,800	8,500	4.0	13.7	23.4	1980	8.0
Hungary	10.0	5,000	11,700	9.8	6.4	22.9	1790	2.9
Latvia	2.4	3,300	6,600	2.6	8.0	24.6	934	5.7
Lithuania	3.7	3,300	6,600	1.0	15.4	18.7	683	3.4
Poland	38.6	4,400	8,700	10.1	15.0	25.3	671	5.3
Romania	22.4	1,800	6,000	45.7	10.8	18.5	317	2.8
Slovakia	5.4	3,900	10,800	12.0	18.6	30.0	1000	10.8
Slovenia	2.0	9,800	16,100	8.9	7.0	27.8	1348	1.0

Table 2.1, cont.

	Exp to EU (% of total)	Trade balance as % of GDP	Share of industry (% of gross value added)	Share of agriculture	
				% of gross value added	% em- ployment
Bulgaria	51.2	-9.9	25.1	14.5	NA
CR	68.6	-6.2	36.0	3.9	5.1
Estonia	76.5	-15.8	14.6	6.3	7.4
Hungary	75.1	-4.4	26.9	4.8	6.5
Latvia	64.6	-14.9	16.3	4.5	13.5
Lithuania	47.9	-9.8	22.8	7.6	19.6
Poland	69.9	-7.8	29.0	3.3	18.8
Romania	63.8	-4.6	27.6	12.6	42.8
Slovakia	59.1	-4.7	25.8	4.5	6.7
Slovenia	63.8	-6.2	27.7	3.2	9.9

Sources: European Commission and EBRD (share of industry).

Despite much higher growth rates than in the EU (still 3% in 2001, after 3.7% in 2000), the region is characterised by high unemployment rates. The average unemployment rate exceeded 13% in 2001, which is one percentage point higher than the preceding year and thus similar in magnitude to the slowdown in growth. The increase in unemployment despite continuing growth of around 3% suggests that labour productivity is increasing rapidly, at around 3% p.a. This is exactly how the catching-up process should work. But the higher level of unemployment (even higher than in the EU) indicates that the labour markets of candidate countries also suffer from a high degree of structural rigidities. We provide further evidence on this below.

3. Real convergence and fitness for EMU

This section looks at the candidate countries' prospects to integrate into EMU. It starts with a brief look at "real convergence" (defined as catching up in terms of output and productivity). The discussion will then turn to the question how to determine whether or not the candidate countries would benefit from joining the euro.

3.1 Catching up

One of the major objectives of the EU, imbedded in the treaties, is the achievement of real convergence between its members. The forthcoming enlargement is going to pose a serious challenge to the successful fulfilment of this objective, as the candidate countries are scheduled to join soon starting from a substantially lower level of economic development than a vast majority of the current EU-15. According to the neo-classical growth theory, the candidate countries that are characterised by lower income levels and capital to labour ratios are expected to grow at a faster rate than the current, more developed EU member countries. This argument is encouraging.

But experience suggests that convergence might not be that easy. First, it has to be stressed that catching up is not a fast process. The weighted average per capita GDP expressed in PPP reached 40.5% of the EU average in 1995. In 2000, it increased to 43% which means only 2.5 percentage points of improvement. After excluding Romania and Bulgaria, the increase was 3.5 percentage points (from 42.5% to 46%). Also the pattern of convergence was rather uneven among the candidate countries. The largest increases were experienced by Slovenia, Estonia, Hungary, Poland and Latvia. For some other EU candidates, the recent transition experience is not very encouraging indeed. The Czech Republic, Romania and Bulgaria even experienced real divergence.

Table 2.2 GDP per capita as a percentage of the EU average

	BL	CR	EE	HU	LI	LA	PO	RO	SI	SL
1995	32.5	62.4	32.6	46	31.4	25.1	34.4	27.9	62.9	44.1
2000	28	58.8	38.5	51.1	33.3	30	39.4	23.3	69.4	47.9

Source: Own computation on the basis of AMECO data.

In terms of broad indicators of economic structures, it is difficult to find strong systematic differences between the candidates and the poorer member countries. The share of agriculture in GDP is still somewhat higher than in the EU, but in absolute terms, it is already rather low in most of the eight candidates for membership in 2004. In terms of the share of industry in GDP it is also difficult to argue that the candidates are different from current member countries. The fundamental reason why it is so difficult to make any firm judgement about systematic differences in economic structure is that there are large differences even among the present EU members. For example, the share of industry in GDP varies considerably even among the so-called Club Med¹ countries. In both Portugal and Italy, the share of industry is rather high, at around 30% of GDP. This cannot be considered a sign of high (or low) level of development since Italy's GDP per capita is slightly above the EU average and Portugal's is the poorest member country. By contrast industry is relatively much less important in Spain and Greece, providing only around 15% of GDP. As all four of these countries are already successful members of the euro area, there is apparently a very large range of economic structures that are compatible with membership in EMU. On the basis of the limited data that are available, it appears that the candidates do not fall outside this range.

In terms of employment, the differences in economic structures would appear to be larger, particularly with respect to Romania, Bulgaria and Poland where a huge part of the labour force is officially employed in agriculture. However, while this will undoubtedly create social problems in these countries and problems for the Common Agricultural Policy, it is less relevant for the issue of EMU membership since value added in this sector is such a small part of GDP.

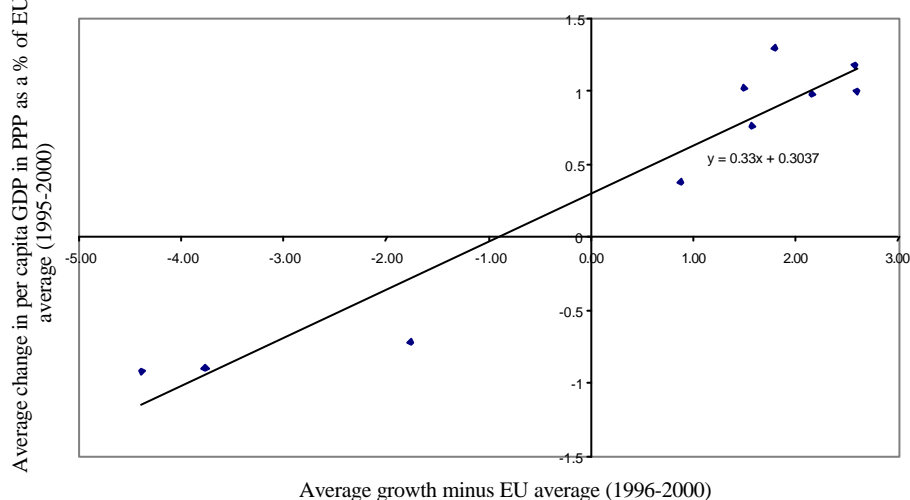
Moreover, one cannot avoid questioning the reliability of the data and of the definitions used for identifying farmers, particularly concerning Poland. Many who are classified as farmers exercise this activity only on a part-time basis and it appears that their average age is close to 60, so

¹ Portugal does not have a coast on the Mediterranean Sea, but it is nevertheless usually counted as an honorary member of Club Med.

that their numbers will shrink rapidly over the next years in any event. A comparison with the Club Med is again instructive. The average share of agriculture in employment for this group of southern member countries is actually not far from that of most candidates and the Club Med countries share the characteristic of many applicants that the relative productivity is particularly low in agriculture (the share in GDP is only a fraction of the share in employment). As shown in Pelkmans et al. (2000) Portugal had at the beginning of the 1990s actually almost the same employment structure as Poland now. The concerns regarding the large shares of the employment in agriculture for the candidates are thus likely to be overstated when one discusses how quickly these countries should join the euro.

The candidate countries usually achieve higher growth rates of GDP than the incumbent EU members and it is often expected that they will retain higher growth during the forthcoming period. Is this enough to achieve higher real convergence? Figure 2.1 suggests that the answer is yes. The countries with higher real GDP growth have achieved higher convergence in terms of per capita GDP levels expressed in purchasing power parities. The countries that reported negative average growth in the period between 1995 and 2000 – Bulgaria, Romania and the Czech Republic – indeed experienced an increase in the differences between levels of economic development.

Figure 2.1 Candidate countries: Real convergence and growth



In general, the relationship between the relative real GDP growth and the level of development defined as per capita GDP in PPP (as a percentage of the EU average) does not have to be that straightforward. The changes in the relative levels of economic development can thus be caused not only by the real growth but also by the changes in international relative prices and exchange rates. The European Commission (2001b) suggests that the changes in international relative prices favoured all of the CEECs with the exception of Slovakia. Hence, they caught up more (or diverged less) than would have been the case had only the growth rates been taken into account.

Real convergence in the narrow economic sense is not a precondition for successful functioning of the monetary union as the experience of the current member states amply demonstrates. Nevertheless it is certain that achieving a higher level of output levels accompanied by convergence of economic structures would make it easier to manage the euro area. Therefore, some observers have called for the introduction of an additional criterion for euro area membership, namely to have passed a certain threshold in terms of GDP per capita as a % of the EU average (75% has been proposed).

Introducing any additional convergence criteria based on the narrow concept of real convergence would anyway not be compatible with the Treaty. Moreover it would de facto imply a standstill to eurozone enlargement. As mentioned above, the catch-up process must be expected to be slow. As the candidates gained only less than 4 percentage points over 5 years (1995-2000) as documented above, it is clear that the experience so far does not suggest that the candidates will catch up very quickly. At this rate it would take them a generation, about 25 years, to reach 75% of the EU-15 average. This would be more than 75% of the EU-25 (or EU-28+ by then?) because the candidates will lower the EU average once they join. But even to reach more than 75% of the EU-25 average is likely to take more than a decade.

3.2 Standard optimum currency area indicators

The costs and benefits of establishing a monetary union are often judged using the optimum currency area (OCA) theory. Unfortunately, the quantification of the OCA criteria is rather controversial, and therefore, it is not certain that such an approach can provide an unambiguous indication of whether a country is “ripe” to give up its currency and join a monetary union. Since it is the most widely used methodology, however, it might provide some useful insights into the core issues.

The following standard six indicators from the optimum currency area approach are used:

- 1) *Intra-industry trade*. This is an indicator of the extent to which two countries exchange similar goods. The higher this indicator the lower should be the likelihood that trade is affected by asymmetric shocks. Technically we use the Grubel-Lloyd index on the basis of the 2-digit CN-level of trade structures. This index is calculated as one minus the sum of the absolute value of net exports of each CN 2-digit sector over the sum of total exports and imports (2000 data).
- 2) *Trade structure similarity*. The more similar the trade structure, the lower should be the likelihood that trade is affected by asymmetric shocks. The measure used here is the correlation coefficient between the shares of about 100 products (at the 2-digit CN-level) in overall intra-European exports and in the exports of each EU member to other EU members (2000 data).
- 3) *Real GDP growth correlation*. Correlation coefficient between real GDP growth in the EU-12 and the respective country from 1993/4-2000.
- 4) *Industrial growth correlation*. Same method as above.
- 5) *Unemployment rate (changes) correlation*. Correlation coefficient between the unemployment rate of EU-12 and the candidate countries, 1994-2001.
- 6) *Exports to EU-15*. Expressed as a percentage of GDP (2000).

The first two indicators capture the differences in economic structures that are supposed to measure the potential for asymmetric shocks. Indicators 3 to 5 measure the extent to which the economies of individual countries have tended to move together to converge on the EU average over the observed period. The last indicator measures the importance of trade with the rest of the EU and is thus a measure of the expected benefits from EMU.

In Table 2.3, the values of the indicators for the CEECs and for some of the current EU members, both the “euro” and “non-euro”, are provided.² It is important to stress that the absolute value of the indicators should not be taken at face value in order to determine whether a country is suitable for joining a monetary union, as it is difficult to say what magnitudes are still acceptable. Rather, one should look at the relative ranking of the

² Fidrmuc and Korhonen (2001) also present correlation coefficients of GDP growth based on quarterly data and arrived at approximately same results.

countries. Moreover, the start of the transition process in the late 1980s and early 1990s was marked by substantial “transitional recession” which was caused by the switch from centrally planned economic systems to the market-based economies.³

Table 2.3 The traditional OCA indicators

	Intra- industry trade	Trade structure similarity	Real GDP growth correlation	Industrial growth correlation	Unemploy- ment rate correlation	Exports to EU-15
CR	74	92	7	30	-20	39
Estonia	56	51	14	44	-19	58
Hungary	76	91	89	75	-30	43
Poland	59	84	16	16	-58	13
Slovenia	72	86	39	82	40	32
Bulgaria	40	23	43	43	-49	23
Romania	42	29	-20	-38	-25	19
Latvia	22	10	30	29	28	24
Lithuania	36	27	-4	-12	-61	18
SR	68	88	14	72	-30	33
Average	54.5	58.1	22.8	34.1	-22.4	30.2
GER	95	77	68	90	85	14
GRE	22	26	64	56	64	5

Source: Own calculations based on AMECO data.

The OCA indicators provide rather mixed evidence. The value of the structural variables is on average quite high. Also the value of exports to the EU countries as a percentage of the GDP is high pointing to the fact that the candidate countries are strongly tied to the EU market and thus would significantly benefit from joining the euro area. On the other hand, the indicators of business cycle co-movement score rather poorly and in the case of changes in unemployment rate, the correlation is even slightly negative. Therefore, one could prematurely conclude that the candidate countries hardly form an optimum currency area, at least in the traditional sense. However, several caveats have to be made.

The overall picture hides huge differences between the candidate countries themselves. As for the structure of trade, the most advanced countries can be easily compared with the EU economies. The Baltic

³ For this reason the analysis is restricted to the period from 1993/4 to 2000.

states (perhaps with the exception of Estonia) and the South Eastern candidates still have very different compositions of trade compared to the EU both in terms of their general structure and their share of intra-industry trade. In the case of the Baltic states, it might be their small size that contributes to the extremely low values of indicators of intra-industry trade and trade similarity. They have no choice but to specialise in a limited number of industries. The structure of export industries thus does not provide a very comforting picture. Wood industry and textiles account for almost 50% of Latvian exports. Lithuanian exports are dominated by mineral products, textiles and machinery. Estonia seems to be less vulnerable to industry-specific shocks as its economy is more diversified with machinery as a major export article. Nevertheless, their high degree of openness makes the Baltic states interested in joining a large currency area. The advantage they will derive from EMU membership will also depend on EMU's size when these countries join. For instance, the current exports of Lithuania to the EU countries account only for 48% of GDP. If the euro area also comprised Poland and Lithuania's Baltic neighbours, the share would rise to roughly 70%.

The data on business cycle developments show that, with the notable exception of Hungary, the CEEC cycle is clearly out of sync with that of the eurozone. This may be to a large extent caused by the unsettled economic features of the candidate economies and a series of country-specific crises, e.g. the Czech Republic went through a recession in 1997 and 1998. Economic growth in the country resumed only recently and continues even despite the sharp slowdown in the EU. The Baltic states suffered deeply as a consequence of the Russian crisis at the end of 1990s. Also Bulgaria witnessed a severe crisis in 1997.

The relatively unfavourable values of the indicators that are supposed to embody the costs of adoption of a common currency do not necessarily need to lead to the conclusion that the CEECs are not suitable candidates for EMU membership. As Frankel and Rose (1998) note, some of the OCA indicators are endogenous and are bound to change once the countries join the monetary union.⁴ It is thus possible that the indicators

⁴ Frankel and Rose (1998) apply the Lucas critique argument by saying that the establishment of a monetary union (in our case accession of the candidate countries to EMU) is bound to significantly change the nature of the business cycles in the member countries through an increase in intra-EMU trade and the impact of a common monetary policy. They put stress on the role of trade flows, which will according to their evidence lead to greater synchronisation of the business cycles. "Thus cyclic correlation is endogenous with respect to trade integration." Note, however, that Eichengreen (1992), Kenen (1969), and

of co-movement in macroeconomic variables such as GDP growth, industrial growth and unemployment rates will adapt and become more synchronised with the EU average. Therefore, we can argue along these lines that countries like the CEECs would not satisfy the OCA criterion of a high correlation with the core countries as long as they stayed outside, but that they would satisfy this criterion once they had been inside EMU for some time. Moreover, the business-cycle indicators have been heavily influenced by the fact that the candidates have undergone the process of transition.

Obviously, this point concerns the relative development of business cycles which can to a certain extent be considered as policy-induced, but the trade structures would not likely be much affected by EMU membership as they depend on structural characteristics that change only very slowly over time.

3.3 Correlation of business cycles: A caveat

What can one conclude from the observation that the correlation between real GDP growth rates over a certain period in the recent past has been positive?

Is it unambiguously better to consider joining EMU if the correlation of shocks has been positive? An example should be enough to illustrate a conceptual problem that is almost always neglected. Assume that (domestic) demand shocks have positive spill-over effects in EMU so that a positive shock to demand in the euro area would increase demand also in the country in question (and vice versa, but this is less important in this context). It can be shown that in this case it might well be better for the candidate for EMU if the correlation between the demand shocks (at home and in the euro area) is negative.

To illustrate this point, simply consider what happens if the correlation is positive (say, at the limit equal to 1). In this case, the foreign (=euro area) demand shocks will tend to come at the same time as domestic ones. As the spillover effects were assumed to be positive, it follows that domestic booms (and busts) will be reinforced by the spillover effects of the euro area booms and busts. It could thus be better for a country considering membership of EMU if the correlation between the demand shocks was negative (under the hypothesis that the spillover effects are positive). Berger, Jensen and Schielderup (2001) use a standard model to analyse

Krugman (1993) for example believe that trade integration will result in greater specialisation of the economies and thus the correlation of business cycles could actually decline if supply shocks were to prevail.

the ramifications of this idea. They seem to have been the first to draw attention to this line of reasoning.

The standard reasoning would be different; it would emphasise that the common monetary policy of the euro area will not be appropriate for the candidate country if the correlation is negative. Consider the case of a strong negative correlation between domestic and foreign demand shocks. In this case, the ECB is likely to tighten monetary policy when the home country is experiencing negative shocks. This is clearly not appropriate from the point of view of the home country, but how important is it? The negative correlation implies that a negative shock in the home country is likely to happen when there is a positive shock in the euro area. As long as the spillover effects are positive, this implies that a negative demand shock at home will usually be mitigated by the stronger demand coming from the euro area so that negative domestic demand shocks will not lead to severe downturns. Hence, it might not matter that much that the common monetary policy is not entirely appropriate for the country in question.

Another factor that influences whether a negative correlation of shocks is an indicator of potential problems with joining the euro is the effectiveness of monetary policy. If monetary policy does have a very strong influence on output (compared to the spillover effects resulting from foreign shocks discussed above), the monetary policy stance could become decisive in determining output in the home country. In this case the home country might suffer from a common monetary policy that is based on the euro area developments if the correlation of the shocks is negative.

These considerations imply that one should be careful in jumping to the conclusion that countries for which the correlation coefficient (between national and euro-area data) of GDP growth (or other business-cycle indicators) is positive are automatically better qualified for EMU than countries for which the correlation coefficient is negative. Moreover, it would also seem inappropriate to conclude that a higher correlation coefficient is necessarily better.

The discussion so far has identified two key factors: the sign and size of spillover effects and the effectiveness of monetary policy in stabilising output. There is very little one can say about systematic cross-country variations of the latter as very little is known about which factors in reality influence the monetary transmission channel. Only little more is known about the size and sign of the spillover effects of demand shocks. But there is a general presumption that they are positive and sizeable.

Gros and Hobza (2001) show that this might not be the case for the larger EU countries. However, one would presume that for the very small and open economies of the smaller candidate countries (e.g. Estonia or Slovenia) the spill-over effects from an expansion of euro area demand could be positive and sizeable; or, at least, greater than for the larger candidates, e.g. Poland. This implies that one should evaluate the traditional OCA indicators somewhat differently for the smaller candidate countries.

3.4 Identification of demand and supply shocks through VAR

The correlation coefficients of GDP and industrial growth may not be considered as the most appropriate measure of co-movement of business cycles⁵ and thus the likelihood of occurrence of asymmetric shocks. A more refined method might be required. Therefore, Fidrmuc and Korhonen (2001) estimated the correlation of the supply and demand shocks between the candidate countries and the euro area using a structural VAR model. Supply and demand shocks were recovered with the help of the decomposition developed by Blanchard and Quah (1989).⁶ Their findings once again underline the heterogeneity of the group of EU candidates. Hungary and Estonia in particular are characterised by a relatively high degree of correlation of both supply and demand shocks with the euro area.⁷ The other candidates, including the most advanced

⁵ At least because high values of the coefficient only show that the GDP (or other indicators) move in the same direction but fail to provide information on the actual magnitude of the movements. Further, it is not possible to distinguish between the impact of supply and demand (permanent/temporary) shocks.

⁶ The decomposition of the reduced form error terms to supply and demand shocks is the main point of criticism of this approach. The identification of the reduced form VAR model is based on the assumption that demand shocks do not have permanent effects on output, whereas supply shocks do. As Minford notes in his Discussion of Bayoumi and Eichengreen (1993), this is doubtful. The temporary shocks could, for example, reflect temporary supply shocks, temporary effects of monetary and fiscal policies or effects of the exchange rates. Similarly, the permanent shocks reflect not only the supply factors but also the permanent responses to them (both fiscal and monetary). It is thus difficult to distinguish the nature of the shocks which then reduces the validity of the conclusions. If the exchange rates are found to be effective in dealing with a certain type of shock, it would be useful to be able to isolate these shocks. But then, it would be desirable to distinguish between shocks and the responses to them, which the VAR methodology does not allow.

Slovenia and the Czech Republic, show little correlation of shocks. Some of them have even negative correlation of the demand shocks. An interesting case is Lithuania, which reported a negative value also in the case of correlation of the supply shocks. This might be caused by the highly specific structure of its economy.

Fidrmuc and Korhonen also updated the analysis of Bayoumi and Eichengreen (1993) and found that, interestingly, some of the countries that had been marked by the latter as peripheral have converged significantly. Thus Italy, Spain and also Portugal achieved a rather high correlation with the euro-area shocks. This seems to support the hypothesis of the endogeneity of the OCA criteria. Therefore, it appears that during the period of preparation for EMU and its early years, the increased interaction between the economies has led to a synchronisation of their business cycles. This would be good news for the candidate countries.

Boone, Maurel and Babetski (2002), also using a VAR model, found that the level of demand-and-supply-shock symmetry in the CEECs is approximately at the same level as the symmetry of shocks in countries such as Spain and Portugal at the time of their accession to the EMU. Further, they discovered some evidence on demand shock convergence with the EU/Germany.⁸ According to their evidence, however, supply shocks have hardly converged during the first decade of transition, which might be due to the Balassa-Samuelson effect. Unlike Fidrmuc and Korhonen, they do not report any convergence of the economic shocks in the EMU “periphery”.

3.5 Labour market flexibility

The threat of diverging economic developments in the candidate economies which would pose a challenge to the formulation of economic policies in both the eurozone and at national level can be mitigated if the labour markets are flexible enough to act as an efficient adjustment mechanism. The labour markets of most of the current EU members are usually considered to be too rigid and calls for greater flexibility are often heard. Where do the candidates stand in this respect?

⁷ The correlation of the demand shocks was in general lower than that of the supply shocks. This might be a result of different economic policies followed by the national governments and as such could be expected.

⁸ With the use of the time-varying estimation (Kalman filter), they computed “time-varying correlation coefficients” of the development of shocks.

Riboud et al. (2002) attempted to assess the flexibility of the labour market institutions in six CEECs (the Czech Republic, Estonia, Hungary, Poland, Slovakia and Slovenia). In order to compare them with developed economies, they made use of the OECD methodology applied in its Jobs Study (1994) and Employment Outlook (1994 and 1999). According to their findings, these countries fall somewhere in the middle of the flexibility scale compared to the OECD countries. Although they do not reach the level of flexibility of the UK, Ireland and Denmark, they still exhibit much greater flexibility than the rather rigid Club Med countries, France and Germany (see Table 2.4 and Figure 2.2).⁹ As regards unemployment insurance systems, the CEECs seem to be less generous than the OECD or EU countries. They also spend less on both passive and active employment policies. In terms of the role of unions in the wage negotiation process, the candidates fall somewhere in the middle, although they have extremely high payroll and also other taxes which significantly exceed the highest levels in the EU.

Table 2.4 Labour market flexibility in the CEECs

	Employment protection legislation***				Unemployment insurance		Taxes	
	Regular empl.	Temporary empl.	Collective dismissals	EPL strictness****	Benefit replacement ratio	Benefit duration (months)	Payroll tax rate (%)	Total tax rate (%)
CR	2.8	0.5	4.3	2.1	50	6	47.5	73.4
Estonia	3.1	1.4	4.1	2.6	10	3-6	33.0	63.3
Hungary	2.1	0.6	3.4	1.7	64	12	44.0	81.5
Poland	2.2	1	3.9	2	40	12-24	48.2	80.0
Slovakia	2.6	1.4	4.4	2.4	60	6-12	50.0	81.0
Slovenia*	3.4 (2.9)	2.4 (0.6)	4.8 (4.9)	3.5 (2.3)	63	3-24	38.0	69.1
CEEC average	2.7	1.2	4.1	2.4	48		43.4	74.7
EU average**	2.4	2.1	3.2	2.4	60		23.5	53.0
OECD average	2.0	1.7	2.9	2.0	58		19.5	45.4

* Numbers in brackets refer to the new labour code if approved.

** EU average without Luxembourg and Greece.

*** 1: minimum protection, 6: maximum protection.

**** Weighted average of the first three columns.

⁹ In terms of employment protection legislation, however, Slovenia belongs among countries with the highest degree of inflexibility. This status could change somewhat if the new proposed labour code, introducing much more flexible provisions for both permanent and temporary contracts, is approved.

Table 2.4, cont.

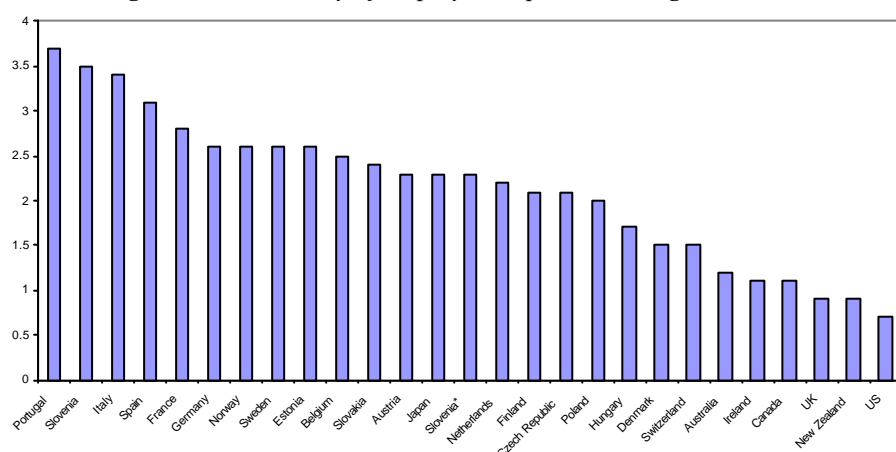
	Passive policies		Active policies		Unions			
	% of GDP	Spending per un-employed	% of GDP	Spending per un-employed	Union density (%)*	Union coverage index**	Coordination: unions	Coordination: employers
CR	0.31	0.04	0.19	0.02	42.8	2	1	1
Estonia	0.08	0.01	0.08	0.01	36.1	2	2	1
Hungary	0.56	0.06	0.40	0.04	60.0	3	1	2
Poland	1.71	0.12	0.49	0.03	33.8	3	2	1
Slovakia	0.54	0.05	0.56	0.05	61.7	3	2	2
Slovenia	0.89	0.11	0.83	0.11	60.0	3	3	3
CEEC average	0.68	0.06	0.42	0.04	49.0			
EU average	1.73	0.26	1.16	0.16	44.4			
OECD average	1.43	0.23	0.92	0.14	39.6			

* Percentage of salaried workers who belong to a union.

** 1: less than 25% of salaried workers are covered by collective agreements; 2: between 26 and 69% are covered; 3: 70% or more are covered.

Source: Riboud et al. (2002).

Figure 2.2: Flexibility of employment protection legislation



* Slovenia after new labour code is approved.

Source: Riboud et al. (2002).

Labour market institutions are usually found to have played a limited role, however, in the transition economies (Boeri and Terrell, 2002 and

Riboud, 2002). As these countries have undergone a fundamental systematic change, the evolution of the labour markets was largely shaped by general approaches to transition such as macroeconomic stabilisation or structural reforms. At the beginning of transition, candidate countries suffered a large drop in their economic output. This was (with an exception of the Czech Republic) followed by a rapid increase in the unemployment rate and a decline in labour market participation (which had been unusually high for some population groups during the communist regime). Interestingly, the unemployment rates have not come down until now (the Czech one rose after the recession in 1998), although output has recovered substantially. The labour market institutions might have somewhat contributed to this persistence in unemployment (Riboud et al., 2002).

The CEECs thus generally opted for labour market institutions similar to those found in Western Europe. One explanation may be that the candidate had to align their legislation with the *acquis communautaire*, which includes several provisions regarding labour market regulations.

Having the same degree of labour market distortions as the old EU-15 might indicate the new members will, *ceteris paribus*, not have more problems than the old ones. But this is certainly also not a desirable situation. Previous CEPS reports have documented that Europe's rigid labour markets carry considerable costs as they stymie growth and slow down the adjustment to shocks.

In order to cope with the challenges posed by monetary integration the candidate countries, like the old member countries, would benefit from having more flexible labour markets. Then, an adverse demand shock to a country or a region could be compensated by the appropriate adjustment in real wages and/or a speedy reallocation of labour from one sector to another. Therefore, the key for the candidates would be to focus on introducing mobility-friendly labour market reforms. This does not necessarily entail an across-the-board minimising of all the labour market institutions, however. For example, Boeri and Terrell (2002) point out that the CEECs put greater emphasis on non-employment benefits and thus imposed floors to declines in wages whereas the former Soviet Republics preferred higher (downward) flexibility of wages throughout the transition process. The fact that output and productivity have recovered so much better in the CEECs (compared to the CIS) suggests that the "less flexible" approach of the CEECs was in the end more conducive to structural reform than the supposedly "flexible" approach of the CIS. The candidates should thus be careful in terms of the reforms of labour markets they introduce.

4. Assessing the stability of the candidate countries

4.1 Current accounts

Current account deficits are usually presented as a percentage of GDP, which is useful if one wants to focus on the capacity of a government to service foreign debt. However, if one wants to have an idea of the exchange rate adjustment required to re-establish current account equilibrium, one should relate the deficit to overall export receipts (goods and services). Under certain reasonable conditions, one could actually argue that the deficit as a percentage of export receipts gives directly the percent depreciation required to eliminate the deficit without a contraction in domestic demand. For example, a deficit equivalent to 20% of exports would require a devaluation of about the same magnitude.¹⁰

Table 2.5 Current account deficits (as a % of export receipts)

	1996	1997	1998	1999	2000	2001
Bulgaria	0.2	7.1	-3.3	-16.1	-10.1	-10.5
CR	-13.0	-11.5	-4.1	-4.7	-6.5	-6.6
Estonia	-13.7	-15.6	-11.5	-6.1	-6.7	-6.8
Hungary	-9.7	-4.6	-9.5	-8.3	-5.2	-5.0
Latvia	-10.7	-12.0	-20.7	-22.0	-15.1	NA
Lithuania	-17.2	-18.8	-25.6	-28.2	-13.2	-7.8
Poland	-4.7	-14.5	-14.8	-21.1	-19.2	-15.8
Romania	-26.8	-21.7	-31.3	-14.4	-10.8	-16.6
Slovakia	-18.2	-15.5	-15.2	-8.1	-5.0	-9.9
Slovenia	0.2	0.1	-1.3	-7.5	-5.5	-2.6

	1990	1991	1992	1993	1994	1995
Portugal	-0.8	-3.3	-0.8	1.0	-8.6	-0.4
Spain	-21.5	-22.2	-21.6	-6.2	-6.4	0.4

Source: Own computations based on European Commission data.

On this account, there is relatively modestly divergence in the data between the CEECs. Most of them seem to have been able to stabilise their current accounts (see Table 2.5). Out of the first-wave countries, Poland experienced the highest current account deficit, amounting to

¹⁰ The conditions are that imports are relatively price inelastic and that the demand curve for exports has an elasticity of one, which is not far from typical estimates in the empirical literature.

more than 15% of export receipts. However, Poland managed to decrease the ratio from values of above 20% and thus get under the values experienced by Spain during the early 1990s. (Portugal had only negligible deficits during this period.) This ratio has been much lower in Slovenia, the Czech Republic, Estonia, Lithuania and Hungary. The two latter countries succeeded in achieving significant reductions in the current deficits in recent years. Bulgaria, whose deficit stays at levels of about 10%, was joined by Slovakia, which experienced a sharp deterioration of the current account balance. The problems of external balance appear to be largest in Romania with very little hope for early stabilisation.

These data imply that a country such as Poland would require a very large depreciation, over 15%, should it ever need to achieve a balanced current account quickly. It is usually argued, however, there will be no need for this because the deficit is financed by stable flows of foreign direct investment. This argument was also frequently used prior to 1992 in the case of Spain and Portugal. In comparison, countries such as Hungary and the Czech Republic are in a much more stable monetary environment, as their need for devaluation would be much smaller.

4.2 Foreign direct investment

Table 2.6 below shows that Portugal and Spain also had rather large inflows of FDI, again measured as a percentage of export receipts. For Spain, FDI flows averaged over 10% of exports during the pre-crisis period, and for Portugal they were only somewhat smaller.

For Poland the FDI flows in relation to export receipts have been considerably more important, financing most of the current account deficits. In all the other candidate countries, the current account deficit is to a larger or lesser extent covered by FDI flows too. In the Czech Republic, FDI inflows represent almost double the current account deficit.

The key question is thus for how long can the candidate countries count on inflows of this magnitude. In recent years, the CEECs have experienced rather stable flows. But can this go on forever? The experience of Spain and Portugal is again instructive in this respect. FDI flows to Spain halved in the year after the first attack (1993) and have since considerably fallen again after the second major attack (1995). By 1997, Spain became a net exporter of FDI, and later Portugal as well. With swings in external flows of this size it is not surprising that a large adjustment in the real exchange rate of the peseta was needed.

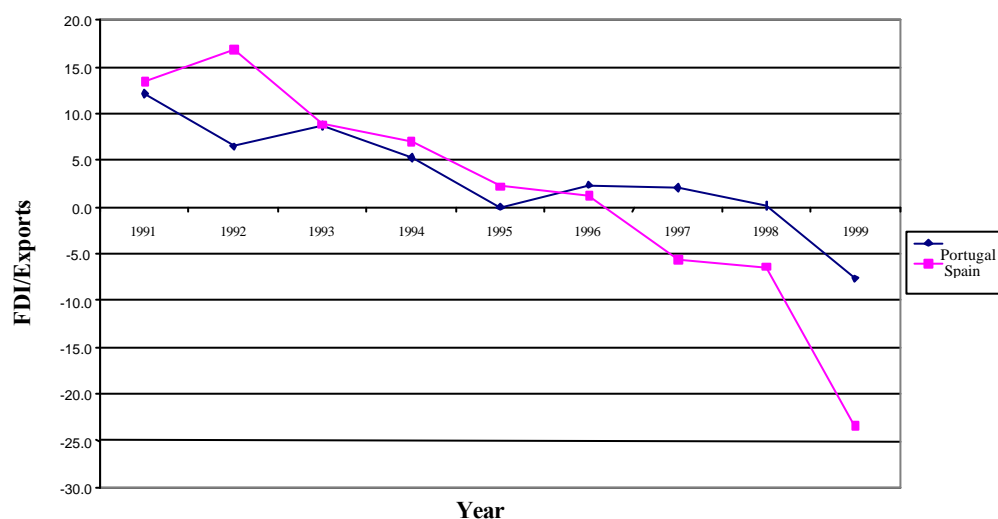
Table 2.6 FDI flows (balance of payments data) as a % of export receipts

	1997	1998	1999	2000	2001
Bulgaria	8.0	9.7	14.7	14.2	9.1
CR	4.3	11.2	19.1	13.7	11.8
Estonia	7.4	13.9	7.5	8.4	10.9
Hungary	10.5	8.6	7.8	5.9	7.4
Latvia	18.2	11.4	11.5	12.5	5.0
Lithuania	6.8	18.3	11.5	7.4	7.7
Poland	13.4	14.3	17.9	19.0	10.9
Romania	11.8	20.7	10.2	8.2	n.a.
Slovakia	1.5	4.3	3.2	15.1	8.4
Slovenia	3.6	2.2	1.7	1.6	3.1

	1991	1992	1993	1994	1995
Portugal	9.2	5.0	6.1	3.9	0.0
Spain	9.0	11.1	5.9	5.1	1.9

Source: Own computations based on European Commission data.

Figure 2.3 Foreign direct investment as a percentage of exports in Portugal and Spain



4.3 Savings and investment: Capital mobility and the candidate countries

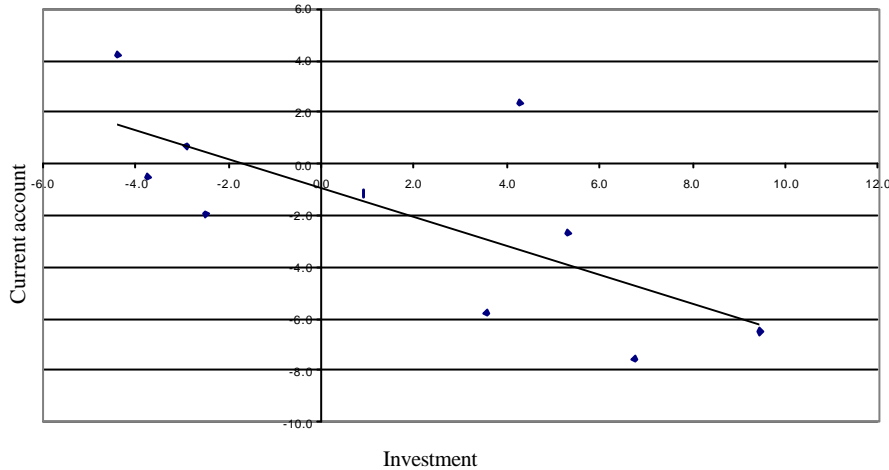
Large current account deficits could be justified if they finance the build-up of strong capital stock, whose returns can later finance debt service. Unfortunately, this mechanism does not seem to be the main driving force for current accounts in Central and Eastern Europe. This evaluation might appear to be surprising in view of the importance of the flows of foreign direct investment into the CEECs. Indeed, for most countries FDI flows are large enough to cover the current account deficits. But the key question is whether FDI is in addition to domestic investment. Here the evidence is not conclusive. Across countries there is only a rather weak tendency for countries with higher FDI to have also higher investment rates. Moreover, the countries with the largest current account deficits are not the ones with the highest investment ratios.

Another way to evaluate the driving forces behind the capital flows into the CEECs is to look at the relationship between the changes in current accounts and investment ratios across countries as depicted in Figure 2.4. It is apparent that countries that recorded large increases in the current accounts (as a % of GDP) were also mostly the ones with the highest increase in investment-to-GDP ratios. If one applies the Feldstein-Horioka criterion, this suggests that capital mobility is already rather high in Central and Eastern Europe.

How should one evaluate this apparent contradiction? It seems that capital is mobile at the margin (for the CEECs), but enormous differences exist among these countries as to their overall propensity to save. The poorer countries (e.g. Bulgaria and Romania) seem to have the lowest national savings rates (they have low investment rates, but still sizeable current account deficits). The large current account deficits make sense in an inter-temporal context, if one assumes that they help the country to accumulate capital faster than it could if it relied on national savings alone. But unfortunately the poorer countries do not seem to be the ones that grow faster, which is not surprising in light of their lower investment ratios. This points again to a risk: namely that some countries accumulate large foreign debts that finance an unsustainable rate of consumption. A protracted crisis is likely to result when capital markets discover that the country has difficulties servicing its debt because not enough capital (physical and human) was invested in the tradables sector. Hungary has been in this situation for most of the past decade. It emerged from the over-indebtedness trap only after a long period of belt-tightening which was politically and economically very painful (Poland extricated itself from a similar situation at the end of the 1980s thanks to a combination of

large-scale debt forgiveness and rapid growth). At present it appears that the CEECs are no longer in this situation, but the danger remains for the laggards, i.e. Bulgaria and Romania.

Figure 2.4 Relationship between Changes in Investment and the Current account between 1995 and 2000 (as a percentage of GDP)



4.4 Real appreciation and competitiveness

During the early 1990s, there was a lively discussion whether the Club Med currencies were overvalued. There was no general agreement, because the judgement depended, as usual, on the indicator and the base period used. The two indicators most often used to measure competitiveness are (and were then) the real exchange rate deflated by the Consumer Price Index (CPI) and by Unit Labour Costs (ULC). These two usually give different indications, now and then (see Table 2.7).

In the case of Spain, it was argued that there was no need for a large exchange rate adjustment because there was no real overvaluation – but only if one used ULC as the competitiveness indicator and 1980 as the base period. Not surprisingly, this was the position taken by the authorities. A similar argument was used in the case of Italy, where there was also a large discrepancy between the ULC- and the CPI-based measures.

The candidate countries today present a very similar picture. Depending on the base period and the indicator chosen, it can be argued that their currencies are overvalued by a very small margin or, on contrary, by a

very large margin. In the case of the Czech Republic, Hungary and Estonia, the potential overvaluation is relatively small across most indicators and base periods. Poland and Lithuania report much higher levels of real appreciation. In Romania, the CPI-deflated exchange rate indicates a considerable overvaluation, whereas the ULC-based one points to an undervaluation. In the future, further trend real appreciation of the candidate countries is expected. Recent strong appreciations have occurred, especially in the Czech Republic (from December 2001 to April 2002 by more than 10%), Poland and also in Hungary (after the country widened the Forint fluctuation band).

Table 2.7 Appreciating real exchange rates (percent appreciation relative to the indicated base period)

	2001 relative to 1996		2001 relative to 1999	
	CPI	ULC	CPI	ULC
CR	22	22	12	10
Estonia	21	20	5	-3
Hungary	24	9	13	9
Latvia	39	34	12	7
Lithuania	53	84	16	9
Poland	37	40	27	27
Romania	60	-13	17	-43
	End-1991 relative to 1980		End-1991 relative to 1987	
	CPI	ULC	CPI	ULC
Italy	31	-1	11	9
Spain	24	2	26	28

Sources: Gros and Thygesen (1998), p. 216, for Club Med relative to Germany.
 For candidate countries: own calculations on the basis of AMECO data, CPI relative to EU-12, ULC total economy.

The argument used by the CEECs that their currencies cannot be overvalued because the exports of most of the countries keep growing fast was also used in the case of Spain, where exports had actually doubled in dollar terms in the five years prior to the attack of 1992. This is typical of countries that have recently opened up to trade, such as the transition countries today or Spain in 1992, when it dismantled its last tariffs within the, then, EC. In such cases both exports and imports tend

to grow strongly, and whatever the exchange rate, more and more sectors are exposed to international competition.¹¹

These data suggest that sooner or later an exchange rate adjustment might be needed.¹² What does this imply for the exchange rate policies pursued by these countries?

For example, Poland and the Czech Republic officially follow a floating exchange rate, accompanied by domestic inflation targets. They are thus in a different situation than Spain and Italy in the early 1990s, which were members of a fixed exchange rate adjustment, the ERM. In theory, an exchange rate adjustment could thus come about gradually and without disruption.

However, experience has shown that large adjustments do occur, causing almost always some disruption in financial markets. This was the case even for Spain, which in 1992 actually had rather large room for manoeuvre under the ERM (Spain had margins of $\pm 6\%$). A sudden large depreciation usually forces the central bank to increase interest rates to limit the domestic inflationary pressures that would otherwise worsen inflation. Moreover, the terms of trade shock (deriving from the depreciation) in combination with higher interest rates might initially lead to a contraction in demand (as in Italy and Spain). This in turn puts pressure on the budget, leading to higher deficits, which then might undermine confidence and thus aggravate the depreciation.

Such a negative spiral does not need to develop. The case of Greece shows that a smooth “glide path” to EMU is possible. But it could be potentially dangerous for the candidate countries operating flexible exchange rate regimes to enter into an ERM-type arrangement that would tie their currencies to the euro before they have a clearer view of whether the current exchange rate levels are sustainable in the long run. The case of Greece, which successfully engineered a one-step surprise devaluation, is instructive in this regard.

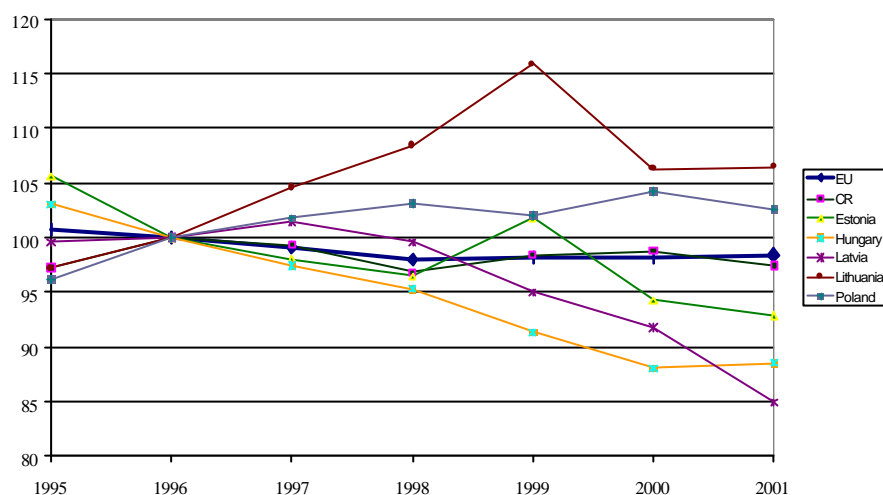
Nevertheless, the real appreciation, which is a natural consequence of the transition and catching-up process, does not necessarily have to be damaging for the candidate countries. If it comes through the Balassa-Samuelson effect, it does not imply any loss of international competitiveness (see section 5.1 below). Moreover, real appreciation may

¹¹ For an analysis of the experience of transition countries, see De Broeck and Sleek (2001).

¹² For further discussion of the potential for real appreciation in the transition economies, see Halpern and Wyplosz (2001).

also reflect further trade integration and elimination of non-quality-related price differences. Finally, it may generate pressure on the exporters to increase their productivity and improve performance and thus eventually lead to an increase in competitiveness. Figure 2.5 demonstrates that despite considerable real appreciation, the competitiveness (measured by real labour unit costs) has even increased in some of the candidate countries relative to the EU.

Figure 2.5 Real labour unit costs (1996=100)



5. Nominal convergence à la Maastricht

The ultimate condition for membership in EMU is to achieve a certain degree of nominal convergence with the other members as stipulated by the Maastricht criteria (see also Box 2.1). The EU institutions have so far made it clear that the criteria will have to be fully adhered to by the candidate countries in their run-up to monetary union.

The motivation behind the formulation of the Maastricht convergence test was three-fold. First, the EU countries wanted to create a stable, low-inflationary and growth-friendly environment – hence, the stress on the level of inflation and interest rates. Second, the founders of EMU wanted to eliminate the risk of free-riding behaviour and thus they introduced the conditions limiting the size of budget deficits and government debt. And eventually, the condition regarding the exchange rates was intended to

test the stability of the currency in question and the appropriateness of the level of exchange rate vis-à-vis the other ERM countries.

Box 2.1 The Maastricht criteria

Article 121 (ex. Article 109j) lists the criteria according to which the degree of sustainable convergence necessary for EMU entry is assessed:

- The achievement of a high degree of price stability: this will be apparent from a rate of inflation that is close to that of, at most, the three best performing member states in terms of price stability.
- The sustainability of the government's financial position: this will be apparent from having achieved a government budgetary position without a deficit that is excessive as determined in accordance with Article 104(6).
- The observance of the normal fluctuation margins provided for by the exchange-rate mechanism of the European Monetary System, for at least two years, without devaluing against the currency of any other member state.
- The durability of convergence achieved by the member state and of its participation in the exchange rate mechanism of the European Monetary System, as reflected in the long-term interest-rate levels.

A Protocol to the Treaty specifies the criteria by stating that a member state has to achieve price performance that is sustainable and an average rate of inflation, observed over a period of one year before the examination, that does not exceed by more than 1.5 percentage points that of, at most, the three best performing member states in terms of price stability. Further, over a period of one year before the examination, a member state has to have an average nominal long-term interest rate that does not exceed by more than 2 percentage points that of, at most, the three best performing member states in terms of price stability. In terms of stability of public finances, the general government deficit of a member state may not exceed 3% of GDP, or should be falling substantially or only be temporarily above though still close to this level, and the gross government debt may not exceed 60% of GDP at market prices, or must at least show a sufficiently diminishing rate and approaching the reference value at a satisfactory rate. And finally, a member state has to respect the normal fluctuation margins (in the case of ERM II $\pm 15\%$) provided for by the exchange-rate mechanism of the European Monetary System without severe tensions for at least the last two years before the examination. In particular, the member state shall not have devalued its currency's bilateral central rate against any other member state's currency on its own initiative for the same period.

Despite the fact that the Maastricht criteria had been heavily criticised, they proved, at least in terms of the stabilisation of public finances, rather successful. Indeed the EU countries managed in the run-up to EMU to bring the public deficits under control and those with substantial government debts succeeded in reducing them to more acceptable levels. On the basis of their early experience, at least it can be expected that the current eurozone countries together with the ECB and the European Commission will insist on “stringent”¹³ adherence to the original wording of the criteria. But many economists in this context have called for some tailoring of the criteria so that they are more suited for the candidates’ specific situation (Pelkmans et al., 2000, Halpern and Wyplosz, 2001, Buiter and Grafe, 2001 and Rostowski, 2002). They voice concerns that attempts to comply with the criteria in a relatively short time might prove destabilising for the CEECs and could potentially lead to a real divergence instead of a catching up.¹⁴

Let us first examine where the candidate countries now stand in terms of the values of the Maastricht indicators. The evidence is apparently mixed. They are doing quite well regarding the volume of general government debt. It is only Bulgaria that somewhat exceeds the stipulated threshold. Hungary also is uncomfortably close to the limit, but it has a promising record of having been able to push down the ratio from about 90% in the beginning of 1990s to the current 53.1%. In 2001, only one-half of the candidate countries managed to keep their budget deficits under 3% of GDP. These were the Baltic states, Slovenia and also Bulgaria. In terms of monetary indicators, the performance of the CEECs is lagging. The inflation criterion was, despite good progress towards achieving price stability by a vast majority, fulfilled only by Lithuania. The (unweighted)

¹³ In the sense that no formal changes to the criteria will be allowed. The interpretation of the criteria in the case of the incumbent EMU members was however a different story as a rather flexible approach was adopted. From this point of view, one could also expect a relatively benevolent approach towards the present candidates (or at least the candidate countries can use this fact in negotiations on entry). This time, however, the situation will be to a certain extent different. It can be assumed that the EMU membership of the current candidate countries will not be such a politically dominated issue as was the launch of the EMU in 1999 and therefore it is likely that more attention will be devoted to the economic aspects. This is also indicated by the rather cautious, if not discouraging, stance of the ECB in terms of the timing of the new members’ entry into the eurozone.

¹⁴ Note that the EU uses the same line of reasoning but arrives at completely different conclusions: the enlargement of the eurozone to the East should be postponed.

average of 8.7% highly exceeded the threshold value, which stood at 3.3% in 2001. Even if Romania and Bulgaria were excluded from the sample, the resulting 5.6% inflation is still substantially higher. The interest rate criterion is likely to be violated too.¹⁵

The candidate countries are not entering the eurozone today, however, and thus it makes sense to assess their preparedness in a more forward-looking manner. Hence one can compare the performance of the current EU/EMU candidates with that of the “weakest” EU countries aspiring to adopt the euro in late 1990s – the so-called Club Med (Portugal, Spain, Italy and Greece).

As already mentioned, the earliest possible date for the current candidate countries to join the eurozone seems to be 2006. In such a case, the final decision on accession would be made in 2005 on the basis of 2004/05 data. Therefore, in order to assess where the candidates stand today in comparison to the Club Med countries at approximately the same time before EMU entry, one should use the data for Spain and Portugal from 1993 and for Greece from 1995, as it joined EMU two years later. Table 2.8 presents the results of such a comparison.

In this context, it is immediately apparent that the candidate countries are in much better shape than were the Club Med countries five years before their entry into the eurozone. Thus, the candidates will not necessarily encounter problems in fulfilling the qualification criteria for becoming fully-fledged EMU members.

However, the European Commission’s forecasts (2002c) for 2004 indicate that the CEECs could still find it somewhat difficult to comply with the convergence criteria. Budget deficits and inflation are likely to cause the most problems.

This brings us again to the fact that early fulfilment of the convergence criteria might not be easy. Does this mean that the candidate countries should wait or is there something wrong with the criteria? Are they really suitable in their present form to generate the desired stability and favourable economic environment for real convergence in the candidate economies?

And indeed many economists argue that the criteria are not appropriate for the candidate economies. There are some inherent features of their economies that make it difficult for them, if not impossible, to comply

¹⁵ Moreover, interest-rate convergence will result from a stable exchange rate. Therefore, the exchange-rate stability criterion can also be viewed together with the criterion on interest rates.

with the criteria in the short- to middle-term, but that at the same time do not pose a risk to their overall stability and thus do not contradict the overall conditions for membership in the eurozone.

Table 2.8 Maastricht criteria – Candidate countries and Club Med

	Budget deficit (2001)	Debt (2001)	Inflation (2001)	Long-term interest rates (2001)
Bulgaria	0.4	66.3	7.4	5.0
CR	-5.2	23.7	4.7	5.4
Estonia	0.5	4.8	5.8	6.8
Hungary	-4.1	53.1	9.2	6.6
Latvia	-1.6	16.0	2.5	10.2
Lithuania	-1.9	23.1	1.3	6.3
Poland	-3.9	39.3	5.3	8.4
Romania	-3.3	23.3	34.5	49.2
Slovakia	-5.4	44.1p	7.3	7.7
Slovenia	-2.5	27.5	8.5	n.a.
Average	-2.7	30.8	8.7	11.7
Average-B,R	-3.0	26.8	5.6	7.3
1993/5 data				
Portugal	-5.9	61.1	6.9	9.5
Spain	-6.7	58.7	5.3	10.1
Italy	-9.4	118.2	5.5	11.1
Greece	-10.5	108.7	8.9	n.a.
Average	-8.1	86.7	6.7	10.2

p = Provisional.

Source: Own computations on the basis of Eurostat data.

5.1 Inflation: The Balassa-Samuelson effect

The candidate countries have in most cases a rather impressive record in bringing inflation down. All of the countries except Romania managed to achieve one-digit inflation rates and forecasts indicate that the stabilisation of price-level growth will continue in the years to follow. As is also apparent from the forecasts, however, inflation is expected to decline only modestly and stay at higher levels than those common in the EU and also the eurozone. This might have potentially important implications regarding the timing and strategy of accession of the candidate countries to EMU.

When looking for causes of such an inflation inertia, one has to resort to the theoretical framework of the Balassa-Samuelson effect explaining trend appreciation of the real exchange rates in terms of productivity differentials in the tradable and non-tradable sectors of an economy.¹⁶

The catching-up process in the candidate countries can be characterised by trend appreciation of their real exchange rates. Why is this so? The labour productivity in the candidate countries rises in most cases at a higher pace compared to the EU economies, and the large gap in price and productivity levels between the CEECs and the EU countries coupled with strong FDI inflows indicate that the faster productivity growth might be preserved in the future as well. However, the high degree of trade integration implies that most of the increases are experienced in the tradable sector. The non-tradable sector benefits from increases in productivity only to the extent the non-traded goods and services enter the production of the traded goods as intermediate inputs, thus facing indirect competition. As the marginal product of labour in the tradable sector increases and prices are kept at the world level due to international competition, wages in the sector also tend to rise.

The basic assumption of the model is that the wages in the economy tend to be equalised. First, there exists, although this in reality is somewhat limited, labour mobility between the sectors and thus the workers would move to better paid jobs in the tradable sector thereby generating pressure towards equalisation. Furthermore, trade unions also tend to make sure that the wage developments in the whole economy are more or less synchronised (Halpern and Wyplosz, 2001).

Thus, the increase in wages in the tradable sector results in equivalent increases in the non-tradable sector. However, the profitability of the non-traded sector facing rising wages and limited productivity increases cannot be retained without upward adjustment of prices of the non-traded goods and services. Hence, inflation in the non-traded sector tends to overtake inflation in the traded sector.¹⁷

¹⁶ Another reason might be the still considerably high share of goods and services in the consumer basket whose prices are not fully determined by free market forces (in Poland the share is estimated at almost 15% (Durjasz, 2001). This might be due to direct regulation or structural weaknesses. The case of regulated prices will not be further dealt with as it is reasonable to expect that the prices will have been deregulated by the time the candidate countries enter the EU/EMU.

¹⁷ The magnitude of the effect also depends on the demand-side effects. Rising increased productivity leads through increasing income and wealth to increases

Then, the evolution of the real exchange rate due to the Balassa-Samuelson effect can easily be depicted by several equations. The real exchange rate can be written as:

$$s_r = e + p^* - p$$

where \dot{a} is the rate of expected depreciation of the nominal exchange rate, and δ and δ^* are the inflation rates (based on the CPI index) in the transition country and eurozone, respectively. The overall inflation rate can be decomposed to inflation rate in the traded sector and inflation rate in the non-traded sector, δ^T and δ^N , respectively. Also in this case the asterisk will denote the eurozone. a will be the share of the tradables in the CPI index and its composition is assumed to be the same in the transition country and the eurozone. Thus,

$$p = ap^T + (1-a)p^N \quad \text{and} \quad p^* = ap^{T*} + (1-a)p^{N*}$$

From this follows that

$$s_r = e + ap^{T*} + (1-a)p^{N*} - ap^T + (1-a)p^N$$

Due to international arbitrage, it must hold that the inflation rate of domestic tradable goods is equal to the inflation of the eurozone tradable goods plus the expected rate of depreciation. Therefore,

$$p^T = p^{T*} + e$$

Then we can find that

$$s_r = -(1-a)[(p^N - p^T) - (p^{N*} - p^{T*})]$$

From this follows that the real exchange rate will appreciate if the difference between the excess inflation in the domestic non-tradable sector over the tradable sector is larger than that in the eurozone. And the higher differences in productivity levels in the transition countries compared to the eurozone indicate that this will probably be the case. The gap between the GDP per capita levels in the candidate countries and their EU partners is very wide. Thus there is a large potential for catching-up and productivity increases.

At this point it is important to stress that the Balassa-Samuelson (B-S) effect is an equilibrium phenomenon that naturally occurs when an

in consumption. If the demand for non-traded goods and services rises at a higher speed than the demand for non-traded goods, as is usually assumed because of their "superior" character, the price increases might be even further reinforced.

economy experiences economic growth. Through an adjustment in relative prices in the economy an appreciation of the real exchange rate is achieved. Therefore, higher inflation generated by this process is in no way a threat to the monetary stability of a country or its international competitiveness and there is thus no need to take counteracting economic measures.

It is of course important to know what the magnitude of the effect might be, or whether it occurs at all. ECB (1999) claims that a number of recent papers found evidence in favour of the Balassa-Samuelson hypothesis.¹⁸ Pelkmans et al. (2000) estimate that the inflation differential generated by the B-S effect might amount to between 3.5% and 4%. Halpern and Wyplosz (2001) arrived at a similar estimate of about 3.5%. Sinn and Reutter (2001) also report high levels of inflation which might be compatible with the Balassa-Samuelson effect. According to their estimates, the candidate countries might have inflation rates that are higher by between 3% to 7% than those in Germany, a country with the lowest difference between productivity in tradables and non-tradables sectors. Coricelli and Jazbec (2001) estimated the possible size of the effect for 19 transition countries and arrived at the conclusion that under the assumption of a yearly rate of real convergence between the transition countries and the EU of 2%, the B-S effect will result in real exchange rate appreciation of about 1%. The estimates of the UN (2001) vary between 2% and 2.2%. The Bundesbank (2001) arrived at estimates between 1.9% and 2.6%.

These numbers show large differences that are due to the different methods applied, the various sizes of the samples and the periods covered. Many are subject to reservations regarding the very short time

¹⁸ Typically, these studies have used econometric techniques to detect the existence of long-run relationships (co-integration) between relative price levels and relative productivity. In this framework, the direction of the applied studies has been two-fold. A first class of studies focuses on the relationship between long-run changes in relative prices and productivity differentials across countries, while a second set analyses the link between the productivity differentials and inflation differentials across sectors within countries. The general conclusion of the first approach is that there is evidence of a relationship between the evolution of the relative price levels across countries and that of productivity differentials. Following the second approach, a clear causality between productivity growth in the traded goods sector and inflation in the non-traded goods sector has been identified. Indeed, recent studies show that, while some of the more restrictive assumptions of the hypothesis are not supported by the data, there is still clear evidence that the B-S effect has been at work within the euro area.

periods used in estimations, which in addition were characterised by large structural changes. Also the division between the tradable and non-tradable sectors is hard to determine in practise. As a result studies use various techniques which make the results incomparable. Moreover, the estimates of the impact of the B-S effect on CPI inflation might be further distorted as most of the studies are using GDP value-added distinctions which can be considerably different (Durajsz, 2001). Moreover, some assumptions on which the estimates are based, such as full labour mobility and a resulting wage equalisation, can be in reality to some extent violated, which leads to an overestimation of the overall impact of the B-S effect.

Even if these reservations are taken into account, it is obvious that the B-S effect plays an important role. The estimated values in most cases exceed the 1.5% limit set by the Maastricht inflation criteria. From this point of view, insisting on a strict adherence to the criteria seems to be capable of generating economic crisis rather than achieving the desired stabilisation of the candidate countries. If a candidate country wishes to adopt the euro in the shortest possible time, as many of them already proclaimed they do, it will be forced to suppress the inflation under the stipulated limit which could trigger a recession. Of course, it can be argued that the effect will have a decreasing impact with the passage of time, but given the large differences in economic levels between the CEECs and the EU and thus also in productivity, it seems impossible that the gap would close sufficiently during the four years time between now and the desired “€day” for some of them.

The inflation problem could certainly be solved, at least temporarily, with the help of flexible exchange rates. The undesired, according to Maastricht criteria, inflation differential could be compensated for by proportional nominal appreciation of the exchange rate. This might however breach the criteria concerning the stability of exchange rates within ERM II. The relatively wide $\pm 15\%$ band could at times be too tight and an adjustment might be needed (Halpern and Wyplosz, 2001). It is worth noting, however, that this would mean a revaluation, whereas the exchange rate criterion (see Box 2.1) only refers to a unilaterally decided devaluation. The reasoning behind the Balassa-Samuelson logic would thus advocate considerable flexibility regarding revaluations. After the entry into the eurozone, the change in relative prices would still be needed in any event. As a result, inflation differentials will persist.

Box 2.2 What will be the cost of reducing inflation under the Maastricht threshold?

It is important to find an answer to the one key question that is likely to arise in reality rather soon: how much growth will have to be squeezed in the short run in order to allow a country with a strong B-S effect to reduce its inflation differential to the 1.5% allowed for by the Maastricht criteria.

In order to get a rough idea about possible magnitudes, one can perform a simplistic econometric analysis with data from the euro area (1999-2001) which should rather be taken as indicative than a precise estimate of the size of the effects in question. In this analysis the difference between national inflation rates and the euro-area average was explained by two variables: the relative price level and the cyclical position of the country. The result of a simple OLS regression was rather good in that the two explanatory variables had a strong and clearly identifiable impact on inflation differentials. The point estimate on the relative price level variable (defined as the ratio of per capita GDP at current prices to per capita GDP at PPP) allows one to make a prediction for the B-S effect for the candidates. For example, for Poland per capita GDP evaluated at PPP is around 36% of the EU average, but evaluated at current prices without purchasing power adjustment it is only 18% of the EU average, implying a relative price level factor of 0.5. Given the estimated point coefficient of around (minus) 3.6 this implies that inflation in Poland should be 1.8 % higher than the eurozone average. The B-S estimates for other candidate countries vary between 1.3% in Slovenia to 2.6% in Bulgaria.

One reason why the estimate of the B-S effect is lower than that in most of the previous studies might be that they just related inflation differentials to relative prices for the early years of the eurozone. But during these years it so happened that the poorer countries also were in particularly strong cyclical position (basically because their growth was still being fuelled by the huge interest-rate reductions that had taken place just beforehand). This means that the relative price variable also picked up the effect of the cyclical position, and was thus biased upwards. The introduction of the variable of cyclical position controls for this effect.

Moreover, the estimates presented here also show that it will be rather costly in terms of foregone growth to squeeze the economy for a while, just in order to qualify for EMU. The point estimate on the cyclical position proxy is around 0.3. This implies that one would have to reduce growth by 3.3% in order to reduce the inflation differential by one full percentage point.

Source: Gros (2002).

Moreover, some of the candidates have deprived themselves of this possibility by fixing their exchange rates in a form of conventional pegs or currency boards. Therefore, the appreciation of real exchange rates can only be achieved through changes in relative prices. These countries then have little possibilities to limit the overall inflation without resorting to price controls and generating recession at least in some sectors of their economies. From this point of view, an adjustment in the Maastricht criteria would be desirable without running the risk of damaging the commitment to price stability in the eurozone (Buiters and Grafe, 2001). The EU and member countries' officials have so far been opposed to such proposals, arguing on the principle that there should be an equal approach to all countries.¹⁹ It is worth noting, however, that no official intervention into the wording of the Treaty would be necessary as the quantification of the criteria is done in a separate protocol (Pelkmans et al., 2000).

From the above, it is obvious that the B-S effect is not only a transition specific phenomenon. SVR (2002) looked for the sources of relative price changes (tradables/ non-tradables) in the euro area, whereas Fagan (2001) looks directly at inflation differentials as a function, inter alia, of price level differences. Both identify the B-S effect as an important factor that could contribute to divergences in inflation rates.

Fagan (see Box 2.3 below), found that the price level differences are not the only or even main factor explaining inflation in the EMU countries. Indeed, the estimated coefficient is so low that differences in price levels contribute to inflation differentials only modestly. Hence, other factors also have to be found that would explain the actual and also expected differentials. In other words, the fact that the candidate countries are poor today does not automatically mean that they will have much higher inflation in the eurozone. Some fear that the accession of the applicant countries to the eurozone would endanger price stability. Ignoring the fact that the weight of these countries is negligible and so is their influence on the eurozone aggregates, it is important to realise that the higher inflation rates are a natural phenomenon that concerns the current member countries as well.

¹⁹ This is not that surprising after all, since the EU institutions do not account for the impact of the B-S effect on the interest rates differentials in the eurozone countries (Sinn and Reutter, 2001).

Box 2.3 Fagan (2001) panel estimate of HICP inflation (1999-2001) in the euro area

$$p_{i,t} = 0.14y_{i,t} - 0.045rp_{i,t-1} + 1.0t_{i,t} + 0.44dprod_i$$

$\delta_{i,t}$	- HICP inflation rate in country i in period t	(1% to 10%)
$y_{i,t}$	- Output gap (for EU: OECD estimate)	(-2.5 to 2.5%*)
$rp_{i,t-1}$	- Relative consumer price level	(0.4 to 0.5)
$\hat{o}_{i,t}$	- Indirect tax variable	
$dprod_{i,t}$	- Relative productivity growth (traded/non-traded)	(5% to 10%)
	$R^2=0.82$	$N=33$

Note: Numbers in brackets are typical numbers for candidate countries.

* For candidate countries computed as a difference between actual growth and average for 1995-2000.

The general conclusion one can draw from this partial survey is that the B-S effect exists. Therefore, if the inflation criterion remains without change, the candidate countries that want an early membership at a fixed exchange rate will have to accept a period of reduced growth in order to reduce inflation temporarily. This might not be needed if they engineer the appropriate appreciation just before joining. But at any rate they will have to accept higher inflation later if the catch-up continues. The key question is how much. The earlier estimates were quite high in this respect. However, the new evidence trying to disentangle the relative importance of various factors on the inflation differentials is somewhat more modest as far as the absolute values of expected B-S effect are concerned.

In any event, if the candidate countries decide not to push too much and wait with the introduction of the euro, one good year might help them to get under the magical limit and they would be in (Szapary, 2000, Pelkmans et al., 2000). This could, however, take somewhat longer than they would wish and could also bring along all the negative aspects of unfulfilled expectations including financial market volatility, reverse capital flows and increased pressure on their currency. On the other hand, such an approach would require longer-term sound fiscal and monetary policies that would generally support the overall stability.

5.2 Inflation: Maastricht criterion in need of adjustment

Apart from the specific problems that the candidate countries might incur due to the Balassa-Samuelson effect, there are also other reasons why one should have a closer look at the inflation criterion.

The Maastricht Treaty stipulates that the inflation rate in a prospective euro area member must be lower than the average of three best performing members plus 1.5 percentage points.

The first point to note is that the Treaty just speaks about member countries. This means that the benchmark for the euro area entry may be based on inflation not only in "euro" countries but EU members in general. And indeed, in the last three years there was always at least one non-eurozone country in the group of best performers (see Table 2.9 below). It is difficult to see why membership in the euro area should depend on data of a country that stays outside.

Moreover, the criterion was originally devised because there was a clear need for a benchmark to start EMU with a group of low-inflation countries. In the absence of an absolute benchmark, the Treaty drafters devised the concept of three best performing countries. However, now that the euro area exists, a suitable benchmark is available – the average euro-area-wide inflation rate. It makes sense to judge the readiness of the candidates to join the euro area by comparing them to this indicator.

Furthermore, since the business cycles in the EU are not perfectly correlated, there is always a possibility that the benchmark will be driven by a small number of (potentially small) countries that by chance experience abnormally low inflation (e.g. because of a local recession or tax changes) even in a generally expansionary environment. This was the case in 2000, when the three member countries with the lowest inflation rate averaged 1.3%, implying an inflation criterion of 2.8%. During the same year, Ireland, a happy euro-area member country, had an inflation rate of over 5%, whereas a candidate country with an inflation rate of e.g. 3% would have failed to satisfy the inflation criterion. Something similar has actually happened every year: the difference between the average of the three best performers and the highest eurozone national inflation was always above 1.5%.

Moreover, keeping the criterion without changes even after the EU enlargement would in reality mean to make it much stricter because with an increasing number of member states it becomes more and more likely that the three best performers are outliers, which are way below the eurozone average. This can be demonstrated in a straightforward way. Let us assume, for simplicity, that the inflation rate in all member

countries has the same (normal) distribution. The mean does not interest us in this context, but the variance becomes decisive. Over the last years the standard deviation of inflation has, by chance, been very close to 1 (%). One can then calculate the probability that the average of the three best performers falls in a certain range, given a certain number of member states. The simple value for the standard deviation found above implies that enlarging the EU from 15 to 25 members means that the probability of the average inflation rates in the three best performing countries would fall below the mean by more than 1.5 standard deviations doubles from about 30% to almost 60%. This implies that with an EU of 25 members it becomes 60% likely that the Maastricht criterion on inflation is actually below the euro-area average. This would lead to an absurd situation: unless the criterion is changed one might have to exclude a country from eurozone membership when its inflation rate is actually below the eurozone average.

Table 2.9 Inflation: The EU and the candidate countries

	1997	1998	1999	2000	2001
EU					
Eurozone	1.6	1.1	1.1	2.3	2.5
Average 3 best performing EU countries	1.2	0.7	0.6	1.3	1.8
Maastricht criterion	2.7	2.2	2.1	2.8	3.3
Highest inflation	5.4	4.5	2.5	5.3	5.1
3 best performing countries	At, Fr, Ir	At, De, Fr	At, Fr, Se	Fr, Se, UK	Dk, Fr, UK
Country with highest inflation	Gr	Gr	Ir	Ir	Nl
Candidates					
Average (unweighted)	10.3	8.6	5.2	6.6	5.4
Countries fulfilling criterion	0	0	CR, Lt, Lv	Lt, Lv	Lt, Lv
Countries with lower inflation than EU highest	0	La	CR, Lt, Lv	CR, Ee, Lt, Lv	CR, Lt, Lv

5.3 Fiscal challenge

Most of the candidate countries do not have any particular problems with fulfilling the debt criterion. In this respect the performance of the Baltic states is also striking with a public debt amounting to only 6% and 9% of GDP for Estonia and Latvia respectively. Bulgaria, which so far highly

exceeds the stipulated framework, is planning substantial reductions of the debt. Also Hungary which is now approximately at the level required by the Maastricht criteria is expecting a considerable consolidation of its debt position until 2004. What might be worrying is the dynamics of the public debt in some other candidate countries. It is especially the case of the Czech Republic, Slovakia and to some extent also Poland. The major reason is the necessary cleansing of their banking sectors which were troubled by several crises during the last couple of years. The data on bad loans in the economies (see below) indicate that a large part of this problem has already been solved, and thus no further large increases in the level of government debt should be expected. However, in the short-to medium-term, the debt-to-GDP ratios might still increase, but the process will presumably be over before the EU accession. Further pressure on public finances from this side should thus be limited.²⁰ Moreover, in most of the candidate countries, strong growth combined with relatively low deficits should lead to rather strong downward pressures on the debt-to-GDP ratio so that some debt assumption could take place without jeopardising the debt criterion.

A much greater problem seems to be the fulfilment of the deficit criterion. This is especially the case in a majority of the CEECs. In 2001, the Czech Republic, Slovakia, Poland, Hungary and also Romania greatly exceeded the 3% threshold for budget deficits. It is also worrying that no significant improvements are envisaged by some of them. The impact of expansionary fiscal policies could to a certain extent be limited by the fact that the higher deficits still reflect the costs of banking-sector restructuring.

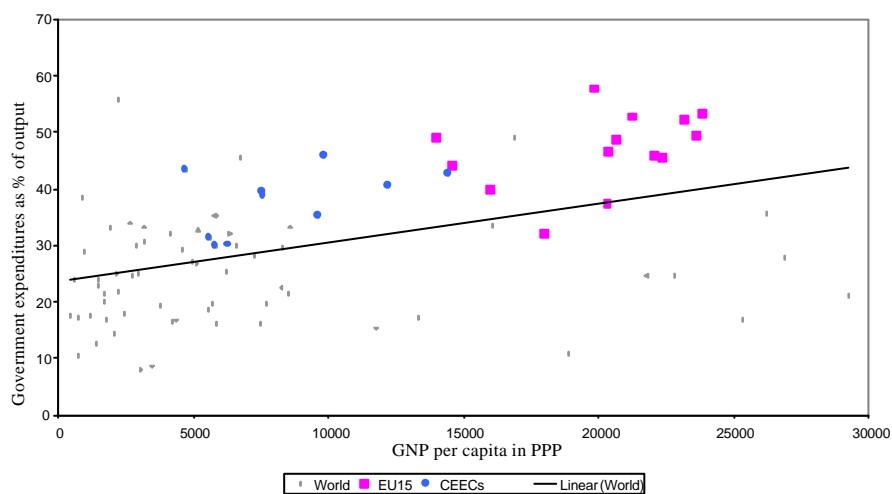
Achieving a fiscal deficit below 3% is essentially a question of political will. But the will seems to be withering in some of these countries. In the short-term they have often a very limited scope for reductions in deficits as a large part of the budgets is composed of mandatory expenditures. Moreover, tax collection is sometimes relatively inefficient, thus contributing to an increase in tax arrears and exerting further pressure on the balance of public revenues and expenditures. Therefore, substantial fiscal reforms are needed in order to provide the desired fiscal discretion. And it takes some time to phase-in such reforms. The conflict of political proclamations and lack of will or perhaps ability to take appropriate measures is especially apparent in Poland, which wants to adopt the euro as early as possible yet has failed to come up with a programme for the necessary reductions in budget deficits. The need for fiscal reforms in the

²⁰ See Pelkmans et al. (2000) for more details.

candidate countries is generally acknowledged, but their execution is very sensitive politically. Suhrke (2001) found that people in the transition economies exhibit a clear preference for more income equality compared to their West European counterparts. This “egalitarian” spirit might effectively prevent any attempts for larger reforms of public expenditure as they would most probably entail reductions in social transfers. Such an effect is likely to be much stronger in the wake of elections. On the other hand, the objective to join EMU which is positively accepted by the public in most of the candidate countries and which is conditional upon following healthy fiscal policies, could act as a catalyst for the reforms.

In this context, one can also ask whether it is only the structure of public expenditures that is not suitable for the transition economies. It might also be that the size of government is too big given their level of economic development. This would further support the argument for radical fiscal reforms. Figure 2.6, relating per capita GDP measured in PPP and size of the government for 88 countries, attempts to provide at least a partial answer to this question. And indeed, it seems that all of the candidate countries lie above the regression line, which would mean that they cannot afford to have such an extensive public sector at their level of development. Several caveats have to be made, however. The fit of the regression is rather loose. And further, if only the EU and the CEECs are taken into account, there seems to be hardly any relationship between the size of government and per capita output.

Figure 2.6 Size of government and economic development



A crucial question for the future shape of fiscal policies in the candidate countries is whether there are any longer-term (probably transition-related) factors that would urge the candidate countries to continue running large budget deficits? It is often argued that such pressure might arise from the need to build a modern infrastructure in the candidate economies, plus the pressure on their underdeveloped social systems. Thus according to Wagner (2001), an effort to comply prematurely with the budget deficit criteria might lead to real divergence. He argues that there is a trade-off between real and nominal convergence stemming from the need for the candidate countries to support their catching-up process by building an appropriate infrastructure. He goes even further by saying that some of the transition countries might "lag behind more and more, so that the other EU countries will politically be forced to bail these countries out. As soon as the financial markets assign high enough probability to this scenario, this may result in a significant EU-wide increase in interest rates and thus, at the worst, lead to an anticipatory recession." (Wagner, 2001, p. 31). However, these concerns seem grossly overestimated as the reliance on government investment as a prerequisite for economic growth is clearly doubtful.

Moreover, one also needs to know the extent to which the candidate countries are lagging behind the EU in terms of infrastructure. Public infrastructure in the CEECs is certainly less developed than in the current EU members. The candidates have fewer motorways and paved roads per inhabitant and square kilometre, fewer fixed telephone lines, etc., but this does not immediately imply that they therefore need more investment in this area. What they have might actually be adequate for their level of development.²¹ Poland for example has actually a larger stock of infrastructure than one would expect given its income per capita. It is thus difficult to argue that public infrastructure is the main impediment to growth.²² Moreover, once the CEECs join the EU they will be eligible for support under the regional policy of the EU, which is designed to finance this type of expenditure.

²¹ See Gros and Suhrcke (2000).

²² There are more reasons to doubt the need for large public infrastructure spending: Within the EU one actually does not find any link between public investment and growth in GDP. Ireland, by far the fastest-growing economy of the EU in recent decades, has a somewhat below-average ratio of public investment to GDP. Moreover, given the changes in financial markets that have taken place over the last decade, it is now generally recognised that most infrastructure projects could also be financed and sometimes even operated with substantial private sector involvement. Major projects, such as motorways, are already being undertaken on a mainly private sector basis in the candidates.

In the EU it is also often argued that the candidate countries have an underdeveloped social security system. It is true that pension expenditures figure prominently in the current debate over the budget crisis in Poland. But the same could be said of most EU countries as well. Indeed, most of the indicators that should signal pressure for spending in the social sphere show little difference between the EU and the CEECs.

For example, there is no significant difference in the age profiles between the EU and most of the candidates. The ageing problem is thus not worse for the new members. Poland actually has somewhat less of a greying problem than the EU. In terms of public spending on health and education (as a percentage of GNP), there is also little difference between the candidates (around 5%) and the EU average (below 6%).

On the other hand, there will be considerable costs of complying with the EU standards (especially environmental). A further "burden" on the candidate countries' budgets will be the requirement to provide a part of the funding of projects under the EU structural and cohesion programmes (Eichengreen and Ghironi, 2001). This could either prevent the candidate countries from making maximum use of the available funds or cause them to seek savings in other areas that could be efficiency decreasing. Thus, in a recession the candidates could be deprived of EU sources of financing, as they would not be able to provide their required part. Therefore, Eichengreen and Ghironi advocate increasing the 3% limit on budget deficits given by the Growth and Stability Pact.²³ An alternative solution would be a change in the rules concerning the provision of the financing from the EU Structural Funds.

Fiscal policy will undoubtedly be one of the crucial factors in the CEECs' quest to join the eurozone. If managed properly, it can smooth the way; if not, the way can become quite bumpy. All in all, it appears that the pressure on budgets should be manageable over the medium run in all the CEECs, allowing them to achieve the required remaining reductions in deficits. This, however, will require some effort and in some case even more profound fiscal reforms.

²³ They further argue in favour of increasing the limit on budget deficits by saying that the new member states will be able to grow considerably faster than the current members did in 1990s when the criteria were designed. The candidate countries are also likely to experience "larger shocks, either of the business cycle variety or one-off disturbances like a banking problem".

5.4 Exchange rate regimes

The candidate countries have a whole range of exchange rates regimes in place with differing degrees of flexibility. On the one hand, Bulgaria, Estonia and Lithuania operate currency boards and on the other Slovakia, Slovenia, Romania, the Czech Republic and Poland introduced managed floating or freely floating exchange rates. The present situation is a result of a longer-term development during which the candidates adapted their exchange rate regimes according to the needs of monetary policy management or, at times, as a consequence of currency crises. Some economists (Begg et al., 2001, Buitert and Grafe, 2001 and Tullio, 1999) have put forward the idea of hollowing out the middle ground of the exchange rate regimes. It is based on the observation that, whereas at the beginning of transformation most of the post-communist countries operated exchange rate regimes with reduced flexibility (mostly pegs); they later shifted to either fixed regimes or rather to flexible regimes. Such a tendency has been found also in the case of other emerging economies in general (Fischer, 1999). The underlying reason is the increasing role of capital flows in the international economy. Consequently, small open economies that have dismantled the barriers to free movement of capital find it increasingly difficult, if not impossible, to operate exchange rate regimes with an intermediate degree of flexibility.

Before the candidate countries may enter the monetary union, they will have to pass three stages (EC, 2000):

- 1) The pre-accession stage;
- 2) The accession phase, covering the period from the date of accession to adoption of the single currency (this stage can be subdivided into the period before adopting the ERM II regime and the membership in the mechanism); and
- 3) The final phase of the adoption of the euro.

In the current pre-accession stage, the choice of the exchange rate regime is left fully to the discretion of the candidate countries. After numerous pledges from both representatives of the candidate countries and the EU member states, it seems probable that, if no unforeseen difficulties arise, the accession negotiations will be concluded by the end of 2002. Thus the target set at the Göteborg European Council aiming for 2004 as the date of entry of the most advanced candidates into the EU can reasonably be achieved. Furthermore, the so-called big-bang scenario has become ever more probable after ten out of the current twelve candidates (leaving behind Bulgaria and Romania) were marked as capable of concluding the

negotiations by the set term at the Laeken European Council summit. Thus it seems that the pre-accession period might soon be over for the majority of the CEECs.

The second stage, starting at the moment of EU membership, will not change much. Representatives of the EU have confirmed on several occasions that the new member states cannot hope for an opt-out from participating in the single currency as received by Great Britain and Denmark. They will become members of the EMU with a derogation for introducing the euro.²⁴ The new members will be able to keep their current exchange rate arrangements. The only limitation will be that they will be obliged, according to Article 124 of the Treaty, to consider their exchange rate policies as a matter of common interest. The ECOFIN Council further specified this by stating that the smooth functioning of the single market must not be distorted by competitive devaluations.

According to the Maastricht criteria, a country has to prove the stability of its exchange rate before it can adopt the euro. In practise it means that a country has to become a member of the EMR II and comply with its rules for at least two years (see the Box 2.4 on ERM II below). Thus the ERM II membership will be the ultimate stage before entry into the eurozone and according to many economists also the most critical one. The candidate countries are not in any way bound as to the timing of their entry into ERM II. Those who are willing to adopt the euro in the shortest possible time will aim to introduce the ERM II upon their entry into the EU. Those who stick to the more cautious approach can follow the example of Sweden and postpone it for quite some time. Most of the candidate countries, however, do not seem extremely excited at the prospect of operating fixed exchange rates, even with a rather wide fluctuation band, as it can very likely generate exchange rate risk. It is thus to be expected that the countries will adopt this regime for only the required two years – if everything goes well.

In terms of the exact form of the exchange rate, the ERM II is rather benevolent. According to the European Commission (2000), the only exchange rate regimes that are incompatible with the ERM II are regimes

²⁴ This means that all the EMU-related legislation would have to be implemented even before EU entry. The envisaged measures include complete liberalisation of the capital movements (Art. 56); prohibition of any direct public sector financing by the central bank (Art. 101) and of privileged access of the public sector to the financial institutions (Art. 102); alignment of the national central bank statutes with the Treaty, including the independence of the monetary authorities (Arts. 108 and 109). (European Commission, 2000).

without a mutually agreed central rate to the euro, crawling pegs, and pegs to currencies other than the euro. This means that a large number of the candidate countries will have to, at this point, adapt their exchange rate regime to make it compatible with the ERM II (for an overview of the current exchange rate arrangement, see Table 2.10).

Table 2.10 ER and plans for participation in ERM II/EMU

Country	Current ER regime	MP framework	PEP (EMU target date)	Plans for EMU entry	ERM II
Bulgaria	CB (euro) from 1997		Goal: nominal convergence until EU accession	Yes (national accession strategy)	Keep CB
CR	Managed floating	Inflation targeting	No	No	±15%
Estonia	CB (euro) from 1992	IMF supported	No	Target date not set till 2003	Keep CB
Hungary	Crawling bands (±15%)	Inflation targeting	ASAP	Yes (mon. policy aimed at EMU in 2006-7)	2 years (possibly narrower bands)
Latvia	Fixed peg to SDR	IMF supported	No	Yes (national accession strategy)	
Lithuania	CB (in Feb switched from USD to euro)	IMF supported	No	Join ERM II	Keep CB
Poland	Independent floating	Inflation targeting	No	Yes (2006)	After accession,
Romania	Managed* floating	IMF supported	No	Meet Maastr. in MT	Switch to euro as a reference currency
Slovakia	Managed floating	No specific anchor	ASAP taking into account real convergence		
Slovenia	Managed floating	Monetary aggregate target	No	Yes (Central Bank – 2006)	ASAP after accession

* The de facto exchange rate regime of Romania differs from the de jure one. In reality, the exchange-rate regime is an informal crawling peg to the US dollar linked to inflation.

Sources: IMF, EC (2002b) and Lorenzen (2001).

It is especially the case of the countries operating floating exchange rates and Latvia, which has kept the peg of its currency to SDR. In practise, the switch from floating to ERM II does not have to be that profound a change in some of the countries as they manage their exchange rates quite heavily and the exchange rate is in general quite stable (e.g. Slovenia). Latvia will have to adjust its peg and attach the lat to the euro. However, the central bank is willing to do this only once the county enters the EU. Despite the fact that Latvian trade has reoriented towards the EU significantly, only 36% of the value of the transactions take place in euro. Also the private sector in Latvia is quite resistant to using the euro. Only 10% of foreign currency deposits are denominated in euro. The rest is dominated in dollars (Repse, 2001). Lithuania has successfully repegged the litas from the dollar to the euro on 2 February 2002. Hungary, willing to give further boost to disinflation, increased the fluctuation bands of the Forint to $\pm 15\%$ in May 2001. This can also be seen as a preparation for the entry into the ERM II.

Until recently the countries with currency boards were concerned about the possible implications of participation in the ERM II. They were afraid that after having operated the very fixed exchange rates for a couple of years, they would have to abandon the firm peg and introduce some degree of flexibility in the form of an ERM II fluctuation band. The Commission and the ECOFIN Council acknowledged, however, that such a solution would not bring the desired stability and voiced their opinion that currency boards were compatible with the ERM II regime as long as the ECB and the respective country agreed on the central parity. By contrast, the EU (EC, 2000) has resolutely refused any attempts at unilateral euroisation as it would reportedly run counter to the logic of demonstrating sustainable convergence as stipulated by the Treaty.

Box 2.4 Exchange Rate Mechanism II

The Exchange Rate Mechanism II replaced the European Monetary System after EMU was established on 1 January 1999. The rules of the ERM II were set in two legal Acts:

- 1) The resolution of the European Council on the establishment of an exchange rate mechanism in the third stage of economic and monetary union (16 June 1997) and
- 2) The Agreement between the European Central Bank and the national central banks of the member states outside the euro area laying down the operating procedures for an exchange rate mechanism in stage three of

Economic and Monetary Union (1 September 1998 and amended on 14 September 2000).

According to these documents, the exchange rates between the euro area and the non-euro area EU countries are governed by the following principles:

- The non-euro area countries are required to treat their exchange rate policy as a matter of common interest. The functioning of the single market should not be endangered by real exchange rate misalignments or excessive exchange rate fluctuations, which would disrupt trade flows between member states.
- The ERM II should not endanger the primary objective of the ECB to maintain price stability. Thus, any adjustment should be made in a timely fashion in order to avoid fundamental misalignments.
- The EU countries participate in the ERM II on a voluntary basis. However, a country with a derogation for the introduction of the euro is expected to join the mechanism.
- The ERM II is based on central rates of the national currencies against the euro. Any decision on the rates will be taken by mutual agreement of the ministers of the euro area member states, the ECB and the ministers and central bank governors of the non-euro area member states participating in the ERM II. The procedure also involves the European Commission and the Economic and Financial Committee. The ministers and governors of the central banks of the member states not participating in the ERM II will take part but will not have the right to vote in the procedure. All parties to the mutual agreement, including the ECB, will have the right to initiate a confidential procedure aimed at reconsidering central rates. The central rates will, however, remain the focus for the non-eurozone countries participating in the ERM II through the implementation of stability-oriented economic and monetary policies.
- The standard fluctuation band around the central parity will be $\pm 15\%$. Interventions at the margins will in principle be automatic and unlimited, with a very short-term financing available (up to 3 months). The ECB and participating central banks can suspend the interventions only if the primary objective of price stability is endangered. After mutual agreement between the ECB and the respective central bank of a non-eurozone country, an intramarginal intervention can be undertaken.
- A narrower fluctuation band than the standard one can be agreed upon at the request of the non-eurozone member state concerned. Such a negotiated fluctuation band would in principle be backed by automatic intervention and financing. The decision on the fluctuation band would follow the same procedure as in the case of central rates.

Despite the immense progress achieved by most of the CEECs, they are still considered as being transition economies. As such they are more vulnerable to various shocks and crises. Therefore, the choice of the exchange rate regime can potentially play an important role in the process of joining EMU. Many economists have devoted a great deal of attention to the question of which exchange rate regime the candidate countries should adopt during the transition period before full EMU membership to be able to cope with any problems they might encounter along the way. This research is useful for identifying potential sources of instability, but the original question about the optimal choice of exchange rate regime seems to be of limited practical use as most of the candidate countries seem to be satisfied with their current arrangements and are planning to retain them until their entry into ERM II or even the eurozone. Any substantial changes in exchange rate regimes that might be undertaken will, therefore, most probably be a consequence of an actual crisis not a precaution against one.

6. Specific structural issues: The banking system and financial markets

The candidate countries still have to address a considerable number of structural issues. Despite the vast differences among the candidate countries, the most pressing issues are very similar. Most of them wish to finalise the privatisation and liberalisation process (there are usually backlogs in privatising large enterprises, especially telecoms and utilities). Furthermore, new legislation on competition and bankruptcy usually needs to be introduced and implemented. Tackling all these issues will be crucial for future development towards stable and healthy economic climates, which will be indispensable for a smooth transition to the euro. Since these issues are of general interest and do not pose any immediate implications for the process of monetary integration, however, they will not be treated explicitly. Instead, attention will be directed towards an area that will be of utmost importance in the transition to the euro – financial markets, including their structure, vulnerability to crises and legal framework.

Given all the risks inherent in the monetary integration process, there will be a great need for stable and healthy banking sectors and capital markets in the candidate countries. They should be able to cope with the challenges brought about by large capital inflows or contagion effects of financial crises in world markets – the financial markets of the candidate countries are after all still considered as emerging markets. Furthermore, the financial markets are essential for attaining a higher level of real

convergence since the necessary restructuring and dynamic development of the enterprise sector can hardly be possible without sources of financing. Therefore, stable institutions intermediating domestic savings to investment are needed.

Banking systems and capital markets could also become a cause of crises themselves. If, for example, the banking system proved to exhibit substantial deficiencies in terms of regulations or their application, or alternatively, if a string of bad loans got out of hand without the authorities intervening in time, investor confidence could be shattered and a crisis could potentially follow. The latest empirical research suggests a strong link between currency crises and banking crises (e.g. Kaminski, 1999). Currency crises are often preceded by, or coincide with, banking crises. Therefore, it is essential for the candidate countries to have sound banking systems in order to be able to cope with large capital inflows that are in some cases already occurring and that are expected to further strengthen due to the so-called "convergence play" in the run-up to the eurozone accession. In this respect, Demirguc-Kunt and Detragiache (1998) find that the probability of a currency crisis depends negatively on the number of foreign banks operating in the country. The fact that EU banks already dominate the CEECs' banking systems (see below) should thus provide some protection against banking crises.

Another reason why the banking systems of the candidates might constitute less of a potential for crisis is their small size in comparison to their EU counterparts. As a measure of banking system development and its ability to intermediate savings into investment, one can use the share of domestic credit to the private sector as a percentage of GDP (Table 2.11). The comparison unveils an immense difference between the candidate countries and developed economies. Whereas the share stands at roughly 120% in the latter group, the best performing candidates – the Czech Republic, Slovakia and Slovenia – find their values at about 40%. In Estonia, Hungary, Poland and Latvia, the domestic credit as a percentage of GDP is roughly 20%. The last group of countries with very low values slightly exceeding 10% comprises Lithuania, Bulgaria and Romania.

Not only is the domestic credit very low in the candidate countries but its development over time is hardly encouraging as it exhibits very little progress and significant instability. Very few countries experienced a substantial rise in the indicator throughout the transition process. Thus only Slovakia has made considerable progress. Positive developments can also be observed in the case of Estonia, Slovenia and to a certain extent Poland. All the other countries more or less stagnated or even

experienced sharp reversals that usually coincide with periods in which the countries were hit by economic crises. As a consequence, the domestic credit in the Czech Republic has declined from its peak of about 60% in 1995 to slightly over 40% at the end of the decade.

Table 2.11 Domestic bank credit to the private sector as % of GDP

	1996	1997	1998	1999	2000
Bulgaria	35.6	12.6	12.7	14.6	12.5
CR	57.4	54.7	48	43.8	38.2*
Estonia	18	25.5	25.2	25.9	25.9
Hungary	18.7	20.4	20	20.7	23.6
Latvia	7.2	10.7	15.2	16	19.6
Lithuania	10.7	9.6	10	10.7	14
Poland	15.9	18.1	17.6	18.8	18.8
Romania	11.5	13.7	16.6	10.5	n.a.
Slovakia	24.9	42.1	43.9	40.5	37.6
Slovenia	28.7	28.6	32.8	35.8	n.a.
Germany	108.8	112.8	118.2	117.4	120.3
UK	120.7	120.9	120.2	123.5	135.1

* Provisional figure for December.

Source: EBRD.

The poor performance in terms of lending activity of the candidate countries' banking sectors points to structural problems with channelling savings of the population to private investment. The gross saving rates of the candidate economies are on average close to that in the EU – 21% compared to 22%.²⁵ However, the per capita bank deposits in PPP terms reach only 18% of the EU average. As the major part of savings in the candidate countries is deposited with banks, the part that is invested in the securities markets can hardly explain the huge discrepancy. A possible reason might be the low banking tradition and unwillingness of people to save. Also the trust in the banking sectors is still at a low level due to a

²⁵ Though, it is often argued that the candidate countries should strive to achieve substantially higher levels of savings if they want to catch up successfully with their EU counterparts. But also in this case the data hide a highly differentiated picture. Whereas the Czech Republic and Hungary save 31% of their GDP, Bulgaria's saving rate is only 7%.

number of crises and bankruptcies. Thus, it seems that a significant proportion of individual savings is still kept “under the mattress” instead of being available for efficient investment opportunities.

Table 2.12 Banking sector indicators, 2000

	Risk-weighted capital asset ratio (in %)	Non-performing loans (% of total)
Bulgaria	n.a.	10.9
CR	14.9	19.3
Estonia	n.a.	1.5
Hungary	13.5	3.1
Latvia	n.a.	8.3
Lithuania	n.a.	10.8
Poland	12.4	15.9
Romania	n.a.	3.8
Slovakia	12.5	26.2
Slovenia	13.5	8.5

Note: Non-performing loans – excludes loans transferred to a rehabilitation agency or a consolidation bank.

Source: EBRD.

How healthy are the (small) banking systems of the candidate countries? In many cases they are still characterised by a high volume of bad loans, currently estimated on average at about 15% of the total. Nevertheless, given the very low share of the domestic credit as a percentage of GDP the share of the non-performing loans in countries' GDP is usually rather limited and does not pose a significant threat to economy or public finances.

The overall data on bad loans hide an uneven pattern. The most troubled seem to be the Central European candidate countries (with the exception of Hungary and partly Slovenia). On the other side, Estonia performs the best. Some caution is necessary when looking at the data, however, as it does not include bad loans that have been transferred to national consolidation agencies or consolidation banks. Thus, for instance, the Romanian figure declined sharply from its peak of almost 60% in 1998 to roughly 4% two years later. In the Czech Republic the considerable losses of the consolidation agency due to the clearing of the banking

sector prior to its privatisation²⁶ are included in the expenditure side of the government budget, thus significantly increasing the resulting deficits. This indicates that the price for stabilisation of the banking system which has to be borne by the public sector can be substantial (e.g. in Hungary the costs of recapitalisation and rehabilitation are estimated at 10% of GDP; see Wagner and Iakova, 2001). The latest estimates show that the costs could be as high as 20% in the Czech Republic (EC, 2002a)). Bad loans thus remain a problem of public finances.

However, the vulnerability of the banking system might not be as severe as generally perceived. During the 1990s, the candidate countries proceeded with privatisation of banks, although at different speed. According to the European Commission (2001c), bank privatisation has been completed in Estonia, Hungary, Latvia and the Czech Republic. Progress has been achieved in Lithuania, Romania, Poland and Slovakia, whereas it is lagging in Slovenia. The process of privatisation and consolidation of the banking sector has resulted in strong foreign presence of domestic banks. This is a beneficial process for the candidate countries as strong strategic partners provide the domestic banks with their banking know-how and also strengthen their capital positions.

A large majority of the new owners come from the EU countries, which contribute, to further integration of the banking systems of the EU and the future members. Thus, in the Baltic countries, characterised by a very high degree of consolidation, the banking systems have become largely integrated and connected to the Nordic members of the EU. In Estonia, for example, the two largest banks with assets accounting for almost 85% of the total assets of the sector – Hansbank and Uhisbank – are controlled by two Swedish banks – Swedbank and SEB, respectively. Swedbank also plays, through Hansbank, an important role in the banking systems of the two remaining Baltic countries. SEB also controls crucial shares in Latvian and Lithuanian banks. The banking sectors of the other candidate countries are fragmented to a much larger degree (especially in Poland) but important stakes are held by Western banks (see Table 2.13 for an overview of foreign ownership of banking sector assets in the candidate countries and, for comparison, in the EU).

²⁶ A considerable part of the loss was incurred by the bail-out of the *already* privatised IPB Bank which collapsed in June 2000. This case also points to the importance of creating appropriate incentive schemes for strategic investors. The IPB Bank had been sold to the investment bank Nomura Europe in 1998. However, the new owner failed to undertake the necessary restructuring which led to a deterioration of bank's balance during the recession in 1998 and 1999 and ended in a collapse.

Table 2.13 Share of majority foreign-owned banks in total assets (in %)

Panel a) The CEECs

	1998	1999	2000	2001
BL	74,4			
CZ	25.7	28.1	65.5	90.1
EE	5.1	90	93	97.5
HU	58.9	61.8	62.9	65.5
LA	78.7	78.2	77.2	62.6
LI	51.8	38.3	57	83.9
PO	16.6	47.2	69.6	68.4
RO	20	47.5	50.9	55
SL	n.a.	28.2	42.7	81
SI	20	47.5	50.9	55

Source: European Commission (2002a).

Panel b) The EU

Ireland	53.8	Netherlands	7.7
UK	52.1	Finland	7.1
Belgium	36.3	Italy	6.8
Greece	21.9	Germany	4.3
Spain	11.7	Austria	3.3
Portugal	10.5	Sweden	1.6
France	9.8 (1996)	Denmark	n.a.

Source: European Central Bank (1999).

Over the last decade, banking sectors in the candidate countries have thus gone through a pronounced process of consolidation. Preparation for impending EU membership has become another important factor contributing to further this process, especially through the adoption and application of stricter EU legislation concerning regulation and supervision of the financial markets.

The positive impact of the increased competition and rising efficiency of the banking institutions together with relatively stable and favourable macroeconomic environments can be seen in the rapidly declining interest spreads (lending rate minus deposit rate) in most of the candidate countries. The most advanced countries are now approaching the EU levels in this respect.

All in all, it appears that during the last couple of years the situation has improved considerably and the banking sectors have undergone a process of privatisation, restructuring and rehabilitation. A strong foreign ownership of local banks has become a rule rather than an exception after most of the candidate countries cast away the protectionist policies and granted foreign investors full access to their banking institutions. Though still somewhat weak, the banking sectors in most of the candidate countries seem to be structurally healthy.

Therefore, the factors that troubled the banking sectors of the candidate countries in the past, such as the non-performing loans, macroeconomic instability and state interventions, should not be a factor of great concern if one looks forward to EMU. Risks obviously remains, for example: expansionary monetary and fiscal policies, the large scale of private capital flows, real exchange rate appreciation, the incidence of lending booms, a lack of deep bond and derivative markets and weaknesses in the accounting, disclosure and legal frameworks. This indicates that attention need no longer focus on the fundamental structural issues but rather on general improvements in the regulatory framework and its implementation. Good regulation, healthy macroeconomic policies and strategic foreign participation in the domestic banking sectors will be essential to cope with large capital inflows and the potential volatility that are likely to characterise the transition period before full EMU membership.

7. Conclusions

Ten of the thirteen candidate countries are proceeding quickly towards EU membership, which formally also implies the right to membership in EMU. However, these new EU members will initially have a derogation for the introduction of the euro. When can and should this derogation be lifted, i.e. when should the euro be introduced in these countries? And how can one ensure that the transition period to the euro is smooth? These are the key issues underlying the analysis presented in this chapter.

The time frame is now quite clear: The earliest possible date of entry into the eurozone is the year 2006 (if the EU enlarges in the course of 2004). A large number of the candidate countries have expressed a willingness

to proceed to the eurozone as quickly as possible. It is thus possible that by 2006 the membership of the eurozone will grow considerably. A brief comparison with the Club Med countries (whose qualification for EMU was also long in doubt) indicates that most of the candidate countries could be able to satisfy the Maastricht conditions relatively quickly.

But many officials in the EU, especially in financial circles, are not particularly excited about this prospect and call for prudence and a slower-track approach. The objections are usually couched in terms of the need to reach a higher level of real convergence. Although it is acknowledged that a monetary union is fully compatible with income differences among its members, too fast a compliance with the nominal convergence criteria is sometimes portrayed as a threat to real convergence.

The analysis in this paper suggests that fulfilment of the fiscal criteria should not represent a problem for the candidates and cannot be said to retard real convergence. However, this is not necessarily the case for the inflation criterion (if viewed together with the exchange rate stability criterion). The catching-up process can be expected to lead to substantially higher inflation rates in the candidates if they fix their exchange rate to the euro. Our analysis of this so-called Balassa-Samuelson effect suggests that the magnitude of the problem might be smaller than often feared, but the problem exists and poses a dilemma for the candidate countries: either implement restrictive policies to squeeze inflation during the qualification period for EMU, or accept a delay in being able to join the euro.

In this limited sense one can argue that the Maastricht criteria do not take into account the specific situation of the candidate economies. As a result, the candidate countries willing to fulfil the inflation criterion might be forced to follow sub-optimal economic policies. Therefore, there is a strong economic case for a reappraisal of at least one criterion.

It is a generally accepted proposition that the most dangerous exchange rate system combines capital mobility and "fixed but adjustable" exchange rates. This is exactly the position the candidates will be in for at least two years, when they have to qualify for EMU. What then should the EU do to smoothen the way to the eurozone?

It seems that the best protection against speculative attacks during the transition is to follow a clear path towards the euro. The candidates will have to ensure that their public finances remain sound. The EU side should make sure that the price stability criterion is applied in a sensible way.

CHAPTER 3
PREPARING THE ECB FOR ENLARGEMENT:
REPRESENTATION VERSUS EFFICIENCY?

1. Introduction

The previous chapters have discussed the economic implications of enlarging the euro area to the East and the West. It is by now widely accepted that enlargement requires reform of the highest decision-making bodies of the ECB. Without reform, the membership of the Governing Council of the ECB would increase with each country that joins the eurozone. The Governing Council is composed of the six members of the Executive Board (henceforth EXB) and the president of the national central bank (NCB) of each country that has joined the eurozone. If “only” the three current “out” countries (the UK, Denmark and Sweden) among the EU-15 were to join, the Governing Council would already have 21 members. If (when?) all present 13 candidates for EU membership join, the Governing Council would then have over 30 members – more like a mini-parliament than a decision-making body that has to manage a global currency in fast-moving financial markets.

The essence of our proposal is to re-define the division of labour between the Executive Board and the Governing Council. The Executive Board should develop into a decision-making body in its own right, but so far its powers have been fully controlled by the Governing Council. The tasks of the Governing Council could be to set the direction for monetary policy, decide on proposals from the Executive Board, constitute a platform for the exchange of views on the eurozone economy and monitor the work of the Executive Board. These tasks can be performed efficiently even by a rather large body and the representation of all member countries in the Governing Council provides the appropriate legitimacy for such a controlling function.

In European monetary policy, the Governing Council can be regarded as the “sovereign institution”. It derives its sovereignty from the fact that it represents all the member states and pools expert knowledge from the national central banks. All powers within the ESCB can eventually be traced back to the Governing Council. This also applies to the Executive Board, all of whose powers at present are directly delegated by the Governing Council.

Our proposal does not affect the primacy of the Governing Council – all powers would continue to emanate from it. It does, however, reduce the right of the Governing Council to control every single act of the Executive Board. Thus the Executive Board could come to enjoy a certain degree of discretion, which is justified by the fact that it represents not just the aggregation of individual state interests but rather a “general European monetary interest”.

2. The state of the discussions so far

Recognising that a Governing Council of over 30 members would be unwieldy, the European Council of Nice agreed on a simplified procedure to make some changes in the membership of the ECB governing bodies and asked the ECB to make concrete proposals.¹ This seems to have set in motion a lively discussion within the Eurosystem about which very little is known outside central banking circles.

The academic literature on this issue is scarce. (For a summary of ECB reform proposals published so far, please see Annex 2.) Most of the existing contributions start with assumptions about the differences in the motivations of the presidents of national central banks versus those of the members of the ECB Executive Board. They then proceed to discuss the number of NCB presidents that should attend, or be able to vote, in the Governing Council. The key problem of this literature is that the results rely on assumptions about differences in motivations that are entirely arbitrary. For example, Berger (2002) assumes that members do not have a target level for output, whereas NCB presidents do. This has the immediate implication that the best arrangement would be a Governing Council without NCB presidents. Other contributions have made similar assumptions. In addition, NCB presidents are often assumed to focus on national economic developments while the Board is characterised as having a more European perspective. But this is a separate issue that will not be discussed here.

The key assumption that only NCB governors care about employment is not well grounded. Within the Governing Council, NCB presidents and members of the EXB are formally on an equal footing. The only formal difference between them lies in the nomination process. The Board members are nominated by a European body (the European Council),

¹ Once the Nice Treaty is in force, the relevant part (Art. 10.2) of the Statutes of the ESCB can be amended upon a unanimous proposition from the Council and enter into force after having been ratified by all the member states (see Annex 1 for the relevant excerpts from the Treaty).

whereas the NCB presidents are nominated at the national level. All these nomination processes are subject to strong political pressures and are thus a priori equally likely to result in personalities that represent the preferences of the society in terms of employment, including a target level for output. The nomination procedure for the EXB should in principle produce candidates that are committed to represent area-wide, rather than national interests. But the national vs. EU dimension is completely independent (technically: orthogonal) to the issue whether the ECB will try to influence output. A committed European is as likely (or unlikely) to be a hawk as someone who has national loyalties. Moreover, the row on the occasion of the nomination of the first EXB and in particular the President of the ECB in 1998 shows that national interests or pride have a strong influence even over nominations for membership of the EXB. In this sense, much of the existing analysis seems to be “barking up the wrong tree”.

This chapter abstracts from the issue whether Board members or NCB presidents are more likely to have an output target, and also from the fact that there are discrepancies between the economic weights of countries in the eurozone and their “political” weights (which in principle would all be equal on the assumption that Board members have no “nationality”). See Box 3.1 and Berger (2002) for more detail on this issue.

This chapter emphasises instead one key difference between NCB presidents and members of the Board that is more objective: i.e. their respective information bases. Board members concentrate on area-wide aggregates in their daily work and are likely to be in closer contact with global financial markets than the NCB presidents. The latter perform a wide variety of functions at the national level: they supervise the national banking system, they are influential participants in national debates about almost all economic policy issues, etc. By contrast the members of the Board can concentrate almost exclusively on issues related to the formulation of the common monetary policy stance.

This information advantage of the Board members is likely to be most pronounced in the area of financial market developments. Area-wide data on real economic variables, such as output, result essentially from the summation of national data that become available at different points in time and most of which contain small national idiosyncrasies. Financial markets are much more integrated than the markets for goods in services so that an observer at the centre does not need to have detailed local knowledge. Some national idiosyncrasies persist in financial markets at the retail level, but the movement towards a unified market is stronger for financial services than for goods and most other services.

Box 3.1 Enlargement and the difference between economic and political weights

It is widely assumed that enlargement will increase the discrepancies between economic and political weights within the Governing Council of the ECB. Most of the present candidates are relatively small in economic terms, but their representatives (the governors of the NCBs are often perceived that way) would have the same weight as that of Germany, whose economy is an order of magnitude larger.

Can this perception be quantified and verified? Economic weights could be defined as GDP shares and the political weights could be defined as being equal for all countries to $1/n$, with the number of countries in EMU. Using this definition it is not evident that the discrepancies that exist at present will be worse in a larger EMU. Indeed, if one computes the sum of the squared differences between the economic and political weights, one arrives at the opposite result: the discrepancies between economic and political weights are lower in a larger euro area than in the current euro-12 club. Table 3.1 below provides the results of some illustrative calculations. It is apparent that all larger euro area compositions considered here actually lead to a lower discrepancy between economic and political weights than the current euro-12 grouping. (See Annex 3 for further details and additional calculations that take into account the Executive Board.)

Table 3.1 Mismatch between economic and political weights

	Sum of squared differences between economic and political weights with economic weight measured by:		
	GDP	Population	ECB shares
EU-12	9,5	10,3	8,9
EU-15	7,4	7,8	7,1
EU-25	7,0	9,2	5,4
EU-27	7,2	9,4	5,7
EU-25-UK	8,0	10,8	6,1

Source: Own calculations. Each entry represents the sum of the squared differences (times 100) between the political weights (defined as $1/n$) and one of the different economic weights used here. ECB shares are the average of GDP and population weights.

By contrast, the markets for most goods and services retain some distinctive national characteristics. For example, the average area-wide inflation rate might be influenced by a change in indirect taxes or a re-basing in one member country, which can at times produce an effect that might not even be known outside the country and whose importance is difficult to judge unless one knows the local situation in some detail.

This view implies that there might well be a natural division of labour between the NCB presidents and the EXB members: the latter can contribute their knowledge about the state of financial markets whereas the former can contribute local knowledge about the real economy, including prospects for output and employment. This division of labour has one immediate consequence: financial markets move much more quickly than the markets for goods and services, which in the final analysis determine output and employment. Interest rates and stock markets can collapse or soar in a matter of weeks, if not days, but a fall in consumer demand usually takes months to develop (and to be recognised as such). Supply-side shocks, such as an acceleration of productivity, take place over an even longer time horizon.

The different comparative advantages of NCB presidents and members of the EXB suggest a simple approach to the reform of the ECB in view of enlargement. As the number of euro-area member countries increases, the Governing Council, which would continue to comprise all the NCB presidents, would meet less often and concentrate on strategic decisions. To be concrete, the Governing Council might meet only once every quarter. These meetings could involve a longer exchange of views on the state of the economy, which would then allow the Governing Council to formulate general, strategic guidelines for monetary policy, leaving the day-to-day execution to the Board in Frankfurt.²

This approach has the advantage that it maintains the representation of all member countries in the highest decision-making body of the ECB. There is a strong political demand for full representation, which should not be dismissed. It also has a rational background: as argued above, local information is essential to fully understanding the economic situation even at the area-wide level. This same perception is also shared by the wider public. Tough decisions by the ECB are thus more likely to be accepted as necessary and legitimate if all countries are represented in the governing body of the ECB that takes strategic decisions. In this context,

² Von Hagen (1998) and von Hagen and Süppel (1994) arrive at a similar conclusion starting from the more usual assumptions about differences in motivation.

strategic means those decisions that have a longer-run and more profound impact on the economy.

During normal times the general public is unlikely to even notice the week-to-week, or even month-to-month changes in monetary policy interest rates. Monetary policy becomes an issue only when tough decisions have to be taken. This is most likely to happen when output falls and unemployment goes up but inflation remains high (as at present). In such a situation, the choice takes on great political importance. Should monetary policy become accommodating to sustain employment or restrictive to achieve price stability?³ These are the issues that concern the general public rather than the question whether the appropriate neutral stance implies an interest rate half a percentage point higher, or whether rates should be cut in a month instead of today. This type of decision can be left to a smaller group even if it is not perceived to be currently representative of all countries.

All rotation schemes face the same dilemma: while they may be fair on average, this fact is irrelevant at any given moment in time. If a country that is hit by a crisis does not have a representative on the ECB, the public is unlikely to magnanimously accept its bad luck. Unpopular decisions of the ECB could then quickly be perceived as illegitimate because the ECB “does not even know what our problems are”. An asymmetric rotation scheme that differentiates, for example, between larger and smaller countries would reduce the likelihood that this would happen for a large country, but it would raise the general suspicion that ECB policy is being determined by the interest of the restricted group of countries that happens to be represented at any one time in the Governing Council.

The example of the US Federal Reserve Board, where there is an asymmetry in the sense that the Governor of the NY Federal Reserve District is the only one to have a permanent seat in the Open Market Committee, does not constitute a counter argument. This asymmetry is due to the importance of New York as a financial centre, not because the New York District is in a different league in terms of population or GDP. This implies also that the NY Fed Governor is more likely to represent

³ The argument that it would be politically costly to exclude (or appear to exclude) any one country from the decision-making process is likely to become particularly relevant when one country experiences an extreme shock. As welfare loss functions are usually assumed to be convex in the standard economic variables, this implies that the contribution of the country concerned to the area-wide loss in such a situation is likely to be particularly high.

the interests of the US financial sector (witness the rescue of LTCM) rather than the interests of the Federal Reserve District of New York, which encompasses a number of quite different states. In the case of the ECB, the Board, based in Frankfurt, would subsume the role of the NY Fed Governor. Moreover, Governors of Federal Reserve Districts do not have the same prominent role in regional politics as do the presidents of NCBs in Europe, partially because their constituencies encompass several states (some Federal District boundaries even cut across states).

3. Legal issues

How could the approach proposed here be implemented? In principle, it could be done without changing the Statutes of the ESCB (as it is called officially in the Treaty). Article 12.1 of the Statutes already allows for this possibility:

The Governing Council shall formulate the monetary policy of the Community including, as appropriate, decisions relating to intermediate monetary objectives, key interest rates and the supply of reserves to the ESCB, and shall establish the necessary guidelines for their implementation.

The Executive Board shall implement monetary policy in accordance with the guidelines and decisions laid down by the Governing Council. (...) In addition the Executive Board may have certain powers delegated to it where the Governing Council so decides.

It is thus difficult to decide whether the present text would allow for this delegation. Hence, it might be useful to slightly amend this provision to clarify that it should indeed be interpreted in this direction. For a legal analysis, see Allemand (2002) and Louis (2002) who conclude that the present text probably would not impede the type of delegation proposed here.

In particular, Article 12 on the responsibilities of the decision-making bodies might be changed in the following way (main changes in bold):

12.1 (First sentence unchanged) The Governing Council **shall meet four times per year to discuss guidelines for the implementation of** the monetary policy of the Community including, as appropriate, decisions relating to intermediate monetary objectives, key interest rates and the supply of reserves in the ESCB.

However, implementing even such a minor (formal) change is less straightforward than seems at first sight. The decision taken at the Nice Council to simplify the procedure for changing the statutes of the ESCB applies only to the composition of the Governing Council, determined in Article 10. Although, as argued above, a treaty change is not strictly necessary for the approach taken here, it might still be useful to slightly modify the Statutes. Since a new Treaty is now being elaborated in any event by the Convention on the Future of Europe (to be completed perhaps only after enlargement, but certainly before the eurozone's membership increases), this should not be an insurmountable hurdle.

4. Recent developments

The ECB recently published its own view of its accountability (ECB, 2002). For the purpose of this chapter, the interesting point is that the ECB maintains that only the Governing Council is accountable, and this only collectively. It is striking that the Executive Board does not seem to matter for the ECB as it is almost totally neglected in the contribution, which comes after all from the ECB itself.

It is also remarkable that the ECB has not yet used its right to make a concrete proposal, as accorded under the Nice Treaty provisions mentioned above. Nothing has been communicated officially, but we assume that after long and controversial discussions, the Governing Council must now be nearing agreement (which has to be unanimous) to propose a rotational scheme with the following characteristics:

- The composition of the Governing Council would not be changed.
- All governors of national central banks would continue to attend its meetings, but only a limited number of them would retain the **right to vote on interest rate decisions**.
- The number of NCB governors with the right to vote would not be much different from the present, i.e. around 12.
- These twelve would be determined on the basis of a rotation scheme in which the governors of the NCBs of larger countries would either not rotate at all, or rotate less frequently than those from smaller countries.

If the ECB does make a proposal, the European Council is likely to accept it without significant modifications. If the ECB does not make a proposal, the Commission will have to make one. Little is known at present on what position the Commission might take on this issue.

Box 3.2 Rotation: Does the US constitute an example to follow?

In the main decision-making body, the Federal Open Market Committee, which meets every six weeks, the members of the Board vote together with five of the twelve Federal Reserve Board Presidents, serving on a differentiated rotation system. The US example might nevertheless be misleading on several accounts:

1. In the US, the Federal Reserve Districts encompass several states (and sometimes parts of states), and therefore the regional Federal Reserve Presidents do not in any way represent regional interests. This may be a good thing, but it would run counter to the political imperative of all EU institutions to give (or at least to appear to give) all member countries a voice in the decision-making process.
2. The (Executive) Board of Governors has seven members as against five voting Federal Reserve Bank Presidents in the FOMC. The Board – to the extent it is unanimous – has the preponderance in any vote, whereas the opposite is the case in the ECB General Council as presently composed and as envisaged under the rotation principle. Furthermore, the role of the Board of Governors is reinforced by the authority vested in it to change the discount rate (of lesser importance today than in the past), to set and change reserve requirements and to conduct the supervision of banks and major financial institutions.
3. The importance of financial shocks was recognised in the US by giving the New York Fed a permanent seat on the Open Market Committee. Financial markets are much less concentrated in the EU, and the most important financial centre actually lies outside the present eurozone. It would be politically impossible in any event to introduce any asymmetry in favour of London as the main financial centre.
4. Last, but not least, the distribution of resources is totally different. Most of the research staff, which analyses recent developments and prepares monetary policy decisions, reside in Washington. (See also Bini Smaghi and Gros (2000).) This seems appropriate in an environment in which macroeconomic statistics become available first for the entire area. By contrast, in the euro area the area-wide statistics become available only with a lag, i.e. after the last national data have appeared.

The proposal the ECB seems about to make seems to us to represent a combination of drawbacks, rather than a sensible compromise. It appears that the overall size of the “effective” Governing Council (i.e. those who can vote on interest rates) will remain too large to allow for an in-depth discussion. With 12 NCB governors plus the 6 members of the Executive Board, a total of 18 would have to express their views. Even with each member speaking for only 10 minutes, an initial *tour de table* would take three hours. Moreover, it is difficult to see how the collective accountability of the Governing Council can be maintained with a rotational scheme. Would only those with the right to vote remain accountable?

Finally, as has often been observed, differentiated rotation implies that the governors from large member countries would be treated differently than those from smaller countries. This could nourish the impression that the function of governors from NCBs is to defend national interests. Moreover, this unequal treatment would also puncture the argument, used by the ECB itself, that the Governing Council can only be collectively accountable because the NCB governors perform a “European” function and cannot thus “render account” individually to their national parliaments.

Some will undoubtedly argue that the official proposal to reform the Governing Council of the ECB can be justified with reference to the US example, which seems to point to (differentiated) rotation as the best solution. This would be misleading in our view, however, as the main decision-making body of the Federal Reserve has only 12 members. Moreover, a majority of them (7) come from the centre, which also has the best access to information about recent economic developments as well as most of the research staff (i.e. the resources to provide an analytical underpinning for monetary policy decisions). See Box 3.2 for more details.

5. Concluding remarks

The purpose of this chapter was to introduce one element that has so far been absent in the discussion about reform of the ECB governing bodies in view of enlargement. The contributions in the academic literature have concentrated on differences in motivation between the members of the Board and the presidents of the NCBs. These assumptions about differences in motivation seem largely arbitrary. By contrast, we abstract from differences in motivation and concentrate on differences in the information basis that should result naturally from the differences in functions and working environments. Board members are in relatively

closer contact with fast-moving financial markets whereas the NCB presidents are in relatively closer contact with the real economies of their home countries.

Given that most shocks to the real economy occur less frequently and take longer to evaluate than financial market shocks, one may assume that the expertise of the NCB presidents is needed less often than that of the Board. Hence it seems natural to conclude that the most efficient arrangement might be one in which the full Governing Council meets much less frequently than is the case today for in-depth discussions on the state of the economy and the strategy for monetary policy. These meetings would also be the occasion to establish general guidelines for the management of monetary policy in the meantime. The task of the Executive Board would then be to conduct monetary policy on a day-to-day basis, in particular reacting to developments in financial markets. The Board would then become the Management Committee of the ECB, whereas the Governing Council would have the role of a Supervisory Board in the private sector.

The best, or rather least bad, solution to solving the “numbers” problem might thus be the arrangement we propose: to give the Executive Board the authority to react quickly to financial market shocks when implementing the medium-term guidelines for monetary policy set by the large Governing Council at less frequent meetings.

Annex 1

Excerpts of the Nice Treaty Referring to Reform of the European Central Bank

TREATY OF NICE
AMENDING THE TREATY ON EUROPEAN UNION,
THE TREATIES ESTABLISHING THE EUROPEAN COMMUNITIES
AND CERTAIN RELATED ACTS
(2001/C 80/01)

Article 5

The Protocol on the Statute of the European System of Central Banks and of the European Central Bank shall be amended in accordance with the provisions of this Article.

In Article 10, the following paragraph shall be added:

‘10.6 Article 10.2 may be amended by the Council meeting in the composition of the Heads of State or Government, acting unanimously either on a recommendation from the ECB and after consulting the European Parliament and the Commission, or on a recommendation from the Commission and after consulting the European Parliament and the ECB. The Council shall recommend such amendments to the Member States for adoption. These amendments shall enter into force after having been ratified by all the Member States in accordance with their respective constitutional requirements.

A recommendation made by the ECB under this paragraph shall require a decision by the Governing Council acting unanimously.’

Declarations adopted by the conference

19. Declaration on Article 10.6 of the Statutes of the European System of Central Banks and of the European Central Bank

The Conference expects that a recommendation within the meaning of Article 10.6 of the Statutes of the European System of Central Banks and of the European Central Bank will be presented as soon as possible.

Annex 2

Review of Proposals for Reforming the ECB

The proposals that have been put forward so far for reforming the ECB can be summarised under five main headings: 1) weighted voting, 2) constituencies, 3) rotation, 4) nomination and 5) centralisation.

1) Weighted voting

In this option, the Governing Council would include the six members of the Executive Board plus all the central bank governors of the participating member states. However, the votes of the non-board members would be weighted by the countries' shares in euro area GDP (or by a combination of GDP and population shares). This option in reality has not been endorsed by anyone because it is not perceived to resolve the problem of "size", since there would still be a large number of Council members involved in the discussions.

2) Constituencies

In this solution, countries would be grouped into constituencies, which would send one representative each to participate in the Governing Council. This would be a similar solution to the one adopted by the Bretton Woods institutions. Giving each representative one voting right would result in implicit weighting of the votes of the members of each constituency. As pointed out by Berger (2002), this solution requires the definition of a mandate for the representatives. A "restricted" or "imperative" mandate, with votes determined at the group level, would fail to contain the decision-making costs associated with enlargement. For the reduction of these costs, some degree of delegation would be required. The problem with this solution is that some countries would be permanently deprived of participating in the decision-making process. Another problem raised by Baldwin et al. (2001) is that this solution would violate the total personal independence of the individual participants, since each representative would have to represent the interests of his constituency.

3) Rotation

A rotation scheme would guarantee that all euro-area members would have a seat in the Council at some point in time. It has been generally agreed that a solution of this type must ensure that the Council members selected by rotation account for a sufficiently large share of euro-area GDP. Hence many argue that rotation schemes must be asymmetric. One

option to design the asymmetric scheme is to pool countries for rotation. Fitoussi and Creel (2002) propose separating the countries into two groups, the largest in one group and the remaining in another. They propose forming a Council with 19 members: six Executive Board members, two members chosen among the largest countries and 11 members chosen among the remaining countries, each with a five-year mandate. The lower the number of governors in the ECB Council and the longer the rotation period, the more opposition such a scheme will face; therefore efficiency must be balanced with the probability of approval. Berger (2002) proposes instead that the Governing Council be composed of six Executive Board members and nine rotating central bank governors. The number of constituencies and the number of seats assigned to each should balance the percentage of governors holding voting power in excess of their respective country's economic weight and ensure that on average the Council represents more than 60% of euro-area GDP. Berger (2002) notes that there may be advantages in choosing groups, not only by country size but also taking into consideration other dimensions, to make the groups more homogeneous, for instance in terms of business – cycle synchronisation or structural inflation. This could be achieved without changing the average share of euro-area GDP represented by governors and the percentage of governors holding voting power in excess of their respective country's economic weight, by adapting the number of constituencies and the number of seats assigned to each. It has been argued however that a rotation scheme would create problems if a country whose central bank governor is not participating in the Council were hit by a particularly negative asymmetric shock.

4) Nomination

This option is defended by Fitoussi and Creel (2002) as the one that would go the farthest towards eliminating the national dimension of the Governing Council. In this solution the heads of government in the European Council would choose among the national central bank governors a number that it deems optimal for the Governing Council. The Executive Board would remain unchanged with six members. The authors claim that the potentially damaging horse-trading involved with such nominations could be avoided if the selection and nomination process is sufficiently well designed. Why not only the six Executive Board members then?

5) Delegation

In this alternative, monetary policy would be delegated to a group of independent experts, such as the six current members of the Executive Board. As with the other solutions, more than one form of delegation has been proposed. Baldwin et al. (2001) defend the delegation of monetary policy to a monetary policy committee, composed by six full-time executive members and five non-executive members, chosen amongst the most capable and experienced experts in Europe, and giving the national central bank governors a consultative role. There are fears that such a solution could worsen the EU's democratic deficit and be politically infeasible. Hence, Artus and Wyplosz (2002) propose instead that the Governing Council retain the superior authority, setting the broad guidelines for monetary policy, but delegating the day-to-day implementation to the Executive Board. This solution would in his view resolve the problem of size, not be affected by later enlargements, strengthen the non-national character of the ECB and facilitate informal exchanges between the monetary policy-makers.

Table A.3.1 Summary of some concrete proposals

	Type of scheme	Number of Council members
Fitoussi and Creel (2002)	Rotation with two groups: large and small	19: 6 board, 2 from large countries and 11 from small
Berger (2002)	Rotation with groups selected by size or by balancing size with other economic characteristics	15: 6 board plus 9 rotating (groups should ensure representation and balance voting power to economic weight)
Baldwin et al. (2002)	Delegation to a monetary policy committee of independent experts; consultation role for the NBCs.	11: 6 full-time executives (current board members) plus 5 non-executives.
Artus and Wyplosz (2002)	Delegation of day-to-day monetary policy to the Executive Board; Council remains supreme authority and sets the broad guidelines for monetary policy.	31 for broad guidelines and 6 for day-to-day implementation.

Annex 3

Political/Economic Mismatch in the ECB Governing Council under Alternative Assumption about the “Nationality” of Executive Board members

In order to address the small vs. large countries dilemma, one could also consider an alternative distribution of the votes in the ECB Governing Council. For example, one should consider the possibility that the six largest countries (as defined below) each have two votes in the Council because they would have one “national” on the Executive Board (whereas the remaining eurozone members would each have one vote).

The indicator of discrepancies between the economic and actual (political) weight in the eurozone is computed, similarly as in the text, as the sum of squared differences between the two. Economic weights are based on GDP, population and countries’ shares in the ECB (computed as an average of the GDP and population weights). The political weight is defined as a number of votes in the ECB Governing Council divided by the total number of votes.

The table below shows that taking into account the existence of the Executive Board leads to a lower discrepancy between political and economic weights. This table confirms that enlargement will not necessarily make the problem any worse.

Table A.3.2 Indicator of discrepancies between economic and political weights in the Governing Council

	Standard voting (one “country” – one vote)			Alternative voting (6 largest countries 2 votes)		
	GDP	Population	ECB weights	GDP	Population	ECB weights
EU-12	9.5	10.3	8.9	6.9 ^a	5.7 ^b	6.2 ^c
EU-15	7.4	7.8	7.1	4.5 ^d	3.8 ^d	4.0 ^d
EU-25*	7.0	9.2	5.4	6.1 ^d	2.9 ^e	4.2 ^e
EU-27*	7.2	9.4	5.7	6.4 ^d	3.2 ^e	4.8 ^e
EU-25-UK	8.0	10.8	6.1	7.8 ^a	3.5 ^f	5.6 ^g

Source: Own calculations. Each entry represents the sum of the squared differences (times 100) between the political weights, defined as v/n (where v is the number of votes in the ECB Governing Council, $v \in \{1,2\}$, and n is the total number of votes), and one of the different economic weights used here. ECB shares are the average of GDP and population weights.

Notes: a) Countries with 2 votes are: Germany, France, Italy, Spain, Netherlands, Belgium.

b) Germany, France, Italy, Spain, Netherlands, Greece.

c) Germany, France, Italy, Spain, Netherlands, Belgium.

d) Germany, UK, France, Italy, Spain, Netherlands.

e) Germany, UK, France, Italy, Spain, Poland.

f) Germany, France, Italy, Spain, Poland, Romania.

g) Germany, France, Italy, Spain, Poland, Netherlands.

* EU-15+CEEC-10.

** EU-15+CEEC-10+Malta+Cyprus.

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