EUROPEAN CENTRAL BANK

THE NEW EU MEMBER STATES
CONVERGENCE AND STABILITY

THIRD ECB
CENTRAL BANKING
CONFERENCE
21-22 OCTOBER 2004

EDITORS

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VÍTOR GASPAR
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Opening address

Lucas Papademos

Ladies and Gentlemen,

"This is the third time. I hope good luck lies in odd numbers." So wrote William Shakespeare, and I am quoting him as a fitting reference for our conference. This is the third European Central Bank (ECB) Central Banking Conference to which I welcome you all. After the ECB conferences in 2000 and 2002, entitled, respectively, "Why Price Stability?" and "The Transformation of the European Financial System", we chose as the topic of this year's conference "The new EU Member States: convergence and stability". I speak on behalf of all my colleagues on the Executive Board and all ECB staff involved in the preparation of this conference when I say that we are delighted to host such a distinguished group of academics and policy-makers here in Frankfurt.

Obviously, in 2004 – the year of the historic enlargement of the European Union (EU) with ten countries from central, eastern and southern Europe – our theme is a very topical one. For that very reason it is also a difficult one: there have been a plethora of academic conferences and gatherings of policy-makers examining the issues related to EU enlargement. That said, I believe that the subjects and the quality of the papers to be presented, the impressive expertise and experience of our speakers, discussants, chairpersons and panellists will provide particularly fertile ground for nurturing fruitful debates, enhancing our understanding and generating new ideas regarding the topics addressed.

So what can we look forward to today and tomorrow? The headings of the three sessions provide the framework which will structure our discussions.

1 After enlargement – where do we stand?

We will start off by devoting this afternoon to the economic and structural transformation of the new Member States. And I am very grateful indeed that Christian Noyer has kindly agreed – at very short notice – to replace Eugenio Domingo Solans (who unfortunately could not join us) as chairman of this session. On the basis of the paper by Gérard Roland, we seek to ascertain where the new Member States stand today with regard to nominal and real convergence, and in particular their institutions and market structures. I find it very useful that such a comprehensive stock-taking exercise is undertaken at this moment in time, since the accession of these countries to the Union is a distinct step marking the beginning of a new phase in their economic and monetary integration within the EU.

Looking back over the past few years, it is obvious that the new Member States have made remarkable progress in terms of macroeconomic stabilisation. Eight of them transformed their planned economies into market economies and integrated them through trade and financial relations with the euro area. The prospect of EU accession and future euro adoption has already served as a powerful focal point and driving force for economic, monetary and exchange rate policies, and has guided policy-makers as well as market participants. In that process of transformation from planned to market economies, institutions played a key role – and here I understand "institutions" in a broader sense as also encompassing appropriately designed policy frameworks. Countries that have established high levels of political and civil liberties and the effective rule of law have made significant progress in the crucial area of

institution building. The existence of well-designed policy frameworks has also been conducive to achieving a high degree of sustainable nominal convergence, which is the essential prerequisite for the eventual adoption of the euro by the new Member States. If we look at the data for inflation, long-term interest rates and fiscal positions, it seems that a number of the new Member States already fulfil at least some of the Maastricht criteria.

But, of course, all the Maastricht criteria for nominal convergence must be fulfilled and in a sustainable manner. Moreover, it is also important to aim at real convergence – structural and institutional – as real GDP per capita levels in the new Member States are still well below those in the euro area. Even though progress has been achieved in the areas of privatisation and product market deregulation (with the exception of utility prices), and the relative size of different sectors (agriculture, industry and services) and the distribution of employment have now converged towards EU levels, we cannot deny that there are still large differences.

A number of issues could be raised in this context, for instance, with regard to labour markets and the development of the financial sector. I believe, however, that the core message remains the same: much has been achieved, but many issues still remain to be tackled. Assessing the current situation and establishing in which fields further action is required – be that with respect to further trade and financial integration, to intra-industrial specialisation or to fiscal consolidation – is of paramount importance, especially to policy-makers.

2 Economic and monetary integration

The second session tomorrow morning is devoted to international linkages and the macroeconomic performance of the new Member States, by looking at the interrelations between the processes of integration into the EU25 and into the global economy. This may seem a rather specific angle from which to analyse the enlargement process. However, it is one that I find particularly important, not least since it counteracts the assertion on the part of some international observers that the EU is "obsessed with its own internal dynamics".

Over the past two decades, the world economy has become increasingly integrated. The new Member States are particularly striking examples of this process. Those that were formerly part of the Soviet economic sphere used to constitute a largely isolated trade bloc, with few interactions with the world economy. Today, these countries export and import more than two-thirds of their goods and services to and from the rest of the world. They also attract significant amounts of foreign investment. Openness and international integration can lead to a dramatic improvement in economic performance through the introduction of new technologies and access to larger markets. The paper by Tamim Bayoumi, Michael Kumhof, Douglas Laxton and Kanda Naknoi provides some interesting insights and helps to estimate some of the dynamics that are at work. At the same time, international integration places significant demands on a country's economic, political and social institutions. In this context, three principal subjects deserve, in my view, particular attention: trade, capital flows and labour mobility. I expect that the conceptual approaches to understanding the phenomena that we are observing, as well as the concrete policy challenges related to these subjects, will take centre stage in the discussions tomorrow.

3 Macroeconomic adjustment, convergence and the role of policy

The third session tomorrow morning, as well as the policy panel in the afternoon, will address the questions which are probably closest to home for central bankers: what is the role of national policies, both at the micro and macro levels, in the process of economic adjustment?

What are the key policy challenges for the new Member States on the road to euro adoption? And, looking ahead, what is required to ensure a successful participation in Economic and Monetary Union of any future new entrants into the euro area?

The paper by Jürgen von Hagen and Iulia Traistaru provides a comprehensive treatment of the issues at stake and will serve as a good basis for discussion. Allow me to whet your appetite for these issues with a few preliminary thoughts.

Clearly, short-term and medium-term economic prospects depend on factors such as the stance of fiscal or monetary policy, the movements in commodity prices and/or global economic activity. However, the degree of *long-term* economic success is ultimately determined by the level of progress achieved with regard to structural and institutional reforms. These include, for instance, the creation of a business environment conducive to investment and entrepreneurial initiative; incentives for the formation of human capital; investment in education and research; competition policy; and appropriate policies concerning labour markets and social security systems. These are significant issues that deserve attention, and not only in those EU Member States that seek to adopt the euro in the future, but also in the current euro area Member States.

On the road to the euro, convergence and stability are key objectives – hence the title of our conference. I view real and nominal convergence as interdependent processes which can be mutually reinforcing. Indeed, by fostering real convergence through structural reforms, thereby improving the supply-side of the economy through enhanced flexibility in goods and labour markets, nominal convergence will also be enhanced. Likewise, by advancing nominal convergence, anchoring inflation expectations and reducing the inflation bias, prospects for economic growth and thus real convergence will improve. The role of macroeconomic policies in general, and the stability-oriented policy framework of the Union in particular, is to make sure that the dynamics of the economic, financial and monetary integration process do not jeopardise an orderly convergence process. It is in this light that participation in ERM (Exchange Rate Mechanism) II and the fulfilment of the Maastricht convergence criteria should be seen.

EU membership is not sufficient to ensure continued economic success and real economic convergence of the new Member States with the EU15. There is a risk that "reform fatigue" could set in after EU accession, because the incentive for reform may no longer be as strong as before. At the same time, I would expect further pressure for reform to come from increased competition within the Single Market which is now confronting domestic producers; from the limitations on state aid and public subsidies that are laid down in the *acquis communautaire* and are applied by the European Commission; and from the constraints on macroeconomic policy which derive from the objective of all new Member States to adopt the euro.

To what extent these expectations are justified and, more importantly, what can – or should – be done in order to address the challenges accompanying these processes of economic adjustment and structural reform will be discussed tomorrow. Given that the policy panel will consist of high-calibre policy-makers from both the EU15 and the new Member States as well as from EU institutions, one does not have to be a follower of the rational expectations hypothesis to anticipate a lively debate, be it on labour and product market reform; on financial sector policies; on monetary and fiscal policies; or on exchange rate policy and the merits of ERM II membership.

As I said at the beginning, this is the third time that the ECB has organised a Central Banking Conference. And I hope there is not only good luck in odd numbers. I also hope that our third conference will again offer a valuable forum where we can have intellectually

stimulating debates, exchange insights, generate new ideas, and enhance the good contacts between central bankers and academia. Judging by the experiences of the first two conferences, I have every reason to be confident.

Thank you very much for your attention.

2

Introduction to the Third ECB Central Banking Conference The new EU Member States: convergence and stability

Carsten Detken, Vítor Gaspar and Gilles Noblet*

* We thank our colleagues Lina Bukeviciute, Matthieu Bussiere, Roberto De Santis, Frigyes Ferdinand Heinz, Mika Kuismanen, Stelios Makrydakis, Reiner Martin, Carolin Nerlich, Ad van Riet, Philip Vermeulen, Tina Zumer and conference participants for comments, summaries of the discussions and for providing the data underlying the figures in the text. Luisa Rey provided excellent editorial assistance for the whole conference volume.

A large number of people have contributed to making the third ECB Central Banking Conference a success and to completing this volume. Thus we would like to express our gratitude to the other members of the Conference Steering Committee. In particular to Philip Vermeulen as the secretary of the Committee, Selina Claridge for the efficient managing of the logistics, Helga Meister for the skilled handling of protocol issues, Regina Schüller and Jukka Ahonen for the effective management of press relations, Dirk Freytag, Werner Breun and colleagues from the Official Publications and Library Division for dealing with the website and the technical production of this book and last but not least the Linguistic Services Division (Simon Scott-Kemball) for their excellent work. Furthermore we would like to thank Peter Backé, Gert Jan Hogeweg, Francesco Mongelli, Pierre Petit, Pierre van der Haegen and Ad van Riet for their advice on a wide range of issues.

1 Introduction

On 1 May 2004, ten new Member States joined the European Union (EU), putting an end to the political division of Europe that had lasted for decades. The enlargement was the culmination of a process that started soon after the end of World War II, whereby commerce replaced war in Europe. It is the most recent in a long list of milestones paving the way for European integration. In 1957, 48 years ago, six states (Germany, France, Italy, the Netherlands, Belgium and Luxembourg) signed the Treaty of Rome creating the European Community. From that day on, it was clear that European integration would concentrate on the economic field, after projects of a more political nature such as the European Community of Defence (1952)[2] eventually failed to take off. The central objective of the Treaty of Rome was to create a common market with full freedom of movement of goods, services, people and capital. From 1957, economic forces became the main driver of European integration. However, it is crucial to emphasise that its motivation and guiding strength have always been political. Clearly, the letter and the spirit of the Treaty are of an eminently political nature, as sovereign states share their sovereignty and co-exist with a European "institutional triangle" comprising the Council, Commission and European Parliament, as well as the European Court of Justice.

The underlying meaning was crystal clear to the founding fathers of the European Community, who agreed that the aim of European integration was:

"to substitute for age-old rivalries the merging of their essential interests, to create, by establishing an economic community, the basis for a broader and deeper community among peoples long divided by bloody conflicts; and to lay the foundations for institutions which will give direction to a destiny henceforward shared."[3]

In the last fifty years, an increasing number of countries have found the idea of European unity, as an economic and institutional setting, attractive. Over the years, membership of the EU has gradually broadened. The United Kingdom, Ireland and Denmark became members in 1973. Greece joined in 1981, Spain and Portugal in 1986. In 1995, Austria, Finland and Sweden became members.

In June 1998 the European Central Bank (ECB) was established. 1 January 1999 marks the adoption of the euro as the single currency in 11 Member States and the start of the single monetary policy in the euro area. On 1 January 2001 this number increased to 12 as Greece joined the euro area. Such moves marked the crowning achievement of a very long process. In fact, the creation of a common market accompanied by common policies was not seen as the final stage of European integration. The completion and the smooth functioning of the single market called for the creation of a single currency. The first project emerged in the late 1960s with the adoption of the Werner Report. The Report foresaw a three-step move towards a monetary union based on fixed parities, yet without calling for a single currency. Later on, the currency instability that followed the end of the US dollar convertibility into gold and the free floating of the US currency convinced the Europeans of the need for stable exchange rates. The first initiative in this respect was the creation of the "Snake" in 1972, followed by the European Monetary System in 1979. Ten years later, the Delors Report clearly advocated the creation of a single currency in three stages. It led to the signature of the Maastricht Treaty in February 1992. With the completion of the Single Market in January 1993, the time was ripe for setting up a monetary union and a single currency.

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[2] The French National Assembly rejected the Treaty in August 1954.

[3] Quoted from the Treaty establishing the European Coal and Steel Community (signed in Paris on 18 April 1951).

In May 2004, ten more states (the Czech Republic, Estonia, Cyprus, Hungary, Latvia, Lithuania, Malta, Poland, Slovenia and Slovakia) became members of the EU. For eight of these countries, membership is the culmination of a decade-long transition from central planning to market economies. Creating free markets in places where they were previously blocked required the destruction of a vast array of institutions, laws and regulations controlling production, distribution and even consumption. The process of transformation may well be characterised as a "dangerous moment", to use a phrase coined by Alexis de Tocqueville. Its success depends on the clarity and stability of expectations. Stable and clear expectations are necessary to foster investment in physical and human capital by domestic and international investors. The fall of Communism in Europe created an opportunity to end the historical East-West divide in Europe associated with the Cold War. The countries of central and eastern Europe had the prospect of joining a Europe characterised by democracy, free and open market economies, and stability-oriented monetary and economic policies. Such prospects were undoubtedly key in providing a clear anchor that could coordinate and stabilise expectations during the transition process.

Specifically, the transformation of the former planned economies into political democracies and market economies implied far-reaching administrative and institutional changes in the new Member States. The process was accelerated and smoothed, as it was also necessary for joining the EU. The ten new Member States have fulfilled the Copenhagen criteria laid down by the European Council and have adopted the whole set of EU legal texts known as the *acquis communautaire*. **Gérard Roland**, in his contribution to this volume, **"After enlargement: institutional achievements and prospects in the new Member States"**, argues that the process of institutional and administrative transition has been very successful. Moreover, membership has wider implications. It means embracing the Union's political, economic and social values such as democracy, the rule of law, competitive and open markets, and social cohesion.

The new Member States, in turn, bring increased diversity and dynamism to the EU.

Over the last 50 years, economic integration and monetary integration have developed in parallel and have supported each other. It is also important to note that, over this period, the enlargement of the EU and its deepening have also developed jointly, contrary to a largely held view that both concepts were in conflict with each other. In this respect, the Nice Treaty and the EU Constitution, although not a direct consequence of enlargement, aim at enhancing and streamlining the governance and functioning of the enlarged EU, in particular through new voting weights in the Council and the extension of the qualified majority rule. Moreover, by reaffirming and solemnising the common political, social and human values shared by Europe's citizens, the Constitution is the latest testimony to the intricate relationship between economic integration and political integration in Europe that its founding fathers contemplated 50 years ago.

The European integration process is testament to the link between a single market and a single currency, as highlighted by the report "One Market, One Money" issued by the European Commission in 1992.[4] Tommaso Padoa-Schioppa (2004) affirms that two economic paradigms have led the EU along this path: Robert Mundell's Optimum Currency Area theory[5], and Tommaso Padoa-Schioppa's own "inconsistent quartet".[6] According to Padoa-Schioppa, Mundell's main contribution was to question the one-to-one

[4] See Emerson et al. (1992).

[5] Mundell (1961). Other pioneers include McKinnon (1963) and Kenen (1969).

[6] Padoa-Schioppa (1982).

correspondence between states and monies. This in turn raised the possibility of currency unification. On the other hand, the inconsistent quartet meant that the single market, exchange rate stability and autonomous national monetary policies were not compatible in a lasting way. This, therefore, pointed forward to the necessity of monetary unification.

More recently, the inverse link has been explored, especially by Andrew Rose.[7] Indeed, Rose inverted the order to obtain "One Money, One Market". Integration consequences from currency unification are crucial, as shown in the contribution by **Tamim Bayoumi, Michael Kumhof, Douglas Laxton and Kanda Naknoi** to this volume, entitled **"Exchange rate regimes, international linkages and the macroeconomic performance of the new Member States"**.

All new Member States are committed to participating in the euro area as soon as they fulfil the necessary conditions for the adoption of the single currency. Therefore, the achievement of a high degree of sustainable convergence is a main challenge ahead. Convergence and domestic stability should complement each other throughout the process of adjustment. The title of the Conference: **"The new EU Member States: convergence and stability"** conveys this message. The paper by **Jürgen von Hagen** and **Iulia Traistaru**, **"Macroeconomic adjustment in the new Member States"** and the policy panel, introduced by **Otmar Issing**'s contribution, **"EU enlargement and monetary integration"**, cover these fundamental questions.

2 The economic and structural transformation of the new EU Member States

In this section we will provide an overview of the papers and discussions presented in the first part of the Conference. However, before doing so, we will recall some basic facts concerning the economic achievements of the transition process and highlight the growing and significant linkages of the new Member States with the euro area.

Figure 1 reveals what has been achieved in terms of catching-up convergence of real per capita GDP levels between 1993 and 2004. The percentages shown are based on the GDP-weighted euro area average. According to 2004 projections and in terms of their GDP-weighted average, the new Member States have reached 54% of the purchasing power-adjusted euro area per capita income. Significant country differences exist (see Figure 1). It is evident that all countries have made substantial progress in terms of real catching up in the last 11 years.

The catching up is also evident from Figure 2, which depicts annual growth rates of real GDP. Since 1996 the average new Member States' growth rate has been consistently higher than euro area growth. The small weight of the new Member States in a hypothetically enlarged euro area of 22 countries – 5.7% at nominal exchange rates, or 10.7% at purchasing power parities in 2003 – is indicated by the relatively similar growth performance of the EU25 and the euro area in Figure 2.[8]

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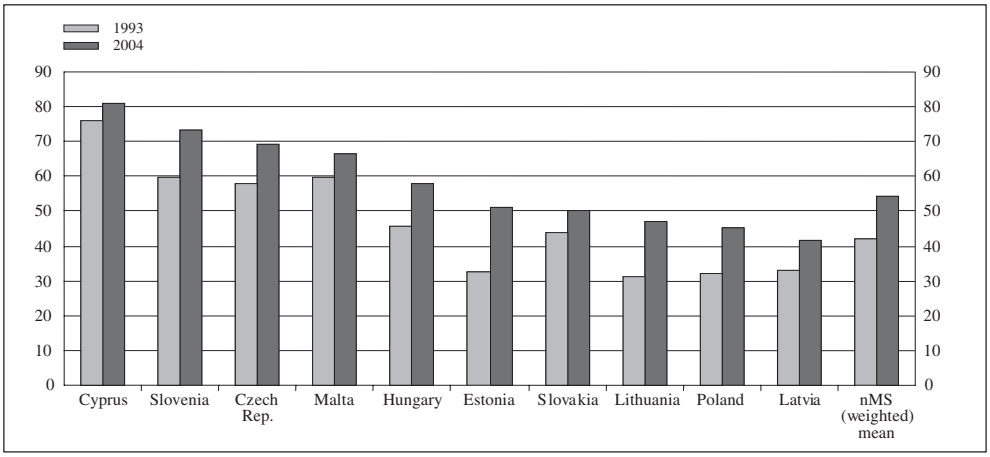
[7] Rose (2000).

[8] Note that Denmark, Sweden and the UK also grew on average more than the euro area over the period depicted in Figure 2.

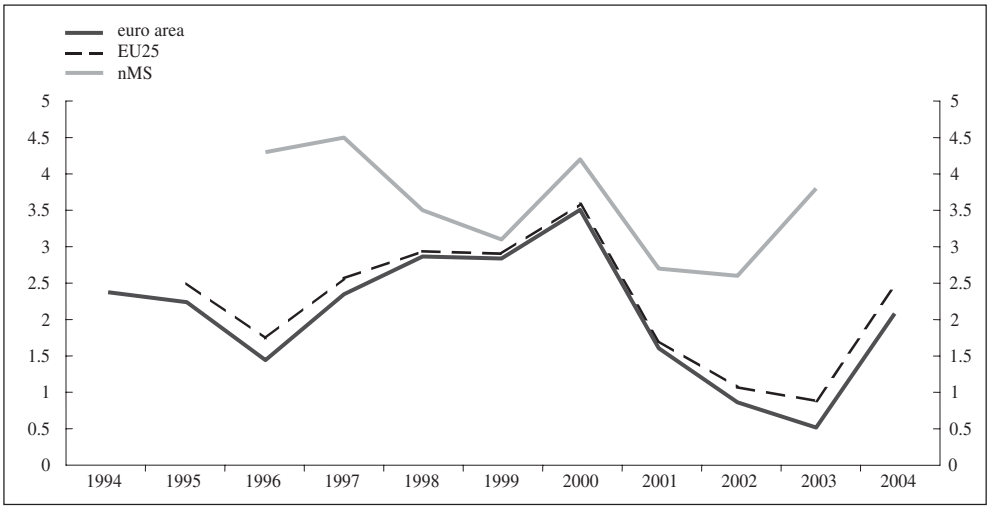
Figure 1: Catching up in real income
(GDP per capita in PPP terms, % of euro area average)



Sources: ECB, Eurostat and European Commission (EC), 2004 data EC Services projections [nMS = new Member States].

The recent EU enlargement follows a steady process of trade and financial integration between the EU15 (the 15 EU Member States before May 2004) and the ten new Member States over the last ten years. In fact, the share of these countries in euro area imports grew from 6.6% in 1995 to 10.3% in 2003, while the share of the new Member States in euro area exports rose from 7.6% to 11.1% over the same period. This trend has been largely helped by the conclusion of the so-called bilateral Europe Agreements with each of these countries, which led to the abolition of trade barriers for industrial products.

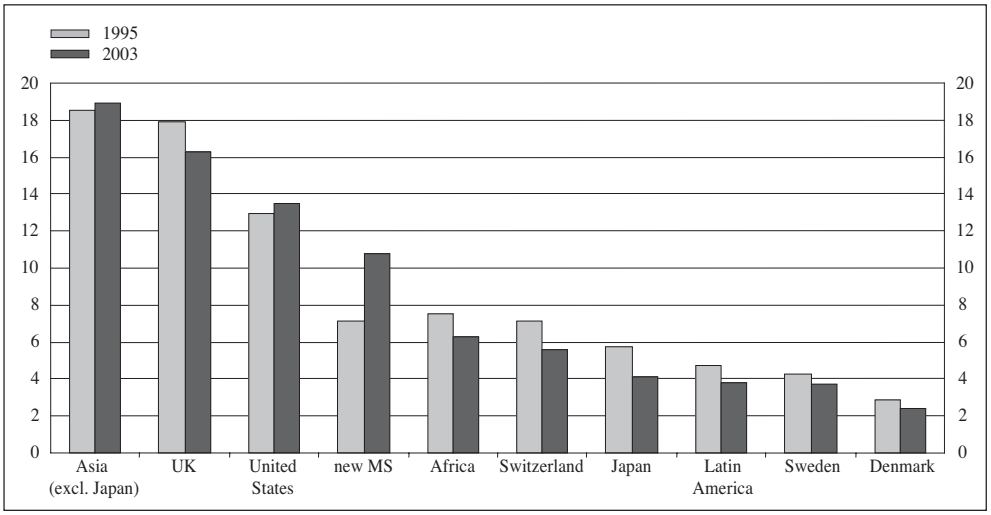
Figure 2: Real GDP growth in the EU, the euro area and the new Member States
(annual percentage changes)



Sources: ECB, Eurostat and European Commission, 2004 data EC Services projections.

Figure 3 shows that between 1995 and 2003 only three countries/regions have increased their share in goods trade with the euro area. These are Asia (excluding Japan), the US and the new Member States. The increase in the new Member States' share by 3.6 percentage points is by far the most significant change over this eight year period.

Figure 3: Geographical breakdown of euro area trade in goods (exports + imports) as a % of total trade



Source: ECB, Monthly Bulletin.

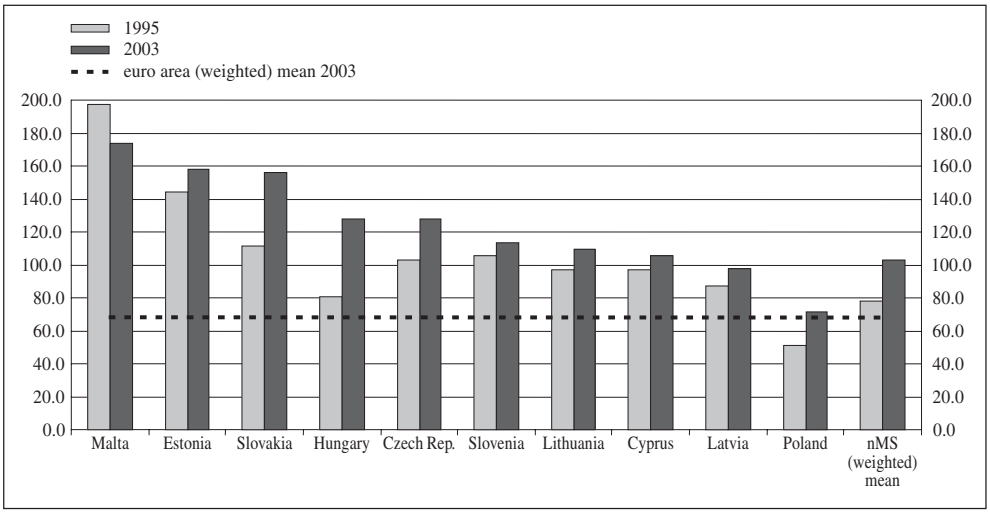
Figure 4 reveals that all new Member States are now very open and, indeed, more open than the weighted average of the euro area countries. Openness is measured as the ratio of exports and imports in goods and services to GDP. Between 1995 and 2003 all new Member States (with the exception of Cyprus) witnessed an increase in their degree of openness, some countries even substantially so. The GDP weighted average degree of openness of 103% for the new Member States by far exceeds the weighted euro area country average, which is 68%.

Figure 5 depicts the trade linkages of the new Member States with the euro area. The columns show exports and imports in goods and services with the euro area, as a percentage of total trade. The importance of the euro area as a trade partner is on average about the same (exceeding 50% of total trade) for the new Member States compared to the weighted average of individual euro area countries' trade with the rest of the euro area. What is surprising is the fact that between 1995 and 2003, three countries actually experienced a decline in their share of trade with the euro area. This must reflect the simultaneous ongoing integration of new Member States with world markets as well as with the euro area.

Data capturing the financial linkages of the new Member States with the euro area are more scarce. Nevertheless, there is clear evidence of significant financial ties between the two. Recently published data on the geographical breakdown of the euro area international investment position show that at the end of 2003, the stock of euro area direct investment in the new Member States amounted to EUR 109 billion[9], which is 5.2% of the total stock of euro area foreign direct investment (FDI) assets. The outstanding stock of euro area foreign

[9] Backé et al. (2004) state that 80% of foreign direct investment in the new Member States originates from the EU15.

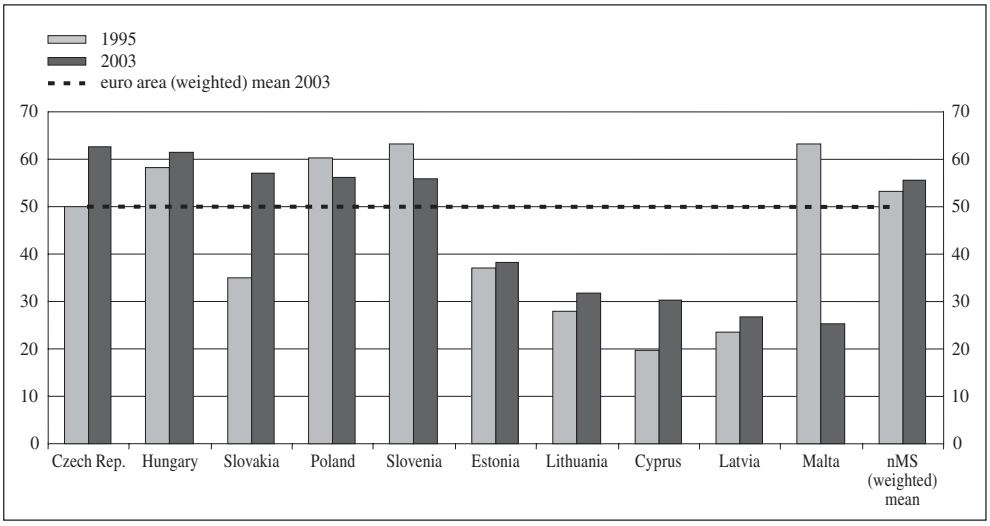
Figure 4: Degree of openness
(goods and services exports and imports as a % of GDP)



Sources: ECB, International Monetary Fund (IMF) World Economic Outlook.

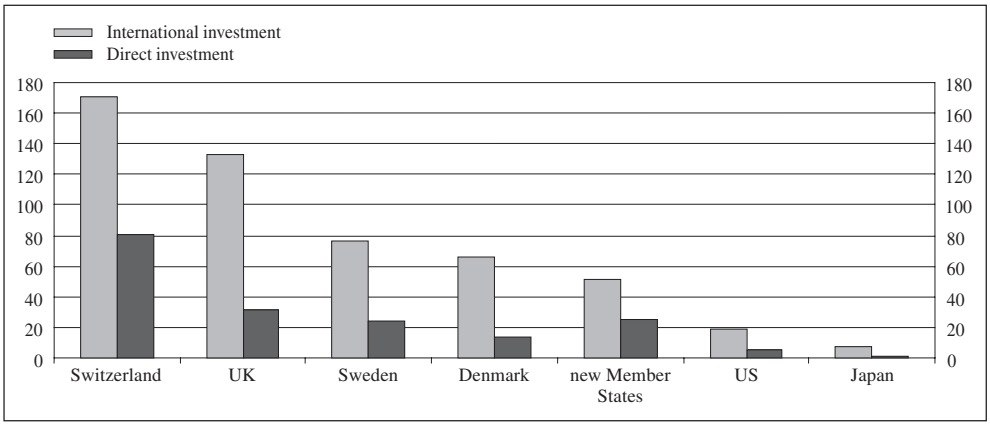
direct investment, portfolio and other investment assets in the new Member States (totalling EUR 226 billion at the end of 2003) amounts to only 3% of euro area GDP, but equals 51% of new Member States' GDP. In terms of receiving countries' GDP (i.e. focusing on the importance of euro area foreign investment for third countries), the ten new Member States are the fifth largest country block with regard to euro area international investment assets,

Figure 5: Trade with the euro area
(goods and services exports and imports as a % of total trade)



Sources: ECB, IMF Direction of Trade Statistics (DOTS).

Figure 6: Euro area international investment
(assets outstanding as a % of the recipient country's GDP, end-2003)



Sources: ECB, Monthly Bulletin; Schweizerische Nationalbank (SNB), Statistical Monthly Bulletin.

behind Switzerland, the UK, Sweden and Denmark (see Figure 6). In terms of the euro area's FDI assets as a ratio to receiving countries' GDP, the new Member States are, with 25%, in third place, behind Switzerland and the UK (see Figure 6). As these ratios refer to overall outstanding assets, these figures are the result of very large capital inflows in a relatively short period of time.

At the current juncture, there still remain some significant structural differences in financial systems compared to the euro area. For example, the level of financial intermediation (banking assets as a % of GDP) is much lower in the new Member States (except for Cyprus and Malta).[10] Nevertheless, the banking sector dominates capital markets in all new Member States in terms of firms' financing decisions, which shows that the development of capital markets still has some way to go.

In 2002 the ECB released a book entitled *Financial Sectors in EU Accession Countries*, which stressed two important features of financial sectors in these countries.[11] The first is that, as mentioned above, the financial system is dominated by the banking sector. The second is that foreign ownership of commercial banks is pervasive in these countries (see Table 1).

It is interesting to point out that the importance of foreign ownership in banking is far greater than on average for the EU15 countries. It is even true that, after extensive privatisation, the share of private-owned banks is greater than in some countries participating in the euro area. Financial development will likely foster growth prospects and accelerate the catching-up process. Moreover, increasing economic and financial integration has brought major benefits, not only to the new Member States, but to the EU as a whole. **Gérard Roland**'s paper **"After Enlargement: Institutional Achievements and Prospects in the New Member States"** deals with institutional and structural convergence. He attempts to answer four specific questions. First, have the new Member States achieved this transition in a stable and satisfactory way? Second, has the EU acted as an external anchor for institutional changes in the new Member States? Third, is there anything the EU15 Member States can learn from the transition period in the new Member States with regard to the needed reforms

[10] For evidence on this and the following facts, see Backé et al. (2004), pp. 39-42.
[11] Caviglia, Krause and Thimann (2002).

Table 1: Foreign ownership of banks in 2003

	Number of commercial banks	Of which: foreign-owned	Share of total assets that is foreign-owned (as a %)
Czech Republic	35	27	96
Estonia	6	3	97
Cyprus [1)]	14	6	12
Latvia	22	9	47
Lithuania	13	10 [2)]	96
Hungary [1)]	36	29	83
Malta	16	10	68
Poland [1)]	60	46	68
Slovenia	22	6	36
Slovakia	21	19	96

Source: ECB (2005), Table 4, p. 17, ESCB Banking Supervision Committee.
1) Excludes cooperative banks and international banking units, but includes the Cooperative Central Bank (for Cyprus).
2) Includes foreign bank branches.

in their own labour markets, welfare and pension systems? Fourth, will the EU work with 25 members, and will the overall contribution of the new Member States be positive in terms of efficiency of decision-making?

The answers to these four questions provided by Roland are respectively *yes*, *yes*, *not really* and *most likely yes*.

Roland finds that after more than ten years of experience with market institutions[12], the new Member States have successfully completed the transition. He provides evidence based on a variety of indicators of development of the institutional economic environment, which show a satisfactory convergence to the EU15 level. The indicators cover price liberalisation, foreign exchange and trade liberalisation, privatisation, enterprise reform, competition policy, the degree of corruption and the quality of government from an institutional perspective. These indicators are taken from the European Bank for Reconstruction and Development (EBRD) and the World Bank. Admittedly, some are a rather rough description of reality and are moreover sometimes based purely on (expert) opinion. While country differences clearly exist, nearly all indicators reveal convergence to industrial country levels by the early to mid-1990s.

This does not imply that the process is fully completed, especially as there are two exceptions. With regard to enterprise reform, progress has been slow and recently has been stagnating. This indicator includes corporate governance and the slow progress in tightening soft budget constraints. The second exception is corruption. There is no clear trend showing a decrease in the indicators measuring corruption. In some countries, rather to the contrary, the level of corruption seems to have increased. Roland relates this development to the many temptations created by the transition process itself.

Has the EU acted as an external anchor (or compass) for institutional change? Roland argues that the requirement to implement the *acquis communautaire* has played a fundamental role, providing a clear benchmark for sound market institutions. The judgement is based on a comparison of the economic and institutional development of the EU10 (+2)

[12] In this context, institutions can usefully be defined in a broad way, which also covers appropriately designed policy frameworks (see the Opening Address to this conference by Lucas Papademos).

(i.e. the ten new Member States plus Bulgaria and Romania) with that of the CIS (i.e. the 11 former Soviet Republics that form the Commonwealth of Independent States). Broadly speaking, while the EU10 (+2) countries have exceeded their pre-transition real GNP level since 2000/2001, after recording an initial decline, the CIS countries were (in 2001) still close to their trough at just over 60% of their pre-transition real GNP level.

Furthermore, the literature on law enforcement and transition (see for example Roland and Verdier, 2003) shows how the certain prospect of future law enforcement (secured by future EU membership) already influences the degree of law enforcement during the transition process and solves a multiple equilibrium problem by selecting the "good" equilibrium in terms of private agents' behaviour. This "institutional anchor" explanation of the "Great Divide" between CIS and EU10 (+2) countries, according to Roland, dominates alternative explanations such as differences in the length of periods under Communism, in their respective resource endowments, religions or geographical position.

The observation that good institutions, i.e. in general terms ones that represent constraints on the discretionary power of governments, such as secure property rights, are linked with economic development, is by now a stylised fact of the growth literature (see for example Hall and Jones, 1999, or Easterly and Levine, 2003). What is more disputed in the broader discussion is whether it is really good institutions that cause growth, or whether rather differences in human capital are responsible for both growth and the development of good institutions, including democracy and human rights (on the latter, see Barro, 1999). In order to confirm the argument that institutional developments were at the root of the Great Divide, one should probably take a close look at differences in human capital to discard fully the latter possible explanation.[13] Or, put differently, could it be possible that higher average human capital in the EU10 (+2) countries would anyway have triggered higher growth in reforming economies and led, as Roland reports, to the diversion of the freedom house index of civil and political rights of the two groups of countries, irrespective of the prospect of EU membership?

This would contradict most people's priors, but as Glaeser, La Porta, Lopez-de-Silanes and Shleifer (2004) convincingly explain, so far the issue of causality has been difficult to resolve owing to problems with the measurement of institutions (indicators should capture rules rather than outcomes) and the limitations of econometric techniques (i.e. difficulties in finding appropriate instruments).

Concerning the third question, Roland argues that, contrary to the widespread perception that EU10 (+2) countries might have surpassed the current EU15 in terms of structural reforms, there is little evidence to support this claim. He starts by pointing out the generally worse labour market situation of the new Member States compared to the EU15. This is a first – though only suggestive – indication that labour market reforms might not have resulted in more flexible labour markets. This notion is supported by an index of labour market rigidities, which reveals that the EU10 (+2) countries on average have more rigid labour markets than the EU15. With regard to pension systems, the new Member States have opted for standard three tier systems. Together with an only slightly more benign demographic structure, there is overall no major difference between EU15 and EU10 (+2) pension systems. Roland concludes that although there is somewhat less of a "time bomb" in other social security systems due to their slightly less generous character, unfortunately the Lisbon agenda is still just as much an issue for the new Member States as it is for the EU15.

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[13] See also Koromzay, who argues that economic linkages with Russia could be one simple explanation of the Great Divide.

In his dinner speech titled **"Enlargement and "Old" Europe: Blow or Blessing?" Tommaso Padoa-Schioppa** pointed out that the recent EU enlargement could also be a blessing for the EU15 as increasing competition is likely to be a driving force for structural reforms. He explicitly mentioned labour mobility, increasing wage competition, industrial relocation and outsourcing activities that put pressure on labour laws and the tax systems of EU15 countries.

The answer to the fourth question raised by Roland is – as the author himself explicitly states – rather more speculative. Roland argues that the new EU Constitution represents a sound basis for efficient decision-making. The claim that the new Member States would contribute positively is derived from his evaluation of their contribution to the drafting of the Constitution in the Convention, coupled with the observation that less vested interests linked to current EU inefficiencies should accordingly be less of an obstacle for efficient decision-making. The new Member States should have a relatively positive influence on the likelihood of the EU embarking on needed reforms. With regard to the new Member States, Roland thus doubts the existence of a trade-off between EU enlargement and EU deepening.

Tommaso Padoa-Schioppa shared this optimism in his dinner speech and argued that the Council of Ministers may become more competition-oriented than was previously the case, because many of the new Member States are relatively small countries. Economic realism, i.e. the acceptance of basic economic truths, seems often to be more widespread in small than in large countries, most likely due to the latter's illusion of self-sufficiency and the willingness to promote national champions. The first discussant, **Erkki Liikanen**, dismissed the risk that after having joined Economic and Monetary Union (EMU), new Member States would face weaker incentives for future reform. The EU Commission has stronger powers in the field of the internal market and competition policies than, for example, with regard to fiscal surveillance. Furthermore, competition between new Member States over FDI will continue to be a driver of reform.

With regard to Roland's first question, Liikanen asked for a clear definition of what actually constitutes a stable and satisfactory institutional transition. In his view the definition should include the long-run sustainability of reforms, as measured, for example, by the state of public finances and indicators of political stability.

Liikanen predicts that the new Member States will oppose new regulations, which could hamper competitiveness. The new Member States are likely to protect their competitive advantage both inside the EU and towards third countries, and will thus probably seek to reinforce principles which strengthen the market orientation of EU economic institutions. In the long run this will benefit the whole EU and lead to more efficient production structures. The second discussant, **Val Koromzay**, agreed with answers to the first two questions, but disagreed with the third one. Koromzay conveyed a more optimistic attitude with regard to still remaining reform needs and also the reform capabilities of the new relative to the EU15 Member States. He explicitly mentioned pension and labour markets. New Member States still have a substantially less constrained set of choices regarding future pension systems, due to the fact that less liabilities from pay-as-you-go systems have so far accumulated. A system shift towards funded systems should thus be easier and less costly. Furthermore, the poor performance of the labour markets was judged to be rather a result of the interaction of pre-transition labour market rigidities and the transition shock than a sign of rigidities in the post-transition labour laws. Koromzay expressed optimism with regard to the reform leadership capacity of the new Member States within an enlarged EU. The speed of real convergence could then trigger a more aggressive approach to reforms within the whole Union.

Koromzay then asked for a more careful interpretation of the set of indicators used in the paper. Given his experience with the construction of indicators, a careful check with country experts is required before conclusions should be drawn. In this respect he particularly questioned the country ranking on labour laws. A certain degree of scepticism on the reliability of the broad set of indicators was later shared by **Vítor Gaspar**. In terms of major challenges ahead, Koromzay put less emphasis on enterprise restructuring than on the development of independent regulatory authorities. In the general discussion, Governor **Leszek Balcerowicz** mentioned the difficulties with corruption indices. A high perception of corruption requires some degree of transparency to detect it, which might not be present in very corrupt systems. The comparison of the transition period with socialism according to some indicators might therefore be misleading. The lack of declining or even increasing corruption levels could possibly be attributed to an increase in transparency instead of true underlying changes in corruption. Furthermore, unlimited state power, as was the case under socialism, is a worse phenomenon than corruption, which implies a certain limit to the reach of the state. **Val Koromzay** also stressed the different forms of corruption in central planned economies, e.g. the importance of personal relationships, and doubted that corruption was a particular product of the transition process.

3 A new look at the costs and benefits of monetary unification

In the 1960s Mundell (1961), McKinnon (1963) and Kenen (1969) asked questions about the optimal geographical scope of currencies. The emphasis was on the implications for macroeconomic balance and business cycle fluctuations – in other words, on macroeconomic stabilisation. These seminal contributions gave rise to the Optimum Currency Area (OCA) literature.[14] Assuming that monetary policy helps the adjustment to country-specific shocks, the OCA literature looks at the determinants and propagation mechanisms of symmetric vs. asymmetric shocks.[15] Bayoumi and Eichengreen (1993) present an assessment of the potential costs of monetary unification, looking at the correlation between the underlying supply and demand shocks across the relevant national economies. By stressing the distinction between symmetric and asymmetric shocks, they explore the direct empirical content of the OCA literature. To this end they use vector autoregressive (VAR) models as the basis for their research, using the US and its regions as a benchmark. This leads them to reach some firm conclusions. First, supply shocks have been larger and less correlated across Europe than in the US, which makes it more difficult for Europe to operate as a monetary union when compared to the US. Second, adjustment to shocks is faster in the US than in Europe. The authors interpret this finding as evidence that the costs associated with foregoing policy autonomy in the face of large idiosyncratic shocks may be substantial. Third, it is possible to draw a strong distinction between core and peripheral EU Member States.

Frankel and Rose (1997, 1998) criticise Bayoumi and Eichengreen's approach, arguing that (trade) integration and business cycle correlations are jointly endogenous. Specifically, Frankel and Rose argue that EMU may provide substantial impetus for increased (trade) integration. Furthermore, they show empirically, using a panel of 21 industrial countries from 1959 through 1993, a positive relation between trade integration and business cycle synchronisation. More explicitly, they conclude that a country is more likely to satisfy the OCA criteria ex post than ex ante.

[14] See, for example, Mongelli (2002) for a critical review.

[15] Of course, it remains to be shown that monetary policy does, in fact, react to absorb or mitigate country-specific shocks. Canzoneri, Vallés and Viñals (1996) argue that empirical evidence does not support such a claim.

A different strand of the literature can be grouped under the label "one market, one money", to borrow the title of the extremely important and influential report mentioned above, which was published under the auspices of the European Commission.[16] These contributions were motivated in the 1980s at a time when European countries were contemplating the costs and benefits of participating in a process of monetary unification against the background of the Single Market programme and of the common policies of the European Community. Many authors have stressed the link between the single market and monetary unification. The single market implies free trade in goods and services and mobility of labour and capital. Moreover, since 1979 European countries have decided to limit exchange rate fluctuations in the context of the Exchange Rate Mechanism (ERM) of the European Monetary System (EMS). It is clear that factor mobility cannot, in the end, be compatible with both stable exchange rates and autonomous monetary policies. This is a fundamental point that can be referred to a "folk theorem" in international macroeconomics (see, for example, Wyplosz, 1997 or Frankel, 2001). The argument was applied to European integration as early as 1982 (see Padoa-Schioppa, 1982). It is therefore remarkable that its implications in the form of constraints on feasible policies and institutional arrangements are so frequently overlooked. From such a viewpoint, monetary unification is a natural corollary of the single market and limited exchange rate flexibility in Europe. Therefore, "one market, one money" clearly expresses the link between the single market and the single currency, in the European context.

In retrospect, it may seem puzzling that *One Market, One Money* did not put much emphasis on the impact of monetary unification on trade and financial integration. However, this is perhaps natural (perhaps even unavoidable) once we remind ourselves that monetary union was seen simply as the most extreme case of reduced nominal exchange rate volatility. Therefore the micro (or real) benefits from a single currency stemmed from the reduction in exchange risk and transaction costs. Moreover, the empirical evidence surveyed in the Commission's studies relied on time series evidence. The literature was unable to find strong effects from exchange rate volatility on either trade or international financial investment flows. The cautious tone of Michael Emerson and his collaborators, the authors of *One Market, One Money,* is therefore easy to understand. In any case, they were among the first to point out that the costs and benefits of monetary unification may be significantly different from estimates based on the OCA theory.

Andrew Rose led the systematic exploration of the link between currency unification and trade integration. His original contribution was entitled *One Money, One Market.*[17] Rose revived an old strand of the literature from the 1960s (see Tinbergen, 1962, Poyhonen, 1963 and Linneman, 1966) which looked at distance as a key determinant of trade flows. In the gravity model of trade the emphasis is on transport costs. However, when thinking about the determinants of trade flows, the notion can be generalised to encompass all relevant trading costs. In a broad sense, trading costs can be conceived as reflecting tariff and non-tariff barriers, different currencies, different languages, conventions, legal systems, enforcement practices and information asymmetries.

In his initial contribution, Rose used a very large panel data set covering almost 200 countries from 1970 to 1990, and grouping data at five-year intervals. Only about 1% of observations are from countries that belong to currency unions. Rose's estimated response to the question "what is the impact of currency unions on trade?" was both stark and surprising. His own summary reads as follows:

[16] See Emerson et al. (1992).

[17] The full title of Rose's paper is: "One Money, One Market: Estimating the Effects of a Common Currency on Trade."

"In this paper, the gravity model was used to show that two countries with a common currency trade more. The effect is statistically significant and economically large: my point estimate is over three times as much as countries not sharing a common currency. The impact of a common currency is an order of magnitude larger than the effect of reducing moderate exchange rate volatility to zero but retaining separate currencies. The effect takes into account a variety of other factors and seems robust."

The surprisingly large estimated effect gave rise to numerous comments and many papers looking at these questions. Recently, Rose (2004) surveyed the results from 34 different studies. He draws three main conclusions. First, the hypothesis that currency unification has no impact on international trade can be rejected at standard confidence levels; second, on the basis of the available evidence from all studies, the combined estimate is that a bilateral currency union increases trade between 30% and 90%; and third, and particularly interesting from our viewpoint, studies focusing on the euro systematically find a smaller effect of currency union on trade. Specifically, Micco, Stein and Ordonez (2003) and Faruqee (2004) estimate the impact of the euro on trade to be about 10%, some five years after its initial introduction.

The contribution to this Conference by **Tamim Bayoumi, Michael Kumhof, Douglas Laxton** and **Kanda Naknoi**, **"Exchange rate regimes, international linkages and the macroeconomic performance of the new Member States"**, starts from the remark that the literature has, thus far, used different tools to assess the macroeconomic and microeconomic costs and benefits of monetary unification. As the authors point out, even studies aiming at quantifying the overall costs and benefits of EMU have resorted to different methodologies when looking at the various aspects of the question at hand. The use of different models implies that the overall assessment becomes a matter of judgement in the absence of an integrating methodology.

In their paper the authors offer a first step towards such a methodology. They construct a theoretically complete model that combines a microeconomic approach to trade (leading to an endogenous determination of tradable and non-tradable goods and services as a function of trading costs) with a variety of real and nominal frictions (which are used in the business cycle literature to discuss the implications of alternative monetary policy regimes). As noted above, recent research suggests large increases in trade flows associated with monetary unification. This can be rationalised as a result of declining international trading costs associated with lower transactions costs and also the associated convergence in legal and regulatory frameworks. The model includes state-of-the-art features that have been found useful in explaining business cycle behaviour. These include habit persistence, monopolistic competition, multi-stage production, adjustment costs on investment, time to build, and wage and price rigidities.

Bayoumi, Kumhof, Laxton and Naknoi consider two blocks in their model. The model is calibrated to represent the new Member States (home) and the euro area (foreign). The authors report a number of important findings. First, moderate reductions in trading costs lead to large increases in international trade and welfare. For example, a reduction in trading costs by 10% leads to an increase in international trade of about 50% in the steady state and an increase in welfare of 10% (in consumption equivalent terms[18]). Second, the adjustment to the steady state equilibrium is (very) slow. Only one-fifth of the effect materialises after five

[18] See Lucas (1987). This measures the change in the consumption *level* at all dates which is, from the viewpoint of the representative household, equivalent to the deviation from the baseline. The change in welfare refers, obviously, to the new Member States. Given the differences in the size of the two economies, the magnitudes for the euro area are, obviously, much smaller.

years. Strikingly it implies that estimates of a 10% increase after five years (in line with the results reported above from Micco, Stein and Ordonez (2003) and Faruqee (2004)) are compatible with long-run estimates (as reported in Rose, 2004). Third, the welfare gains from trade integration seem to be of an order of magnitude larger than any costs or benefits associated with changes in monetary policy regimes through their impact on business cycle fluctuations.

The authors finally conclude that since the potential macroeconomic costs associated with increased volatility in economic activity occur immediately, whereas the benefits from increased integration build up gradually over time, the need to ensure a smooth transition remains a key policy issue. **Nicholas Garganas** made three main points in his comments. Firstly, he questioned the empirical ground for the link between trade flows and monetary integration. He rather saw a clearer link between monetary integration and financial integration. Secondly, he questioned the assumption in the paper that there would necessarily be some macroeconomic costs associated with participation in the euro area and the associated loss of autonomy in the conduct of monetary policy. He emphasised that small open economies have very little effective monetary autonomy in a world of unrestricted capital movements and high capital mobility. Moreover, for countries with a long history of inflation, the adoption of the euro may be associated with very important credibility gains. In this connection, he offered the example of Greece, where the adoption of the euro led workers to lower their inflation expectations and to moderate demands for wage increases. Thirdly, he stressed that in a world of highly mobile capital, participation in a currency union removes a very important source of speculative capital flows, and lowers the risks of reversals in capital flows. In his discussion, **Frank Smets** acknowledged the contribution of Bayoumi, Kumhof, Laxton and Naknoi. Nevertheless, he also pointed to a number of missing parts that would complete the authors' ambitious agenda. First, the analysis of the trade-off between the long-run benefits from further integration and the short-run costs associated with foregone monetary independence has not been (explicitly) performed.[19] One important structural feature of the new Member States is that they are small and (in general) very open economies. Therefore, according to the OCA criteria, the costs should be small. Second, the link between monetary integration and trade flows is not explored in detail, which raises questions concerning a number of calibration decisions. Third, and more important, monetary integration is also linked with financial integration. Baele et al. (2004) have shown that monetary unification has led to deeper financial integration in the euro area. Financial integration will undoubtedly be an important feature of the transition process for the new Member States, and will also take place faster than trade integration. Financial integration is therefore likely to create very relevant challenges and opportunities for the transition process of the new Member States.

The omission of financial integration is potentially important. In fact, Bayoumi, Kumhof, Laxton and Naknoi find that reducing trading costs does not lead, in the model, to equilibrium real appreciation. They also document that the new Member States from central and eastern Europe have experienced sizeable real appreciation which is positively correlated to productivity catching up.[20] They quote Halpern and Wyplosz as providing evidence of a

[19] For a cost-benefit analysis of joining a monetary union adapted to the case of catching-up economies, incorporating (i) the Balassa-Samuelson effect and other deterministic factors affecting the real exchange rate and (ii) the Rose effect, see Ca' Zorzi, De Santis and Zampolli (2005).

[20] Although the paper does not show this, the model does produce a real appreciation in response to a positive productivity shock.

Balassa-Samuelson effect for these countries.[21] In their paper, the authors consider a scenario where the capital stock in the new Member States is below equilibrium, giving rise to a long-lasting investment boom, initially financed from abroad. Some of the effects examined can be interpreted as similar to those which might arise from a more explicit modelling of financial integration.

It is, however, clear that a number of other potentially important aspects are missing. For example, Lipschitz, Lane and Mourmoras (2002) argue that very large capital inflows are likely to characterise the adjustment path of countries from central and eastern Europe. They identify far-reaching implications for the conduct of economic policies.

4 Macroeconomic adjustment in the new Member States

The paper by **Jürgen von Hagen** and **Iulia Traistaru** entitled **"Macroeconomic adjustment in the new EU Member States"** deals with the keywords defining the topic of this conference, convergence and stability. Von Hagen and Traistaru examine the relationship between real (catching-up) and nominal convergence, as well as on the sustainability of macroeconomic stability in an enlarged EMU. For the latter purpose they analyse fiscal institutions and business cycle stabilisation possibilities in EMU25, i.e. after the new Member States have achieved nominal convergence.

With regard to the relationship between real and nominal convergence, opinions tend to differ. Von Hagen and Traistaru mention that rapid growth and large capital inflows could make it harder to achieve nominal convergence. This leads them to conclude that real convergence would be easier to manage for some new EU Member States if they were allowed to adopt the euro immediately.

Lucas Papademos also considered real and nominal convergence to be interdependent processes in his Opening Address. But, unlike von Hagen and Traistaru, the Vice President of the ECB stressed the mutually reinforcing nature of real and nominal convergence. Structural reforms leading to real convergence and improved flexibility on the supply side of the economy will foster nominal convergence. Nominal convergence is accompanied by low inflation and low interest rates, which in turn support real convergence.

The discussion on the link between real and nominal convergence relates directly to the issue of the optimal strategy on the road to EMU, especially with regard to the exchange rate regime and the role of ERM II. The issue is discussed in von Hagen and Traistaru's paper as well as in the policy panel (Session IV of the conference). We will present the various views in the following section, entitled "ERM II and the path to EMU".

Von Hagen and **Traistaru** start their paper by reviewing the past real and nominal convergence processes. With regard to real (catching-up) convergence, the authors show that convergence can be observed in terms of growth in both per capita GDP and productivity. States that had lower per capita GDP levels and lower productivity in 1996 grew faster in the period 1996-2000, and much more so than the euro area average. Over the period 1996-2000, labour productivity growth was more than three times as large in the new Member States than in the euro area, while per capita GDP grew nearly twice as much.

According to the ECB's 2004 Convergence Report[22], six of the ten new Member States were in an excessive deficit situation in 2002 and 2003 (and would remain so according to EU

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[21] See Halpern and Wyplosz (2001). The original contributions are from Balassa (1964) and Samuelson (1964). See Obstfeld and Rogoff (1996) for a comprehensive presentation.

[22] See the ECB's Convergence Report 2004 at www.ecb.int/pub/pdf/conrep/cr2004en.pdf and Otmar Issing's introduction to the policy panel in this volume entitled "EU Enlargement and Monetary Integration".

Commission projections in 2004). Von Hagen and Traistaru's focus on budgetary institutions in one part of their paper is thus well founded. The authors derive five main conclusions with regard to the new Member States' public finances:

1. Given the per capita income levels and the openness of the new Member States, their public sectors are considerably oversized.

2. The share of direct (indirect) taxes in the new Member States is likely to be increased (decreased). The new Member States (with the exception of the largest three) will most likely face a reduction in social security contributions as a share of overall revenues to safeguard their competitiveness.

3. Weak fiscal discipline in the new Member States has usually been related to weak control over government spending rather than declining revenues. This result confirms the findings of Perotti (1998) for EU15 countries.

4. The formal and informal rules governing the formulation of the budget by the executive (the budget process) is shown to have an influence on fiscal performance. Reforms of the national budget processes along the lines of specifying medium-term fiscal targets in coalition agreements, ensuring that the finance ministry plays a strong supervisory role in the execution of the budget, and the drafting of rules for dealing with revenue windfalls and unexpected shortfalls are recommended by the contract model of the budget process (Hallerberg and von Hagen, 1999). The Stability and Growth Pact (SGP) provides further support for stability-oriented domestic fiscal policies.

5. Fiscal policy is best suited to absorb the aggregate demand effects of large capital inflows.

Von Hagen and Traistaru analyse the importance of large capital inflows for the convergence process and the path to EMU. Capital inflows in the period 2000-2003 appear large when compared with the capital inflows that Italy, Portugal, Spain, Greece and Ireland received in their respective catching-up phases. A reason for these large capital flows is provided by the authors' estimates of the marginal productivity of capital of the new Member States relative to Germany. Although the return differences diminished substantially between 1996 and 2002, marginal productivity of capital (measured by assuming the same Cobb-Douglas production function for all countries) is still higher in the new Member States compared to Germany by a factor varying between 1.3 and 9.8 (and by a factor of 4.6 as the unweighted average for the EU10). These calculations lead the authors to project that capital flows into the new Member States are likely to continue and should remain large in the foreseeable future. Due to the fact that some countries are subject to large portfolio investment and other investment inflows, which are supposed to be more volatile than direct investment (overall, only slightly less than half of the euro area's EU10 assets are FDI, see Figure 6), significant macroeconomic effects from sudden breaks in capital inflows cannot be excluded. Indeed, the authors show that we have already seen some periods of strong reversals of capital flows in the past.

Another reason for concern with regard to large capital inflows is the possibility of triggering an overheating of the domestic economy, potentially leading to unsustainable asset price booms. This is even more likely should the monetary authority in question attempt to counter exchange rate appreciation by loosening monetary policy. Von Hagen and Traistaru note that those four countries which so far have put the most emphasis on exchange rate stabilisation also witnessed the largest average real money and real credit growth rates (all exceeding 10% per annum in excess of real output growth) in the period 1999-2003. An increasing level of external indebtedness could lead to a fear of currency depreciation and thus to premature ERM II entry.

Von Hagen and Traistaru also deal with the stabilisation policies and needs of the new Member States in the future enlarged EMU. They confirm existing evidence that the business cycles of individual new Member States are much less correlated with the overall euro area cycle than is the case for the present euro area Member States. The business cycles of individual euro area Member States are also practically uncorrelated with the overall new Member States business cycle, and furthermore individual new EU Member States' business cycles are also uncorrelated with the overall cycle of the new Member States. The authors use this evidence to argue that there will be a high likelihood of asymmetric shocks in an enlarged EMU. Of course, the authors hasten to add that the correlation of business cycles is likely to be endogenous to the prevailing monetary regime. Increasing economic and monetary integration will also continue to affect production structures and trade patterns and thus further impact the correlation of business cycles. To prove this point, von Hagen and Traistaru use national data for the EU25 to show that differences in the sectoral structure as well as trade patterns affect bilateral business cycle correlations, even after accounting for possible endogeneity issues.

The evidence presented on real wage rigidities by using regional data on the new Member States is mixed. Only in the Baltic countries and Slovakia do regional wages respond to regional unemployment in an employment-stabilising way. Nevertheless, in most new EU Member States regional wages react to changes in labour productivity as expected in a functioning labour market. Overall, and in contrast to evidence presented by Gérard Roland in the previous session, the authors take a relatively benign attitude to the existing degree of labour market flexibility in the new EU Member States.[23] These different views are compatible with the findings of Backé et al. (2004), who conclude that "the degree of labour market flexibility differs across countries. Indeed, the assessment critically depends on which indicators one chooses to focus upon" (p. 38).

Von Hagen and Traistaru conclude by stating what is in their eyes the main challenge ahead for the new Member States: to cope with large and potentially volatile capital inflows while achieving nominal convergence. Fiscal policies will have to bear the major burden on both fronts. To do so, effective spending controls and improved budgetary procedures are badly needed. The first discussant, **Zsigmond Járai**, agreed with the emphasis the paper put on fiscal issues. Deteriorating fiscal balances are the main reason why expected entry dates to EMU have recently been shifted by several new Member States. Therefore, the role of the target entry date as an anchor which stabilises expectations has unfortunately been weakened.

Járai called for thorough public sector reform with the aim of reducing the degree of public redistribution. He also stressed the potentially stabilising role of fiscal policy to prevent overheating of economies on the path to EMU. Járai interpreted the current reform debate on the SGP as already weakening incentives for fiscal discipline in the new EU Member States.

In periods of increasing uncertainty, a central bank has a special role to play in providing a credible nominal anchor, e.g. a clear inflation target, in order to help stabilise expectations about the future path of the economy.

[23] A view shared by Val Koromzay in his discussion in this volume.

5 ERM II and the path to EMU

Jürgen von Hagen and **Iulia Traistaru** also discuss the risks and opportunities of ERM II membership for the new Member States. There is a large body of literature that argues that ERM II provides an opportunity in the sense that it can be compared to a "boot camp" where policy-makers learn to conduct macroeconomic policies consistent with stable exchange rates in a low inflation environment. Von Hagen and Traistaru, on the other hand, rather stress the risks of ERM II. They argue that the "boot camp" view confuses a necessary with a sufficient condition of exchange rate stability. If financial market behaviour is at times unrelated to fundamentals, even potentially irrational, ERM II could – in von Hagen and Traistaru's view – rather be considered a form of "purgatory"[24] where attempts to stabilise the exchange rate in periods of speculative attack would unnecessarily damage the domestic economy. The authors consequently recommend minimising the time spent in ERM II. Larger countries could wait before ERM II entry until they have achieved a sufficient degree of fiscal sustainability and low enough inflation. In the meantime they would be able to conduct an autonomous monetary policy. Smaller countries, however, will not be able to conduct an effective autonomous monetary policy and are thus advised to enter ERM II relatively quickly and to fulfil the convergence criteria as soon as possible.

Otmar Issing and **Jean-Claude Trichet** both addressed the ERM II issue in the introduction to the following panel session and the closing address to the conference respectively. They agreed that ERM II entry should not occur too early in the accession process; that all convergence criteria have the explicit role to measure sustainable convergence; and that in terms of equal treatment, changing any of the convergence criteria is ruled out.

On a more practical issue, von Hagen and Traistaru also discuss the trade-off related to the timing of the announcement of the final conversion rate (i.e. the exchange rate used to convert a national currency into the euro at EMU entry). An early announcement of this would reduce exchange rate volatility. However, in case the announced rate is not credible – possibly because it is far away from the perceived equilibrium rate – the effect might be counter-productive. Still, von Hagen and Traistaru recommend that countries should announce the euro conversion rate early on, with the argument that prices and wages then have time to adjust smoothly in order to close any possible gap between the announced nominal conversion rate and the nominal equilibrium exchange rate, by changing the real exchange rate. The second discussant, **Sylvester Eijffinger**, missed any reference to what he termed the basic inconsistency of two of the convergence criteria. Due to the Balassa-Samuelson effect, according to which higher productivity growth in the tradable sector spills over into overall higher wages, higher inflation in non-tradables and thus also higher CPI inflation, new Member States are predicted to face problems in fulfilling both the exchange rate criterion and the price stability criterion simultaneously. Eijffinger has surveyed the literature on the size of the Balassa-Samuelson effect (see also De Haan, Eijffinger and Waller, 2005), and admitted that the results of empirical studies vary. Nevertheless, he considered those studies more reliable that conclude that the effect is large enough to warrant a reconsideration of the exchange rate and/or price stability criterion. Overall, Eijffinger sided with Buiter (2004) in arguing that ERM II is a potentially dangerous "waiting room", and that countries should be allowed to float until they adopt the euro.

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[24] See Buiter (2004).

As a first reaction, **von Hagen** defended not focusing on the Balassa-Samuelson effect by arguing that it is purely a relative price effect, not inflation, which does not deserve the policy-maker's attention. Much of the importance attributed to the Balassa-Samuelson effect might also depend on one's expectations with regard to future productivity differentials. Eijffinger argued that future large productivity growth differentials are likely while, for example, Backé et al. (2002) expect that productivity differentials will abate, since productivity levels have been converging. Interestingly, none of the central bank governors, when talking about the transition path to EMU in the policy panel discussion, mentioned the Balassa-Samuelson effect as an argument for leniency in interpreting any of the convergence criteria. In this sense governors incorporated von Hagen's advice almost immediately.[25] Eijffinger also noted that the Balassa-Samuelson effect will definitely not be an issue once the new Member States have adopted the euro, as even an unrealistically large 3 percentage point difference in inflation would only increase the euro area HICP inflation rate by, in his calculations, 0.1 percentage point.

Eijffinger then reviewed the literature on the ability of central banks to defend exchange rate pegs during periods of speculative attack. He concluded that the evidence is mixed and non-conclusive. Questioning the ability of central banks to defend fixed exchange rates, he argued that the ECB should clearly communicate its intervention strategy in ERM II and its exact interpretation of the exchange rate criterion in order to avoid speculative attacks. He suggested introducing some sort of conditionality for intra-marginal interventions with regard to new Member States' monetary and fiscal policies.

The evidence mentioned by Eijffinger with regard to the potential inability of new Member State central banks to defend a pegged exchange rate contrasts with the Danish ERM experiences mentioned later by Governor Jens Thomsen and the early Dutch experience referred to by Vitor Gaspar and Wim Duisenberg during the panel discussion. Both examples stress the importance of overall consistent macro-economic policies in order to successfully maintain an exchange rate peg under free capital mobility. Furthermore, von Hagen later argued that burdening the Eurosystem with assessing the soundness of national fiscal policies with respect to the conditionality proposal would, in his view, be asking too much of a central bank.

Finally, Eijffinger raised the important issue of central bank independence, in particular the crucial distinction between legal and actual independence (Eijffinger and Stadhouders, 2003). Eijffinger demonstrated that institutional quality indicators, used as a proxy for the "rule of law", i.e. broadly speaking the degree to which all kinds of contracts are enforced within a country, significantly explain the success in containing inflation. He emphasised that, although the legal independence of central banks in the new Member States may be settled, this does not necessarily imply that their actual independence is guaranteed. This was confirmed by the other discussant, Zsigmond Járai. Issues raised in the **general discussion** included the quality of the IMF data for Slovenia used in the von Hagen and Traistaru paper (**Andrej Rant**), the distinction between Hungary and the Czech Republic with regard to the recommended exchange rate system in the transition period to EMU (**Maciej Krzak**), the appropriateness of announcing conversion rates to the euro at an early stage (**Tibor Schindler** and **Anders Møller Christensen**), the sustainability of high real interest rates to defend the

[25] A more serious interpretation is that the issue had been discussed and seemingly settled in central bank fora at earlier stages of the transition process. See for example Szapary (2000), cited by Eijffinger. See also Otmar Issing's statement in his panel introduction that the convergence criteria are "neither negotiable nor subject to change", or Jean-Claude Trichet's formulation in his closing address that "no new criteria were added, and the existing criteria were not relaxed".

exchange rate (**Tibor Schindler** and **Zsigmond Járai**) and the effectiveness of foreign exchange interventions (**Sylvester Eijffinger**).

6 Policy panel and conclusions – EU enlargement and monetary integration

The policy panel was opened by **Otmar Issing** with a presentation entitled **"EU Enlargement and Monetary Integration"**, which set the scene for the senior policy-makers' discussion on the new Member States' transition paths to EMU.

Issing stressed that there is a clear institutional framework which describes the path the new Member States have to follow. Economic policies are subject to a number of multilateral rules; the new Member States' exchange rate policies are to be treated as a matter of common interest; and the primary objective of monetary policy is price stability. At some point the new Member States will then join ERM II and later adopt the euro after they have fulfilled the convergence criteria.

Despite this clear framework, the choice of an explicit exchange rate policy and a monetary policy strategy during the transition is left open. Issing identified three challenges for the transition process. First, the institutional structure of the financial system has to be strengthened. A sound and efficient financial system is required for the transmission mechanism to work smoothly and to avoid or contain financial crises. Second, the central bank must have credibility in terms of being committed to the mandate of price stability and to follow a clear strategy without being dogmatic. And third, suitable ways have to be found to deal with the large and unavoidable degree of uncertainty confronting the new Member States' policy authorities. In this respect, it is, for example, not necessarily the case that the ECB's monetary policy strategy, which gives a prominent role to monetary aggregates, is best suited for the new Member States during the transition phase. Permanent changes to their financial structures could undermine the reliability of money as an indicator of future inflation during the transition period. A strategy of inflation targeting could therefore be a reasonable choice on the path to EMU before countries join the euro and implicitly become part of the ECB's strategy.

Turning to the timing of ERM II entry, Issing warned against premature participation. A sufficient degree of nominal convergence and structural adjustment is highly advisable before a country considers pegging its exchange rate to the euro in ERM II. If ERM II entry occurs too early, misalignments are likely, market expectations about the entry date and conversion rates will still be very volatile, and maintaining both price stability and exchange rate stability could at times become difficult. **Leszek Balcerowicz** was the first panellist to react to Issing's introductory statement. Balcerowicz first supported a point made by Garganas in his earlier discussion, which is that one should be careful to label the loss of stabilisation possibilities within a monetary union as necessarily a cost. Whether a loss of discretionary power is a cost or rather a benefit depends on whether national monetary policy can deliver sufficient credibility and discipline on its own. If macroeconomic discipline is low, the constraints imposed by a common monetary policy could be beneficial.

In a similar vein, Balcerowicz continued by arguing that fiscal consolidation, as required in particular in the larger new Member States to fulfil the convergence criteria, would not be a new sacrifice. Fiscal consolidation is at any rate required to preserve and foster genuine long-term growth prospects.

With regard to ERM II, Balcerowicz argued against a too rigid interpretation of the exchange rate criterion, in terms of defining the width of the bands consistent with exchange rate stability.

In line with the above arguments, a final comment concerned the use of proper language. Instead of the "loss of independent monetary policy", Balcerowicz suggested talking instead about the "shift from a domestic to a common monetary policy", which would be more neutral. **Zdeněk Tůma** agreed with Issing that there is no universal strategy for the path to EMU. Key factors determining the optimal transition strategy for a new Member State are the size and flexibility of the domestic economy, the credibility of the current monetary policy regime and the state of public finances. The Czech Republic has decided to choose a relatively cautious timescale with regard to the envisaged EMU entry date (2009-10).

Tůma considered a monetary policy regime of inflation targeting, as practised by Česká národní banka, as being consistent with both achieving low and stable inflation and exchange rate stability, in the absence of large external shocks. This is why he did not regard ERM II membership as being superior to the current inflation targeting-cum-floating exchange rate regime. Česká národní banka will therefore advise the government to enter ERM II once the conditions to fulfil all convergence criteria within a two-year period are in place.

With regard to fiscal developments, Tůma argued that the recent debate about the SGP should not be used as an excuse to postpone fiscal reforms, but rather as a warning to create a sufficient buffer for difficult times.

He finished by mentioning that the knowledge gained by new Member State central banks in the conduct of monetary policy during the transition period will certainly enrich future monetary policy debates in the ESCB Council. **Vitor Constâncio** elaborated on the Portuguese experience with European monetary integration. His contribution focused on the risks associated with the process and the associated policy responses. On the risk side he mentioned boom and bust cycles, which could be associated with recession and hysteresis, overheating in asset markets (especially housing and equity markets), a loss of international competitiveness with large current account imbalances and, finally, financial instability.

On the policy side he stressed five main points. Firstly, the importance of a flexible use of ERM II. In such circumstances, monetary policy cannot be conducted in line with a pure inflation-targeting regime. Secondly, fiscal policy must be conducted so as to allow it to contribute to business cycle stabilisation. At the same time, before joining the euro, it is important to have built a very solid and cautious budgetary position. Thirdly, wage developments have to be compatible with the avoidance of excessive real appreciation, as measured by relative unit labour costs. Fourthly, strong prudential supervision is required to contain the risks of financial instability. Lastly, but no less important, it is key to implement structural and institutional reforms to foster flexible and competitive markets. **Jens Thomsen** reported on the Danish experience with ERM. Denmark still adheres to a central parity which was fixed in January 1987, more than 18 years ago, with a fluctuation band of ± 2.25%. This implies that interest rate decisions are fully determined by the need to keep the exchange rate close to the central parity.

A clear division of labour between stability-oriented fiscal authorities and an independent central bank have proven to be crucial for the lasting success of the current monetary regime. Previous experiments with fiscal and monetary fine-tuning had not met expectations but had rather created unnecessary volatility in the Danish economy.

Thomsen was less optimistic than Tůma about the consistency of inflation targeting and exchange rate stability. He stressed that under inflation targeting, some shocks will require a change in the output gap, which will usually not be consistent with a stable exchange rate.[26]

A further problem of inflation targeting within ERM II, according to Thomsen, is that the closer the date of EMU entry, the more the impact of the national interest rate on domestic activity will decline. The reason is that the long end of the domestic yield curve would be increasingly determined by euro area developments. The present domestic policy rate would have progressively less influence on expectations about future domestic short-term rates.

Thomsen argued that a two-year period of ERM membership is like obtaining a driver's license before getting behind the wheel, meaning that he generally sides with the "boot camp" view of ERM II referred to above. During the **general discussion**, **Gonzalo Capriolo** (Ministry of Finance, Slovenia) asked Constâncio whether he would ex post recommend any other domestic policies on the path to EMU. **Constâncio** answered that first he would recommend entering EMU with a more balanced fiscal situation, and second, to prepare trade unions well in advance that EMU is a different regime, which requires wage adjustments mainly related to intra-euro area productivity differentials. **Tůma** later added that he believed the situation of Portugal was quite different from today's new Member States. EMU enlargement follows a different process than the foundation of EMU itself, especially as a clear anchor for price stability now exists, and countries with a derogation have possibly already developed their own credible monetary policy regimes. **Issing** added that one should avoid so-called pathological learning: we should always be ready to learn from mistakes others have made before us.

Lazlo Halpern (Hungarian Academy of Sciences) asked Issing whether a country could enter ERM II with a narrower band than ±15%. **Issing** replied that exceptions to the rule should be made as rarely as possible. Furthermore, for a currency board country, nothing would change in ERM II. It could continue the currency board within ERM II, whatever the official width of the band, so that one would not necessarily need any formal agreement for a narrower band. Finally, the President of the European Central Bank, **Jean-Claude Trichet**, closed the conference by summarising the main results and lessons learned and by providing the ECB's view on the main challenges for the new Member States on their path towards EMU.

Reviewing the transition process of the new Member States, it is generally accepted that real and nominal convergence is well under way. Much has already been achieved, but there are also quite a few further necessary steps to be taken. On the side of achievements, one can list the ongoing catching-up process in terms of real income and the general economic and institutional transition of the new Member States to becoming market economies. The details of the current state of institutional convergence were presented by Gérard Roland in the first session of this conference. The legal certainty created by the prospect of EU accession and finally the adoption of the *acquis communautaire* seem to have played a crucial role in economic performance and institutional convergence.

The paper by Tamim Bayoumi, Michael Kumhof, Doug Laxton and Kanda Naknoi presents a first step towards an integrated methodology for evaluating the costs and benefits

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[26] The different views can be reconciled by noting that the consistency of optimal inflation targeting with stable exchange rates depends on the structure of the economy, especially the degree of openness and the type of (asymmetric) shocks (excess demand, cost-push or forex risk premium) that are likely to hit the economy (see for example Detken and Gaspar, 2003). For a very open economy with mainly excess demand and forex risk premium shocks, optimal inflation targeting would simultaneously result in very stable exchange rate developments, which is not necessarily true for cost-push shocks. In this sense, both governors' statements are supported in the literature.

of EMU. The authors construct a theoretically complete model that combines a microeconomic approach to trade, which endogenously develops as a function of exogenous trading costs, with a variety of real and nominal frictions which are used in the business cycle literature to discuss the implications of alternative monetary policy regimes. The results show that, in the long run, EMU will be beneficial due to gains from trade, which will dominate costs in terms of forgone short-term business cycle stabilisation possibilities.

Von Hagen and Traistaru focused on the necessary fiscal adjustment in the new Member States, which includes downsizing the public sector, better controlling public expenditures and most importantly improving the budget process. Fiscal policy will also bear the brunt of coping with continued large capital inflows and possible sudden stops to such inflows.

Otmar Issing's main message was to warn against premature ERM II entry. A significant degree of nominal and real convergence is highly advisable before a country can peg its exchange rate to the euro. The Maastricht criteria are an indicator of sustainable convergence. Challenges in the transition process are creating a sound and efficient financial system which maintains the credibility of the monetary authorities and appropriately deals with uncertainty.

Jean-Claude Trichet summarised the clear consensus view that enlargement has positive implications for economic growth for all EU Member States due to gains from trade and an increase in competition.

Trichet stressed again the importance of the fact that the path to the euro is embedded in a well-defined multilateral institutional framework. In this context he also referred to the policy position published by the Governing Council of the ECB in December 2003 with regard to relevant exchange rate issues. He mentioned two guiding principles of the process of monetary integration. First, there is no single trajectory which can be recommended to all new Member States, and second, equal treatment will be applied to candidates both across countries and over time.

In terms of the challenges ahead, the President of the ECB confirmed the need to maintain price stability during the transition process and to advance with sustainable fiscal consolidation.

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3

After enlargement: institutional achievements and prospects in the new Member States

Gérard Roland*

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1 Introduction

May 1 2004 will undoubtedly be seen as an important event in European history. The enlargement of the European Union from 15 to 25 Member States is not only the biggest enlargement in the history of the European Union so far but it also has deep historical significance. It represents the definite end to the cold war and to the geopolitical configuration of Europe into two opposite blocks. It also represents the end of the transition process from socialism to capitalism for most of the new Member States (with the exception of Malta and Cyprus), a process that started in 1989 with the fall of the Berlin wall and the unexpected collapse of communism following Gorbachev's perestroika. Try to imagine the pride of a Czech citizen who 15 years ago was not even allowed to travel abroad and since May 1 passes through the EU passport control in any of the European airports today and you will get a feeling for the exhilaration associated to such a historical event.

Despite all the cheering at this historical event, there is still an enormous amount of ignorance about the realities of the new Member States. Changes in the transition countries of Central Europe and the Baltics have been so rapid that even the experts have had a hard time following them. Many questions are thus raised in this context.

First of all, can we say that the new Member States have achieved their institutional transition in a stable and satisfactory way? Answering this question is quite important to get a feeling of what the Single Market will be in a Europe of 25. The economic weight of the new Member States is not that huge but fears have been expressed that an unachieved or unstable transition could have many negative spillover effects on the functioning of the European Union, especially if these countries are to join the EMU in a short period of time.

Second, has the EU played a positive role in helping those countries achieve their transition? It is quite striking that the transition performance in the new Member States compares very favorably to the dismal outcomes observed in most of the former CIS countries. Has the EU acted as an external anchor for institutional changes in those countries?

Third, given the experience of the new Member States with large scale reforms, is there anything that the EU can learn for its needed structural reforms in labor markets, pension and welfare reform? Have the new Member States been "leapfrogging" the EU in terms of structural reforms?

Finally, how will the EU work with 25 and what will be the contribution of the new Member States?

I will try to give as best as possible of an informed answer to those questions in this report. As far as the first question is concerned, there is no doubt in my mind that the new Member States have truly graduated, they have now over 10 years of experience with fundamental market institutions and these institutions are well established and solid. This does not mean that the economic transition is completely over. A lot still needs to be done in the areas of enterprise restructuring. The former state sectors in those countries will remain fragile for quite many years. This implies a danger of lingering soft budget constraints and of ensuing fiscal imbalances. However, I am confident that these problems, which might be obstacles to entry into EMU, can be overcome in the coming years.

In answer to the second question, I will argue that the EU has played a fundamentally positive role in anchoring the institutions of the new Member States to sound market systems. This is due not only to the positive effect of prospective entry on reform efforts in the new Member States but also to quite close monitoring of the implementation of the *acquis*. While bureaucratic and dull, that process has greatly contributed to institutional stabilization in the new Member States just as the Maastricht criteria helped many EU members to fundamentally improve their public finances. Once inside the EU, the enforcement power

towards those countries will be much smaller just as the stability pact today provides less incentives for EMU members compared to the Maastricht criteria as we have observed in reality. Poland, the biggest of all new Member States and also the one that has led the political and economic transition process since 1989, has been one of the most reluctant countries in implementing the *acquis* and I predict possible tensions in enforcement of EU law with Poland. Enforcement of EU law will be an important topic in the coming years in the EU in general.

The answer to the third question is a bit more disappointing. There is a widespread perception that the new Member States have gone farther in their structural reforms than "Old Europe" but the data show on the whole that this is not the case. The new Member States will thus also need to participate in the necessary structural reforms ahead and in the long delayed implementation of the Lisbon agenda. While limited progress has been achieved with pension reforms that are sometimes ahead of what existing EU members have done, further labor market reforms will be very much needed in the new Member States.

The answer to the fourth question is more speculative. On the whole, I predict that the new Member States will be active, enthusiastic and loyal participants in the enlarged EU. They will add their own voice, as they already have for example in the Convention for the preparation of the European Constitution, and this must be truly welcomed. The enlarged EU will have a Constitution that will contribute to greater efficiency and legitimacy in decision-making. There will not be and should not be a "core" and a "periphery" in the enlarged EU. The center of gravity in Europe has definitely moved East and the role of the Franco-German axis will be smaller than in the past.

2 The overall achievements of the new Member States

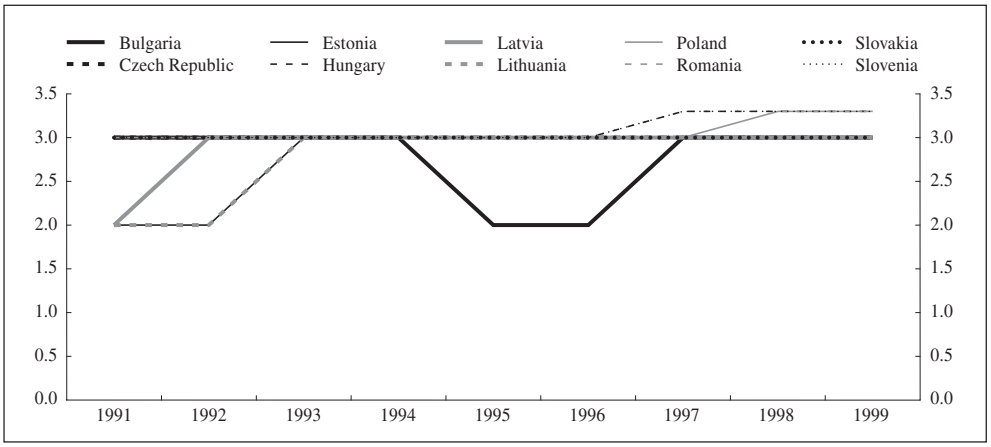
How far have the new Member States really gone in their reforms and what exactly have they achieved? In what follows, we look at a battery of indicators for the countries that entered the EU on May 2004 but also for Bulgaria and Romania who are later in their reforms but will enter the EU in 2007. We use the word "new Member States" for all these countries without distinction.

We present data compiled by the EBRD and the World Bank. These data are far from perfect and some are rather sketchy and sometimes only based on expert opinion. They should thus be taken with a grain of salt. However, they do provide a useful basis to compare country evolutions.

Figure 1 gives the evolution of the EBRD index of price liberalization. Note that an index of 3 indicates very comprehensive price liberalization comparable to advanced industrialized countries and an index above 3 is an indicator of even more advanced price liberalization.[1] We see clearly that price liberalization has been implemented at the beginning of transition and has been there for over a decade. We have only one episode of policy reversal in Bulgaria in 1995-96 when the communists came back to power. The policy was reversed after the communists lost the election. Note that Hungary, Poland and Slovenia are even quite advanced.

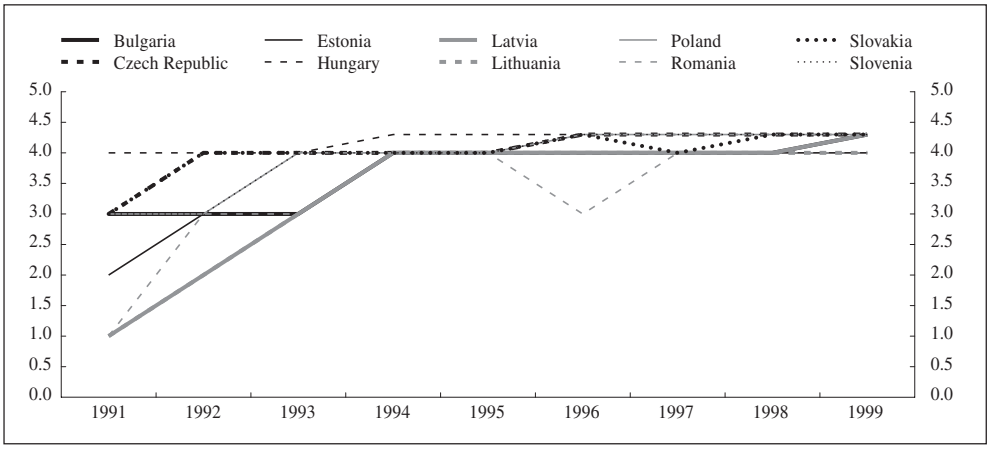
[1] Note that the EBRD has changed their index in recent years as well as the scale of their index. For the sake of consistency, due to definition changes in the variables, we usually present data until 1999. As we will see however, nearly all reforms were achieved by then.

Figure 1: EBRD index of price liberalization



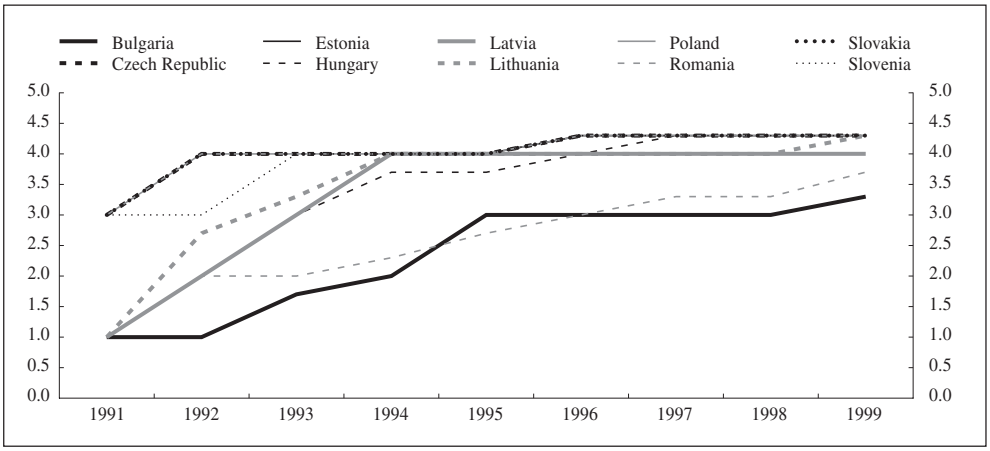
Implementation of trade liberalization is depicted in Figure 2. The picture that emerges is quite similar and even more dramatic. All countries have achieved a score of 4 which is the standard for advanced industrialized countries early in the nineties. Note only one temporary reversal in one country, Bulgaria in 1996. Overall, the new Member States have thus been liberalized for over a decade and no serious reversal or even reversal trend has occurred.

Figure 2: EBRD index of volume of foreign exchange and trade liberalization



The dynamics of small-scale privatization is shown in Figure 3. With the exception of Romania and Bulgaria who have been somewhat lagging behind, comprehensive liberalization (an index of 4) was usually achieved within a few years after the beginning of transition. Obviously, the Baltics started the process later since transition started in 1992 after the breakup of the Soviet Union.

Figure 3: EBRD index of small-scale privatization



When it comes to large-scale privatization, it is well know that different methods were implemented with the Czech Republic opting for mass privatization and Hungary and Poland for a policy of gradual sales. However, when looking at the dynamics of the EBRD index of large-scale privatization in Figure 4, one sees that with the exception of Romania that was trailing a bit, all countries were between the index of 3 and 4 at least since 1997. The large waves of privatization are thus behind us.

Figure 4: EBRD index of large-scale privatization

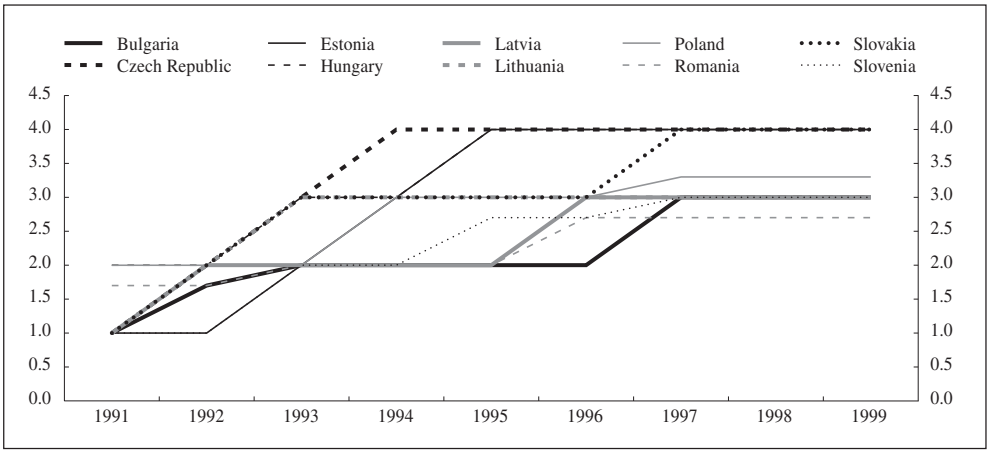


Figure 5 looks at the index of enterprise reform constructed by the EBRD. It captures not only the intensity of restructuring activity but also the degree of hard budget constraints and improvements in corporate governance. The picture here is less rosy. An index of 4 and above is the index for the most advanced countries. Against that benchmark, progress has been clearly slower and has even been pretty stagnant since 1997. Things are changing only very slowly. Unfortunately, Figure 5 only gives consistent time series until 1999 but there have not

been major changes in recent years. It is thus safe to conclude that changes have been slower here. While the picture is a bit more disappointing than for other dimensions of reform, we should not be too surprised either. Eliminating soft budget constraints is a difficult process that was not well understood in the beginning of transition and is still not very well understood, certainly in policy-making circles (for a survey, see Kornai, Maskin and Roland, 2003). Since the beginning of the transition process restructuring was predicted to be the most painful of reforms and among those to be achieved the latest (Roland, 1991). While much defensive restructuring has been taking place in the last 15 years, strategic restructuring which involves investment, know how and insertion in modern supply chains has been rather slow. The economic landscape has been transformed beyond recognition since 1990 but many of the former state-owned enterprises are far from having achieved their restructuring process. One has to be fully aware that enterprise restructuring is still an important weakness even in the more advanced transition countries. There is no reason to believe that things are going in the wrong direction but this will remain a fragile spot in the coming decade.

Figure 5: EBRD index of enterprise reform

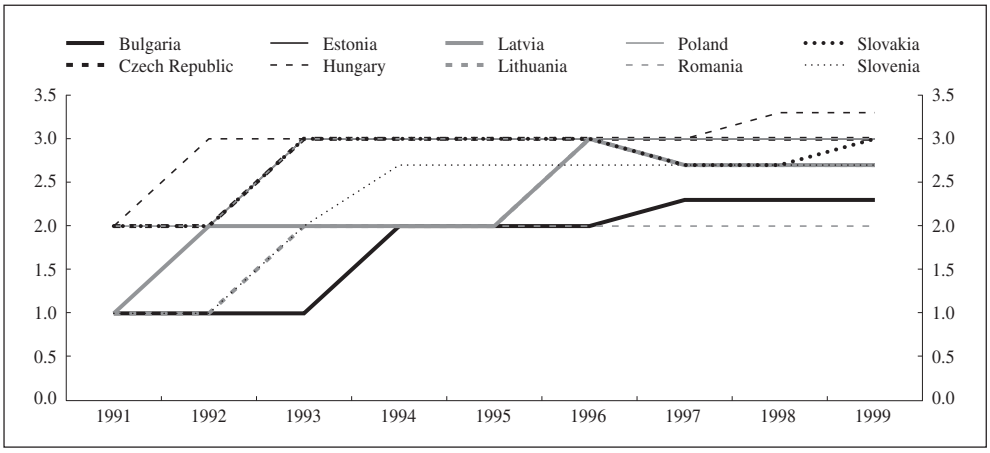
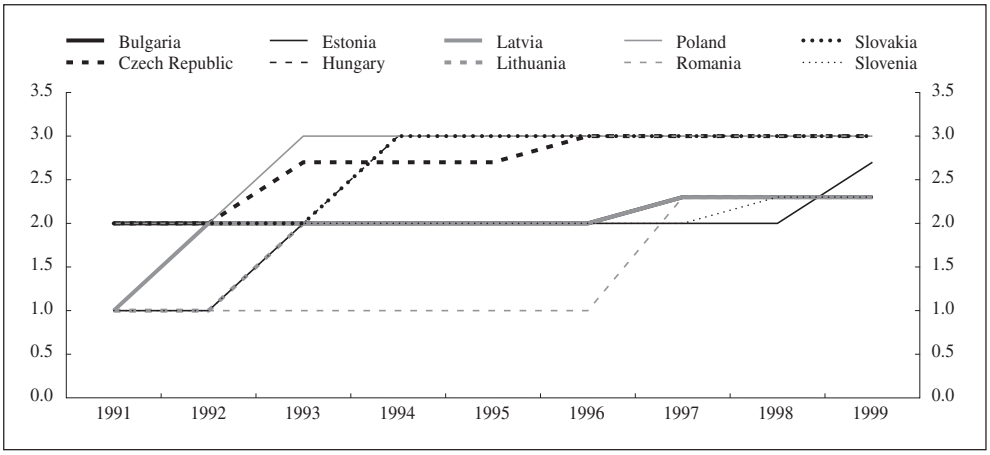


Figure 6 displays the EBRD index of competition policy implementation. This is a broader index than the EU index of conformity with competition law presented in the appendix. One sees that Hungary, Poland, the Czech Republic and Slovakia were the most advanced. The Baltics, Romania, Bulgaria and Slovenia were somewhat lagging behind. The overall situation can nevertheless be judged as relatively satisfactory. Nowhere does one see situations of monopoly or monopoly rent-seeking like in the CIS. Competition policy has been addressed rather early on in transition and this is clearly an area where the prospect of EU accession has played a positive role.

Figure 6: EBRD index of competition policy



The dynamics of reform of banking institutions is shown in Figure 7. One sees that the situation was generally good towards the end of the nineties. An index of 3 indicates a functioning banking system with liberalized interest rates and a very active private banking sector. An index of 4 indicates that a country is around the level of BIS standards. Only Hungary had reached that level. For the rest, Romania and to a lesser degree Slovakia appear the least advanced. One even sees a temporary decline for the Romanian index. Romanian banks have had a history of soft budget constraints throughout the nineties (see Perotti and Carrara, 1996) and have been comparatively slow and not very successful in implementing banking reforms. Figure 7 does not include data beyond 1999 but casual evidence from various countries, including EU reports about preparation for accession suggest that there has been further improvement in the following years.

Figure 7: EBRD index of banking sector reform

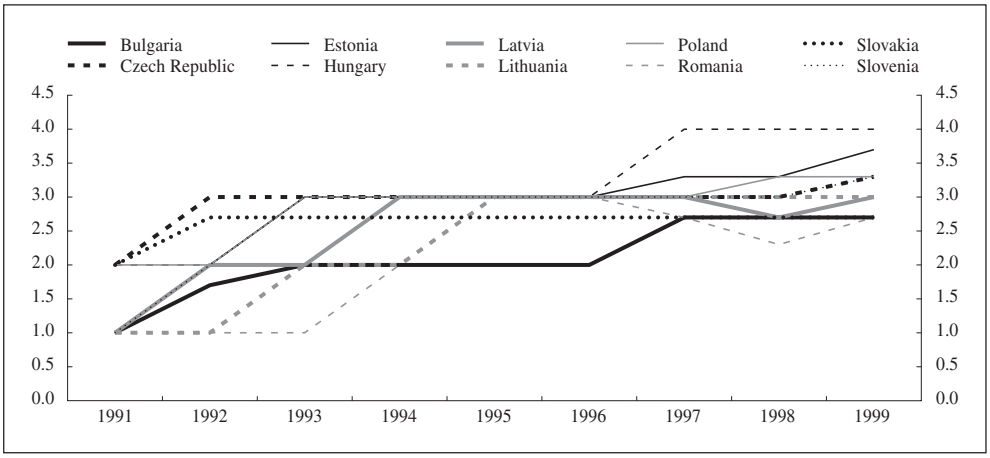
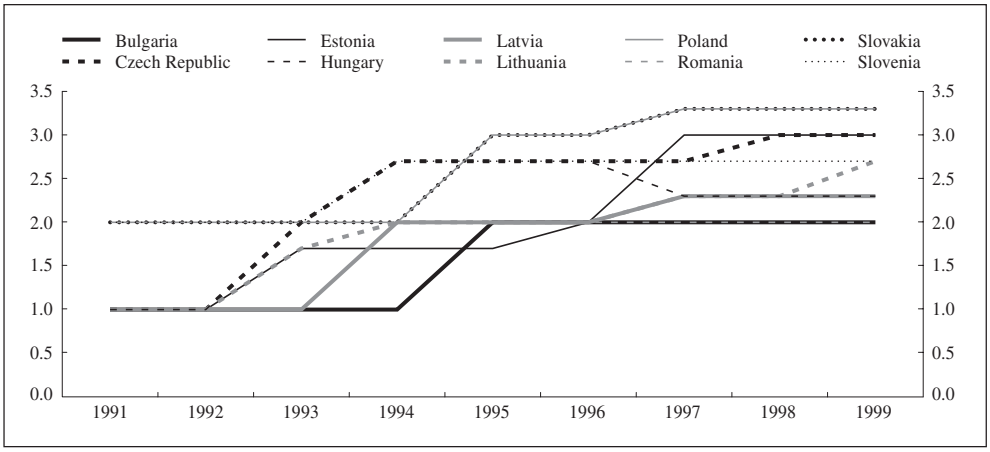


Figure 8 shows the evolution of reform of other financial institutions. This is mainly about securities markets. The picture here is more varied than with banking reform. Bulgaria is at the bottom and Hungary and Poland clearly on top. There are less signs of convergence. These reforms are very important complementary reforms to other reforms as they have an influence on market liquidity. Lack of experience with financial markets leaves small investors often unprotected and the lack of clear and transparent regulations can have a very negative influence on stock market liquidity. The slower progress with reform in this sector seems however to be of second order effect in these emerging market economies relative to other more substantial reforms such as the encouragement of the development of small and medium private enterprise sector.

Figure 8: EBRD index of reform of non-banking financial institutions



Overall, the picture emerging from the figures on reform is that most of them are really behind us. Only enterprise reform remains unachieved to a certain extent but there is no indication of reversal to past socialist practices.

Of course, it is difficult to assess the quality and the solidity of the institutions that have been established in the transition economies based only on these very broad indices. Measurement in this area is very difficult and often sketchy and the only viable option we have is to come up with as many institutional indicators as possible. The next few figures show more general indicators of the quality of institutions which should also be taken with caution. Figure 9 shows the Transparency International index of corruption for the new Member States. We present the evolution of the index until 2002. Here we see large variation. Slovenia and Estonia ranked the best among new Member States, respectively number 27 and 29 in 2002 just behind France. Romania ranked the lowest and was number 77 in the world together with Pakistan and the Philippines. One should not take variations in that index too seriously. Nevertheless, it is quite striking when looking at this figure that there is no clear upward trend in the index for the new Member States. The indices for the Czech Republic, Poland and Romania have even been going down. Only Bulgaria seems to have improved significantly. Corruption is thus definitely a factor to be looking at. Corruption took often different forms under central planning but in many countries, much of the corruption perceived in recent years is transition-related. There is no good explanation for this

phenomenon but it seems obvious that the transition process which is a unique historical process with thus unique opportunities as for example large scale privatization of state-owned assets has led many agents to seize the opportunities for corruption.

Figure 9: Transparency International-Corruption Perception index

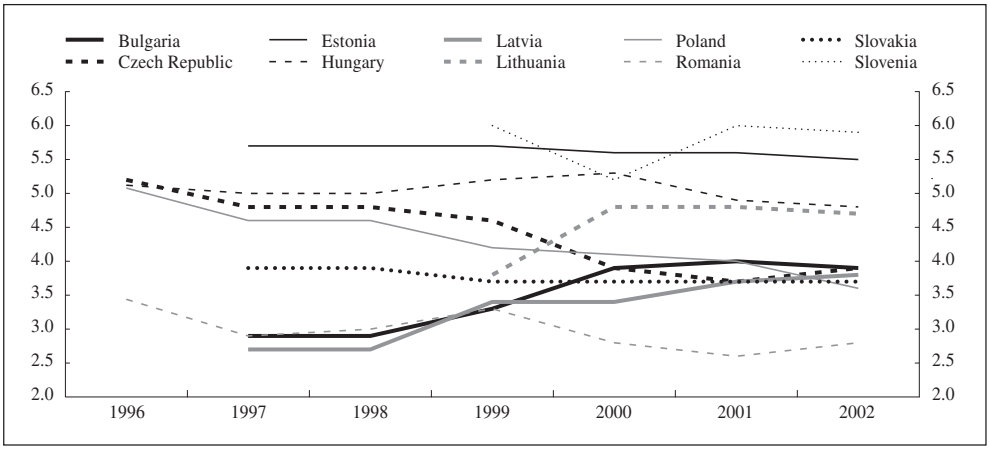
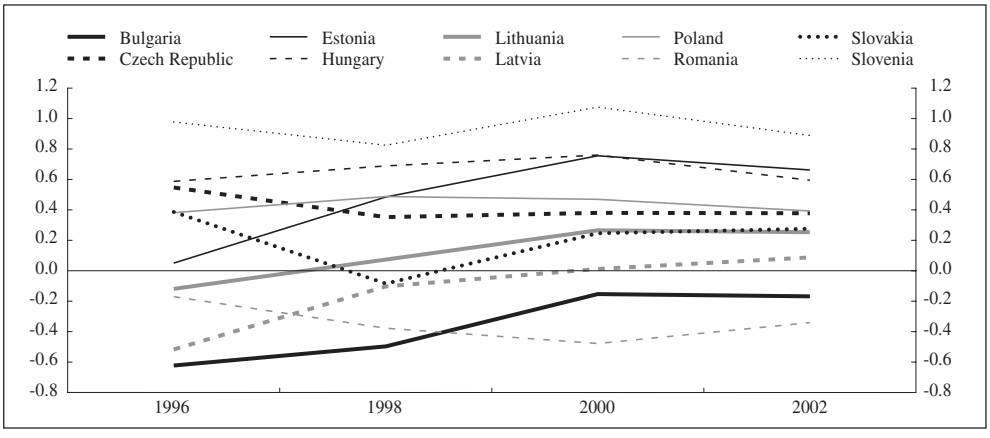


Figure 10 shows the World Bank index for control of corruption. Obviously, it is constructed differently than the TI index and addresses a slightly different question. It looks more encouraging. Nevertheless, one also sees a strong variation in the data. Slovenia and Estonia have been doing well. There are still a few countries where the index declines, Romania notably which is also performing the worst, but also the Czech Republic, Slovakia, Hungary and Poland all to varying degrees. Again, Bulgaria has improved.

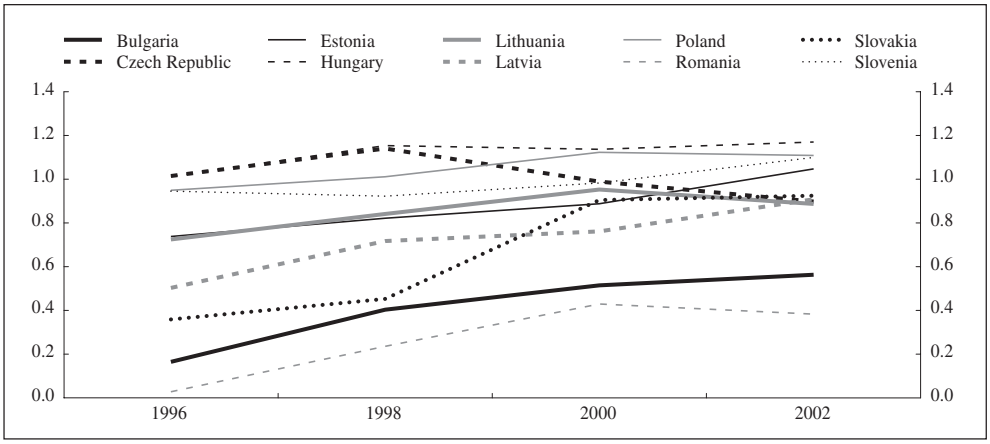
Figure 10: World Bank control of corruption



The World Bank voice and accountability index pictured in Figure 11 is also encouraging. It is a composite index that reflects mostly surveys in different countries reflecting questions such as the amount of repression, the presence of political rights, the presence of the military

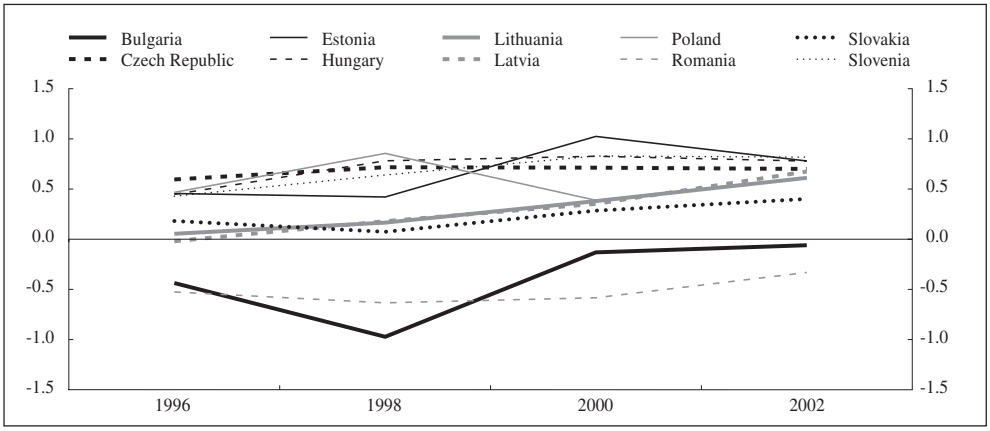
in politics, press freedom, fairness of elections, trust in government, transparency, accountability of public officials and a whole battery of indicators. This index shows progress for all countries except for the Czech Republic which goes through a concerning decline after a very good start. Romania and Bulgaria are behind while Hungary, Poland and Slovenia are on top.

Figure 11: World Bank voice and accountability



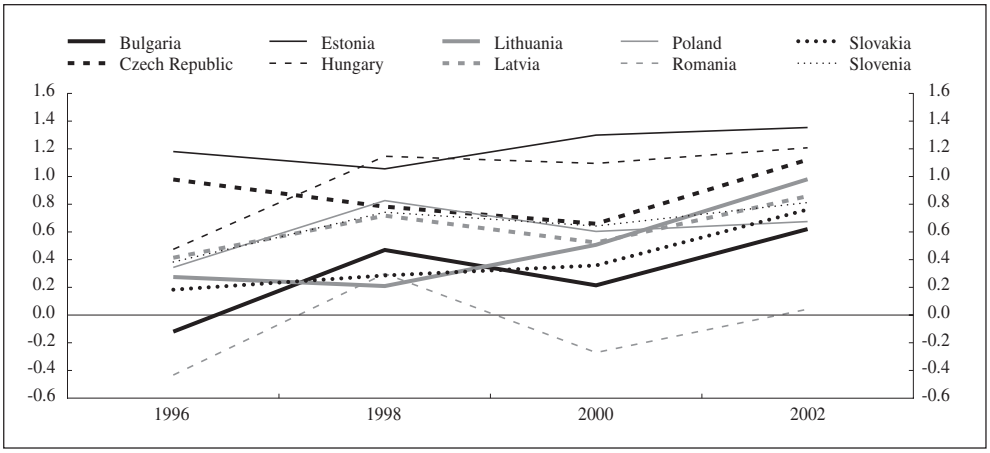
The picture is a bit different when we look at the World Bank Government effectiveness index, exhibited in Figure 12. This index reflects surveys about the quality of the civil service, government instability, trust in the police and public officials. We see two distinct groups with Romania and Bulgaria lower than all the others. The general picture is nevertheless one of slow progress. Poland had a decline in the index in 1998 and Estonia in 2000.

Figure 12: World Bank Government effectiveness



The World Bank index for regulatory quality shows a larger variation across countries as can be seen from Figure 13. Romania is the laggard while Estonia, Hungary and Czech Republic are on top. One observes a general increase especially since 2000.

Figure 13: World Bank regulatory quality



One should be cautious when drawing conclusions from Figures 11 to 13 since they show only a limited window into the institutional evolution of the new Member States. However, the combination of the figures on the dynamics of reform and these more recent institutional data suggest a positive picture of the achievements of institutional reform in the new Member States. Corruption is the only worrying phenomenon.

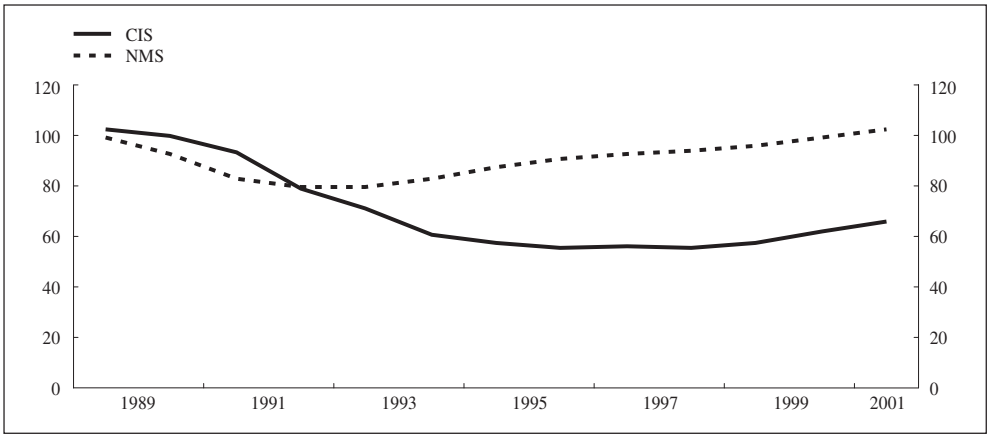
This general trend obtains despite substantial differences in the transition processes themselves. Countries like Hungary and Slovenia were more following a gradualist strategy whereas countries like the Czech Republic and Estonia, and Poland in the beginning, were trying to follow a Big Bang strategy of fast and simultaneous implementation of reforms. Some countries implemented a mass privatization program, most notably the Czech Republic, while most of the others used a combination of sales methods to gradually divest the state assets. Some countries like Poland implemented a stabilization program early in the transition while others did not face large disequilibria in the beginning of transition or dealt with milder macro stabilization problems later on. While the different strategies and policies certainly had different effects in different countries, the overall result is one of successful transition.

To conclude this section, the new Member States have definitely a positive record in achieving the post-socialist transition and of reforming their institutions towards better governance. The slow process of enterprise restructuring is not over though and will continue for some years. One must also be particularly attentive to vigorously rein in corruption.

3 The role of the EU as an institutional anchor

The achievements of the new Member States should be put in perspective. From that point of view, transition countries from the new Member States have experienced better outcomes than the CIS. Indeed, a “great Divide” (Berglöf-Bolton, 2002) has occurred between those two groups of countries. Figure 14 shows GNP developments in the two groups of countries.

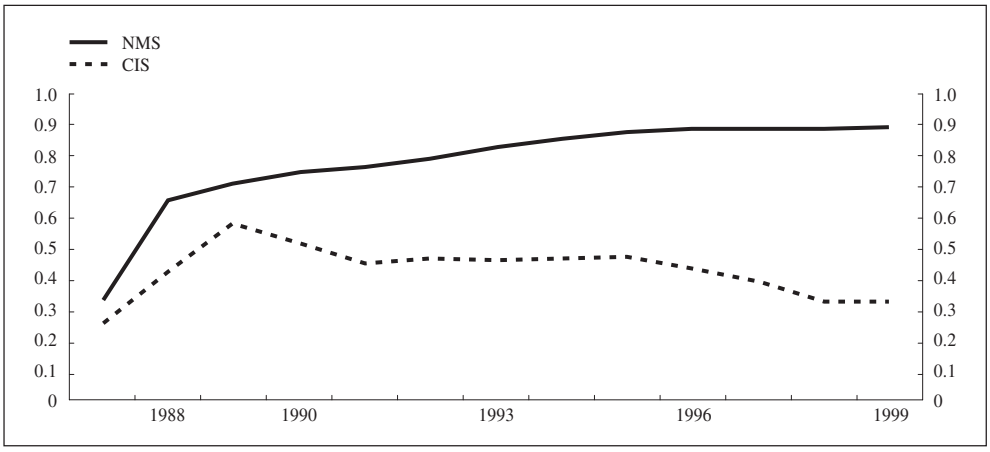
Figure 14: GNP index (1988=100)



One sees clearly from Figure 14 that while output fell everywhere in the beginning of the transition process following price liberalization (on that see Blanchard and Kremer, 1997; Roland and Verdier, 1999), the output fall was less severe and less prolonged in the new Member States than in the CIS. Moreover, it has more or less returned to its pre-transition level whereas in the CIS, it is still over 30% below its pre-transition levels.

The great divide is not only economic. It is also deeply institutional. Figure 15 shows the striking difference in the freedom house index of civil and political rights of the two groups of countries. While the new Member States have clearly had a stable transition to democracy, the democratization process in the CIS is much less impressive and has even declined after an early start. Note that the decline already started early in the nineties.

Figure 15: Human rights (freedom house)



How can one explain this “Great Divide”? The differences in transition policies between the two groups of countries have not been that different. Truly, a great number of former Soviet republics have been reluctant, slow and late to reform but if one compares Russia with

the new Member States the differences in policy are not striking. All countries have had price liberalization early on in the reform process, all have been engaged in large-scale privatization policies and in restructuring programs. Russia implemented mass privatization which proved rather disastrous compared to countries like Hungary or Poland who did not. However, the Czech Republic also had a mass privatization program. Stabilization policy was less successful and late in Russia compared to Poland for example but Hungary also stabilized rather late and the Czech Republic also faced a stabilization problem in the late nineties.

Given that the policies were not so different, other explanations have been suggested. Sometimes one hears that cultural differences might play a role. Little research has been done to substantiate such claims but it is not a priori obvious why differences say between orthodox and Catholic-protestant religions should make such a large difference. Greece, a long time EU member is for example mostly orthodox. Still other explanations for the "Great Divide" include the longer period of communism in the Former Soviet Union (70 years against 40), differences in natural resource endowments and "distance from Brussels" which can be interpreted in many different ways. None of these explanations gives a straightforward answer to the question of why the new Member States have been faring better than the CIS.

A rather convincing idea is to explain these differences by the role of "external anchor" of the European Union, an idea first formulated by Berglöf and Roland in 1997 and formalized in Roland and Verdier (2003). To put it in a broader perspective, there are two components to the external anchor idea. A first one is geopolitical. It relates to the aspiration that citizens in satellite countries of the Soviet Union had to break away from their Soviet satellite status and to become a member of the "Western" club in Europe, and thus a member of the EU. This geopolitical motivation having at stake a change in the status of the Central European and Baltic countries gave stronger incentives to undergo reforms and may explain why the political constraints to reform where less strong in these countries relative to the CIS (Roland, 1997). The second component is related to the incentives associated to entry into the European Union itself. Membership required conditions to be fulfilled and a failure to satisfy the conditions set by the EU could lead to rejection or delayed entry. This gave very strong incentives to fulfill all conditions necessary to gain acceptance into the EU. These incentives can be compared to the effect created by the Maastricht criteria on candidates to the EMU. As we know, several countries including Italy and Belgium have had serious fiscal imbalances, and the prospect of EMU entry gave them strong incentives to improve their public finance situation.

The strong stabilization of democracy in the new Member States, as can be seen from Figure 15 seems to me clearly an area where the role of external anchor of the EU has played an especially useful role. One should remember that the enlargement to Spain, Portugal and Greece happened after the demise of dictatorial regimes in those countries and that entry in the EU helped definitely stabilize democracy in those countries. Aspirations for democracy were immense prior to the collapse of communism but nationalist aspirations were equally strong and they might have produced clashes say between Hungary and Romania or between Hungary and Slovakia to name only a few examples. Such tensions might have had a very adverse effect on the democratization process as one has indeed seen in former Yugoslavia. It is always difficult to make counterfactual evaluations but it is fair to say that the prospect of EU accession has helped avoid and discourage Yugoslav type situations.

As stated in the introduction of this article, the incentives provided by the EU are the strongest when the reward is entry into the EU. Once inside, incentives to fulfill whatever conditions imposed by the Commission will generally be less strong. One sees this very clearly with the weak implementation of the Growth and Stability Pact. The issue has less to

do with how good an instrument it is. The real issue is that the EU does not have very strong enforcement powers towards the governments of Member States. This problem will appear in other dimensions of EU law enforcement within the enlarged EU with the new Member States. This is a reality we have to face. This would be very worrying if the new Member States had strong structural weaknesses that have not been addressed so far with the reform process. In that case, the EU might have a serious problem with enforcing change. However, as we have seen, the institutions of the new Member States appear quite in order. Therefore, despite the weak enforcement powers of the EU, we should not expect big problems ahead.

The institutional stabilization in the new Member States was the result of great efforts in the countries concerned but the EU has also played a very active monitoring role. In preparation for the accession, the European Commission has been following the progress of implementation of the *acquis communautaire*, i.e. the body of law that implements EU law in Member States. The Commission has been following the progress of Member States on 29 chapters: the four freedoms (free movement of goods, services, persons and capital), Company Law, Competition, Agriculture, Fisheries, Transport, Taxation, EMU, Statistics, Social Policy, Energy, Industry, Small and Medium Enterprises, Science and Research, Education and Training, Telecommunications, Cultural and Audiovisual matters, Regional Policy, Environment, Consumer and Health Protection, Customs Union, External Relations, CFSP, Financial Control, Financial and Budgetary Provisions and Institutions.

This process is a more bureaucratic one than the adoption of the big transition reforms and is certainly less inspiring. Nevertheless, I argue that it has worked as a simple and effective instrument to monitor the institutional evolution in the new Member States.

Figure 16: Implementation of the acquis

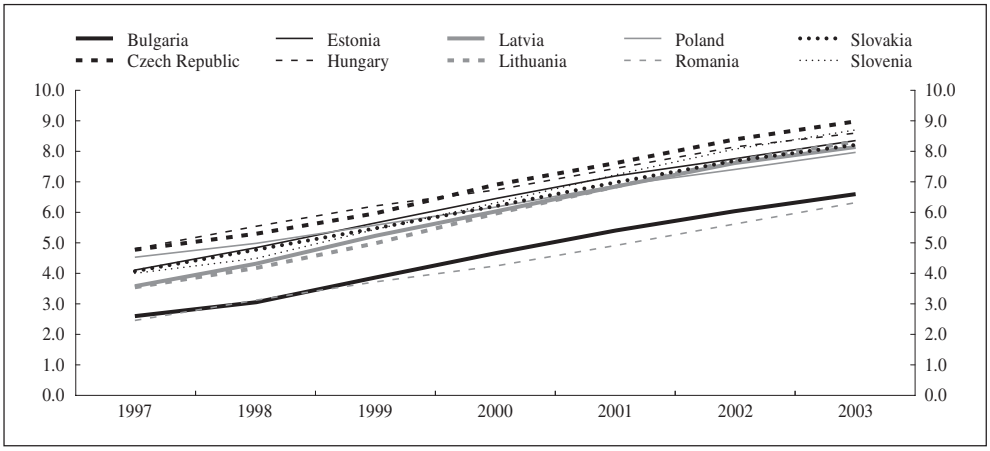


Figure 16 shows the average evolution of scores for all 29 chapters between 1997 and 2003. A score of 10 means a total implementation. The progress has been remarkably steady for all countries. Bulgaria and Romania who have not yet entered are the clear laggards and were probably given less attention, being perceived as the weaker accession candidates from the start. The Czech Republic, Slovenia and Hungary rank on top. Note that Poland performs the worst among the entrants despite a very good start.

We only comment briefly on the various countries.

The Czech Republic has generally done the best in nearly all chapters. Hungary and Slovenia have done nearly as well. Bulgaria and Romania (mostly the latter) tend to be the laggards. Poland was top in taxation and Common Security and Foreign Policy (CSFP), Lithuania was on top for the environment and Latvia and Slovakia for Cultural and Audiovisual matters. Poland has been lagging for the four freedoms except for the free movement of persons. Also lagging were Estonia as well as Latvia on free movement of persons, the latter also lagging on telecommunications and customs union, and Slovakia lagging on free movement of services, competition and financial and budgetary provision.

It is interesting to note that countries have generally been reacting positively to progress reports emphasizing their weak points. The progress was then evaluated in the regular progress reports on accession that checked the various items in the implementation of the *acquis*. Let us take a few examples.

Bulgaria was criticized for slow progress in Transport, Taxation and Energy Policy. Subsequent reports evaluate the progress made and call for further progress. Progress in transport was later deemed "substantial", "significant" in taxation and "encouraging" in energy.

Similar points have been made for the Czech Republic for the free movement of persons, telecommunications, Culture and Audiovisual and taxation. Taxation was a particularly bad point in 2001. The progress report noted divergence from the *acquis* in the VAT system. The 2003 noted with satisfaction that the problem had been corrected.

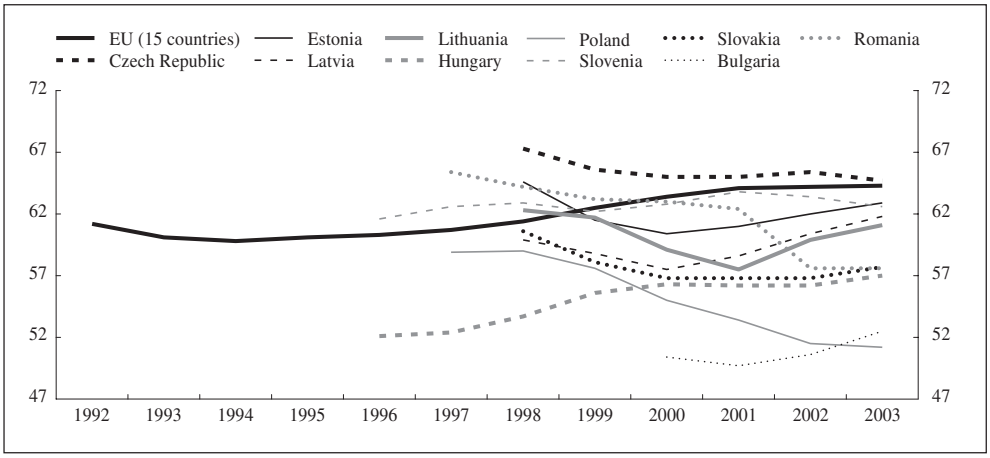
Estonia was similarly criticized on Culture and Transport, Hungary on taxation, EMU, Environment and Culture, Latvia on EMU and Social Policy, Lithuania on Free movement of persons and Consumer and Health Protection, Poland and Slovakia on culture and agriculture and Slovenia on taxation, competition, telecommunications, EMU and culture.

All in all, the monitoring of the progress by the EU in its own doggedly bureaucratic way has been relatively effective. The incentive effects (the reward of entry) probably played a more important role than the EU's monitoring power but this monitoring was still quite thorough. It is interesting to note that Poland, despite being the first to start reforms and being the largest entrant, has been doing the least well of the new Member States. I interpret this less as having to do with reform failures than with a "big country" attitude whereby one is more used to thinking how to influence the EU rather than how to follow its decisions. There is nevertheless no large difference between the implementation of the *acquis* in Poland and in the other new Member States.

4 Can we learn from the new Member States about the structural reforms needed in Europe?

In 1999, Poland introduced a three tier pension system with a pay as you go component, a fully funded mandatory contribution component and a voluntary component. Newspaper articles in the press lauded the new system noting that Poland, having undergone major transition reforms, was being faster than most existing EU members in reforming its pension system. Are the new Member States being the leaders in pension reform? Similarly, given the absence of independent trade unions under communism, with the exception of Poland, the new Member States have not had very strong Unions. Have their labor markets that were liberalized with transition become more flexible than those inside the EU? One sometimes hears that transition countries have been injected with more liberalism than existing EU members. What is the reality?

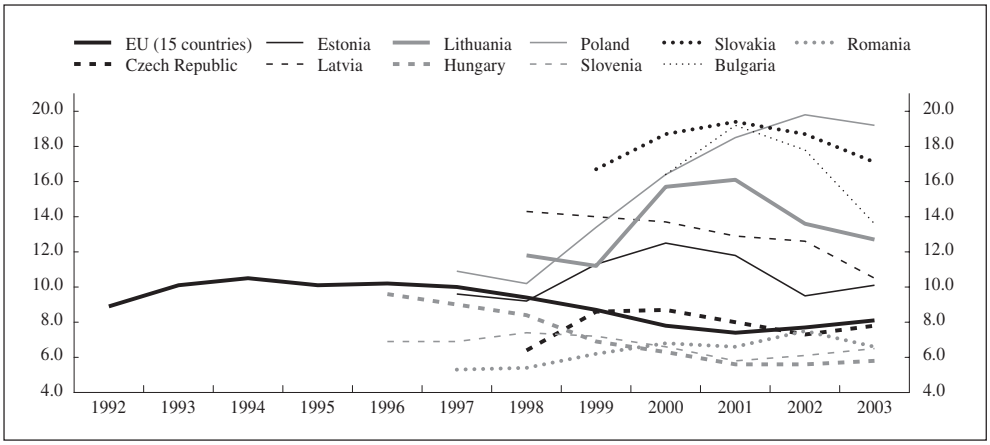
Figure 17: Total employment rate



Let us first start with labor market reform. Figure 17 shows the employment rate in the EU 15 and in the new Member States. We see immediately that the employment rate is in general lower than in the EU15 and tends to be declining while it is not in the EU15. Bulgaria has the lowest but is improving. Poland's employment rate is dangerously decreasing. So is the case with Romania. The picture looks thus worse in the new Member States than in the EU! This is probably one of the least well noticed features of transition countries. Many people who lost their job during the transition dropped out of the labor market altogether. Moreover, the low number of jobs created has had a negative effect on labor supply. This is truly a transition phenomenon as employment rates prior to transition were much higher than in the EU (Boeri, 2000). It reflects the restructuring process that has been taking place since the early nineties but that is not nearly over, as we mentioned above.

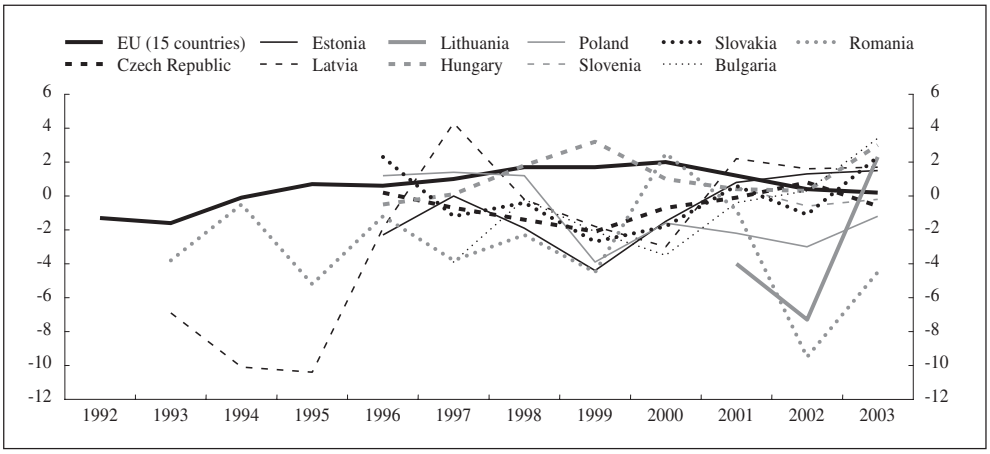
Figure 18 shows the unemployment rates. One sees that they are usually higher than in the EU15 with the exception of Hungary, Slovenia, Romania and Czech Republic. One notices

Figure 18: Total unemployment rate



very high unemployment rates in Poland, Bulgaria and the Baltics. This is not too surprising given the restructuring activity in those countries. Nevertheless, these first figures do not give the impression of thriving labor markets. On the contrary, they tend to suggest that the situation in the new Member States is worse than in the EU15. Is this compensated by a higher rate of job creation? Figure 19 displays employment growth. One sees strong year by year variability but no particular pattern of higher average growth in the new Member States.

Figure 19: Total employment growth



When one looks at implementation of labor market reforms in individual countries, nothing really revolutionary can be noted. Most of the legal changes in that field can be interpreted as copying laws from existing EU countries: mostly active labor market programs and measures to create more labor market flexibility. There is a lot of evidence of rigidities at the level of different countries. In the Czech Republic for example, despite rather flexible labor market regulations, the housing market is very rigid and generalized rent controls prevent good mobility across regions. Boeri (1994) had written about the "stagnant" labor market pool and Boeri (2000) noted the strong rigidities on labor markets in Central Europe.

Note that the correlation between high unemployment rates and labor market rigidities is not automatically clear. Slovenia has a very corporatist system and has managed to maintain low unemployment rates. Romania seems also to be doing quite well here.

Table 1 gives an index of rigidity of labor market laws in the EU15 and in the new Member States. The right hand column ranks the countries from less rigid to more rigid. While no country does as badly as Spain or Portugal, it is clear that labor market rigidity is higher in the new Member States than in the EU15. Note however that the Czech Republic scores relatively well and ranks number 4 in Europe behind Denmark, the UK and Austria. All in all, most new Member States will have to participate in labor market reforms just like most of the other EU countries.

Figure 20 shows general social benefits as a percentage of GDP. The figure shows a generally lower share of expenditures on social programs compared to the EU with the notable exception of Poland. There is thus not really a social time bomb in the new Member States. On the other hand, the latter are also poorer and it is not surprising to see lower social generosity in poorer countries.

Table 1

Employment laws index (0=less rigid to 100=very rigid)		Employment laws index (0=less rigid to 100=very rigid)	
EU Accession Countries (current and future)		Ranked	
Bulgaria	53	Denmark	25
Czech Republic	36	United Kingdom	28
Estonia	–	Austria	30
Hungary	54	Czech Republic	36
Latvia	62	Sweden	42
Lithuania	64	Belgium	48
Poland	55	Ireland	49
Romania	54	France	50
Slovakia	61	Germany	51
Slovenia	59	Bulgaria	53
EU-15		Hungary	54
Austria	30	Romania	54
Belgium	48	Netherlands	54
Denmark	25	Poland	55
Finland	55	Finland	55
France	50	Slovenia	59
Germany	51	Italy	59
Greece	67	Slovakia	61
Ireland	49	Latvia	62
Italy	59	Lithuania	64
Luxembourg	–	Greece	67
Netherlands	54	Spain	70
Portugal	79	Portugal	79
Spain	70	Estonia	–
Sweden	42	Luxembourg	–
United Kingdom	28		

Figure 20: Social benefits (other than social transfers in kind) paid by general government *(% of GDP)*

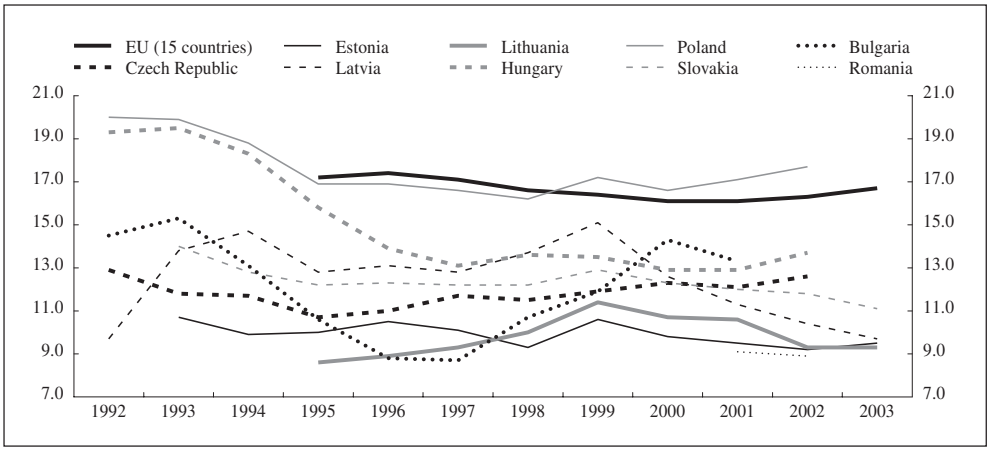


Table 2 shows contribution rates for social security. These rates are generally high but not necessarily among the highest (Romania is the highest though!). They are however nowhere nearly as low as the figures of Ireland and UK. Note also that Poland and Hungary have higher contribution rates than Germany.

Table 2: Contribution rates for social security programs, 2002
(in percent)

	Old age, disability, survivors			All social security programs [1]		
Country	Insured person	Employer	Total	Insured person	Employer	Total
Austria [4]	10.25	12.55	22.75	17.20	25.10	42.30
Belgium	7.50	8.86	16.36	13.07	24.87	37.94
Bulgaria	22.25	8.75	31.00	25.50	19.20	[3] 44.7
Czech Republic	6.50	19.50	26.00	12.50	35.00	[3] 37.5
Denmark [4]	[6]	[6]	[6]	[6]	[6]	[3], [6]
Estonia	0.00	20.00	20.00	0.00	33.00	[3], [7] 33
Finland [4]	4.40	16.70	21.10	6.30	20.40	[3], [7] 26.7
France [4]	6.65	9.80	16.45	15.45	33.86	49.31
Germany [4]	9.55	9.55	19.10	19.80	21.11	[3] 40.91
Greece [4]	6.67	13.33	20.00	11.95	23.90	35.85
Hungary [4]	[2] 8	[2] 18	[2] 26	12.50	32.00	44.50
Ireland	6	[2], [9] 10.75	[2], [9] 16.75	[9] 6	[9] 11	[3], [9] 17
Italy [4]	[2], [9] 8.89	23.81	32.70	8.89	32.22	41.11
Latvia	[10]	[10]	30.86	9.00	26.09	[3] 35.09
Lithuania	2.50	22.50	25.00	3.00	28.00	[3] 31
Luxembourg [4]	8.00	8.00	16.00	15.40	13.57	[3] 28.97
Netherlands [4]	19.15	8.90	28.05	36.05	18.75	[3] 54.8
Poland	16.26	16.26	32.52	26.46	20.88	[3] 47.34
Portugal	[2] 11	[2] 23.75	[2] 34.75	11.00	26.75	37.75
Romania [4]	[2] 11.66	[2] 23.34	[2] 35	19.66	35.34	[3] 55
Slovakia [4]	[2] 6.4	[2] 21.6	[2] 28	12.80	38.00	[3] 50.8
Slovenia	[2] 15.5	[2] 8.85	[2] 24.35	22.10	15.90	[3] 38
Spain [4]	[2] 4.7	[2] 23.6	[2] 28.3	6.25	31.58	37.83
Sweden [4]	7.00	10.21	17.21	7.00	19.09	[3] 26.09
United Kingdom [4]	[2] 10	[2] 11.9	[2] 21.9	10.00	11.90	[3] 21.9

Source: http://www.ssa.gov/policy/docs/progdesc/ssptw/2002-2003/europe/guide.html
1) Includes old age, disability, and survivors; sickness and maternity; work injury; unemployment; and family allowances. In some countries, the rate may not cover all of these programs. In some cases, only certain groups, such as wage earners, are represented. When the contribution rate varies, either the average or the lowest rate in the range is used.
2) Also includes the contribution rate for other programs.
3) Government pays the total cost of family allowances.
4) Contributions are submitted to a ceiling for some benefits.
5) New system rates.
6) Portion of set amount for old age, disability, and survivors. Central and local government and other types of contributions for the other programs.
7) Government pays the total cost of basic unemployment benefit.
8) Government pays the total cost of cash sickness and medical benefits.
9) Range according to earnings bracket. Higher rate is shown, which applies to highest earnings class.
10) See total.

Table 3 gives relevant data about social security. new Member States have relatively younger populations than the EU15 so they face a less important demographic problem but one should not exaggerate the difference. On the other hand, the dependency ratios in the new Member States are not among the highest but they are not really low either. The pension ages are in line with those from the EU15 though they are rather generous. Slovenia has the earliest retirement age for men at 58. One should note that the retirement age tended to be considerably lower early in transition and reforms have already taken place in the nineties to increase the pension age. Table 4 gives a broad overview of the different types of pension systems in Europe.

Table 3: Demographic and other statistics related to social security, 2002

Country	Total population (millions)	Percentage 65 or older	Dependency ratio [1]	Life expectancy at birth		Statutory pensionable age		Early pensionable age [2]		GDP per capita
				Men	Women	Men	Women	Men	Women	($U.S.)
Austria	8.1	15.4	47.7	74.7	80.9	65.0	60.0	61.5	56.5	25,089
Belgium	10.2	16.8	52.2	75.0	81.3	65.0	62.0	60.0	60.0	25,443
Bulgaria	8.0	16.0	47.4	67.1	74.8	61.5	56.5	[3]	[3]	5,071
Czech Republic	10.3	13.7	43.8	71.2	78.0	61.0	59.0	58.0	56.0	13,018
Denmark	5.3	15.0	49.4	73.6	78.6	67.0	67.0	60.0	60.0	25,869
Estonia	1.4	14.1	47.9	64.8	75.8	63.0	58.0	[3]	[3]	8,355
Finland	5.2	14.8	49.4	73.7	81.0	65.0	65.0	60.0	60.0	23,096
France	59.0	15.8	53.1	74.5	82.3	60.0	60.0	[3]	[3]	22,897
Germany	82.0	16.1	46.8	74.3	80.6	65.0	65.0	[3]	[3]	23,742
Greece	10.6	17.2	48.1	75.5	80.8	65.0	65.0	60.0	60.0	15,414
Hungary	10.0	14.6	46.6	66.8	75.4	62.0	62.0	[3]	[3]	11,430
Ireland	3.8	11.3	49.9	73.8	79.1	66.0	66.0	[3]	[3]	25,918
Italy	57.5	17.8	47.4	81.6	75.2	65.0	60.0	[3]	[3]	22,172
Latvia	2.4	14.5	48.3	64.3	75.6	61.5	58.5	60.0	56.5	6,264
Lithuania	3.7	13.1	49.4	66.5	77.0	62.0	58.0	[3]	[3]	6,656
Luxembourg	0.4	14.3	49.2	73.9	80.4	65.0	65.0	57.0	57.0	42,769
Netherlands	15.8	13.6	47.0	75.3	80.7	65.0	65.0	[3]	[3]	24,215
Poland	38.6	11.9	46.6	69.0	77.3	65.0	60.0	[3]	[3]	8,450
Portugal	10.0	15.4	47.4	71.9	79.1	65.0	65.0	55.0	55.0	16,064
Romania	22.5	13.1	46.6	66.5	73.3	65.0	60.0	55.0	55.0	6,041
Slovak Republic	5.4	11.3	45.7	69.1	77.0	60.0	60.0	[3]	[3]	10,591
Slovenia	2.0	13.6	42.8	71.5	78.9	58.0	54.0	[3]	[3]	15,977
Spain	39.9	16.7	46.4	74.8	81.9	65.0	65.0	61.0	61.0	18,079
Sweden	8.9	17.4	56.0	77.0	82.1	65.0	65.0	60.0	60.0	22,636
United Kingdom	59.3	15.7	53.3	75.0	80.0	65.0	60.0	[3]	[3]	22,093

1) No country in Europe has provident funds. The column is in this table to facilitate comparisons with countries in other regions.
2) The benefit formula contains a flat-rate component as well as an earnings-related element.
3) Persons who became insured before June 30, 1998, or who became insured after this date but before reaching the age of 42 years, can choose between the earnings-related system or the mixed system of the earnings-related pension and private insurance.

Table 4: Types of mandatory systems for retirement income

Country	Flat-rate	Earnings-related	Means-tested	Flat-rate universal	Provident funds [1]	Occupational retirement schemes	Individual retirement schemes
Austria		X					
Belgium		X	X				
Bulgaria		X	X				X
Czech Republic	X [2]	X [2]					
Denmark			X				X
Estonia	X [2]	X [2]					X
Finland			X			X	
France		X	X			X	
Germany		X					
Greece		X					
Hungary		X					X [3]
Ireland	X		X				
Italy		X	X				
Latvia		X	X				X
Lithuania	X [2]	X [2]					
Luxembourg	X [2]	X [2]					
Netherlands	X						
Poland	X [2]	X [2, 4]					X [4]
Portugal		X	X				
Romania		X					
Slovak Republic		X	X				
Slovenia		X					
Spain		X					
Sweden		X	X				X
United Kingdom	X	X	X				

1) No country in Europe has provident funds. The column is in this table to facilitate comparisons with countries in other regions.
2) The benefit formula contains a flat-rate component as well as an earnings-related element.
3) Persons who became insured before June 30, 1998, or who became insured after this date but before reaching the age of 42 years, can choose between the earnings-related system or the mixed system of the earnings-related pension and private insurance.
4) The old system contains a flat-rate component as well as an earnings-related element. The new system includes an earnings-related notional defined contribution (NDC) scheme and private mandatory insurance.
Note: Flat-rate pension: A pension of uniform amount or based on years of service or residence but independent of earnings. It is financed by payroll tax contributions from employees, employers, or both.

One should note that most of the new Member States have undertaken serious measures to introduce a three tier pension system, which seems to be the model that will generally prevail throughout Europe as radical privatization of pension systems is generally rejected by the population (Boeri, Tabellini and Boersch-Suppan, 2001).

All in all, there is no big difference between the state of pension systems in the new Member States and that in the EU15. High contribution rates and low pension ages indicate that further efforts in pension reform will be needed in the new Member States.

To conclude this section, there is no large difference in the need for structural reforms in the new Member States. The latter tend to have very rigid labor markets with the partial exception of the Czech Republic and they will have to make sure that their social welfare and pension systems are sustainable in the long run.

5 What can we expect from a Europe of 25 and what will be the contribution of the new Member States?

Several years ago, EU observers noted that there was a contradiction between deepening and widening. Deeper integration meant remaining together in a smaller club and widening meant forsaking further gains in integration. Both advocates and enemies of enlargement claimed that with enlargement Europe would be diluted to little more than a free trade zone. Indeed, in a Europe of 25, decision-making would be much more difficult given the high thresholds for qualified majority that were not addressed satisfactorily by the Nice Treaty. Advocates of looser integration saw this as a plus while the advocates of deeper integration saw this as a threat to further future integration. In reality, it seems that we are going to have both widening and deepening. Less than two months after the historical enlargement, the European Council approved with some modifications the project for the European Constitution prepared by the Convention in 2003. The Constitution represents a marked improvement on the Nice Treaty. The qualified majority voting rule for legislation initiated by the Commission will be 55% of Member States (at least 15 states) and 65% of the population (article I-24), a lower threshold than Nice. The European Council will elect its president for a period of 2.5 years and the Commission president will be elected by the European Parliament after the elections to the latter, upon a proposal from the European Council. Co-decision will be the rule for legislative decision-making giving more powers to the European Parliament. Europe will also have a foreign minister. Legislative procedures and categories will be simplified. If the Constitution is ratified, it will provide a solid basis for decision-making within an enlarged Europe. Indeed, it strikes a fine balance between the preservation of national sovereignty and the creation of options for further integration in a larger Europe. On the one hand, the catalogue of competences and the extent of qualified majority voting has not been extended in the Constitution. On the other hand, it does leave an option for further consensual integration: after the initial ratification of the Constitution by the Member States, further ratifications will not be necessary for extensions of the domain of qualified majority voting and changes in the catalogue of competences in areas because of special flexibility clauses included in the Constitution (articles I-17 and IV-7a) that allow the European Council to make such changes using the unanimity rule.[2] Moreover, the rule for qualified majority makes decision-making easier in domains where countries have already agreed to transfer sovereignty to the European Union.

Note that the Central European participants to the Convention have helped to contribute to its success. They came as enthusiastic conventioneers participating with the spirit of contributing to the preparation of the best possible Constitution for Europe. They had less vested interests to defend and could take at heart the larger and longer term interests of Europe.

While there is strong enthusiasm for European integration, the low election turnouts in various new Member States indicates that the population of those countries has yet to become more familiar with the European institutions. The media from those countries will have an important responsibility there.

Note that the support for Europe in the new Member States does not come from those categories of the population that hope to gain from European subsidies but rather for other categories who are likely to benefit from the Single Market (Doyle and Fidrmuc, 2004).

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[2] Moreover, following the subsidiarity principle, national parliaments will need to be consulted on changes in the catalogue of competences.

6 Concluding remarks

We asked several questions in the introduction.

Can we say that the new Member States have achieved their institutional transition in a stable and satisfactory way? The answer is yes. The new Member States may face institutional problems in the future but they are not worse than those facing existing EU members. The only important legacy from transition is an unfinished enterprise restructuring process that will leave many sectors economically fragile for quite many years. Corruption will also need to be watched carefully.

Has the EU played a positive role in helping those countries achieve their transition? The answer is a clear yes. The prospect of entry in the EU has played the role of a powerful magnet for the transition process. Moreover, the EU has been able to use this magnet effectively to prepare the candidates for accession in implementing the *acquis communautaire*.

Third, given the experience of the new Member States with large scale reforms, is there anything that the EU can learn for its needed structural reforms in labor markets, pension and welfare reform? Here, the answer is disappointing. The structural reforms agenda outlaid since the Lisbon summit will be just as valid for the new Member States as for previous EU members. Structural reforms need to speed up in a Europe of 25.

Finally, how will the EU work with 25 and what will be the contribution of the new Member States? The answer to that question is obviously more speculative but both the success of the Constitutional Convention and the participation of delegates from those countries is a sign that their input will be interesting, loyal and original. I hope that historians will look back at the beginning of the twentieth century as the beginning of a new era for Europe that closed the cold war and represented a significant step forward in European integration and towards durable peace on the continent.

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Comment

Erkki Liikanen

Introductory remarks

Gérard Roland's paper raises some essential issues regarding the institutional development of the new Member States and the prospects as to how an enlarged European Union (EU) will work. The paper looks at various institutional indicators compiled by the European Bank for Reconstruction and Development (EBRD) and the World Bank. By using these indicators, the paper aims at answering the following specific questions: i) have the new Member States achieved their institutional transition in a stable and satisfactory way; ii) has the EU played a positive role in this process; iii) is there anything that the EU can learn with regard to the structural reforms needed in labour markets, pension and welfare reform; and iv) how will the EU work with 25 members?

Summing up the main results of the paper

The paper provides some tentative answers to the first two questions. It argues that institutional problems in the future are unlikely to be essentially worse than those facing existing EU Member States. Furthermore, the paper argues that the EU has been playing a "fundamentally positive role in anchoring the institutions of the new Member States to a sound market system". As a general message, the paper suggests that fundamental market institutions and the basics of market economies are well-established and solid.

Given the wide scope of the paper, the last two questions are given understandably less attention.

First I would like to comment on two questions:

1) Is the EU an external anchor and enforcement power vis-à-vis the governments of Member States?
2) What is a stable and satisfactory institutional transition?

External anchor and enforcement powers

Regarding the first point, Roland argues that the prospect of EU membership has enforced institutional reform, but that once inside, incentives to fulfil future reforms will be weaker. The paper builds an analogy to the weak implementation of the Stability and Growth Pact (SGP), and argues that the EU does not have appropriate (i.e. sufficiently strong) enforcement powers.

While to some extent it is not difficult to agree with this point, it should also be recognised that the SGP – in common with the Maastricht criteria – has improved fiscal prudence within the EU markedly over the last decade, in spite of numerous difficulties.

On the other hand, the SGP is still a relatively new instrument. The Commission has even stronger powers in the field of the internal market and competition policy. There is moreover a long tradition and case law. By using these tools, the Commission has accelerated the liberalisation process in Member States, controlled state aid and promoted competition. I am sure the Commission will not hesitate to use these competencies in the new Member States as well.

There are two further incentives to consider:
Most of the new Member States are working towards joining Economic and Monetary Union (EMU). The Maastricht criteria and the associated institutional reforms that are required will certainly foster future reforms, and not just those explicitly required in the Maastricht criteria. For instance, some studies show that structural reforms in the labour markets may be associated with the implementation of new monetary regimes, such as inflation targeting.

In addition, there is and will continue to be much healthy competition between the new Member States with regard to new foreign investment. A successful reform process will be an asset in this field.

Stable and satisfactory institutional transition

At this point we need to define precisely what constitutes "stable" or "satisfactory" institutional transition.

The paper apparently takes the view that stable institutional transition can be defined as a process that has progressively evolved without any major disruptions or reversals. By looking at the evolution of the number of interesting indicators that the paper has compiled, this indeed seems to be the case: most of the institutional indicators show a steady pattern of improvement. Yet, as can be observed from the same indicators, there are also rather large differences between countries.

The stability and satisfactoriness of institutional transition can also be assessed by analysing its consequences on economic, political and societal development.

Stability can be measured from this point of view by using indicators such as fluctuations in inflation, public sector deficits, interest rates, exchange rates, different measures of political stability, the number of strikes, etc.

Looking at some important macroeconomic indicators of convergence, economic stability has improved with regard to inflation. In the new Member States, the harmonised index of inflation declined on average from close to 10% in early 1997 to around 2% in mid-2002, where it remained until early 2004.

Progress with fiscal consolidation, on the other hand, has generally been too slow, and the majority of countries have yet to achieve a situation which, from a broader perspective, might be judged as sustainable in the medium term.

The satisfactory element of an institutional transition can also be assessed by looking at some more indirect measures. For instance, the extent to which there has been a reversal or drastic change in inflows of foreign direct investment (FDI) gives a rather good indication of how foreign investors judge the institutional transition. Considerable changes have indeed taken place with regard to the inflow of FDI in many of the new Member States.

In many countries high levels of FDI have supported high output and investment growth rates. However, maintaining a steady inflow of FDI represents a major challenge for the future, as FDI inflows have tended to decrease in many new Member States, partly linked to reduced privatisation activity. The decrease in FDI inflows has been accompanied by a net outflow of portfolio investments, with loans and trade credits becoming the main source of financing of the current accounts.

All in all, institutions have developed in the right direction during the last decade and, as the paper argues, they are mostly compatible with a market-driven economy. Of course, institutions as such are not important, but they do provide the necessary conditions for creating an environment for future growth and prosperity. However, reforms are needed, in particularly with regard to corruption and the legal system.

Roland also raises the following question: what can we learn from reforms in labour markets, pension and welfare reform? Not much, is his conclusion.

I would like to put the question differently: what will the impact of the new Member States be on regulatory development in an EU of 25 members?

I believe that the new Member States will be very sensitive with regard to new regulation, which could harm Europe's competitiveness. They will be competing directly with Asian countries for FDI, and will not want to weaken their position. There will therefore be less new regulation.

How will the EU work with 25 members?

Let me finally turn to the most important and topical issue, namely how the EU will work with 25 members

I agree with Roland that the new Member States will be active and enthusiastic members. They have not come to use their veto. And the larger the Union is, the more difficult it is for one veto to prevent a decision.

I would also like to discuss the growth and productivity prospects for European economies in the years to come. As already argued, for Europe to work as a stable political entity, and build room for enlarged EMU, it is necessary to close the income gap between the new and the EU15 Member States. Probably the best way to achieve this is to facilitate competition and thus enhance productivity growth in all the sectors of the economies.

The rationale for, and success of, the single market is that it reinforces the principle of a market economy adhered to by the European economies. The market economy is strengthened by subjecting otherwise closed sectors to greater competition, and by the prospect of a wide range of cross-border exchanges of goods and expertise. This improves resource allocation and provides both dynamic and static efficiency gains that, in turn, offer the promise of improved economic performance.

As for the new Member States, many of the above-mentioned positive features have already been reflected in faster economic growth and productivity.

The new Member States will in the future also benefit from larger markets for their products (and thus economies of scale), while the EU15 Member States are facing stiffer competition in many industrial sectors. This is likely to enhance productivity in Europe as a whole.

A large part of the productivity growth in the new Member States has been associated with FDI inflows as well as restructuring by domestic companies.

Large internationally operating companies have been playing an important role in this process, not only by importing capital, but also by transferring business management skills and expertise and thus decreasing the knowledge gap across Europe. Indeed, a large proportion of trade is intra-industry and intra-company, whereby a significant proportion of global trade runs through international production and distribution networks.

Increases in intra-industry and intra-company trade reflect the desire of large companies to diversify their supply chains and achieve further economies of scope in the world market, rather than just reflecting differences in the cost of inputs at different locations. Moreover, thanks to stiffer competition and the complexity of products, companies are now concentrating on their core competencies.

This has a tendency to reinforce the development of a more concentrated, but spatially diverse, economy. In the short run, there can be significant employment losses and imbalanced regional development, yet in the medium term European economies will be more

efficient. Nevertheless, spatial agglomeration across territorial boundaries represents a real challenge for Europe, as there is a need to find the right balance between strengthening Europe's most productive areas and ensuring their global competitiveness, yet also to develop policies that minimise the risk of excessive regional diversification. Policies that enhance the exchange of know-how across borders are of crucial importance in minimising such risk.

For small new Member States in particular, the key to success is to be attractive and adaptive. In the medium term, this requires further strengthening of those business areas with a comparative advantage, with the additional aim of attracting FDI to those areas. This also requires continuing with institutional and legal reforms that strengthen ownership rights, reduce corruption and provide a favourable business environment in general. Otherwise, there is a risk that some countries could become locked into low wage/low productivity production. This would lead to rapidly widening income differences between the EU countries.

In the longer term, expertise, business management skills and capital imported through FDI need to be rooted in society in order to build up domestic capacity and enable further increases in productivity to be achieved. As static comparative advantages based on lower labour costs have been deployed, the new Member States need to base their longer-term industrial strategy on dynamic comparative advantages and policies that enhance productivity through innovative activities of firms. Once more, competition combined with the appropriate renewal of institutions is essential.

Comment

Val Koromzay

Overall, I found this an interesting, highly informative but not wholly convincing paper. To state my position upfront:

a) I broadly agree with the first of this paper's main conclusions: the new Member States do now broadly belong to the same economic universe as the EU15 in terms of market functioning and institutional development.

b) I also agree with the second: namely, that the prospect of EU entry played a significant anchoring role for the economic policies of the new Member States.

c) However, I tend to disagree with the third conclusion – that the new Member States are unlikely to become a significant driving force for economic reform within Europe, but rather partners in misery (albeit, for the EU15, relatively affluent misery) – although this may be more my heart than my head speaking.

d) I have no real comment on the fourth conclusion, as I am unsure as to how the ten will contribute to the evolving governance structure of the EU – defining the drivers of the governance structure within the EU is extremely complicated.

To my mind, the most striking feature of the paper is the large evidentiary weight placed on what are, to use Organisation for Economic Co-operation and Development (OECD) jargon, called "policy indicators", as a way of characterising and ranking economies. I think the methodological issues involved deserve discussion, if only because such indicators are these days springing up like mushrooms – not least in the OECD – and some thought needs to be given to what they can and what they cannot tell us.

I would like to organise my comments under three headings:

- Some reflections on the main conclusions of the paper;
- The methodology of indicators; and
- Two footnotes (or quibbles) concerning specific assertions made in the paper.

Reflections on the conclusions

While I largely agree that the new Member States do belong to the same economic universe as the EU15, I am not sure the paper actually demonstrates this point, as it focuses on the evolution over time of a set of indicators across the new (and future) Member States, but provides very little information on how such indicators place these economies today relative to the EU15. Nonetheless, it is surely correct, as OECD indicators covering those new EU Member States which are also in the OECD confirm, that the former transition economies have entered into the mainstream, even if they are not yet among the elite, of functioning market economies that are able to bear the pressure of competition within the single market. This is supported by basic indicators covering product, labour and financial markets as well as aspects of public policy such as administrative capacity, tax systems and macroeconomic policy frameworks. While the new Member States are still relative outliers compared with the EU15 in some areas, such as the extent of state control over the economy, in others, notably the ease of entry of new firms, they are close to the top of the league tables. I also agree that Bulgaria and Romania lag some way behind.

I agree that the prospects of EU entry played a significant anchoring role for policy development in the new Member States. But I would like to offer some personal experiences concerning the role of the OECD in this external anchoring process – particularly as it relates

to the gap between the Visegrad countries on the one hand and Bulgaria/Romania on the other:

– At the beginning of the 1990s, when the revolt against Communism began, the OECD countries perceived a rare geopolitical opportunity to create a new situation on the ground at a time when the USSR appeared too absorbed in its domestic affairs to offer a decisive counterweight. However, this was seen as a window of opportunity that might close at any time. The OECD countries therefore provided substantial and rapid support to the Visegrad economies, including the "Partners in Transition" programme which put Poland, Hungary and Czechoslovakia onto a fast OECD membership track.

– A year later, when Bulgaria and Romania also abandoned Communism, the situation had changed considerably. It had become clear that the USSR itself was entering a period of profound transformation, and not just going through a phase of self-absorption. The geopolitical imperative was no longer there, and the latecomers – Bulgaria and Romania – were thus much less actively supported in their transformation efforts. This may account for at least part of the gap, and suggests that the OECD was also an important anchor for at least the Visegrad countries.

– To put this into perspective, it also has to be conceded, however, that the more difficult initial conditions for Romania and Bulgaria may have been at least as significant as the lack of an external anchor in explaining the transformation gap. In the case of Romania, the extraordinary hardships suffered by the population during the Ceauşescu years meant that the imperative to avoid more hardship during transition crippled policy choices in the early years after the fall of Communism. For Bulgaria, the workings of COMECON meant that Bulgaria had become (as put to me in a personal conversation with B. Antonov) a "very efficient machine for turning dollars into roubles" – a specialisation that was not particularly advantageous when COMECON crashed.

– Having said all that, it is probably true that the EU anchoring role has been particularly important for Bulgaria and Romania in recent years – perhaps all the more so since the OECD has not played this role.

The paper argues that the new Member States face domestic reform agendas of a similar nature to those faced by the EU15 and, to that extent, may be fellow-travellers on the reform road, rather than catalysts. This may well be correct: certainly the paper correctly recognises that both the EU15 and the new EU Member States face the challenges of achieving fiscal sustainability in the context of ageing populations, and of increasing employment rates sharply to ease the ageing shock. But it seems to me that there is still more choice than the paper recognises concerning "the kind of European country" that the new Member States will become. To illustrate this, I will focus on two areas: pensions and labour markets.

I agree with the paper that the new Member States are unlikely to be reform models for the EU15 with regard to pensions. However, the new Member States still have a substantially less constrained set of choices regarding future pension arrangements than most EU countries: the scope for parametric changes is politically easier and, more fundamentally, the transition costs of shifting from pay-as-you-go towards more extensive funding are more easily managed. This is because the accumulated pay-as-you-go contingent liabilities are simply smaller and because, in some cases, substantial privatisation revenues still to come provide possibilities for "bridge" financing. Thus the new Member States have a substantial head start in the development of funded pillars which should (good management permitting) result in systems that are more robust to ageing pressures than those in a number of EU15 countries.

With regard to labour markets, it is no doubt correct that the performance indicators are wretched: employment rates are low (and still falling in some of the new Member States), and

unemployment rates are in some cases the highest in the OECD. Establishing what is happening in these labour markets is hard, and the data are highly resistant to simple explanations. Even so, I do not think that it is plausible to link labour market performance directly to indicators of labour market rigidity in the European sense. I think the results still reflect to an important extent the interaction of past rigidities of the pre-transition labour markets and the shock of transition, rather than the "new rigidities" of post-transition labour law. Of course there is a risk that, over time, "transition under-employment" will become structural unemployment; however, I think that there is scope in the transition economies for very substantial improvements in labour market outcomes under present settings once the transition shock fully wears off. An analogy to Finland may help. In the latter, the shock of massive restructuring associated with the double blow of a banking crisis and the ending of special trading arrangements with the Soviet Union led to a major recession and a very sharp rise in unemployment in the early 1990s. While output recovered rapidly, Finland, which had been a low employment country up to then, has ever since been a high unemployment country, with unemployment remaining stubbornly near 8 per cent. Apparently it can take a long time for labour markets to adjust to shocks that radically change both the required skill-mix of the labour force and the regional distribution of jobs.

In any event, in assessing labour market problems in the new Member States, it is worth noting that foreign-invested firms seem able to operate their employment policies in a very flexible way at the high end of the market, while the pervasive, if hard to document, informality provides considerable flexibility at the low end.

I think the paper might have been slightly more optimistic about the leadership capacity of the new Member States with regard to reform if it had explicitly focused on Slovakia's comprehensive and radical reform process of the past few years. In this regard, it is worth noting that Slovakia has now entered the global "top 20" of the World Bank's business conditions indicator. Whether the other new Member States have the political and social capacity for such radical reform is of course uncertain, but I would not rule it out.

Finally, and most importantly, the paper seems to ignore the issue of real convergence and its implications. If I accept that the environment for "doing business" is not notably less favourable in the former transition countries than in the EU15; that, furthermore, business tax regimes are in fact generally more favourable; and finally, that human capital – if not up the level of the best-performing EU countries – is nonetheless a relatively abundant factor; then the logic in a globalising economy is that shortages of useful capital will be closed relatively quickly through relocation of investment, given that wage costs in the new Member States are only a fraction of what they are in the EU15. Perhaps, as some people advocate, some sand will be thrown into the wheels of what I see as the likely process. Or perhaps the governments in the new Member States will be blinded by initial gains and will abandon the process in search of short-term expediency. However, my hope is at least that real convergence will galvanise – if only defensively – a more aggressive approach to reform within the Union as a whole.

The methodology of indicators

For its assessment on economic progress in the new Member States, the paper relies almost entirely on a broad range of quantified indicators that aim to measure, in one way or another, the inevitably multi-dimensional characteristics of various markets that define the framework conditions for their functioning. The paper does not develop its own indicators, but uses ones developed by a range of institutions, notably the World Bank, the EBRD, Transparency

International, and an employment law index of unidentified provenance. Only this last indicator (in addition to a table on social security contribution rates) provides a direct comparison of the new Member States with the EU15. I would argue that this paper pushes reliance on such indicators to the limit of what they can tell us – and perhaps beyond. This is not a critique of the paper as such, but more a cautionary note that the growth industry of indicators in the field of economics needs to be scrutinised.

I say this with all the more conviction because the OECD is about to publish its own indicator-based assessment of policy priorities. There are two lessons from this work that I would like to share:

– The first is that even when, taken across a broad sample of countries, an indicator seems to show a clear correlation with some dimension of economic performance, there are typically a number of outliers in one of two senses. In some cases a "bad" indicator is associated with "good" performance (or vice versa). Of course, this often happens in cross-section studies. However, it is a warning that caution is needed in going from an indicator ranking to formulating a policy prescription for any particular country. The second type of outlier is one where the indicator itself – derived as some kind of weighted average of diverse measurable phenomena – simply does not correspond to what country experts "know" about how things actually work in the country in question.

– Following on from this, in our work at the OECD we have taken very considerable pains to cross-check indicator-based results with country experts – a process that has led at times to rethinking the construction of the indicator and, at others, to exploring why the indicator does not send the correct message in certain cases. A simple but telling example of the latter is the discovery that the impact of employment protection on labour market outcomes greatly depends on the nature of the collective bargaining framework. It appears to be the interaction of strict employment protection legislation (EPL) with sector-level bargaining that does much of the damage. An example of the former is the sensitivity of an EPL indicator to the weighting of protection for workers on permanent contracts versus the "flexibility" provided by atypical contracts: depending on the weights chosen, a country like Portugal could either appear as very rigid or quite flexible!

To conclude, I would like to issue a particular health warning on Table 1 of the paper. The country ranking on the employment law index has some correlation with the OECD's EPL indicator – but also features some notable differences, e.g. for the Czech Republic.

Two quibbles

There are two propositions in the paper which, while not central to its conclusions, deserve comment. The first is the assertion that the one area in which the new Member States are still farthest away from EU norms is that of enterprise restructuring, which is seen as inherently a very long-run process. I cannot judge to what extent this might be the case for some of the transition countries that I know less well, and I would agree that for Romania in particular this remains a very significant task. However, at least for the Visegrad countries, I would argue that what restructuring remains to be done is no longer of macroeconomic significance – indeed, for some, like Hungary, the governments are essentially finished with that process altogether. Of course, restructuring is an ongoing phenomenon in market economies, but the specific task of dealing with the inherited shock of state enterprises is actually well advanced in all these countries. If I were to identify the area in which institutional convergence still has farthest to go, I would focus elsewhere, particularly on the development of a regulatory culture that incorporates the key role that independent regulatory authorities have to play in a

market economy, or on finding a balance that avoids politicising regulatory issues while ensuring the accountability of the regulators.

Finally, I would question to some extent the notion that there is a "great divide" between the transformation experiences of central Europe and of the CIS, at least if the basis for this comparison is the divergence of GDP per capita. The problem I have with this is that the evolution of GDP per capita cannot really be accounted for by the success or failure of transformation policies, since it essentially reflects the much larger fall in GDP in Russia than in central Europe at the very beginning of the reform process. Since then, and certainly in recent years, Russia has outperformed central Europe in terms of growth. I would also argue that in some important respects, Russian reforms were more radical and, in their way, more market-friendly than those undertaken elsewhere. Certainly it is a mixed picture; but it is probably still several years too early to reach any firm conclusions about the relative success of different transition models. That said, developments over the past year in particular highlight the risk that Russia is engaged – as far as future economic performance is concerned – in effectively shooting itself in the foot.

General discussion

Gérard Roland reflected on the remarks of Erkki Liikanen concerning regulatory overburdening. He emphasised that the Lisbon Agenda will be a key priority for Europe in the next few years. He also expressed his view that the new Member States will be pushing forward the whole process of striving towards the objectives of the Lisbon Agenda. This is partly because the Lisbon Agenda means going against certain vested interests that have become institutionalised in the existing EU15, but have had less time to become established in the new Member States. However, at the same time the new Member States will also need to implement reforms in their own countries. Concerning the points made by Val Koromzay about methodology, Roland admitted that the indicators for institutional comparisons were clearly imperfect. More work is needed in this area, whereby international institutions can play an important role by helping academics to organise networks to improve the used methods and indicators.

Leszek Balcerowicz started with a comment concerning the indicators of perception of corruption which Roland characterised as indicators that truly represent corruption. Balcerowicz questioned this correspondence, arguing that there may well be situations when the perception of corruption is increasing, whereas in actual fact underlying corruption is declining. For example, when many corruption cases are publicised and the media focuses on corruption, the public believes that there is actually more corruption than previously under socialism. However, probably because there is now a clear incentive to publicise and uncover corruption, this perception might well be wrong.

In his second remark, Balcerowicz claimed that describing corruption as a transition phenomenon, as Roland had done, implies that there was no problem of corruption in central planning. Balcerowicz argued that this view could only be true in an ideal central planned economy, which does not of course exist. In a real-life centrally planned economy, the reality was different. The starting point of his argument was that there is petty corruption whenever a market for private goods is eliminated. Under socialism there were no legal markets for private goods, which explains the widespread occurrence of petty corruption (e.g. in the form of bribes to doctors who requested hidden payments). About a second type of corruption, namely political corruption, Balcerowicz argued that it is misleading to say that this kind of corruption did not exist under central planning. The key misunderstanding arises from the concept of corruption, which implies a certain limit of state power. Since state power was unlimited in some centrally planned economies, there was no need for corruption. However, unlimited state power is an even worse phenomenon than corruption.

Michael Marrese (JP Morgan) expressed both pessimistic and optimistic visions concerning the new Member States. The issue that he addressed was the issue of the importance of fulfilling the requirements of the *acquis communautaire*. Agreeing with Koromzay, he highlighted that one positive feature about the ten new Member States is that there is wide room for diversity. The new Member States have more flexible labour codes, better tax regimes, higher cost-adjusted productivity and greater entrepreneurial hunger as a result of high unemployment. His whole vision for the EU10 is optimistic, and even more so for the EU15, as structural reforms are going to be triggered by the EU's enlargement. This is already happening in Germany and France, as Liikanen also highlighted. About the Lisbon Agenda, Marrese expressed his view that it is simply dead and not worth talking about. Turning to the issue of the EU Constitution, he quoted several market participants, who did not believe that it will eventually be passed. This is because the EU is becoming more

democratic. When thinking of the EU10, one should think about countries that would not rely on the EU Constitution, but instead on the flexibility they have as members of the EU to grow much faster than the EU15. Between 1997 and 2003, the productivity growth differential was 6 percentage points per annum according to Eurostat, Marrese noted. The main reason for optimism is the increased flexibility within the EU. In this respect he expects the EU10 countries to take the lead.

Vítor Gaspar focused his questions on methodological issues. First, he wondered about the accuracy and reliability of the broad set of indicators used by Roland. Second, he pointed out that in the section about labour markets, indicators on institutions and policies were mixed with quantitative indicators on labour market performance. He wondered why this approach was not followed consistently in other parts of the paper.

Witold Orlowski (Research Centre for Statistical and Economic Studies) flagged one aspect about the notion of transition. He argued that the EU15 average is not the ideal market economy that the new Member States should aspire to converge to. Moreover, upon joining the EU, some transition economies actually had to take steps backwards (e.g. de-liberalising their agricultural sectors). Maybe it is better to stop talking about transition countries, he suggested, since in a way the whole of Europe is in a state of transition. Instead, it might be better to talk about best practices and about needed reforms in the EU25.

Gérard Roland first addressed some questions on methodological issues. When it comes to indicators, there are two classes of institutional indicators: objective and subjective ones. Objective indicators measure for example whether a certain law or restriction is present. These laws and restrictions can then be counted. Similarly, the number of indictments of corruption can be counted. Subjective indicators depend on the opinion of experts. Roland admitted that the disadvantage of subjective indicators is that sometimes performance indicators cloud peoples' judgement. However, taking the example of corruption, zero objective corruption can either mean a very low or a very high level of corruption, the latter because corruption is so widespread that no cases are indicted. Reflecting on Balcerowicz's comment, Roland explained that he did not mean that there was no corruption under Socialism; only that corruption is mainly a transitional phenomenon. As Balcerowicz also pointed out, in a market economy there are cases of corruption that were not present in a centrally planned economy and a totalitarian system. He stressed that his views should not be misunderstood as being in praise of central planning in any way.

Roland fully disagreed with the view of Marrese that the Lisbon Agenda is dead. He cited the Sapir report last year, which showed that the growth gap with the US is a concern for policy-makers in all 25 Member States. The productivity gap between the US and the EU has been growing in the last few years and failure to address this would represent a major shortcoming. The debate sparked by the Sapir report shows that the issues highlighted are still extremely relevant.

Erkki Liikanen reviewed the Lisbon Agenda. He claimed that where something has been precisely defined, including measures that should be taken, then there has been progress, whereas where things have been left very general, then there has been none. One example he provided was the full liberalisation of telecommunications services. Productivity in Europe has grown essentially as fast as in the US in the last ten years because of a high level of competition coupled with sizeable investment in research and development.

On benchmarking and indicators, Liikanen expressed his view that indicators should be taken that focus on progress and not only on today's situation. In this case, indicators can work

very well. He also supported Orlowski's view that we should only reluctantly use the term "transition".

Val Koromzay expressed doubts about the proposition that corruption was in some way the product of transition. He agreed with Balcerowicz that petty corruption was pervasive in central planned economies, and added other kinds of corruption – for instance, the way enterprise managers got promoted and how they delivered on their quotas, or the enormous importance of personal relationships. It is also striking, he added, that transition countries are much more explicit about corruption than other countries, and that there might be corruption problems in other countries that perhaps are simply less visible. Koromzay agreed with Orlowski that the EU15 is not an ideal benchmark in all respects. In some areas, particularly in product markets, the gap between the EU and the rest of the world is quite small. There is convergence in general to the best practices. Product markets seem to be an area throughout the OECD where governments understand that useless regulation needs to be abandoned. The pace with which network issues are addressed differs, but there is also a sort of convergence to best practices. However, he stressed that labour markets represent a totally different story.

4

Enlargement and "old" Europe: blow or blessing?

Tommaso Padoa-Schioppa*

Introduction

Less than six months have elapsed since our European family became one of 25. When some years ago we decided that the third ECB Central Banking Conference would be on enlargement (I prefer to call it reunification), this event seemed a long way off. Now we are at the beginning of a new and very exciting challenge that will be with us for many years to come.

Speaking about the economic dimension of this challenge, we are well aware of the anxieties and fears that have been expressed by both the fifteen and the ten countries that now form one single family. A typical anxiety among the fifteen took the form of the question: "are *they* ready for us?" This refers to the readiness of the ten in terms of transformation of their economies, the robustness of their market structures, and real and nominal convergence. In addition, and somewhat paradoxically, there were concerns in the form of the question "will *we* cope?", relating to the fear that for the very affluent, and supposedly very orderly, economic and social system of western Europe, the accession of an entire population almost as large as that of Germany but with low wages, low living standards and a high level of education could be a blow.

Given the fatigue and pessimism that pervades certain quarters of western Europe today, enlargement has often been seen as a danger rather than an opportunity. Tonight, I will plead for the opposite view and argue that for the fifteen, the arrival of the ten could be a blessing rather than a blow.

Economic governance

Let me start by pointing out that the European Union's economic governance is undoubtedly a *cooperative* arrangement between Member States, but one that leaves a very large role to *competition* among them. This not only relates to competition between products or firms, but also between policies, or even countries. Indeed, the deep sense of uniting Europe is *not* to eradicate sentiments of patriotism or national ambition, but rather to channel the energy embedded in those sentiments into the mechanism of competition, turning it away from the mechanism of conflict and even war. For this to happen, very close cooperation and strong institutions are needed. But for dynamism and creativity to remain alive, the engine of local and national ambitions is equally necessary, welcome, and legitimate, provided that the motor turns in compliance with the rule of law or, put more simply, with "fair play". Both the Council and the Commission are expected to ensure the latter by not putting a tap on competition among nations, regions or policies. Their role is to make competition both possible and benign.

Policy competition is particularly necessary given the current situation in western Europe. This is so because much of what western Europe has suffered in the last ten or fifteen years can be attributed to a lack of dynamism. In western Europe we have often been blocked by a more or less tacit agreement among Member States *not* to unleash the forces of competition.

* I would like to thank Martin Bijsterbosch for his valuable contribution.

Now, it is in this context that the arrival of ten new members *can* (I say "can", not "will") be a significant blessing, not a blow, for the previous fifteen and hence to the whole family of 25. This is the single message I wish to deliver. Let me illustrate this by making a few quick points. Neither the fifteen nor the ten are homogeneous groups; however, I will nevertheless compare them as if they were, to avoid this speech becoming a fifty-minute lecture.

Labour mobility and wage competition

The first point concerns labour mobility and migration.

During the accession negotiations, the fear of mass migration led to a seven-year postponement of the free movement of workers from the new Member States. A more courageous attitude would be to assert that labour mobility is entirely desirable. The free circulation of persons is, after all, one of the four freedoms established by the Treaty, and labour mobility is what we normally preach. This is all the more so, in view of current demographic developments. If anything, one would expect the fears and reservations about migration to come from the new EU Member States, not from the EU15.

Throughout history, migration has been a major factor of change, innovation and dynamism. Even today, labour mobility and migration remain crucial for the economic development of both the home and the host countries. Through the so-called kidnapping of Sabine women some 25 centuries ago, the mainly male population of ancient Rome was given a demographic boost enabling the city to play a global role later on. In the 16th and 17th centuries, the inflow of industrious and highly educated immigrants was a main source of the economic success of England, Holland and Prussia. In many cases, active policies were indeed formulated to attract foreign craftsmen and to forbid the emigration of skilled workers. On occasion, craftsmen were literally kidnapped, much like the Sabine women.

Note that mobility is not only important for highly skilled workers. In Spain, where over the last ten years migrant workers have increasingly filled low-paid jobs and, according to a study by the Banco de España, have contributed substantially to growth, the government has now decided to grant residence permits to migrant workers already living in the country.

The problem with labour mobility, of course, is that discussions have often little to do with true benefits. Rather like with free trade, while economists or historians argue in its favour, irrational fears and doomsday scenarios are frequently voiced in the public arena.

In spite of the seven-year delay, there is a positive side to all this: the fear of labour mobility shows that the heat of competition in the labour market is clearly felt. The prospect of larger movements of workers can thus act as a catalyst for much needed labour market reforms. Critics speak of a "grey labour market", where migrant workers operate often with minimum protection and low wages. True, this is not what the free movement of workers in the EU should be about. But it should also be said that the grey market is often the symptom of an "official" labour market that is too rigid to function properly.

Industrial relocation and outsourcing

My second point concerns industrial relocation and outsourcing.

As countries become richer, the share of industry in output and employment declines. This trend could be observed in Europe throughout the post-war period. Resources are redeployed, mainly in the higher-value service sectors.

Labour market flexibility is a key aspect in this respect, and in some areas the ten have the upper hand in the EU of 25. Among the ten, unemployment benefit systems tend to be more

employment-friendly, replacement ratios are generally lower, and benefits are granted for shorter periods than in euro area countries. There is a relatively low coverage of collective bargaining, reflecting generally decentralised levels of bargaining (mostly at the company level) and low levels of union membership.

Unit labour costs are also lower, at about one-third of the EU15 average in the Czech Republic, Estonia, Hungary and Latvia, about one-half in Poland and one-quarter in Lithuania and Slovakia. According to a recent report by the Boston Consulting Group, a manufacturer of car parts in Germany could save 30% by moving production to Poland. It appears that even moving from Spain, which is still catching up, would be quite profitable, allowing savings in the order of 24%. Partly thanks to lower shipping costs for goods intended for European markets, central Europe may well be a cheaper manufacturing base than, say, Asia.

The consequences are visible. Slovakia, for example, is now home to a number of sizeable car *manufacturing* plants and over time could become the Detroit of the European Union. But western European companies are also using the new Member States in central and eastern Europe as a location from which to provide *services*, such as customer call centres and back-office and IT operations. The Czech Republic, for example, already a major destination for manufacturing investment, is now attracting service sector projects because of its strong telecommunications infrastructure, good transport connections, and a cheap but skilled workforce proficient in languages and technology. Since 1999, FDI inflows in the Czech Republic and Slovakia have averaged almost 9% of GDP, compared with 3.3% in the euro area.

The tax system

My third point is tax competition, which is quite a thorny issue, one where – not surprisingly – politicians sound distinctly less competition-oriented than the public at large.

A number of new Member States, and in particular the Baltic countries, have introduced what is virtually a textbook version of an effective tax policy. First, their tax systems are very transparent. Second, their tax burdens are generally low. Third, they have avoided steep progressivity. As for *personal* income taxes, top marginal rates are around 25% in Estonia and Latvia and between 30% and 40% in most other new Member States. In the EU15, by contrast, they are around 50%. As for *corporate* taxes, rates in many new Member States are between 15% and 25%, with the Baltic countries at the lower end of this range. Some countries have moreover announced further reductions in the coming years.

From both a theoretical and practical point of view, we know that such tax systems are conducive to strong economic growth. If lower tax rates in the new Member States were to put pressure for tax reform in the euro area, as lower tax rates in Ireland have already done, this could only benefit us. Arguments about unfair tax competition should not be used as a smokescreen to distract attention from what every citizen in the euro area knows: that tax regimes need to change, and fiscal pressure has to fall.

Other factors

For many years we have observed the rather surprising fact that small tends (I say "tends" because there are, of course, exceptions) to be beautiful, also for Member States in the European Union: lower unemployment, lower deficits, greater flexibility, better overall performance. One explanation is that economic realism and acceptance of the logic of policy

competition meet less resistance in small countries than they do in large ones. The latter often still maintain the illusion of self-sufficiency, national champions, and the like.

Now, the recent enlargement has brought an unusually large proportion of small Member States into the EU family: six of the ten have a smaller population than Ireland, which is, apart from Luxembourg, the smallest of the fifteen, population-wise. This may well mean that the mindset around tables such as those of the Council of Ministers may become more competition-oriented than was previously the case.

Those who are fearful of the blow, rather than hopeful of the blessing, would object by saying that a family of 25 is very, very hard to manage. Thinking back to when I participated in ECOFIN meetings of a Community of just nine countries, I am now amazed by the hundreds of persons that attend ECOFIN meetings today.

Undoubtedly the risk of paralysis exists. But an Italian proverb says: "*non tutto il male viene per nuocere*" (literally: not every evil comes to harm) or, to use an English equivalent, "every cloud has a silver lining". It may happen – and this is indeed my expectation – that the very risk of paralysis will impose more efficient decision-making practices and speedier procedural rules upon the family; practices and procedures that we could afford to refuse when the family was small.

Conclusion

The points above illustrate an overall theme: the pressure of competition from the ten is a potential blessing for structural reforms in the "old" part of the EU, a part of Europe that for so long has recognised the need for them, but has not fully implemented them. Many of the ten have undergone a transformation process which in many respects comes very close to the programme of structural reform that every sensible person advocates for the fifteen. Their transition process has meant that they have been living with rapid and relentless change for many years now. In many ways, this experience makes them less resistant to change. They are fit, whereas we are fat.

Of course, this is not to say that the new entrants have no problems. Labour-shedding during the transition process has left its mark on the labour market. Rigid structures and red tape are still a problem in more than one country. Yet the new members have shown on various occasions that they have been able to do what many euro area countries have not managed to do in the past decade: to fundamentally modernise institutional arrangements in their economies in order to make them more growth supportive and better capable of dealing with economic change.

Are there indications that competition from the new members is already at work? Perhaps there are. The World Bank annual report on regulatory burdens, "Doing Business", covers 145 countries and looks at regulatory reforms relating to business, such as starting a business, hiring and firing workers, enforcing a contract, obtaining credit and closing a business. The 2003 Report placed Slovakia, Lithuania and Poland in the "top ten" of reformers in terms of regulation of business, stating that "accession countries reformed ahead of the competitive pressures in the larger European Market". The Report also placed Belgium, Finland, Portugal and Spain among the top ten reformers, suggesting that these euro area countries are increasingly feeling the pressure from the countries of central and eastern Europe.

Let me conclude by moving from after-dinner scenarios to working-day realism. The blow-blessing alternative should not be seen from the angle of *predicting,* but rather from that of *acting*. The future is open and this is why policy, responsibility and freedom exist. It depends on us whether the opportunity will be seized.

5

Exchange rate regimes, international linkages, and the macroeconomic performance of the New Member States

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1 Introduction

The recent accession of the Czech Republic, Hungary, Poland, Slovakia, Slovenia, and the Baltic States into the EU represents the latest chapter in these countries' rapid economic transformation from centrally planned economies in the 1980s, through a wrenching transition to a market economy after the fall of the Berlin wall, to becoming fully fledged "emerging markets". For these accession countries, EU membership involves a commitment to enter EMU, hence the final stage of this process will be joining a large and wealthy currency union.[1]

Just as has been true for its earlier members, euro adoption will simultaneously provide the benefits of rapid economic integration (including dramatic improvements in production technologies, reductions in trade barriers, and greater financial integration) with the other members of EMU, at the cost of a loss of monetary autonomy. While these costs and benefits have been examined in several studies, such assessments have been complicated by fact that the benefits are primarily microeconomic and long-term in nature while the costs are usually measured in terms of changes in macroeconomic variability. Existing analysis has often focused on only one side of the coin – such as work on the correlation of shocks across countries as a way to analyze the potential losses from a common monetary policy and thereby assess whether countries form an "optimum currency area". Even when a more comprehensive approach examining both the microeconomic and macroeconomic effects of EMU membership is used, these two aspects are generally analyzed using separate methodologies and models, making any overall assessment quite subjective.

This paper provides a first step in bringing this analysis together in a single framework, thereby providing a more holistic view of the benefits and costs of recent EU entrants adopting the euro. More specifically, we present a theoretically consistent model that combines a microeconomic approach to trade with the real and nominal rigidities typically used to assess the macroeconomic effects of different monetary regimes. The focus of the current exercise is assessing both the static and dynamic benefits of the fall in trading costs and higher level of trade integration from entering EMU, with nominal and real rigidities playing an important role in defining the dynamics of this process. Recent analysis suggests large increases in trade associated with entry into a currency union, presumably because of the associated institutional changes such as more harmonized legal and regulatory regimes. Accordingly, we focus the paper on quantifying the benefits to trade, output, and economic welfare from lower costs of trading goods across countries.

Looking to the future, the model could be used to analyze the major microeconomic benefits of EMU membership – greater trade integration[2] with the rest of the currency union – and the major macroeconomic cost – the loss of monetary autonomy[3] – in one overarching analytical framework. As the model is derived from strong theoretical foundations, these costs and benefits can in theory be measured using a single, consistent measure, namely the welfare of a representative individual in the economy. While at this point computational and other

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[1] Many of the issues associated with joining EMU are addressed in Schadler and others (2005, forthcoming).

[2] Some important aspects of monetary integration had to be left out of the model in the interest of tractability. Most importantly, the benefits deriving from greater financial integration are presently not modeled.

[3] The discussant pointed out to us that a focus on the loss of monetary independence misses several beneficial macroeconomic consequences of joining the EMU. These include a significant gain in credibility especially for smaller member states, the removal of an important incentive for speculative capital flows, and EMU related peer group pressure in fiscal and structural policies. We agree that, because of these factors, our final analysis may end up overstating the costs of joining EMU.

limitations constrain the analysis of macroeconomic policies and financial integration, these are temporary constraints, while the way forward in terms of using the model to combine the main micro- and macroeconomic issues associated with entry into EMU is clear.

By incorporating a microeconomic model of trade based on the theory of comparative advantage, this paper represents a further extension of the "new-open-economy macro" approach pioneered by Obstfeld and Rogoff (1996, 2000), in which policy issues are analyzed in the context of models with strong theoretical underpinnings – see Smets and Wouters (2002a, 2002b), Huang and Liu (2004), Laxton and Pesenti (2002, 2003) for other examples. While it needs to be recognized that the theoretical framework involved in this type of analysis implies some limitations (for example, in its current form, the model cannot analyze some of the real-world issues faced by recent EU entrants, such as the fiscal pressures implied from complying with the Maastricht criteria and other EU standards), in our view these limitations are dominated by the benefits that can be obtained from analyzing the most important medium- to long-term effects of EMU in an integrated framework.

The rest of the paper is organized as follows. To motivate our analytical approach, Section 2 presents some stylized facts about the Czech Republic and the existing euro area. Section 3 presents the analytical framework, which extends the work of Naknoi (2004) by adding a range of real rigidities that allow the model to produce more plausible dynamics. Section 4 discusses the base-case calibration of the model, and Section 5 discusses long-run comparative statics and dynamic simulation results concerning the trade-related benefits of EMU. Section 6 provides some policy conclusions.

2 Some basic facts about the Czech Republic

This section presents some basic facts about the Czech Republic, one of the transition countries that has emerged from the collapse of the Soviet block (Figures 1 to 3).[4] They are based on Eurostat quarterly data that start in 1995, about 5 years after the collapse, as earlier data are not considered to be reliable.

Trends in the volume of trade flows of the Czech Republic are striking. Figure 1 reports real export-to-GDP ratios and import-to-GDP ratios for both the Czech Republic and the euro area. Over the last decade, both the export and the import ratios in the Czech Republic have increased by around 50 percentage points.[5] Their strong correlation reflects the intensive use of imported intermediate inputs in the production of traded goods, and their strong growth has coincided with high levels of investment in sectors that produce such goods. This development is partly related to structural reforms that over time have reduced restrictions on trade in goods and capital. On the other hand, risk factors in capital markets have limited the magnitude of trade and current account deficits in emerging-market economies – see Lipschitz, Lane, and Mourmouras (2002). Some evidence to support this can be seen in

[4] Many of the arguments are also applicable to other transition countries, but with some qualications. While Laxton and Pesenti (2002) review similar trends to the Czech Republic in some transition countries, our discussant pointed out that, for example, sustained increases in trade openness have not been observed in all of them.

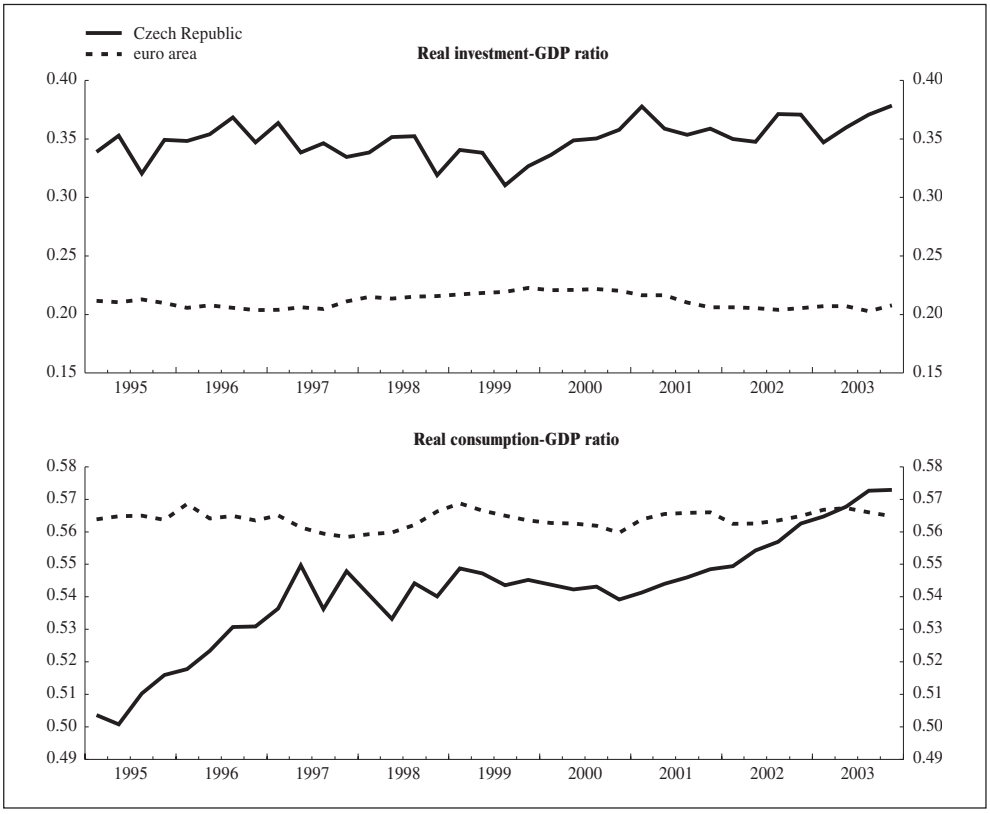
[5] These ratios are based on constant-dollar trade flows relative to constant-dollar GDP. The absolute magnitude and upward trend in the ratios based on nominal data are smaller, as the relative price of exports and imports has declined over time. It is important to note that the estimates for the euro area in Figure 1 include intra-area trade which accounts for a significant fraction of the estimates of exports and imports reported in the Eurostat database.

Figures 1 and 3, which include measures of the trade balance and proxy measures for the real interest rate. The real interest rate has usually been higher in accession countries than in the euro area. There is an exception of a period in 2000 and 2001, when the Czech National Bank did not respond to an increase in imported energy prices that was neutralized by the appreciating exchange rate and downward pressure on inflation coming from measured slack in the economy – see Čapek and others (2003).

Figure 1: Trade

Source: Eurostat.

Figure 2: Investment, Consumption and the Trade Balance



Source: Eurostat.

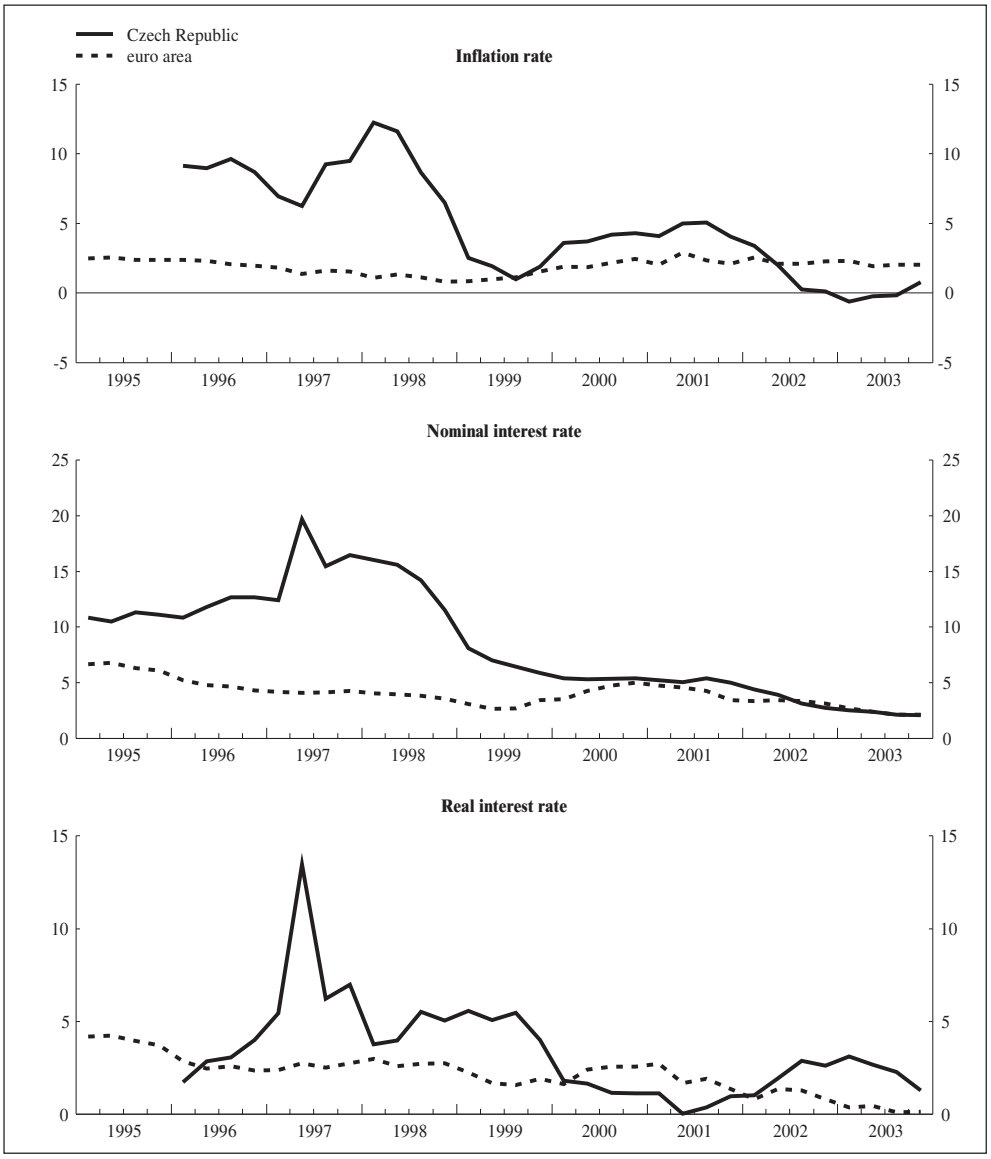
Figure 2 also shows the investment share and the consumption share. The investment share has been approximately 15 percentage points higher in the Czech Republic than in the euro area. This high level of investment in the Czech Republic is generally ascribed to the process of building the capital stock up to levels observed in western countries. The implication is that the investment share will remain high as long as there are higher rates of return in accession countries, but then should start to fall at some point as this gap is narrowed.[6] It is interesting to note that the boom in investment has been accompanied by a boost to consumption as a ratio to GDP. This ratio, which was below the level in the euro-area aggregate a decade ago, has closed the entire gap and has recently risen above the ratio in the euro area,[7] plausibly reflecting wealth creation due to buoyant growth opportunities.

There have been important changes in the inflation process in the Czech Republic that are a result of changes in the underlying monetary policy regime. The Czech Republic evolved from a conventional peg (1990-1995) to a crawling peg in 1996, which then quickly evolved

[6] As far as we know, there are no reliable data on the capital stock that could be used to analyze this contention. It remains to be seen how long this process will continue before the investment share declines to more sustainable levels.

[7] The rise in nominal consumption expenditures as a share of nominal GDP has been less. The larger increase in the real consumption share reflects the increase in purchasing power of consumers.

Figure 3: Inflation and interest rates

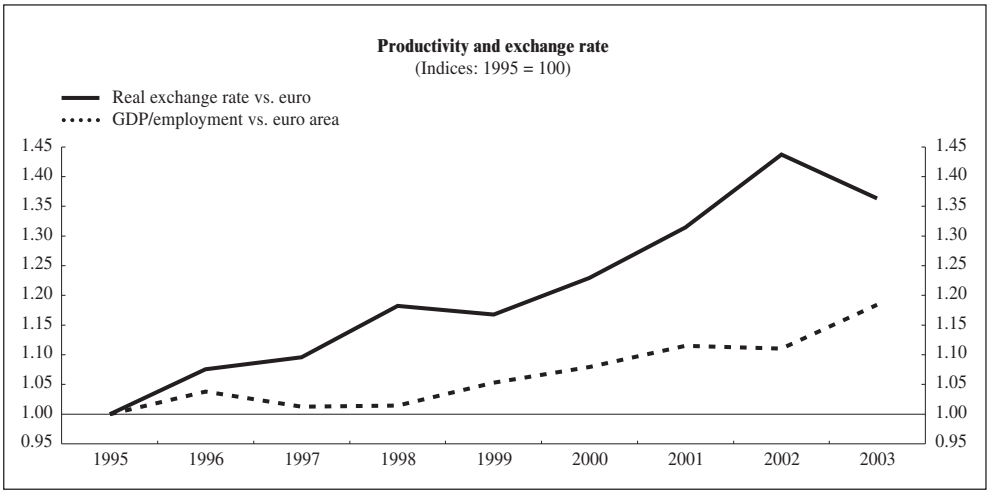


Source: Eurostat.

into an explicit inflation-targeting regime (1997).[8] Inflation has declined from double-digit rates and for the last few years has been low and relatively stable compared to earlier periods. This is reflected in the level of short-term nominal interest rates, which have declined to levels seen in the euro area. That said, Figure 3 indicates that the current real interest rate spread is not out of line with historical values.

[8] See Čapek and others (2002) on the history of monetary policy in the Czech Republic.

Figure 4: Relative Productivity and Real Exchange Rate



Source: Eurostat.

Finally, Figure 4 compares the CPI-based real exchange rate for the Czech Republic (measured so a rise is an appreciation) with estimates of aggregate labor productivity, expressed as a ratio of the level of labor productivity in the Euro area.[9] There has been a clear positive association between productivity catch-up and the real exchange rate. To many observers, this provides clear evidence in support of the Balassa-Samuleson hypothesis (BSH), according to which strong productivity growth in the traded-goods sector results in higher real wages in both the tradables and nontradables sectors, a trend increase in the price of nontradables relative to tradables, and an upward trend appreciation in CPI-based real exchange rates.[10]

Halpern and Wyplosz (2001) provide econometric evidence in support of a Balassa-Samuelson effect in Eastern European countries. Their analysis is supported by proxy measures indicating that aggregate productivity gains have been predominantly concentrated in the tradables sector and that there is a strong positive correlation between relative productivity levels and the relative price of nontradables. While this suggests that the BSH may be able to account for some of the upward trend in the real exchange rate, it leaves substantial room for other explanations, as the trend real appreciation in the real exchange rate has been much stronger than would be implied by the catch-up in productivity levels.[11] More importantly, the analytical 2-sector nontradables-tradables framework, which is the basis for the BSH, cannot easily explain the strong trends in trade flows that have been observed in transition countries like the Czech Republic.

These data pose some interesting challenges to researchers that seek to build the appropriate analytical frameworks. For example, what extensions are needed to a standard macroeconomic framework consisting of fixed tradable and nontradable sectors to help us

[9] The real exchange rate is defined relative to a euro area aggregate. Throughout this paper we will follow a convention that an increase represents a real depreciation from the perspective of a transition country. The measure in Figure 4 has been inverted to make it easier to compare its trend with relative productivity levels.

[10] The original contributions are Balassa (1964) and Samuelson (1964).

[11] For example, Lipshitz, Lane and Mourmouras (2002) suggest that the real exchange rate may have been very low at the start of the transition because of insufficient market penetration and product reputation in Western markets.

understand the rapid expansion of trade volumes? What factors were at work that could explain the high levels of investment and rise in the consumption ratio over the last decade? The paper presents some critical insights that we believe help to shed some light on these trends. It builds on a theoretical framework developed by Naknoi (2004), by adding a range of real-world elements. Some of these are quickly becoming standard in the modern theory-based macroeconomic models that are being rapidly developed to support policy analysis in central banks and the IMF, but there are also a number of intuitively appealing novel features associated with the interaction of trade and macroeconomic dynamics.

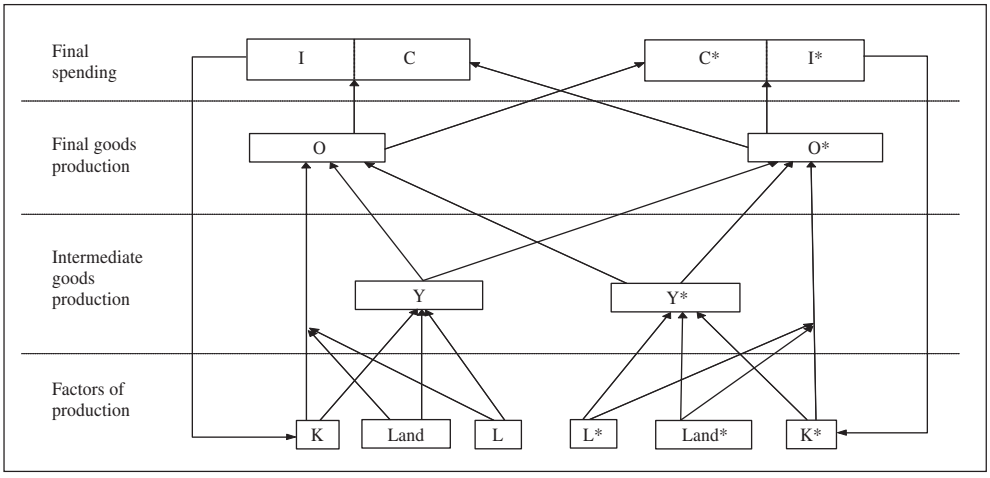
3 The model

3.1 Outline

The model economy has two countries, a small country referred to as Home (representing accession countries) and a much larger one referred to as Foreign (representing the euro area). Households face a relatively standard set of constraints. We include habit persistence in consumption and time-to-build capital lags in investment, which help produce the lagged and hump-shaped responses of real variables to real and monetary policy shocks found in macroeconomic data (see also Laxton and Pesenti, 2003). These are complemented by some similar but theoretically more novel real rigidities on the economy's supply side. Indeed, the three key innovations of the paper are related to firms.

First, as shown in part in Figure 5, the model reflects the complex, multi-stage nature of both production and trading in modern industrial economies. In particular, there are two stages in the production process at which value is added – intermediate and final goods. Countries import and export intermediate goods, use them to make final goods, and can re-export the resulting products. Such transactions that break up the value chain tend to be particularly high between countries at different levels of development, such as the accession countries and the euro area. Consumption goods are also finalized in a third stage of production, reflecting the fact that while most firms have a direct relationship with their

Figure 5: Sectoral levels of productions



major suppliers, consumers do not. In addition, goods at each level of production are assumed to be sold to their ultimate users via a distribution sector that is subject to mark-ups and nominal rigidities.[12] The main advantage of this assumption is that it separates the sources of nominal and real rigidities, thereby simplifying the analytic issues involved in imposing both types at the same level of production. That said, it is also a plausible description of the real world.

Second, trade in intermediate goods is based on a Dornbusch-Fischer-Samuelson comparative advantage theory of trade in which, in principle, all goods can be produced by both countries, but where actual tradedness is determined endogenously by the interaction between the costs of trading and relative productivity levels between the potential producers of any given good in the two countries (Figure 6).[13] If the price advantage for the more efficient producer at prevailing marginal factor costs and productivity differentials exceeds the costs of trading, the good is made in only one country and traded with the other. If not, then the good is produced in both countries and no trade occurs. As a result, lower trading costs and larger dispersions in technologies can then lead to much more rapid increases in trade than in standard models where the status of a good as traded or nontraded is exogenous.[14] Of most importance, we are able to deliver a unique result that standard models cannot. Specifically, we show that trade integration raises the aggregate productivity by changing the product mix and types of exporters. This effect of trade integration is well documented by trade economists as an important source of dynamic gain from trade but has been neglected in standard models.

Third, the model is able to reproduce the gradual response of trade to lower costs or movements in the real exchange rate by introducing a range of plausible real rigidities. In addition to habit persistence in consumption and time-to-build capital lags for investment, we add a "time-to-build markets" technology for trade. The intuition is similar to that for time-to-build capital – it takes time to build or abandon foreign supplier relationships, so that there is both a time lag between an order decision and actual delivery and a cost of changing the size of deliveries.[15] Time-to-build markets technologies significantly slow down the response of trade to real exchange rate movements, in line with existing empirical evidence. These real rigidities, combined with the nominal rigidities located in the distribution sectors, cascade and cumulate down the production process, so that final goods are more affected by them than intermediate goods.

Many open economy models include a Balassa-Samuelson effect, created by the presence of goods that are nontraded and have a low elasticity of substitution with traded goods (haircuts being the oft-cited example). However, in this model traded and nontraded goods are endogenously determined, and all goods are relatively substitutable. Interestingly, the current version of the model does not yield a long-run appreciation of the exchange rate. In our model, trade integration raises the aggregate productivity without a bias in productivity growth towards

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[12] The real transactions costs of changing prices described in Zbaracki and others (2004) for multi-product firms, due to management time and customer costs, appear to describe such a sector well.

[13] In principle, there is no difficulty in extending endogenous tradability tonished goods trade, although it would add further complexity to an already large model. We decided to dispense with this feature because the main trade expansion in the accession countries did indeed take place in the intermediate goods sector.

[14] Betts and Kehoe (2001) model endogenous tradability in a flexible price two-country framework. Bergin and Glick (2003) use a two-period small open economy model where firms take world prices as given. In both of these studies the source of heterogeneity is product-specific transport costs, whereas this paper emphasizes product-specific levels of producivity. To the best of our knowlege, this is the first model of endogenous tradability with both nominal inertia and significant real rigidities.

[15] The difference between these two technologies is essentially the rate of depreciation. Capital depreciates slowly over time, while supplier relationships need to be renewed each period, or in other words they "depreciate" fully each period.

the traded sector, which is required in generating a Balassa-Samuelson effect. This suggests that the observed appreciation is not closely connected with the benefits from closer trade integration, but from other aspects of economic convergence. Obvious possibilities are financial integration and the existence of nontraded factors of production which cannot easily be substituted by foreign trade. These issues are the subject of current work.

This completes the general outline of the model. The following subsection contains a more detailed exposition with sketches of the main agents' optimization problems and a careful exposition of the technology that gives rise to endogenous tradability. Readers who wish to skip this detail can move to Section 4.

3.2 Detailed description

The two countries are allowed to be of different size, with the population of the home country being α and that of the foreign country (1 − α.) We concentrate on the economic decisions of Home agents, as the corresponding decisions of Foreign agents are mirror images.

3.2.1 Households

Households maximize lifetime utility, which has a constant relative risk aversion form with three arguments, consumption C (which exhibits habit persistence), leisure $(1-L)$, and real money balances x. Denoting the intertemporal elasticity of substitution by σ,we have:

$$Max \quad E_0 \sum_{t=0}^{\infty} \beta^t \left\{ \frac{(C_t - \nu C_{t-1})^{1-\frac{1}{\sigma}} - 1}{1-\frac{1}{\sigma}} + \psi \frac{(1-L_t)^{1-\frac{1}{\sigma}}}{1-\frac{1}{\sigma}} + \psi_x \frac{(x_t)^{1-\epsilon}}{1-\epsilon} \right\} \tag{1}$$

Households' capital accumulation involves separate decisions for domestically and foreign produced capital stocks because these are imperfect substitutes in firms' production functions.[16] Capital accumulation follows time-to-build technologies, with a six-period lag between the investment decision and the point at which the investment decision leads to an addition to the productive capital stock. Each investment decision represents a commitment to a spending plan over six periods, starting in the period of the decision and ending one period before capital becomes productive. Actual investment spending is therefore given by the share-weighted sum of investment decisions between periods t and $t-5$.

Households' income consists of real wages, real returns on capital, on fixed factors, on risk-free international bonds, and on risk-free domestic (and domestic currency denominated) bonds, in addition to lump-sum government redistributions and profit redistributions. Their expenditure consists of consumption spending and investment spending. Real and nominal rigidities are created by quadratic adjustment costs on investment, international bond holdings, and wage inflation.[17] These and all other adjustment costs are assumed to be redistributed back to households as lump-sum payments.

The optimality conditions for the household problem are a standard set of Euler equations for asset holdings and consumption, a complex set of intertemporal conditions for the optimal investment path, and a condition for optimal wage setting that penalizes large jumps in the wage inflation rate.

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[16] A good example is domestic buildings combined with imported machinery.

[17] The latter follows Rotemberg (1982), as extended to costs of adjusting the rate of change of the wage by, among many others, Laxton and Pesenti (2003).

3.2.2 Production

We describe the optimization problem of each level of production, starting at the lowest level and building up to final consumption and investment goods. **Intermediates varieties (*z*) producers** have CES production functions in labor, capital and fixed factors:

$$y_t(z) = a(z)x_t \left[(\xi_v)^{\frac{1}{\theta_v}} \left(l_t(z)^{\gamma} k_t(z)^{1-\gamma} \right)^{\frac{\theta_v - 1}{\theta_v}} + (1-\xi_v)^{\frac{1}{\theta_v}} \left(g_t(z) \right)^{\frac{\theta_v - 1}{\theta_v}} \right]^{\frac{\theta_v}{\theta_v - 1}} = x_t a(z) v_t(z) \ . \quad (2)$$

The first two elements of the production function are sector specific productivity levels a(z) and aggregate productivity levels x_t. The sector specific productivity terms determine the pattern of comparative advantage between countries, a crucial ingredient in making tradedness of intermediate goods endogenous. For each variety z there is a continuum of producers who are perfectly competitive in their output and factor markets. Their price therefore satisfies the condition $p_t(z) = m_t^v / x_t a(z)$,where m_t^v is the marginal factor cost (the cost of $v_t(z)$), determined from the appropriate cost minimization conditions. When a good is produced in the Foreign country and shipped to the Home country or vice versa there are iceberg-type proportional trading costs τ_t that are identical across goods.[18] Therefore, in the absence of relative productivity differences, there would be no trade as each country would produce the entire range of consumption goods at home. But as soon as there are sufficiently strong comparative advantage patterns in productivity the effect of trading costs can be overcome, leading to trade. For a given pattern of comparative advantage, lower trading costs lead to more trade, or to a smaller range of nontraded goods, the latter being goods that are produced in both countries. We refer to the pattern of relative productivities along the spectrum of goods z as the comparative advantage schedule. Its shape is of crucial importance for our results. We assume that the z are ranked from the highest to the lowest relative productivity for Home, so that the Home country has a comparative advantage for low end z's and the foreign country for high end z's. We also assume that the comparative advantage schedule is linear and continuous, with a kink at $z = \alpha$.[19,20]

The world trade pattern depends on the relative prices of Foreign and Home produced goods. A Home firm will produce a given variety only if its price does not exceed the price that an importer of the same variety is able to charge given his marginal cost and trading costs. Given the declining relative productivity pattern in Home there will therefore be a maximum level of z above which Home will rely entirely on imports instead of producing at home. We denote this time-varying level by z_t^h. Equally, there is a minimum z, denoted z_t^l, below which Foreign will rely on imports from Home. All goods varieties between z_t^l and z_t^h are nontraded, meaning they are produced in both countries. The resulting trade pattern is illustrated in Figure 6.

The parametric form of the comparative advantage schedule is rich enough to allow for the analysis of a variety of different technology shocks. For example, an increase in its $z = 0$ intercept represents a positive productivity shock biased towards a country's export goods, while an increase in x represents a positive productivity shock to all goods. As we will show, the welfare and trade effects of a reduction in trading costs depend crucially on the shape of

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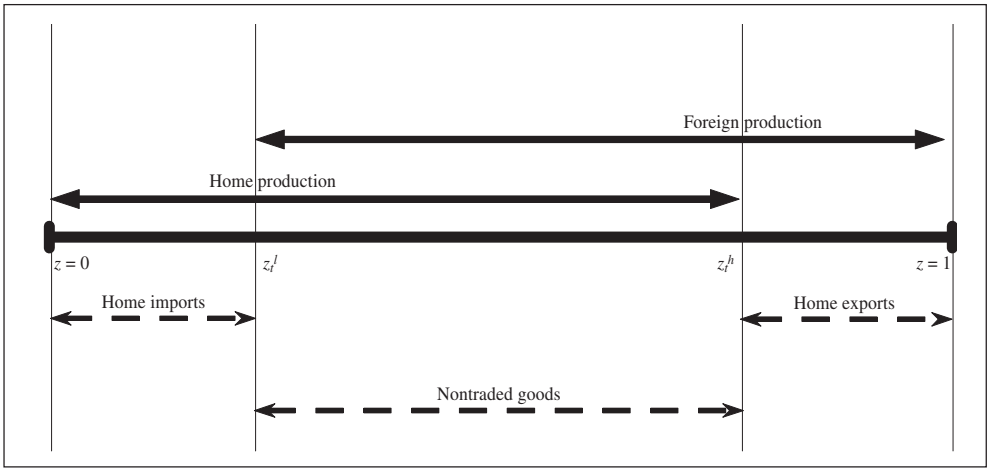
[18] Unlike adjustment costs, transport costs are not redistributed back to agents in a lump-sum fashion. They represent an actual loss in transit.

[19] A kinked linear comparative advantage schedule looks plausible for our chosen parameterization, and it is convenient because the solution of the model requires analytical integration of the comparative advantage schedule over sub-intervals.

[20] Choosing a comparative advantage schedule that is consistent with the data is important for the quantitative predictions of the model. We are currently exploring empirical research on this question.

Figure 6: Trade pattern



the comparative advantage schedule. For a flat schedule, parameterized as a low intercept, the expansion in trade is very large, but the gains from the extra trade are quite limited because the foreign country does not enjoy a strong productivity advantage. For a steep schedule, while trade may expand by much less, the welfare effects in terms of increased consumption and leisure will generally be higher.

Producers of final, homogenous intermediates use inputs of home export goods, nontraded goods and import goods. They are price-takers in both their input and output markets. They also face two real frictions, a quadratic cost of adjusting their inputs, and a time-to-build markets constraint that these inputs can only be chosen k periods ahead. The solution to this problem features both a delayed and an inertial adjustment of input purchases to shocks. **Intermediates distributors** are price takers in their input market and monopolistic competitors in their output market. They sell to producers of finished output, who demand a composite of distributed varieties with finite elasticity of substitution. These distributors face a quadratic cost of changing the rate of change of their prices, similar to the wage adjustment cost discussed earlier. Their optimality condition is therefore a New Keynesian Phillips curve in changes of inflation.

Finished output producers have a CES production function in distributed intermediates and second stage value added. The production function for second-stage value added has the same form as (2), except for the absence of the varieties-index z and of the variety specific productivity term $a(z)$. Homogenous final output is sold in a perfectly competitive market to **final output distributors,** who act as a monopolistic competitor in their output markets, subject to a quadratic cost of changing the rate of change of their prices. Their output is sold either as an investment good, to domestic or foreign **households,** or as a consumption good, to domestic or foreign **final consumption goods producers.** The latter use inputs of Home and Foreign produced consumption goods to produce a homogenous final consumption good. We assume that the elasticity of substitution between Home and Foreign produced consumption goods is as high as that between intermediate goods varieties. The technology is similar in other respects, too, in that the producer is a price-taker in both his input and output markets, in that trade incurs an iceberg-type trading cost, and in that producers are subject to a time-to-build markets technology combined with costs of adjusting their rate of inflation. The solution to this problem therefore again features both delayed and an inertial adjustment of

input purchases to shocks. **Final consumption goods distributors** are modelled in the same way as the previous two layers of distribution sectors. Specifically they buy homogenous final consumption goods taking prices as given, and they act as monopolistic competitors in their output markets, vis-a-vis households.

The model is closed by adding a Home and Foreign **government.** Fiscal policy in both countries is monetary dominant in that fiscal lump-sum transfers are endogenous to the implications of monetary policy choices. Monetary policy is characterized by interest rate feedback rules. For the analysis we employ a simple inflation-forecast-based (IFB) rule where the short-term interest rate depends on its own lag, as well as a 3-quarter-ahead model-consistent forecast of year-on-year inflation. Relative to other IFB rules used in the literature, the only novel feature of this form of the rule is that it allows for the possibility that interest rates respond to expected movements in headline CPI inflation in addition to a measure of domestic output inflation. These types of rules have been employed extensively in central bank models to characterize monetary policy because interest rates settings are typically based on forecasts of measures of underlying inflationary pressures.[21] They can be augmented with a measure of the output gap, but for simplicity, we ignore that in this paper.

4 Calibration

The model's parameters have been calibrated to be consistent with those employed in the literature. We assume that the size of the accession candidates (Home country) represents only 5 percent of that of the euro area (Foreign country). As a result, the accession countries create few spillovers for the euro area.

4.1 Base-Case Parameter Values

Table 1 reports a number of fundamental parameters which are assumed to be the same across the two countries. Consumers discount the future at the rate of 1 percent per quarter (4 percent

Table 1: Key behaviorial parameters

	Home	Foreign
Country size	0.05	0.95
Household discount rate	0.99	0.99
Depreciation rate on capital	0.025	0.025
Habit persistence parameter	0.55	0.55
Intertemporal EOS	0.80	0.80
EOS: Distributed consumption goods	5.00	5.00
EOS: Output of consumption goods	5.00	5.00
EOS: Distributed final output	5.00	5.00
EOS: Distributed intermediates	5.00	5.00
EOS: Output of intermediates	5.00	5.00
EOS: labor	5.00	5.00

[21] Because IFB rules provide a reasonable summary of the entire dynamics in a forecast, they are usually found to be more robust than Taylor rules, which respond to "observed" measures of year-on-year ination and the output gap – see Levin, Wieland and Williams (2003). This will be the case in models with richer sources of dynamics that are difficult to summarize adequately in the current "observed" values of some measure of inflation and the output gap. IFB rules have been used extensively by many central banks with either explicit and implicit inflation-targeting frameworks and have been relied upon in some cases for well over a decade – see Laxton, Rose and Tetlow (1993).

per year), while capital depreciates by 2.5 percent (10 percent) over the same time frame. The intertemporal elasticity of substitution and the degree of habit persistence are 0.83 and 0.72, respectively. These estimates are taken from a study by Juillard and others (2004), although they are somewhat higher than those estimated for the euro area by Smets and Wouters (2002b). These coefficients, together with adjustment costs on the components of consumption expenditures, generate the lagged and hump-shaped responses to interest hikes typically found in empirical models.[22]

Given the paucity of evidence on mark-ups in the accession countries, elasticities of substitution (EOS) across firms and workers are set at 5, a typical value used for industrial countries, which implies markups of 25 percent for labor and for distribution sectors.[23] In the analysis we also consider cases where these elasticities are higher and lower, and are asymmetric across to the two economies. The EOS between imported and domestically produced capital is set at one in the baseline, implying fixed nominal shares are spent on these goods. The EOS between capital and labor is one, the EOS between capital/labor and land is 0.50 in the baseline.

There is little reliable evidence about the magnitude of wage and price rigidities in the accession countries, but they are generally assumed to be smaller than in the euro area. For our base-case, coefficients defining wage and price stickiness parameters have all been set to 400 in the accession countries, half of the value in the euro area. These values were chosen to produce plausible impulse responses for interest rate shocks.

Turning to time-to-build lags, following Murchison, Rennison and Zhu (2004), we assume that it takes one quarter to plan an investment project and 5 quarters to complete it.[24] In addition, we set the adjustment cost parameters that govern investment dynamics to be consistent with the hump-shaped pattern seen in response to interest rate cuts that peak at around 4-6 quarters and, in the case of accession countries, the relatively long-lived nature of the recent boost to the investment to GDP ratio. To reflect the greater difficulties of building and maintaining international supplier relationships, we set the adjustment parameter on imported capital goods to be twice as high as on domestically produced capital goods. We have imposed adjustment costs on imports of intermediate inputs and consumption goods in a similar manner. The model therefore generates moderate changes in trade volumes in response to short run real exchange rate fluctuations but large changes in response to permanent shocks, as has been observed in the transition economies – see Erceg, Guerrieri, and Gust (2003) and Laxton and Pesenti (2003).

Finally, we set the parameters that determine the endogenous risk premium on bonds to ensure that changes in the risk premium are sufficient to prevent implausibly large current account deficits.

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[22] Without the adjustment costs, even higher parameter estimates may be needed. For example, Bayoumi, Laxton and Pesenti (2004) show that estimates as high as 5.0 and 0.97 are required for the intertemporal EOS and habit persistence to generate the hump-shaped responses to interest rate shocks that can be found in the ECB's Area-Wide Model (AWM) of the monetary transmission mechanism – see Fagan, Henry and Mestre (2001).

[23] In reviewing existing empirical work on markups for the euro area, Bayoumi, Laxton and Pesenti (2004) employ a price markup of 35 percent and a wage markup of 30 percent. They argue that these are significantly higher than price and wage markups in the United States, which they argue are closer to 23 percent and 16 percent, respectively.

[24] Time-to-build dynamics are becoming an important feature of the new generation of macro models that are being designed inside central banks. For example, the work by Murchison, Rennison and Zhu (2004) at the Bank of Canada builds on earlier work at the Fed by Edge (2000a, 2000b). For more information on the importance of time-to-build dynamics for the internal propagation mechanism of DSGE models, see Casares (2004). In particular, Casares (2004) provides a very useful study showing the effects on macroeconomic dynamics of adding time-to-build lags that range between 1 and 8 quarters.

Table 2: Determinants of per capita income

	Home	Foreign
Labor effort	0.33	0.33
Aggregate productivity (x)	0.50	1.00
Intercept of comp. adv. schedule	2.50	2.50
Kink	0.05	0.05
Trading costs	0.34	0.34
Per capita consumption	1.47	2.68

4.2 Determinants of per capita income and trade flows

As discussed in Section 2, there have been major changes in the transition countries over the last decade. This section describes the initial steady state that broadly characterizes a typical accession country in the mid-1990s. While these economies have changed significantly subsequently, this provides a relatively neutral equilibrium from which to evaluate the impact of EMU. In the initial equilibrium, per capita consumption (measured at purchasing power parity) in the accession countries is assumed to be just over half of the value in the euro area. We assume that the same proportion of time is allocated to work in both countries, but that total factor productivity in the accession countries is only half that in the euro area.

Turning to trade, we assume the baseline parameterization of the comparative advantage schedule reported in Table 2. The interaction of aggregate relative productivity x/x^* (where the Home country is assumed to be only half as productive as the Foreign country) with the industry-specic term $a(z)/a^*(z)$ implies that the accession countries enjoy a 25 percent productivity advantage in their most productive industry (at $z = 0$) while the euro area is five times more productive than the accession countries in its most productive sector (at $z = 1$).

As reported in Table 3, for the accession countries both the import-to-GDP and export-to-GDP ratios are assumed to be 30 percent, with trade in intermediate inputs comprising half of the total and the remainder being allocated equally between final consumption and investment goods, approximately the magnitude and composition of trade flows for the Czech Republic in the mid-1990s.[25] The values of trade flows in the euro area reflect the mirror image of these values, and hence they are considerably smaller as a percentage of overall activity as the euro area is assumed to be large relative to the accession group.

Table 3: Steady-state flows
(Percent of nominal GDP)

	Home	Foreign
Exports:	30.0	1.5
Intermediate inputs	*15.0*	*0.8*
Final consumption goods	*7.5*	*0.4*
Final investment goods	*7.5*	*0.4*
Imports:	30.0	1.5
Intermediate inputs	*15.0*	*0.8*
Final consumption goods	*7.5*	*0.4*
Final investment goods	*7.5*	*0.4*

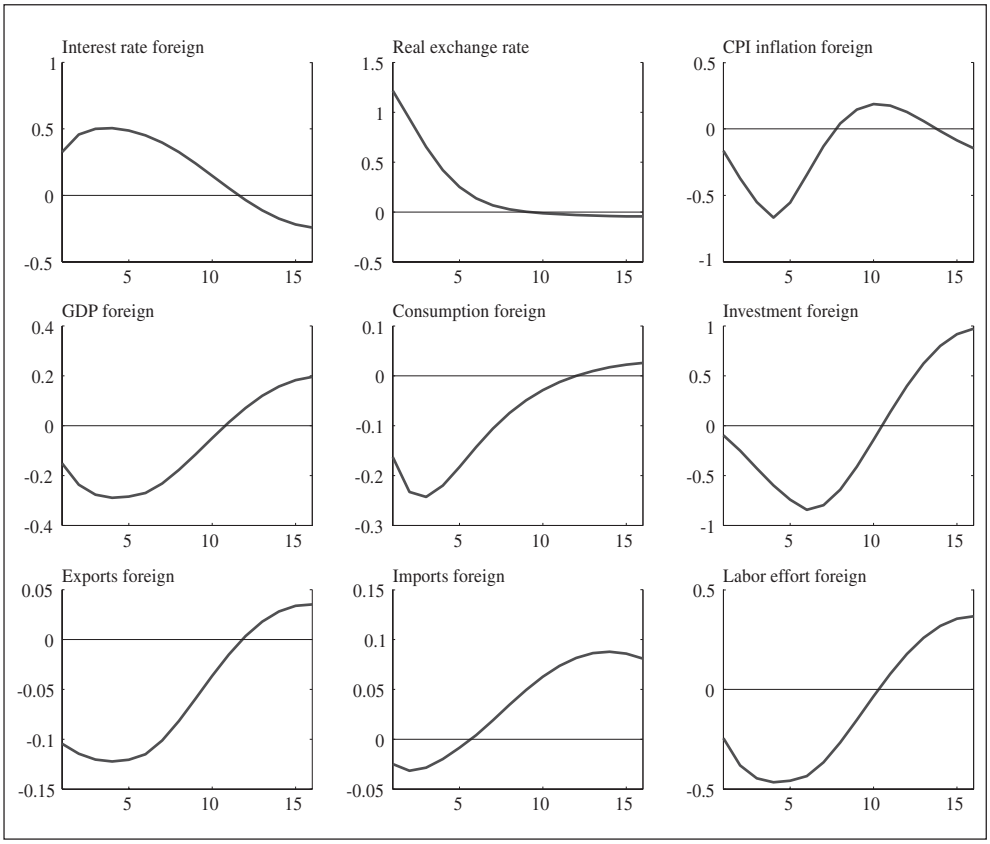
[25] These values were obtained by appropriate coefficient restrictions on final consumption and investment demands as well as trading costs. The implied restriction for trading costs is consistent with some empirical estimates that suggest they represent about one third of the value of goods.

Finally, the steady-state value of labor income has been set at 64 percent of nominal GDP in both economies, roughly the share of labor income in the euro area. With no government sector, the savings rate was set at 30 percent, approximately the average value in the euro area after excluding government output from nominal income.

4.3 Responses to monetary-induced interest rate increases

To illustrate the dynamic properties of the model, Figure 7 reports results for a ½ percentage point increase in euro area interest rates on the domestic economy. This allows us to compare the model's response with existing models of the euro area. In our model, real GDP and CPI inflation decline and reach troughs of about one quarter percent below baseline after 3-4 quarters and one third percentage points below baseline after 4 quarters, respectively, while the real exchange rate appreciates by slightly over 1 percent on impact. Consumption and investment responses are hump-shaped, reflecting habit persistence, time-to-build, and costs of adjustment. Reassuringly, these results are relatively similar to those from the ECB's Area Wide Model (AWM), although the monetary transmission mechanism is somewhat faster and

Figure 7: Foreign responses to a monetary induced-interest rate hike in the Foreign economy

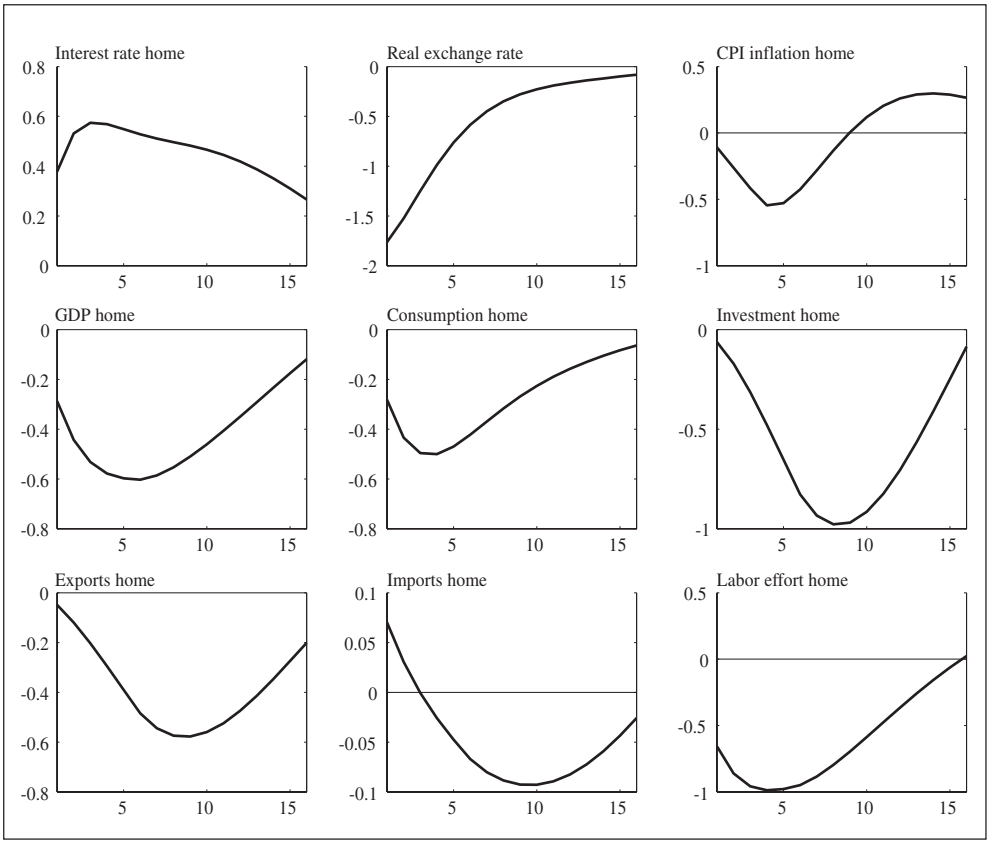


inflation responds more in this model than AWM – see Bayoumi, Laxton and Pesenti (2004) for a discussion of AWM dynamics in response to interest rate hikes. Results from the same experiment for the accession countries are reported in Figure 8. Output responds more in the open economy because the appreciation in the real exchange rate has a larger impact on net exports in the more open economy. This is consistent with previous work that indicates the monetary transmission mechanism may be faster and stronger in small open economies than in relatively larger and more closed economies like the euro area.

5 Simulation results

This section reports simulations illustrating the implications of reducing trading costs in the model, focusing on the implications for trade, GDP, consumption, and welfare using the parameterization discussed above for the accession countries (Home country) and the euro area (Foreign country). To explore the properties of the model, we report the steady-state results from the base calibration and for a range of alternative assumptions about the technologies and linkages of the accession countries and the euro area, before examining some dynamic simulations showing the adjustment path to the new equilibrium.

Figure 8: Home responses to an interest rate hike in the Home economy



5.1 Long-run comparative statics

Under our base case parameterization, trading costs are assumed to be 34 percent of the value of a good. Trade is balanced as, although relatively few goods are produced exclusively by the accession countries, the vast majority of such goods go to the euro area (reflecting its larger economic size). The opposite is true of the much larger number of goods produced exclusively by the euro area. When trading costs are changed, the mixture of traded and nontraded goods changes. For example, in response to higher trading costs the range of nontraded goods produced by both countries (the distance between z^l and z^h) shrinks, and there is a large increase in economic integration.

Table 4 reports detailed results for a one percentage point reduction in trading costs. It turns out that the effects of reductions in trading costs are approximately linear for small changes in values.[26] This can therefore be used as a "handy reckoner" to calculate the effects of different changes in trading costs. We refer the reader to the middle column of the table, which reports our base case results. Exports and imports rise by 6.2 percent, while openness – calculated as the ratio of exports to GDP – rises by 1.6 percentage points. About two-thirds of the increase in openness comes from higher trade in intermediate goods, both exports and imports, consistent with the empirical observation that economic integration disproportionately favors this component of trade. But in addition, and again consistent with the empirical evidence for relatively poorer countries, about half of the remaining increase in trade results from the accession countries importing more intermediate goods and assembling more final consumption goods for re-export to the euroarea. Finally, there is also an increase in bilateral trade in final consumption goods, due to the reduction in trading cost distortions at that level.

Table 4: Long-run effects of lower trading costs under alternative assumptions about key elasticities of substitution (EOS)

	Lower EOS = 4	Base-Case EOS = 5	Higher EOS = 6
Trading costs (Δ)	-1.00	-1.00	-1.00
Home exports (%)	5.29	6.17	6.89
Home export-to-GDP ratio:	1.26	1.55	1.79
Intermediate inputs (Δ)	0.91	1.10	1.23
Final consumption goods (Δ)	0.39	0.50	0.60
Final investment goods (Δ)	-0.04	-0.04	-0.04
Home imports-to-GDP ratio:	1.26	1.55	1.79
Intermediate inputs (Δ)	1.02	1.21	1.36
Final consumption goods (Δ)	0.24	0.35	0.44
Final investment goods (Δ)	-0.00	-0.00	-0.00
Home GDP (90)	1.03	0.94	0.86
Home labor productivity (%)	1.21	1.10	1.00
Home consumption equivalent (%)	1.10	1.02	0.95
Home consumption (%)	1.06	0.98	0.90
Home labor effort (%)	-0.17	-0.15	-0.14
Real exchange rate (%)	0.46	0.37	0.32
Foreign consumption (%)	0.03	0.03	0.02
Foreign labor effort (%)	-0.00	-0.00	-0.00

[26] This is much less true for large changes, when the nonlinearities intrinsic to the model become signicantly more important.

This increase in economic integration is associated with large increases in welfare in the accession countries. Real consumption and labor productivity rise by 1.0 and 1.1 percent, respectively, and labor effort drops by 0.15 percent. This is despite the fact that the real exchange rate depreciates modestly, the opposite of a Balassa-Samuelson effect. The gains in trade and welfare are due to two factors. The first is straightforward, the reduction in resources used up for trading costs. The second is the improved exploitation of comparative advantage. As economic integration increases, goods are increasingly produced in the country with the greatest relative efficiency. The result is a better use of resources, and hence lower prices, and higher real output and productivity. At 1.0 percent the increase in welfare, measured as the Lucas (1987) compensating variation in consumption, reflects increases in both consumption and leisure. Finally, the euro area also benefits through higher consumption and a fall in hours worked, although the effect is relatively small reflecting the relative sizes of the two regions.[27]

To gain some perspective on these welfare benefits, it is useful to compare them to those from other experiments using similar models. One obvious comparison is between the benefits emanating from lowering trading costs and other structural policies that increase competition by lowering the mark-up on prices and wages by one percent. Strikingly, the increase in welfare in the accession countries from a one-percentage-point reduction in trading costs appears to be of the same magnitude as that from a one-percentage point reduction in the mark-up of euro goods (Bayoumi, Laxton and Pesenti (2004)). Given that the implied price wedges of the two distortions are also similar (both raise the cost of goods by around one-third), this suggests that trade liberalization may be as potent in producing large welfare gains overtime as policies to raise domestic competition, at least for small open economies. By contrast, even radical changes to macroeconomic policy rules only rarely exceed welfare gains of the order of 1 percentage point of consumption. As noted by Lucas (2003), the disproportionate gains from better structural policies (in this case lowering trading costs) compared to reducing macroeconomic volatility, comes from the fact that the former permanently increase the level of output and hence welfare, while the latter only reduce undesirable fluctuations due to the curvature of the utility function.

A key parameter in the model is the level of competition in goods and labor markets. The model assumes that several goods markets (the three distribution sectors) and the labor market are imperfectly competitive, with the level of the markup over underlying costs that firms (workers) can extract from exploiting their market power being inversely proportional to the elasticity of substitution across goods or workers. In the base case reported in the middle column of Table 4, this elasticity is set at 5, implying markups of 25 percent, broadly in line with existing estimates (see Bayoumi, Laxton and Pesenti (2004)). Table 4 also reports the results of a 1 percentage point reduction in trading costs for higher and lower levels of competition in both the accession countries and the euro area. A higher level of competition (simulated by raising the elasticity of substitution from 5 to 6) increases the boost to trade openness compared to the initial situation by about one-sixth, with roughly proportional reductions if this key elasticity is lowered from 5 to 4.[28] As might be expected, more competitive and nimble economies are better able to exploit the opportunities coming from greater opportunities to trade. Interestingly, however, the opposite pattern is seen in the

[27] It is important to note that we are not trying to measure the benefits of trade for the existing euro area. Obviously, these would be much larger if we modeled all the trade linkages between the existing euro area and all of its trading partners.

[28] As with all subsequent simulations, the model is recalibrated so the level of trade is the same as in the base case, hence the results continue to mimic the actual situation faced by accession countries.

welfare benefits. In the less competitive economy, even though trade rises by less, the increase in consumption and welfare is about 10 percent larger. This is a manifestation of the theory of second best. While a reduction in trading costs reduces one source of distortion in both economies, lack of competition acts as a separate layer of inefficiency. On the one hand, this reduces the degree to which individual firms are able to exploit new trading opportunities, but on the other it magnifies the benefits from trade in any particular good. For the overall economy, the latter effect dominates, explaining why less competitive economies gain more than their more competitive rivals. It should nevertheless be stressed that in all cases the benefits remain substantial.

These results naturally beg the question of the effects of a reduction in trading costs if one economy is more competitive than the other. To shed light on this question, Table 5 reports the base case (in the middle column) and simulations in which the accession countries are more (less) competitive while the euro area is less (more) so, in the right (left) column. As can be seen, the increase in trade is similar across the three scenarios. However, in comparison to the base case, the macroeconomic benefits for the accession countries are boosted when competition is lower in the accession countries and higher in the euro area, and lower when the opposite is true. Furthermore, a comparison with Table 4 indicates that, for the same level of competition in the accession countries, a more competitive euro area significantly raises the welfare benefits accruing to the accession countries. Again, the intuition is that lack of competition operates as an additional level of inefficiency. While producers in the more competitive country are better able to exploit the rise in opportunities to trade, the benefits are largest in the less competitive one as the benefits of switching from inefficiently produced local goods to efficiently created foreign ones is greater. In short, while both countries continue to benefit, reducing trading costs transfers some of these benefits from the more to the less competitive economy.

Table 5: Long-run effects of lower trading costs under asymmetric assumptions about key elasticities of substitution (EOS)

	Home EOS = 4 Foreign EOS = 6	Home EOS = 5 Foreign EOS = 5	Home EOS = 6 Foreign EOS = 4
Trading costs (Δ)	-1.00	-1.00	-1.00
Home exports (%)	6.05	6.17	6.03
Home export-to-GDP ratio:	1.45	1.55	1.57
Intermediate inputs (Δ)	1.15	1.10	0.95
Final consumption goods (Δ)	0.35	0.50	0.65
Final investment goods (Δ)	-0.06	-0.04	-0.03
Home imports-to-GDP ratio:	1.45	1.55	1.57
Intermediate inputs (Δ)	1.17	1.21	1.20
Final consumption goods (Δ)	0.25	0.35	0.38
Final investment goods (Δ)	0.00	-0.00	-0.01
GDP	1.17	0.94	0.76
Home labor productivity (%)	1.32	1.10	0.92
Home consumpton equivalent (%)	1.23	1.02	0.85
Home consumption (%)	1.19	0.98	0.80
Home labor effort (%)	-0.15	–0.15	-0.15
Real exchange rate (%)	0.35	0.37	0.41
Foreign consumption (%)	0.02	0.03	0.04
Foreign labor effort (%)	0.00	-0.00	-0.01

We next investigate another key aspect of technology, the impact of the slope of the comparative advantage schedule. A flatter (steeper) schedule means that relative productivity is less (more) dispersed across the two countries. This has two effects. Flatter schedules make trade volumes more sensitive to trading costs, but also reduce the gain in efficiency from trade as the gap in productivity between the two countries is smaller. In Table 6 the center column reports the results from the base case, where the maximum relative productivity for the Home country (at $z = 0$) is 125 percent of Foreign productivity. In the left column, that relative productivity is lowered to 100 percent producing a flatter comparative advantage schedule, while in the right panel it is increased to 150 percent. As anticipated, a flatter schedule produces a larger increase in trade as, for a given fall in trading costs, more goods switch from being nontraded to traded. However, the macroeconomic benefits follow the opposite pattern, being larger for a steeper schedule. These results are reminiscent of those coming from changing competition across both countries. While a flatter schedule implies greater opportunities for trade, there are smaller benefits from realizing them. As in the earlier case, the benefits from the former effect are outweighed by the latter, so that the larger increase in trade is associated with smaller macroeconomic benefits.

5.2 Dynamic simulations

The advantage of combining a microeconomic model of trade with a well-specified macroeconomic model is that it allows examination of both the long-run equilibrium and the dynamic path by which this equilibrium is reached. Accordingly, this section examines some of these dynamic properties.

Table 6: Long-run effects of lower trading costs under alternative assumptions about the comparative-advantage schedule

	Intercept = 2.0	Base-Case: Intercept = 2.5	Intercept = 3.0
Trading costs (Δ)	-1.00	-1.00	-1.00
Home exports (%)	6.39	6.17	6.03
Home export-to-GDP ratio:	1.64	1.55	1.50
Intermediate inputs (Δ)	1.20	1.10	1.03
Final consumption goods (Δ)	0.48	0.50	0.52
Final investment goods (Δ)	-0.04	-0.04	-0.04
Home imports-to-GDP ratio:	1.64	1.55	1.50
Intermediate inputs (Δ)	1.32	1.21	1.15
Final consumption goods (Δ)	0.32	0.35	0.36
Final investment goods (Δ)	-0.00	-0.00	-0.00
Home GDP	0.88	0.94	0.97
Home labor productivity (%)	1.03	1.10	1.13
Home consumption equivalent (%)	0.96	1.02	1.04
Home consumption (%)	0.92	0.98	1.00
Home labor effort (%)	-0.15	-0.15	-0.15
Real exchange rate (%)	0.36	0.37	0.38
Foreign consumption (%)	0.02	0.03	0.03
Foreign labor effort (%)	-0.00	–0.00	-0.00

The solid lines in Figure 9 show the paths of key macroeconomic variables in response to a one percentage point reduction in trading costs phased in over 10 years, using a linearized version of the model.[29] In this and subsequent simulations, the reduction in trading costs due to accession and the introduction of the euro accumulates gradually over time, with the majority of the reductions accruing within the first five years. This reflects the natural lags involved as individuals discover and exploit the opportunities provided by this fundamental change in economic structure, such as adapting outmoded rules and regulations, learning about the requirements involved in exporting and importing for firms that were initially only supplying the domestic market, and building new relationships with clients.

As expected, the real and nominal rigidities in the model produce a relatively smooth increase in trade and consumption over time. One of the striking aspects of the simulations is the amount of time taken to reach the new equilibrium – over 100 quarters (the model is quarterly) or 25 years. The transition has an S-shape, but these shifts in the rate at which the new equilibrium is reached are not large – about one fifth of the increase in trade occurs after 5 years. These lags are obviously dependent on a series of assumptions about adjustment costs, where the latter have been calibrated to mimic the short-term responses of consumption and investment to shocks, thus making this a plausible representation of the actual underlying dynamics.

Details of the transitional response of real variables appear reasonable. Exports and imports slowly build up and openness eventually rises by over six percent. Consumption also responds smoothly and eventually increases by almost 1 percent. This is a result both of habit persistence in preferences and of time-to-build markets technologies in production. The increased consumption demand is accompanied by an initial real appreciation that makes imported intermediate inputs cheaper to use. Demand is therefore initially satisfied through increased imports of foreign intermediates giving rise to a trade and current account deficit and a risk premium that crowds out investment in the short run. As the rise in consumption slows, the real exchange rate starts to depreciate, thereby reducing the use of intermediates and improving the trade balance and current account. At that point investment picks up and rises by 0.9 percent in the long run, while the trade balance moves into surplus to pay the costs of higher foreign borrowing.

The dashed line in Figure 10 reports the results of a reduction in trading costs that is anticipated to occur after 5 years. Trade starts to rise significantly in anticipation of the benefits of future integration, and after 5 years this is some two-thirds of the increase in trade compared to the case where costs are cut immediately. This suggests that reductions in trading costs that are well anticipated, as entry into the euro has been, can have effects well before the entry date. That said, the slow adjustment to the new equilibrium implies that significant further benefits accrue over a long period.

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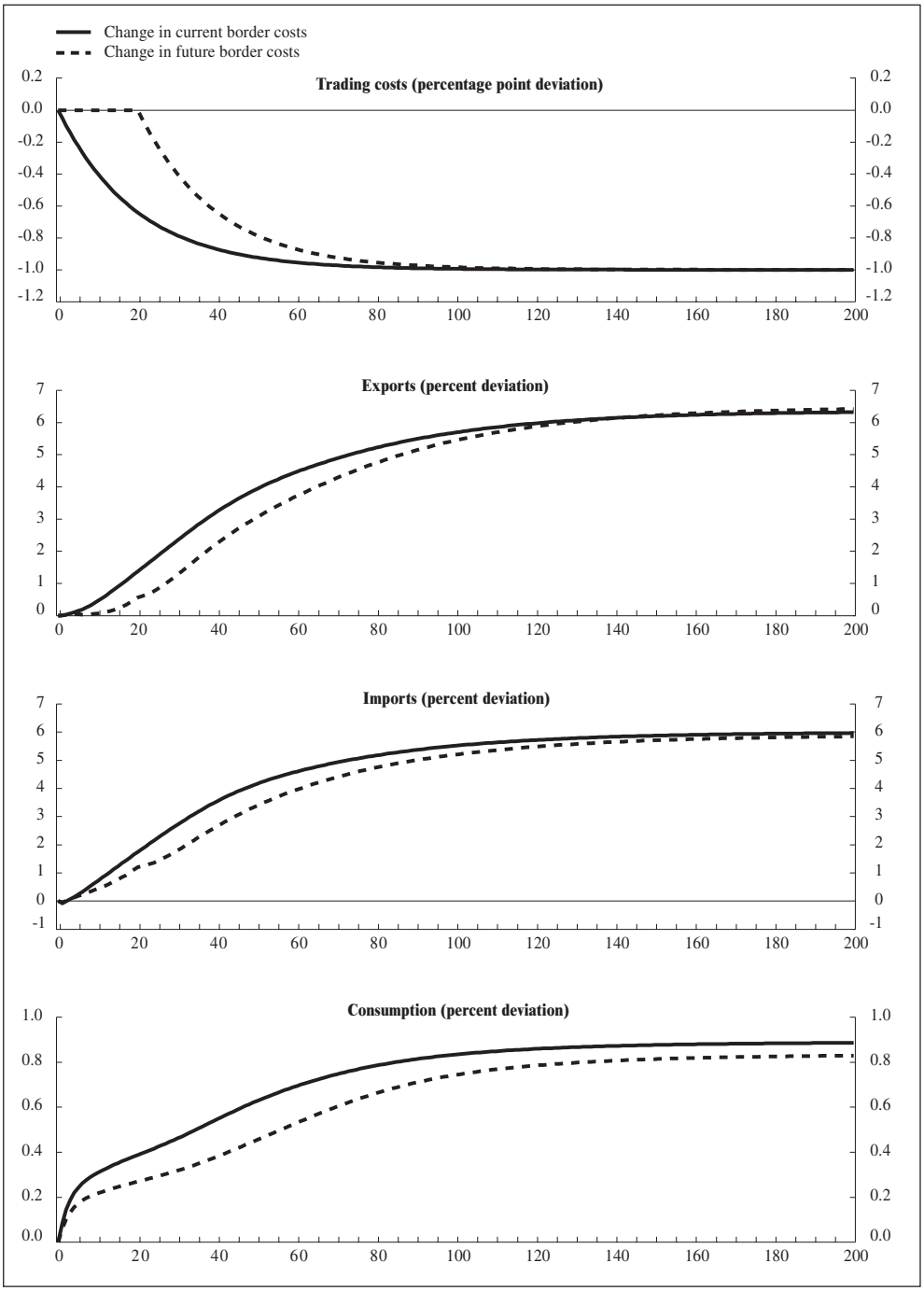
[29] This experiment has the advantage of displaying the properties of the model very clearly by focusing solely on the effects of one key shock. But this also has limitations because it does not consider other shocks that may be relevant to describe the situation of a typical accession country. A more comprehensive combination of shocks will be considered in Section 6.

Figure 9: Effects of a reduction in trading costs (current reduction versus an anticipated reduction 5 years in the future)



6 Policy implications

There has been an enormous literature on the potential costs and benefits of membership of EMU. However, this work has generally used different methodologies and models to estimate the microeconomic benefits coming from more efficient goods and financial market transactions with a single currency, and the potential macroeconomic costs due to the loss of monetary autonomy. Indeed, a large proportion of the existing literature has focused exclusively on one aspect or the other.

In particular, there is a burgeoning literature on the impact of a currency union on trade. Initial estimates that a common money multiplies trade several-fold (Rose, 2000) have been whittled down over time, but cross-country studies still suggest gains of 30-90 percent (Rose, 2004). Focusing on EMU specifically, a number of studies have also concluded that EMU has increased trade within the euro area by some 10 percent some five years after its creation (see Micco, Stein, and Ordonez, 2003, and Faruqee, 2004, although a much more skeptical view is contained in Gomes and others, 2004). Turning to the potential macroeconomic costs, these have been studied in the context of the correlation of underlying shocks (Bayoumi and Eichengreen (1994)) or model-based estimates of the losses in macroeconomic flexibility (see Schadler and others (2005)). Even work that has aimed to examine the overall consequences of EMU, such as European Commission (1991) or UK Treasury (2003), have used very different frameworks and approaches to examine these benefits and costs.

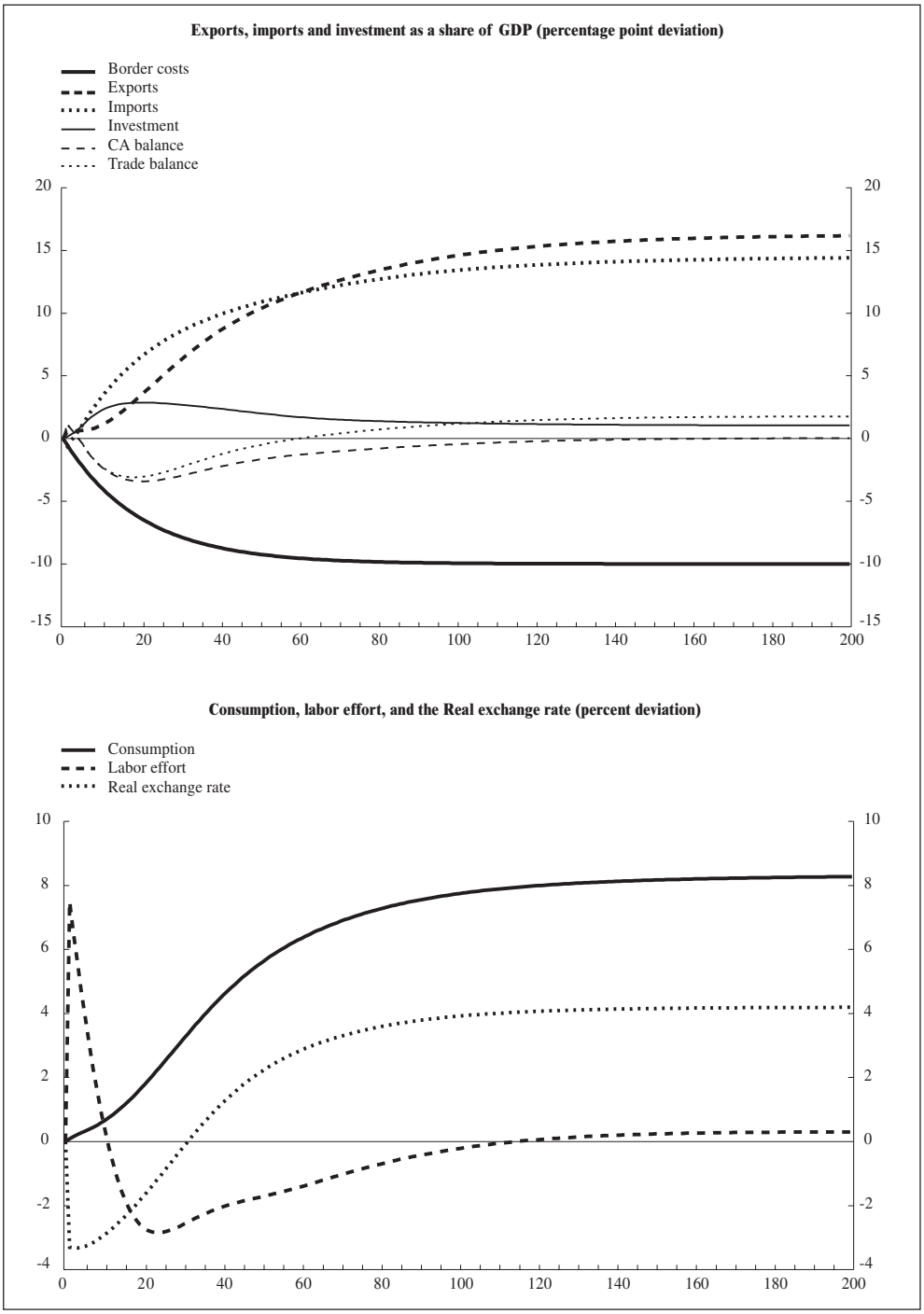
This paper has taken a first step at providing a unified framework in which to examine the benefits to trade and costs to macroeconomic flexibility. To do this, we constructed a modern simulation model fusing a microeconomic model of trade with the real and nominal rigidities typical of macroeconomic models used to study monetary issues such as the impact of EMU on macroeconomic volatility. This paper has focused on the dynamic path and long-term benefits from lower trading costs due to EMU membership. Over time, we anticipate using the model to compare the benefits and costs of EMU membership using a single measure, namely the change in welfare of a typical consumer.

Some commentators have expressed skepticism that euro adoption will increase trade by a large amount, suggesting that as these countries are members of the EU free trade area the direct reduction in trading costs associated with monetary union will be small. In our view, this reflects an overly narrow view of the process of economic integration. In addition to lowering the costs of changing money, adopting the euro reduces the risk of abrupt and unpredictable future price changes, uncertainty that may be difficult to hedge when making long-term decisions such as the location of a production plant. The fillip to integration from this greater certainty generates strong forces towards economic integration, such as more uniform commercial law and regulation. As transactions increase, so does the demand for standardized contracts and the like. This can be seen within many currency unions, such as the United States, where, even though commercial law is largely the responsibility of states, relative uniformity exists, lowering costs of trade very significantly. This is much less true of even close economic relationships without a single currency, such as the United States and Canada.[30]

Our simulations use a two-country version of the model, calibrated to represent the accession countries and the existing euro area. The most striking result is that even relatively modest falls in trading costs across countries can create significant long-term increases in trade. For example, in our base case calibration a 1 percentage point reduction in trading costs increases the trade of accession countries by 6 percent over the long term, and experiments

[30] McCallum (1995) argues that underlying trade across Canadian provinces relative to trade between Canadian provinces and U.S. states is many times larger than what would exist without a Canadian-US border.

Figure 10: Effects of a reduction in trading costs and a lower initial starting point for the capital stock



with alternative underlying parameters indicate that this result is relatively robust. The size of this effect helps explain how the introduction of a single currency could generate the large effects on trade estimated in the cross-country empirical literature. The rise in trade in the existing members of EMU due to the inclusion of the accession countries in EMU is, of course, much more limited because the economies of the accession countries as a group are so much smaller than the aggregate of existing euro area members.

Turning to the impact on welfare, the model finds that lower trading costs due to the introduction of the euro also generate large welfare gains. Again focusing on the base case calibration, a one percentage point decrease in trading costs, which as we have seen raises trade by six percent, raises the long-term welfare of accession countries by the equivalent of about one percent of consumption. Hence, if one assumes that trade will rise by around fifty percent in the long run, an estimate broadly consistent with existing empirical estimates, the welfare benefits could be of the order of ten percent (measured in consumption equivalent). The main benefit comes from higher output and consumption, although there is also some decrease in hours worked and hence an increase in leisure. The existing euro area members also benefit, but again these effects are much smaller due to the relative sizes of the two areas.

One of the advantages of including real and nominal rigidities is that the model also provides information about how these gains to trade accumulate over time. Dynamic simulations indicate that trade is boosted quite slowly, with the full increase in trade occurring over a period of many years. Strikingly, we find that around one-fifth of the increase in trade occurs after 5 years. This implies that the estimated increase in trade of around 10 percent in the 5-years since the introduction of the euro would translate into a long-term impact of 50 percent, which, as noted above, is broadly consistent with empirical estimates of the long-term benefits. In addition, dynamic simulations indicate that the prospect of entering EMU in the future produces an anticipatory increase in trade. While this boost is somewhat less rapid than that generated by actual membership, anticipation of future benefits drives much of the increase in trade and welfare observed in the simulations.

The results also suggest that the lower transactions costs at the border generated by EMU lead to a larger increase in trade in intermediate goods than in final goods. This is consistent with the stylized facts on economic integration. The result occurs because the supply of intermediate goods sold to other firms is more price-sensitive than that of more completed products. This breaking-up of the production chain also helps in explaining the large increase in trade relative to GDP, as trade is based on gross output while GDP measures value added.

Putting all of this together, Figure 10 reports the results of a dynamic simulation in which trading costs are reduced by 10 percentage points, creating a short-term rise in trade of a similar magnitude to that seen in euro area members over the last 5 years and a long-term rise in trade of a magnitude similar to those estimated in the existing literature. In addition, it is assumed that the initial capital stock in the accession countries is 20 percent below its equilibrium level, creating a long-lived boost to investment that is financed partly with a current account deficit. This latter assumption can be seen as a rough approximation to the gains coming from financial integration and lower real interest rates. The result is a generalized boom including steady and large increases in trade, consumption and welfare, accompanied by a more rapid boost to investment as the capital stock catches up. This is paid for through foreign borrowing which is repaid in the long-term through a trade surplus.

While we have not examined the potential costs of the loss of monetary independence for EU accession countries and existing euro members in this specific model, results from those with similar macroeconomic frameworks can be used to draw inferences. In particular, existing studies indicate that even radical changes in monetary policy rarely generate welfare

costs of more than a percent of consumption, and most estimates are much lower. Given existing results about the long-term impact of a single currency on trade and our estimate of the associated welfare benefits, it seems extremely unlikely that the long-term benefits from higher trade could be offset by macroeconomic losses, particularly as these will probably fall as countries become more integrated (Frankel and Rose (1993)). However, given that the macroeconomic costs of the a single currency occur immediately, while the trade benefits build slowly over time, the issue is less clear-cut in the short term. Hence, there could well be some transition hurdles to be overcome in realizing the long-term benefits.

It is also worth emphasizing that the welfare benefits tend to be larger when the accession countries are assumed to be less economically efficient, even though trade generally increases by less in these circumstances. This is true whether this inefficiency comes from lower domestic competition or more diversity in relative productivity with respect to the euro area. It reflects the fact that lower efficiency implies greater scope for gains in productivity within the country. Hence, even though trade increases by less, domestic economic efficiency rises more. A very different result occurs with respect to the euro area. Greater euro area efficiency boosts both trade and welfare of accession countries, as the latter are better able to exploit the trade opportunities provided by lower trading costs.

This paper represents a first step in analyzing the effects of EMU membership in an integrated, modern macroeconomic model. Clearly, uncertainties exist as to the generality of the results from a single model, reflecting as it does a myriad of specific modeling and parameter choices. Interestingly, our results do not include a trend appreciation of the real exchange rate in accession countries, a prominent stylized fact in their recent experience that might be expected to further increase the welfare benefits to accession countries. This suggests that the appreciation of the real exchange rate may be coming from forces other than higher trade integration, such an closer financial ties.

Even at an early stage, the model is capable of providing a range of important insights into the possible implications of EMU on accession economies. First, the long-run benefits are likely to be large, both in absolute terms and compared to the macroeconomic costs. Second, the benefits from trade are likely to occur gradually, and to involve a greater increase in trade in components than in final products. Given that the potential macroeconomic costs stemming from higher volatility occur immediately, while the benefits from increased integration of trade occur more slowly, the key policy issue would appear to be ensuring that the transition to a single currency occurs relatively smoothly.

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Comment

Nicholas Garganas

Michael Kumhof, Doug Laxton and their colleagues have written an interesting and thought-provoking paper. I would like to comment on their paper from the perspective of a macroeconometric modeller and policy-maker. I hope to suggest some areas which seem to be missing from the model as it currently stands, yet which play an important role in a country's decision to join a currency union.

A main focus of the paper is on the microeconomic gains that come with increased economic integration culminating in membership of a currency union. The authors aim to integrate the macroeconomic and microeconomic aspects of international economic integration. However, what they actually do is to build a model that allows economic integration to have an effect on the composition and volume of international trade and in which trade costs play an important role. They then interpret monetary union as a reduction in trade costs. There is no doubt that a reduction in trade barriers as a result of joining the European Union (EU) (economic integration) has important welfare implications through its effects on trade. But I doubt that the trade effects of a single currency, in and of itself, are likely to be especially significant. An alternative approach might have been to let monetary integration affect financial integration. Now this is more likely to have significant macroeconomic and welfare implications. In short, there seems to be an inappropriate confluence of economic (trade) integration and monetary integration in the paper.

Simulations of the model suggest that a 1 percentage point reduction in trade costs increases trade by 6% in this model which, in turn, raises investment and consumption, and, hence, economic welfare. This result is qualitatively in line with the existing empirical literature. A key feature of the results is that the increase in trade occurs slowly because of market rigidities. Finally, a result which is of interest for our focus on the new Member States is that anticipated reductions in trade costs will cause trade to increase even before the cost reduction is realised.

On the whole, there is a lack of formal empirical work on the new Member States either along the lines of this paper or in the large body of literature that takes a reduced form approach to the question. I am thinking here of the influential work of Rose (2000) and subsequent papers, which take the gravity model of trade and augment it with measures of economic integration and/or monetary integration. The results of this work suggest that a single currency can significantly increase trade.[1] Thus let me bring some stylised facts to bear on the issue.

The following figures (1a-2b) display the measure of openness (exports plus imports over GDP) along with its two sub-components, intra-EU trade and extra-EU trade. The figures are for merchandise trade.[2] Intra-EU trade is defined as exports to all EU countries (including the

[1] Rose's pioneer study from 2000 examines bilateral trade among 186 countries at five-year intervals between 1970 and 1990. His results suggest that countries with the same currency trade over three times as much as similar countries with different currencies. While Rose's paper has come in for considerable criticism, subsequent papers which correct the perceived deficiencies of his work come to similar qualitative conclusions, although the magnitude of the effect is usually found to be lower (see Rose, 2004, for an analysis of available empirical evidence). Thus, for example, papers focusing specifically on euro area countries find single currency effects of around 10%, much smaller than Rose's initial estimates (see for example Faruqee, 2004).

[2] Source: IMF Direction of Trade Statistics (DOTS).

new Member States) and imports from EU countries as a proportion of GDP. Extra-EU trade is exports/imports to/from all other countries. The sum of intra-EU trade/GDP plus extra-EU trade/GDP generates the top line in each figure, (exports plus imports)/GDP.

Let us start with the case of the Czech Republic, the illustrative example of this paper (see Figure 1a, top left). It fits our priors perfectly and is consistent with the basic ideas in the model. The upper line shows growing openness, which is essentially accounted for by growing intra-EU trade; extra-EU trade, which is not modelled in this paper, is a constant proportion of GDP. Slovakia, Poland and Estonia had similar experiences. However, the other new Member States differ. In the case of Hungary, after a sharp increase in trade, including intra-EU trade, openness has actually declined since 2000. Slovenia's experience is very flat, as is that of Latvia and Lithuania (see Figure 1b). Finally, Cyprus and Malta (Figure 1c) appear to be outliers in that their increased openness in recent years is a result of trade with non-EU countries. This result seems to support the observation that European integration has not on average been associated with much trade diversion.

Of course, I am fully aware that I am drawing conclusions from the raw data. What we really need is multivariate analysis. But the point I wish to make is that there seem to be a sufficient number of differences among the new Member States at the descriptive level, so that generalisations across them should be avoided. Indeed, it is perhaps worth drawing some parallels with the existing work on the impact of European Economic and Monetary Union (EMU) on individual EU Member States. Two examples of papers which assess individual country effects within a multivariate panel framework are Micco et al. (2003) and Faruqee (2004). They both find significant differences in the effect of EMU on trade across different EU Member States. Such differences need further research if they are to be adequately explained.

Turning now to more macroeconomic issues, the paper argues that the microeconomic benefits of greater trade are likely to be partly offset by the macroeconomic costs of currency union. These costs take the form of the well-known loss of an independent monetary policy and exchange rate policy. My experience however does not convince me that this is necessarily a very large cost; in fact, it suggests that there are macroeconomic benefits which may well outweigh whatever cost is entailed. First, in a world of high capital mobility, experience has taught me that *small open* economies have, in any case, little monetary policy independence.

Second, concentrating on the loss of independent monetary policy overlooks potential benefits in terms of macroeconomic stability provided by the policy framework which accompanies euro area membership. The ECB's "one size fits all" monetary policy may at times not be entirely appropriate to individual country situations, but this cost has to be weighed against its benefits – it is a policy which aims at price stability, reflecting the generally accepted view that low inflation reduces information costs and distortions, thus allowing the economy to grow at potential over the medium run. For countries with a long history of inflation, this can lead to substantial credibility gains. To take the example of Greece, the adoption of the euro was associated with increased credibility and represented a real regime change in terms of expectations formation in the labour market – in anticipation of lower inflation rates, workers began to demand much more moderate wage increases. Furthermore, peer group pressure in other areas such as fiscal and structural policies, which is exercised through the various bodies associated with both the ECB and the EU, contributes further to stabilising the macroeconomic environment. If the choice is between independence used unwisely and giving up independence to join a currency union committed to macroeconomic stability but whose policies may not at all times be optimal for any particular

country, then thinking only in terms of macroeconomic costs may give us a misleading answer.

My final comment is related to the question of the exchange rate decision for small open economies and the role of capital flows in the model. In a world where capital is highly mobile, joining a currency union offers a country a way of avoiding the potentially damaging effects of sharp reversals of capital flows. Again, I think that it is useful to examine the experience of the new Member States. The magnitude of capital flows, both inflows and outflows, should not be underappreciated – as the diagrams in Figure 2 show, capital flows are frequently in excess of 10% of GDP.[3] Moreover, periods of large inflows can sharply turn, and in the past have indeed often done so, into periods of large outflows. Of course, capital flows do not disappear within a monetary union; they can even take on a speculative nature which could fuel inflationary pressures in one region of the union or hamper capital accumulation and economic development in another. But it is undeniable that the act of joining a currency union removes a very strong motive for speculative capital flows, namely that of one-way bets on currency movements.

The paper does not model capital flows, including foreign direct investment (FDI) flows. Newbery and Stiglitz (1984) provide the basic elements of a model of trade in an uncertain world, and their ideas could usefully be further developed and included here. They stress that financial markets and capital flows can help promote risk-sharing and increase the correlation of shocks. As Figures 2a and 2b show, the new EU countries have been particularly successful in attracting FDI flows. Modelling this as part of the integration process would therefore seem to yield positive returns to scale, especially as FDI flows can also help import best practices in, for example, management and marketing, and can help the new Member States make the best use of their stock of human capital.

In conclusion, I would like to see some of these factors considered in any model seeking to provide a comprehensive cost-benefit analysis. Of course, I do not presume to suggest that it would be easy to incorporate these ideas into the kind of model presented here. Perhaps this makes me rather sceptical of the practicality of the authors' original motivation – to provide an integrated framework to analyse the question of the costs and benefits of joining a currency union. Indeed, even as it stands, the model involves too many equations and parameters. While this might seem an advantage in that it provides greater realism, it is not for two reasons. First, it requires the calibration of too many parameters (more of which below). Second, it makes interpretation and understanding of the mechanisms very difficult.

A related factor which struck me when reading the section on the calibration of the model was the number of times that the authors noted the scarcity of evidence on the magnitude of the key parameters for the new Member States. Calibration is an arbitrary and risky business that unfortunately is extremely significant for the results. Let me mention a few cases which are problematic. First, in sub-section 4.2, the relative productivity differences seem quite large. For all we know, the new Member States may have a much more similar industrial structure compared to the EU average than previous entrants, including Greece. If there are productivity differences, they appear to relate more to the non-tradables sector.

Second, in sub-section 5.1 (p. 22), "trading costs are assumed to be 34 percent of the value of a good". This appears to be out of all proportion and, if real, would have led to a cessation of all trading activity. I also wonder whether modelling trading costs as *ad valorem* is

[3] Source: IMF International Financial Statistics (IFS).

factually correct. I think that an approach closer to Dixit's would have been more appropriate (Dixit, 1991; 1992). A large part of such costs are fixed and are related to entering a market (e.g. advertising, setting up a sales network, adapting product specifications to local customs and laws). In this case, what we observe is not a smooth adjustment of trade flows, but rather abrupt jumps at the time of significant changes. This might explain what we see in some of the figures – sometimes long periods of stability in trade patterns, sometimes rapid change.

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Figure 1a: Trade linkages – Czech Republic, Hungary, Slovakia and Slovenia

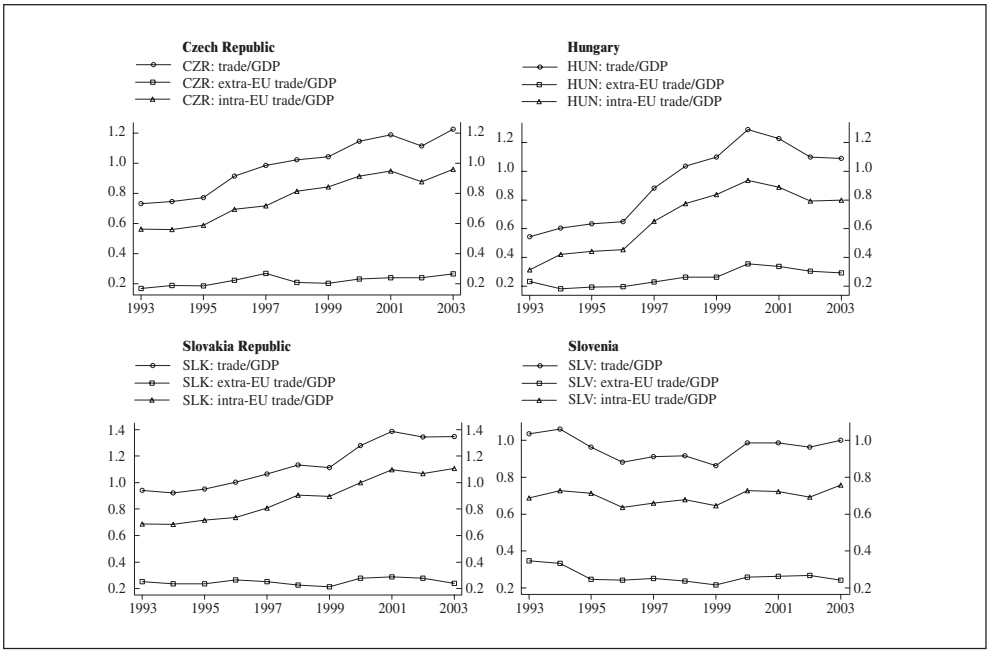


Figure 1b: Trade linkages – The Baltic Countries and Poland

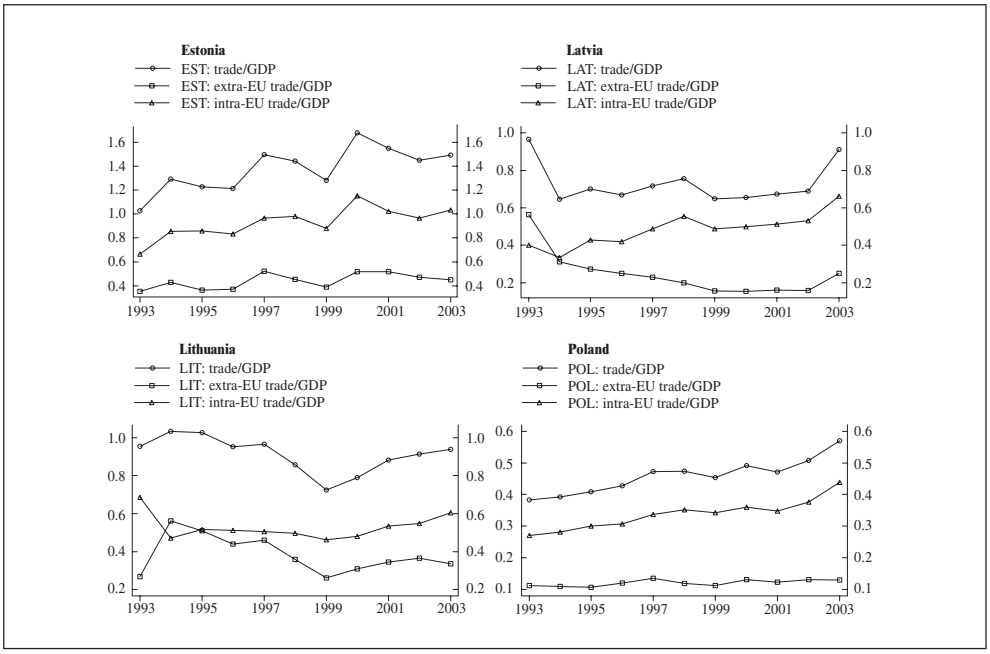


Figure 1c: Trade linkages – Cyprus and Malta

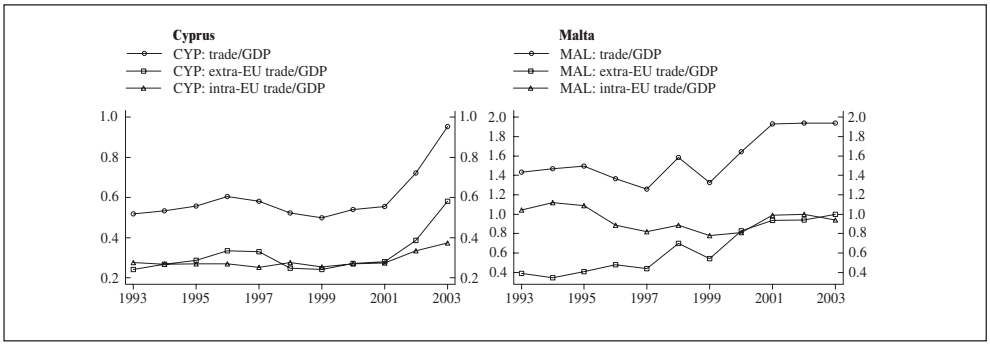


Figure 2a: Capital flows – Czech Rep, Hungary, Slovakia and Slovenia

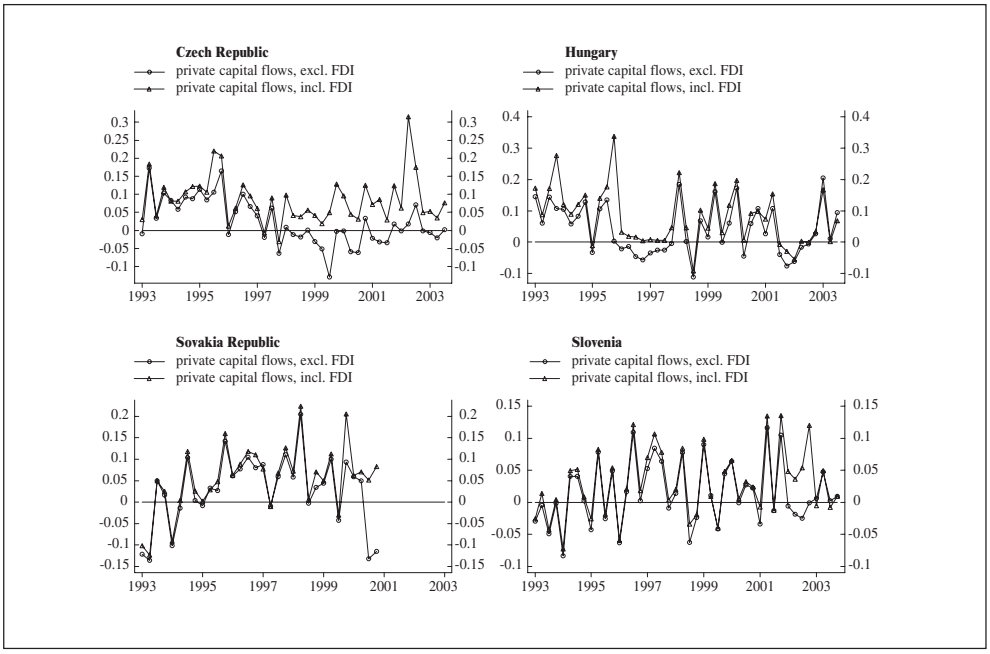
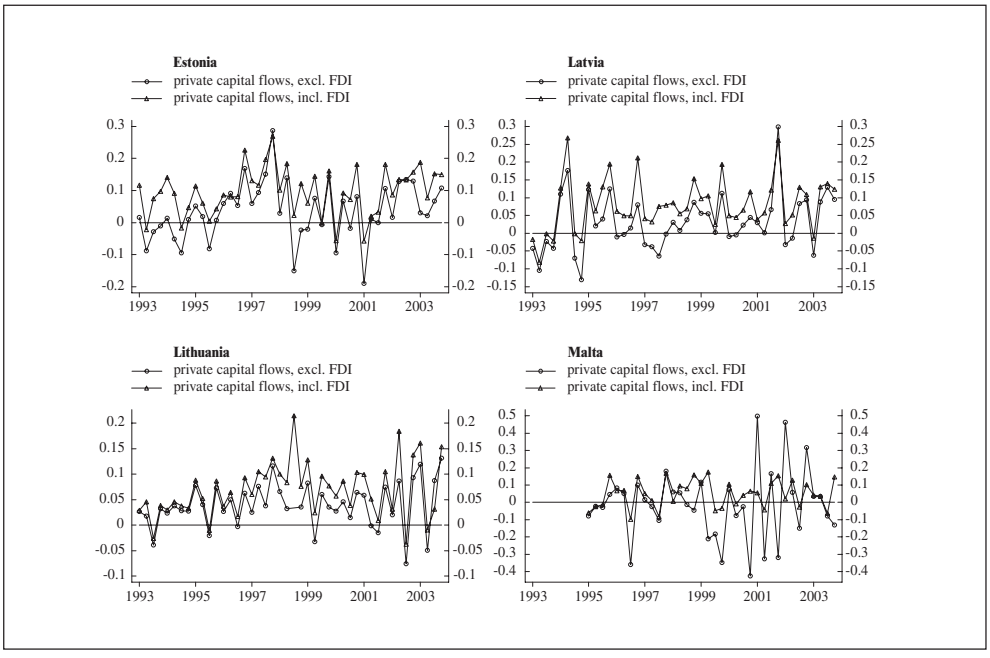


Figure 2b: Capital flows – The Baltic countries and Malta



Comment

Frank Smets[1]

It has been a pleasure to read and study this paper. The authors have embarked on a very ambitious modelling project that ultimately aims at providing a unified assessment of the benefits and costs of joining a monetary union. The main message of the paper is that the benefits from improved trade integration due to monetary integration are of an order of magnitude larger than any costs associated with the constraints that a monetary union puts on stabilisation policies over the business cycle. The paper therefore suggests that the traditional "Optimum Currency Area" (OCA) literature started by Mundell (1961) misses the point. This large body of literature, which also includes many applications to Economic and Monetary Union (EMU), focuses on examining the conditions under which the costs of giving up independent monetary policy are low. On the other hand, the paper backs up the "one money, one market" idea that links monetary unification to trade and financial integration.

More specifically, the authors analyse the steady-state and dynamic economic effects of a reduction in trading costs in a two-country state-of-the-art Dynamic Stochastic General Equilibrium (DSGE) model that incorporates endogenous tradability of goods. The latter feature allows the authors to examine the effects of reduced transaction costs on the location of industries and the resulting changes in international trade. This is a very interesting first step that allows the authors to focus on one of the most important benefits of a monetary union. However, there are some missing parts. First, at this stage of the project, the benefits of increased trade integration are not yet explicitly compared with the costs of giving up monetary independence, although the two-country DSGE model includes nominal rigidities that allow monetary policy to play a meaningful stabilisation role. Second, the link between monetary integration and the reduction in trading costs is not explicitly modelled. The exogenous reduction of trading costs is calibrated on the basis of EMU experience, but an explicit link with the establishment of a monetary union in the model is missing. Third, arguably an additional benefit of monetary integration is increased financial integration. The paper ignores this aspect of the "one money, one market" idea.

In my comments, I will first discuss the main findings of the paper. Next, I will make some comments on the theory and evidence on the link between monetary integration and trade and financial integration respectively.

1 Main findings

The main message of the paper is that participation in EMU may lead to large steady-state gains in trade and welfare through a lowering of trade costs. In particular, based on a two-country DSGE model with many nominal and real frictions calibrated to the euro area and the Czech Republic, the authors conclude that a 1 percentage point reduction in trade costs (from 34% to 33%) implies a 6% increase in trade, a 1.5 percentage point increase in the export-to-GDP ratio, and a 1% increase in the consumption equivalent. These effects are obviously very large. Where do they come from? The basic mechanism is as follows: a reduction in trade costs implies that some of the goods that are produced at home (abroad) are now imported from (exported by) the more efficient foreign (domestic) firms. This leads to a fall in the price

[1] I would like to thank Arjan Kadareja for providing Figures 1 and 2 and Vítor Gaspar for comments.

of intermediate goods. The lower cost of intermediate inputs increases profits and stimulates output and consumption. The crucial determinant of the size of these effects is the shape and the slope of the comparative advantage schedule. However, notwithstanding its importance, the paper contains very little information about why the schedule was calibrated the way it was. Why is there a kink? What determines the mean and the slopes?

The paper also contains an interesting analysis of the dynamic effects of lower trade costs. Overall, the response of the economy is very slow. After five years only one-fifth of the steady-state trade effect has taken place. One interesting feature is that there is no clear exchange rate response, which runs counter to the observed appreciation in many of the new Member States. Given the large number of frictions and the slow introduction of the shock, the slowness of the response is not too surprising. Nevertheless, it would be interesting to investigate the relative contribution of the various frictions to this slow adjustment. In general, the dynamic effects of a reduction in trading costs are very similar to the effects of a positive productivity shock in the tradable goods sector as, for example, shown in Natalucci and Ravenna (2002).

In sum, the authors show that a 10 percentage point reduction in trade costs due to monetary union can generate the "Rose" effects: a 50% increase in trade, of which about 10% will take place after five years. Such an impact would deliver a significant long-run gain of about 10% consumption equivalent.

2 Monetary and trade integration

The calibration exercise is very much inspired by the substantial empirical evidence gathered since Rose (2000) that monetary integration has large positive effects on trade. It is therefore of interest to review some of this evidence. The meta-analysis contained in Rose (2004) finds that a currency union is typically associated with an increase in trade ranging from over 30% up to 90%. Time series evidence on monetary union break-ups suggests similar findings.[2]

There is also some initial evidence on the trade effects of EMU. Mico, Stein and Ordonez (2003), Barr, Breedon and Miles (2003) and Bun and Klaassen (2002) all find a relatively large and significant positive effect of the introduction of the euro on trade in the range of 5% to 40%. However, recently Bun and Klaassen (2004) find a much smaller, if still significant, effect of 3%. Overall, the estimated effects are therefore significant, although their size has diminished in most recent research.

The establishment of EMU has also led to increased relative price convergence. For example, Beck (2003) and Beck and Weber (2001) show that the introduction of the euro has significantly reduced so-called border effects on the variability of relative price changes across European regions.[3]

What can account for the positive effect of monetary integration on trade? The most obvious explanation is that the elimination of bilateral nominal exchange rate volatility reduces risk and uncertainty in trade transactions and thereby facilitates trade. This is consistent with the cross-country results by Klein and Shambaugh (2004), which suggest that direct and indirect exchange rate pegs do increase trade by 20% on top of a significant, but small, exchange rate volatility effect in gravity equations. However, the time series evidence is not very strong (e.g. Klaassen, 2004). It remains to be seen whether relatively large effects

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[2] See Glick and Rose (2002). However, Nitsch (2004) shows that the time series effect of joining a currency union is less robust.

[3] See also Anderton et al. (2003).

can be explained in well-specified theoretical models. A promising avenue for such an analysis can be found in a recent paper by Straub and Tchakarov (2003).

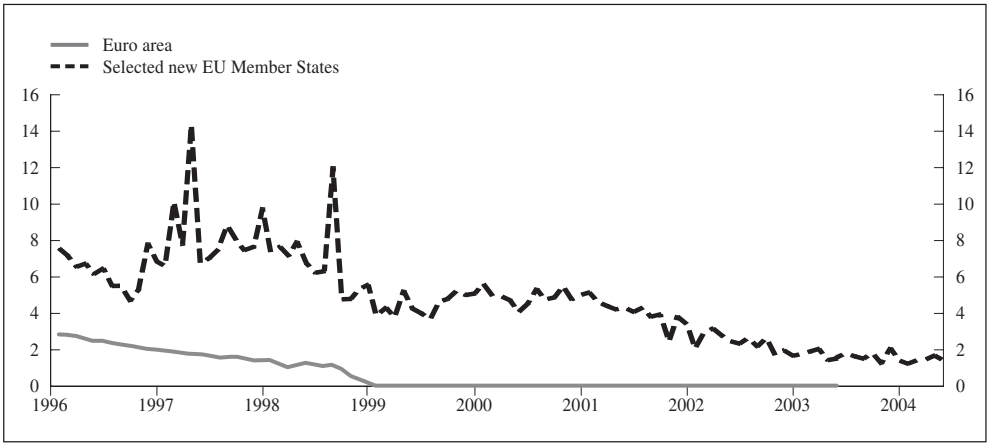
There are, of course, other explanations. First, a currency union eliminates the transactions costs caused by the need to operate with multiple currencies. Second, increased market transparency and competition among firms operating in different countries may reduce market power and market discrimination. Third, the elimination of exchange rate uncertainty may have large effects on foreign direct investment (FDI). To the extent that FDI and trade are complements, this will also tend to increase trade. Finally, a currency union may contribute to a harmonisation of commercial law and could thereby facilitate trade. Although there is likely to be some truth in each of these explanations, it would be very difficult to incorporate all of them into one single framework.

It is additionally worth noting that increased trade due to monetary integration may in turn contribute to more synchronous business cycles as demonstrated empirically in Frankel and Rose (2002). This will tend to reduce the potential costs of joining a currency union and thereby reinforce the case for monetary union.

3 Monetary and financial integration

The paper largely ignores the link between monetary and financial integration by implicitly assuming that the financial structure is unaffected by the creation of a monetary union. Nevertheless, various factors can explain why monetary unification may lead to deeper financial integration. First, the unification of the money market may increase the scale of this market and thereby reduce liquidity risk. Second, the presence of exchange rate risk may influence hedging behaviour and produce a home bias (see for example Gordon and Gaspar, 2001). Third, the enlargement of local financial markets may foster greater competition in the banking sector. Finally, legal restrictions on the currency portfolio of institutional investors may limit international diversification.

Figure 1: Dispersion in overnight lending rates
(Cross-section standard deviation; in %)

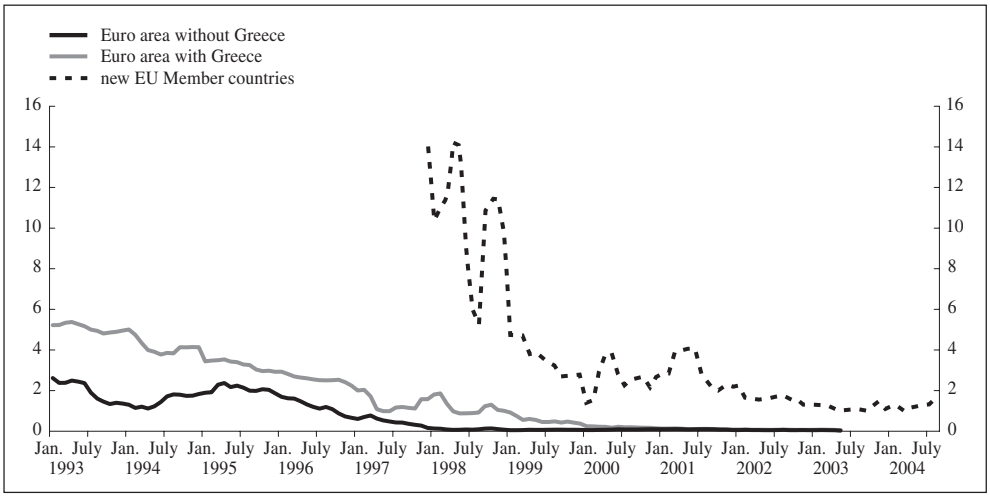


As documented in Baele et al. (2004), there is a fair amount of evidence that monetary integration has indeed led to deeper financial integration. One measure of increased financial integration is the dispersion of interest rates across euro area Member States. Figures 1 and 2 display the dispersion of overnight lending rates and ten-year government bond yields relative to Germany. It is clear that in both segments dispersion fell dramatically in the run-up to the creation of the single currency and has been very low ever since. The figures show an analogous measure for selected new Member States where a similar process of interest rate convergence is currently under way.

Additional evidence of increased financial integration due to EMU comes from research conducted in the context of the Capital Markets and Financial Integration in Europe Network. For example, Cappiello et al. (2003) find that, in contrast to global bond markets, euro area bond markets became almost perfectly correlated 15 weeks before the start of EMU. Bris, Koskinen and Nilsson (2003) show that the introduction of the euro has lowered firms' cost of capital by eliminating currency risks among the countries that joined EMU. Finally, Tsatsaronis and Santos (2003) show that the euro led to a reduction in the underwriting fees of international corporate bonds issued in the new currency due to greater contestability of the investment banking business in the post-EMU European market.

Deeper financial integration will in turn reduce the costs of monetary union by improving risk-sharing in the currency union. It will also spur growth. For example, Guiso et al. (2004) argue that financial integration is likely to spur the efficiency of the financial intermediaries and markets of less financially developed countries through competition and legal harmonisation. They estimate a significant growth gain in the euro area and in the new Member States. In particular, according to their estimates, financial integration may increase growth in the manufacturing industry by 0.6 to 0.7 percentage points. However, as discussed in Ranciere, Tornell and Westermann (2003) and Fratscher and Bussiere (2004), increased financial integration may also entail risks of over-borrowing and overinvestment, in particular in countries with less developed financial markets.

Figure 2: Dispersion in 10-year government bond yields relative to Germany
(in %)



4 Conclusions

Overall, the evidence discussed above suggests very strongly that monetary integration does lead to deeper trade and financial integration, supporting the idea of "one money, one market". The size of these effects and the mechanisms explaining them are, however, still uncertain. This has implications for the calibration of the model and the underlying micro theories. Deeper trade and financial integration in turn reduces the cost of joining a monetary union and spurs growth, thereby creating a virtuous cycle.

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General Discussion

Laszlo Halpern (Hungarian Academy of Science) asked if the model by Bayoumi, Kumhof, Laxton and Naknoi has any specific features to capture the structural elements of the new Member States, or whether it is just a calibrated version of a standard dynamic general equilibrium (DGE) model. In his opinion there seem to be no specific features akin to the new Member States, and trade costs in particular have been modelled in a very simplistic way. He stressed that for the new Member States, strategic pricing in different sectors is an important element to be considered. **Michael Kumhof** answered that the theoretical model is not specific to the new Member States, but what is specific is the careful analysis of the data and the calibration (i.e. focused on the Czech Republic). He stressed they have put considerable effort into matching the economy in question as closely as possible. He also stressed that modelling sector-specific features is too challenging at this point.

Ralph Süppel (Merrill Lynch) questioned the paper's value in terms of deciding whether or not to join EMU because it, in his opinion, compares trade gains against the loss of independent monetary policy, which is not explicitly modelled. He also questioned the magnitudes of some parameter values. **Douglas Laxton** agreed that parameter values can be challenged but, as already mentioned, calibration has been carried out with caution.

Harris Dellas (University of Bern) was also concerned about the calibration of the model. He mentioned that calibrated models, unlike estimated models, are unable to reproduce the experiences of new Member States in the 1990s. He also mentioned that trade effects are not that large as Rose's seminal paper claims. Recent research has shown that Rose's approach suffers from endogeneity problems and, if these are corrected, then the estimated trade effects are small. He also asked if the authors have conducted any parameter sensitivity analysis. **Douglas Laxton** replied that calibration offers a useful alternative to estimation, because DGE models are difficult to estimate. It is clear that the model does not explain exactly what has happened earlier, but that they had done their best to find reasonable parameter values. Parameter sensitivity analysis was carried out and a number of diagnostic simulations were run to be certain about the model's properties. **Nicholas Garganas** suggested that reduced form analysis might be carried out to establish appropriate parameter values.

6

Macroeconomic adjustment in the new EU Member States

Jürgen von Hagen and Iulia Traistaru*

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1 Introduction

In the years to come, macro economic policies in the new EU member states will face two principal challenges. The first is to manage the continued and probably rapid process of further real economic convergence, which will come with high real GDP and productivity growth rates and large capital inflows. The second is to achieve the degree of nominal convergence required to enter into (the Third Stage of) European Monetary Union (EMU). These two challenges are not unrelated, as rapid growth and large capital inflows can make it harder to achieve nominal convergence, although, as we argue below, there are good reasons to think that real convergence would be easier to manage for some of the countries at least, if they were allowed to adopt the euro immediately. Both challenges relate mainly to fiscal policy: managing capital inflows, because fiscal policy can absorb part of their demand effects, nominal convergence, because the sustainability of public finances is part of the requirement for entering EMU. Once in EMU, the new member states will have to cope with asymmetric macro economic developments without recourse to monetary and exchange rate policy. This will pose new demands for fiscal and wage policies in particular.

The new member states have achieved considerable macro economic stabilization over the past decade. The Central and East European (CEE) countries among them went through the transition from central planning to market economies, which began with severe recessions, high inflation, and financial instability. Today, inflation rates are well below 10 percent and nominal interest rates have declined, too. Public debt has been stabilized, though high and persistent deficits and the need for further fiscal adjustments are still critical issues in several cases.

Today, the ten new members are members with "derogations" from adopting the euro. Like Sweden, and unlike Denmark and the UK, they cannot formally opt out of the euro indefinitely, i.e., they are expected to become full members of the EMU sooner or later. Several of them have already announced target dates for this to happen. Table 1 suggests that there are two, perhaps three, groups of countries emerging: fast entrants and slow entrants. Estonia, Lithuania, and Slovenia have signaled their intentions of a fast entry into EMU by entering the ERM II, the exchange rate arrangement succeeding the former ERM.[1] Given the requirement of a minimum membership in the ERM II of two years before the convergence

Table 1: Intended EMU membership dates

Country	Reference time for the adoption of the euro	ERM II membership
Cyprus	2007	No[1)]
Czech Republic	2009-10 provided the Maastricht criteria are met and there is sufficient real convergence	No
Estonia	As soon as possible	Since 28 June 2004
Hungary	2010 (2009 if economic conditions better than expected)	No
Latvia	2008	No[1)]
Lithuania	No explicit reference	Since 28 June 2004
Malta	As soon as convergence criteria are met	No[1)]
Poland	No explicit reference	No
Slovak Republic	No later than 2008-09	No
Slovenia	2007	Since 28 June 2004

Source: Convergence Programmes, May 2004.
1) Joined ERM II on 2 May 2005.

[1] For the performance of the original ERM see Fratianni and von Hagen (1992). Cyprus, Latvia and Malta joined ERM II on 2 May 2005.

examination to enter EMU, these countries could adopt the euro in the second half of 2006 at the earliest.[2] Although Lithuania has not set an official target date, we count it as a fast entrant weighing its ERM II commitment more than words. Cyprus has declared its intention to join the EMU in 2007, but has not yet backed it up by ERM II participation. A second group, Hungary, Latvia, Malta, and the Slovak Republic, seems to aim at EMU entry around 2010. Finally, the Czech Republic has set a conditional target date at 2010 and Poland no target date at all. These two countries may be adopting a "wait-and-see" strategy, which makes sense, since they are probably the only two economies large enough to successfully conduct an autonomous monetary policy aiming at price stability. For the other, much smaller and more open economies, in contrast, the value of an independent monetary policy seems very limited.

In this paper, we discuss the challenges for macro economic adjustment ahead. We begin, in section 2, by taking stock of the degree of real and nominal convergence that has already been achieved. In section 3, we turn to the development of public finance in the new member states. In section 4, we discuss the problems arising from the perspective of continued, large capital inflows. Section 5 considers the role of the ERM II and the problems connected with convergence towards the adoption of the euro. Section 6 looks at the task of macro economic adjustment under EMU. Section 7 concludes.

2 Where we stand: Real and nominal convergence in the new Member States

2.1 Basic economic indicators and real convergence

Table 2 reports a number of basic economic indicators for the 10 new member states. Together, they account for 16.1 percent of the EU's total population, but only 8.4 percent of the EU's combined GDP in purchasing power standards. Only Cyprus, Slovenia, and the

Table 2: Basic economic data, 2002

Country	Population (% EU-25)	GDP in PPS (% EU-25)	GDP per cap. (% EU-25)	Share of agriculture in GDP	Share of agriculture in employment	Openness	Gross capital formation (% of GDP)
Cyprus	0.16	0.13	76.0	4.3	5.3	110.8	18.8
Czech R.	2.24	1.52	62.0	3.7	4.9	125.2	25.9
Estonia	0.08	0.13	40.0	5.4	6.5	169.3	28.5
Hungary	2.23	1.30	53.0	4.3	6.0	133.0	23.0
Latvia	0.51	0.20	35.0	4.7	15.3	101.6	26.4
Lithuania	0.76	0.33	39.0	7.1	18.6	113.7	20.7
Malta	0.09	0.06	49.1	2.8	2.2	176.8	20.9
Poland	8.39	3.82	39.0	3.1	19.6	62.7	19.0
Slovak R.	1.18	0.61	47.0	4.5	6.6	150.7	27.4
Slovenia	0.44	0.33	74.0	3.3	9.7	114.4	22.6

Source: European Commission.
Note: Openness = (Exports plus imports of goods and services)/GDP in percent.

[2] Note, however, that Italy did not spend a full two years in the ERM before its convergence assessment was made. Thus, there is some flexibility in this criterion.

Table 3: Growth performance, 1996-2003

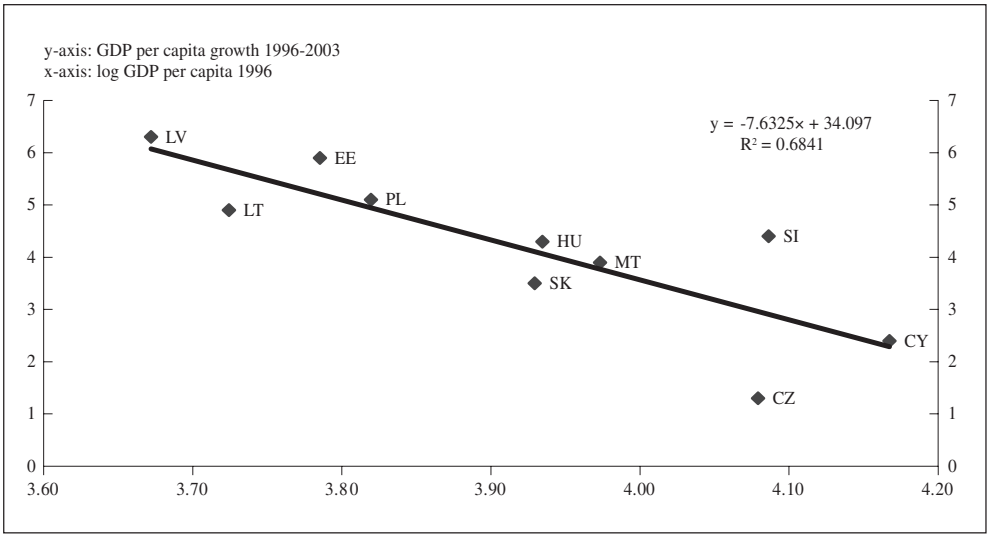
Country	Real GDP (annual growth rate in %)				Real GDP per capita (annual growth rate in %)			
	1996-2000	2001	2002	2003[1)]	1996-2000	2001	2002	2003[1)]
Cyprus	3.7	4.0	2.0	2.0	2.4	2.9	0.7	1.4
Czech R.	1.2	3.1	2.0	2.9	1.3	3.6	2.2	3.0
Estonia	4.9	6.5	6.0	4.8	5.9	6.9	6.4	5.0
Hungary	4.0	3.8	3.5	2.9	4.3	4.1	3.8	3.4
Latvia	5.3	7.9	6.1	7.5	6.3	8.8	6.8	7.8
Lithuania	4.2	6.5	6.8	8.9	4.9	7.1	7.2	9.2
Malta	4.5	1.2	1.7	0.4	3.9	-2.0	1.0	-0.1
Poland	5.1	1.0	1.4	3.7	5.1	2.1	1.5	3.8
Slovak R.	3.7	3.8	4.4	4.2	3.5	3.7	4.9	4.2
Slovenia	4.4	2.9	2.9	2.3	4.4	2.7	2.8	2.2
New member states average	4.1	2.5	2.4	3.6	4.2	3.1	2.5	3.7
Euro area	2.6	1.6	0.9	0.4	2.3	1.2	0.5	0.1
EU-15	2.7	1.7	1.1	0.8	2.4	1.2	0.6	0.4

Source: European Commission, Spring 2004 Economic Forecasts.
1) Estimate.

Czech Republic have per-capita GDPs substantially larger than half of the EU's per-capita GDP. The shares of agriculture in GDP range between 2.8 percent in Malta and 7.1 percent in Lithuania; the shares of agriculture in employment range from 2.2 percent in Malta to 19.6 percent in Poland. All new member states are small open economies, Poland being the exception with a relatively low degree of openness. Table 2 shows that gross capital formation ranged from 18.8 percent of GDP in Cyprus to 28.5 percent in Estonia. This is large compared to an average rate of 19.5 percent in the EU-15.

Table 3 reports the growth performance of the ten new members since 1996. As a group, they experienced much stronger growth than the EU-15 or the euro area. Poland, Latvia, and Estonia had the highest growth rates in the second half of the 1990s, while Latvia, Lithuania, and Estonia had the strongest growth rates since 2000. Significantly, economic growth in the group remained vigorous even while the economies of the EU-15 and the euro area slowed down in 2001-2003. This indicates that the growth trend of this group does not depend entirely on growth in the incumbent member states. Similar observations hold for real per-capita GDP.

Figure 1: Convergence of GDP per capita in the new EU countries



Source: Own calculations based on AMECO database.

Figure 1 plots the average real GDP per-capita growth rates during 1996-2003 together with the initial level of per-capita GDP in 1996. The figure is in line with the standard "convergence hypothesis" that, with free international trade and capital flows, poor countries should grow faster than richer countries. From this perspective, the Baltic countries and Poland, which have the lowest per-capita incomes in the group, should continue to enjoy the strongest growth rates among the new member states over the foreseeable future.

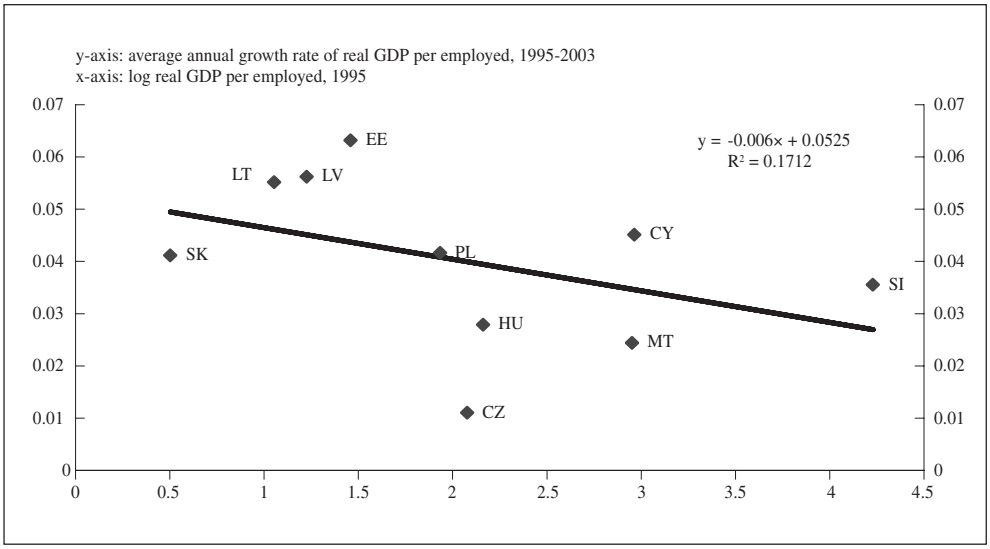
Table 4 reports labor-productivity growth rates in the new member states and compares them to the incumbent EU. Productivity is defined as real GDP per employed person. During the second half of the 1990s, annual productivity growth rates were about three times larger

Table 4: Labor productivity growth

Country	1996-2000	2001	2002	2003[1)]
Cyprus	6.6	2.1	0.6	1.5
Czech R.	0.5	1.6	1.2	3.7
Estonia	7.1	5.6	4.6	3.7
Hungary	2.9	3.4	2.8	2.4
Latvia	5.9	5.6	4.4	6.7
Lithuania	4.9	11.0	2.7	7.3
Malta	3.8	-2.9	2.1	1.9
Poland	4.7	1.7	3.7	4.9
Slovak R.	4.5	3.2	5.5	2.4
Slovenia	3.8	2.4	3.5	3.8
New member states average	3.8	2.5	3.1	4.0
Euro Area	1.1	0.3	0.3	0.4
EU-15	1.3	0.4	0.5	0.6

Source: AMECO database.
Note: Annual growth rates of real GDP per employed person.
1) Estimate.

Figure 2: Productivity convergence, 1995-2003



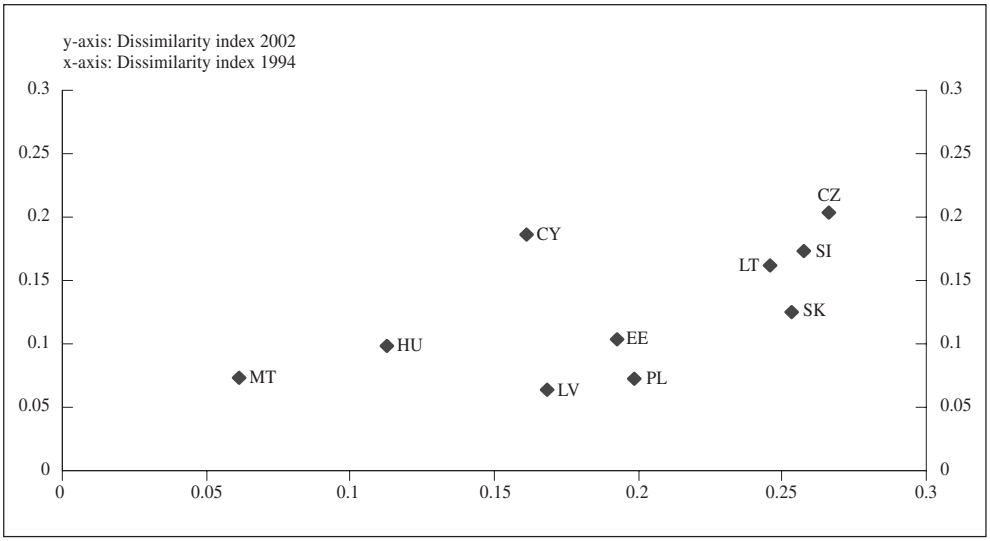
Source: Own calculations based on AMECO database.

than in the incumbent EU for the group as a whole. As in the incumbent countries, productivity growth slowed down in 2001, but it picked up rapidly again in 2002 and 2003, while remaining low in the incumbent countries. This, again, indicates that the new member states as a group have embarked on a growth path that is robust against economic slowdown in the incumbent EU. Again, the highest growth rates can be found in the three Baltic countries and Poland. Figure 2 shows that there is a tendency of convergence of productivity, as countries with low initial levels enjoyed higher growth rates than those with higher initial levels. However, the convergence in productivity is not as strong as it is in terms of per-capita GDP.

The economic transition from socialist to market economies in eight of the new member states, and the rapid economic growth accompanying it, have caused deep structural changes in their economies. Figure 3 shows changes in the sectoral structures. We consider four broad sectors of the economy, agriculture, industry, construction, and services. The *dissimilarity index* plotted in the figure measures the differences in the sectoral structure of each new member state and the average of the euro area economy. It is defined as $DISSIM_{iE} = \Sigma|s_{ki} - s_{kE}|$, where s_{ki} is the share of sector k in country i's GDP and s_{kE} is the share of the same sector in euro area GDP. A larger value of DISSIM indicates a higher degree of structural dissimilarity, or less similarity. Figure 3 plots this index for 1994 against the index for 2002. Values close to the 45-degree line indicate little structural change. Values below the 45-degree line indicate growing structural similarity over the period.

Based on the four-sector classification we observe that Cyprus, Malta, and Hungary experienced relatively little structural change over the period under consideration. For Hungary, this may be due to the fact that the country was already a relatively open and market oriented economy before its transition process began. In all other countries, we see indications of structural convergence, i.e., their sector structures have become more similar to that of the euro area.

Figure 3: Similarity of sectoral structures with the euro area (4 sectors)



Source: Own calculations based on AMECO database.

2.2 Nominal convergence

Adoption of the euro requires nominal convergence of the economies of the new member states to the euro economy. Nominal convergence will be assessed on the basis of the five *Maastricht criteria*, low inflation, low long-term interest rates, stable exchange rates against the euro, and the compliance with two reference values for general government debt and deficits relative to GDP[3]. Table 5 shows that the new member states have already achieved a substantial degree of nominal convergence.

The critical value for the inflation rate is the average of the three lowest inflation rates in the EU plus 1.5 percent. In 2003, this amounted to an annual rate of 2.7 percent. Table 5 shows that Cyprus, Hungary, the Slovak Republic, and Slovenia violated this criterion significantly in 2003. Taking the current inflation projections for 2004 (European Commission, 2004), the critical rate falls to 2.4 percent, which is met only by the inflation projections for Cyprus, Lithuania, and Poland. The decline in the critical rate is due to the very low inflation rates expected in Finland (0.4%), Sweden (1.2%), and Lithuania (0.4%) for 2004. The difference in the outcomes for 2003 and 2004 shows that, with 25 member states of the EU, the critical rate of inflation becomes quite volatile, because this rate is exposed to asymmetric shocks to the smallest EU economies. It is, therefore, not obvious that the average of the three lowest inflation rates in the EU provides a good yardstick for admitting countries into EMU. Since the EU-25 contains many more small open economies than the EU-15 in 1998, it is also clear that, in contrast to frequent declarations by the European Commission and the ECB, mechanically applying the same technical criterion to the new member states as to the first

[3] In addition, the adoption of the euro is conditioned on the compatibility of national legislation in the Member States with a derogation with the Treaty and the ESCB Statute. In order to achieve this legal convergence, the legislation in all new EU Member States requires adaptation (European Central Bank, 2004).

Table 5: Nominal convergence performance, 2003

	Inflation rates[1] (%)	General government balance (% of GDP)	General government gross debt[2] (% of GDP)	Long-term interest rates (%)	Exchange rate fluctuations[3] (+)	(-)
Cyprus	4.0	-6.2	72.2	4.7	1.4	-1.5
Czech Republic	-0.1	-12.9	37.6	3.9	3.9	-7.3
Estonia	1.4	2.6	5.8	4.3	0.5	-0.2
Hungary	4.7	-5.9	59.0	6.6	7.0	-5.1
Latvia	2.9	-1.8	15.6	4.9	10.6	-10.0
Lithuania	-1.1	-1.7	21.9	5.3	1.5	-1.4
Malta	1.3	-9.6	72.0	5.0	3.4	-4.9
Poland	0.7	-4.0	45.4	5.6	13.6	-13.8
Slovak Republic	8.5	-3.6	42.8	5.0	6.3	-2.6
Slovenia	5.7	-1.8	27.1	5.5	4.1	-3.8
Memo: Euro area	2.1	-2.7	70.4	4.1		
Reference value	**2.7[4]**	**-3.0**	**60.0**	**6.2[5]**		

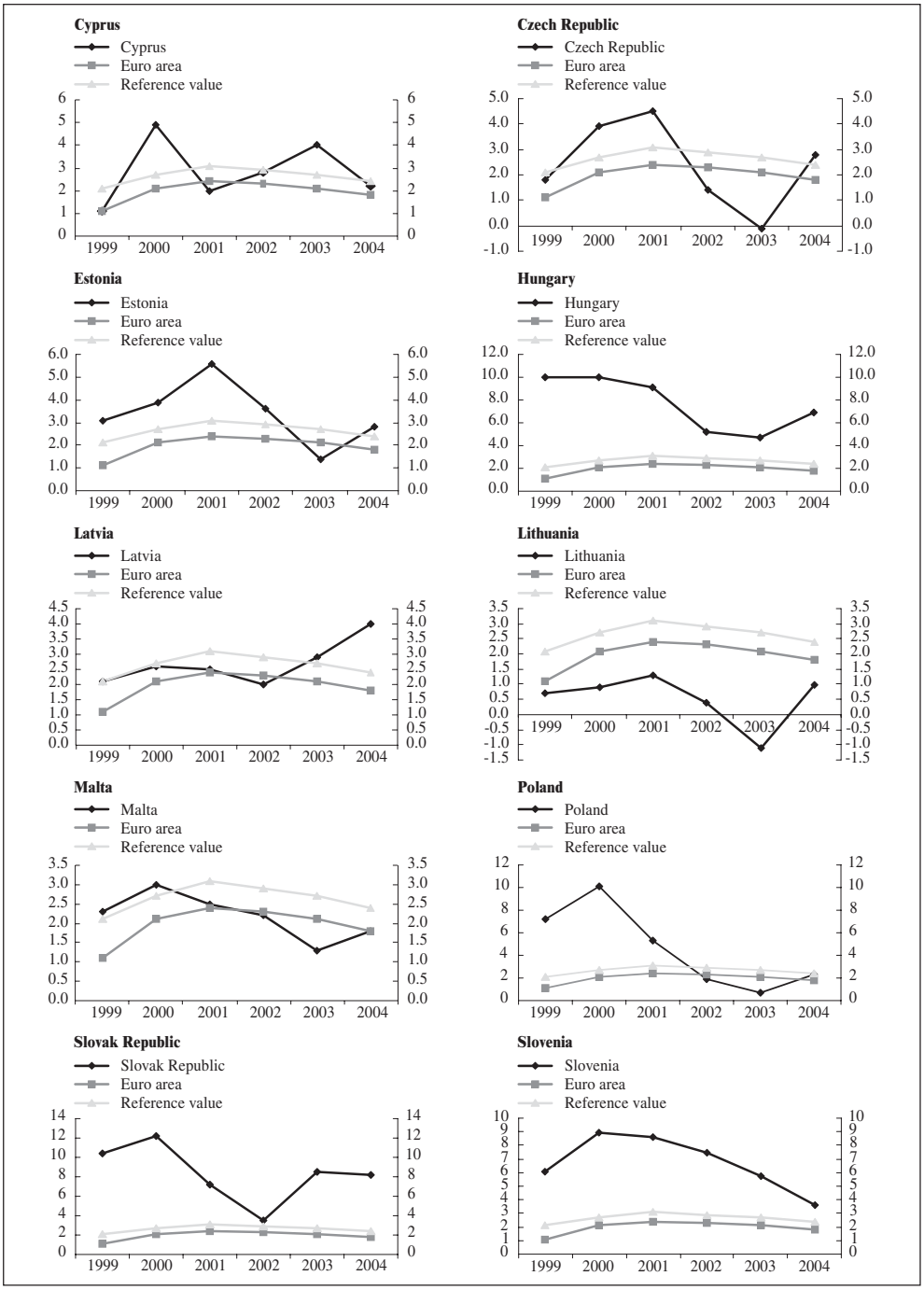
Source: AMECO database.
1) Harmonized index of consumer prices (HICP), percentage change on preceding year. Malta: deflator of private consumption. Percentage change on preceding year.
2) Government gross debt as defined in Council Regulation EC N° 365/93.
3) Maximum deviation of end-month exchange rates from average exchange rates over the two year period January 2002-December 2003. Positive (negative) deviations indicate depreciation (appreciation) of national currencies.
4) Calculated as 1.5% above the simple average of the HICP in Germany, Austria and Finland.
5) Calculated as 2% above the simple average of the long-term interest rates in Germany, Austria and Finland.

wave of EMU members in 1998 does not imply that the new members are treated in the same way as the incumbent members in 1997. Since countries joining EMU have to cope with the euro-area's inflation rate, the most sensible thing to do would be to change the inflation criterion to 1.5 percent above the euro-area rate of inflation. This would raise the critical rate to 3.3 percent in 2004, and allow Cyprus, the Czech Republic, Estonia, Lithuania, Malta and Poland to pass.

Figure 4 reveals different inflation trends in the new member states in recent years. The last *Pre-Accession Economic Programs* (PEPs) suggest that, in most countries, inflation rates are still strongly affected by changes in indirect taxes and administrative prices. Adjustment of relative prices to EU prices causes further price movements during 2004. The resulting fluctuations in the annual inflation rates should be properly interpreted as price level adjustments rather than inflation. They might have been avoided by a tighter monetary policy, but the potential macro economic costs of cutting aggregate demand to achieve that could have been unreasonably large. The experience illustrates that it can be difficult to achieve nominal convergence in terms of annual inflation rates as long as large adjustments in indirect taxes and administered prices are still needed. For the fast entrants, this suggests that any further changes in tax policies they might plan should be postponed until after the adoption of the euro. In contrast, those aiming at a later entry should do the necessary fiscal reforms soon to clear the way for a smooth path of nominal convergence.

In 2003, nominal convergence in terms of long-term interest rates was achieved by all new member states except Hungary (Table 5). This shows that the current inflation trends are perceived as credible by the financial markets. It also implies that, in contrast to many of the incumbent member states of the euro area, the new members cannot expect large fiscal gains

Figure 4: Inflation performance in the new EU Member States, 1999-2004 [1)]



Source: AMECO database.
1) Harmonized index of consumer prices.

from falling interest rates as the adoption of the euro approaches. Most of the credibility gains from adopting the euro have apparently been reigned in already in the process of EU accession.

To assess the requirement of exchange rate stability, we report in Table 5 the largest differences of the exchange rates between the national currencies and the euro from the average exchange rate during 2002-2003 the new member states experienced. The table reveals that only Estonia, Lithuania, and Cyprus, experienced exchange rate movements within fictitious bands of ±2.25 percent. The larger swings experienced by the other countries suggest that an ERM II with relatively wide bands would have been appropriate. Another way to look at this issue is to consider the trends in inflation, nominal and real exchange rates over the past several years. We do this in Table 6 for the years 2000-2004. Here, we use the European Commission's inflation projections for 2004 and exchange rates against the euro up to the second quarter of 2004. Nominal exchange rate trends were stable over this period in Cyprus, Estonia, Malta, and, to a lesser extent, Hungary. The other countries experienced rather pronounced exchange rate trends. For the Czech and the Slovak Republic and Lithuania, they resulted in nominal appreciations of their currencies, while the currencies of the other countries depreciated on average over these five years. Real exchange rate trends, calculated as the difference between the average changes in the nominal exchange rate and average HICP inflation, in contrast, were stable only in Malta and Slovenia. Poland and Latvia experienced sizeable real depreciations during this period, while the remaining countries underwent sizeable real appreciations of their currencies.

Some of these real appreciations can be attributed to the *Balassa-Samuelson effect* of relatively high productivity growth in the tradable sector. However, estimates of the magnitude of this effect indicate that its contribution is moderate at best.[4] The bulk of the real appreciations are probably due to the large capital inflows of recent years, a theme to which we return below.

Table 6: Average inflation and exchange rate changes, 2000-2004

	Average change in nominal exchange rate, 2000-2004	Average inflation excess over euro area inflation, 2000-2004	Average change in real exchange rate 2000-2004
Cyprus	0.29	1.03	-0.74
Czech Republic	-2.14	0.35	-2.49
Estonia	0.00	1.31	-1.31
Hungary	0.49	4.81	-4.32
Latvia	1.97	0.66	1.31
Lithuania	-4.17	-1.62	-2.55
Malta	0.12	-0.22	0.34
Poland	3.86	2.27	1.58
Slovak Republic	-2.33	5.74	-8.07
Slovenia	4.56	4.70	-0.14

Source: Own calculations.
Note: All exchange rates are units of national currency per euro.

[4] See Schadler et al. (2004). For estimates of the Balassa-Samuelson effect see e.g. Kovacs (2004) and Mihaljek and Klau (2004). Since the Balassa-Samuelson effect has already received a lot of attention in recent years, we do not pursue this theme further in this paper.

Most of the new member states comply with the 60 percent threshold for the public debt ratio, the exceptions being Cyprus and Malta. However, only the Baltic states and Slovenia comply with the 3 percent threshold for the deficit ratio. More than half of the huge deficit in the Czech Republic resulted from payments to the Czech consolidation agency and an imputed state guarantee, but even accounting for these one-time effects the deficit is too large. Similarly, most of the high deficit in Malta can be attributed to extraordinary developments related to project financing. We turn to a more detailed analysis of the public finances next.

3 Public finance: Size, structure and consolidation

3.1 Public sector restructuring

While the new member states must strive to meet the Maastricht criteria, the eight former socialist countries among them also have to adjust their public sectors to the new economic environments. Over the past decade, their public sectors have already undergone dramatic changes, as the average spending ratio dropped from almost 60 percent in 1989 to 43.5 percent, and the countries are much more similar in this regard now than before (Gleich and von Hagen, 2001).

The question of what is an adequate size of the public sector is not an easy one to answer. It requires a model explaining the size of government on the basis of economic characteristics. Rodrick (1998), Persson and Tabellini (1999), and Fatás and Rose (2001) suggest that the size of government can be explained on the basis of the degree of openness, represented by the share of foreign transactions (exports plus imports) in GDP. More open economies are more exposed to shocks originating outside the country such as terms-of-trade shocks or swings in the demand for exports than closed economies. A large government sector serves as a buffer against such shocks. Thus, more open economies should have a larger government than less open economies. Furthermore, the demand for many publicly provided goods such as education or infrastructure services can be expected to have a positive income elasticity. Thus, the size of government should increase with per capita GDP, a hypothesis which is empirically confirmed by Fatás and Rose (2001).

On this basis, we consider the following empirical model:

$$\frac{G}{Y} = a + b\frac{Trade}{Y} + cy + residual, \tag{1}$$

where G is government spending, Y is GDP, "Trade" denotes the sum of exports and imports, and y per capita GDP measured in thousand SDR. All data are taken from IFS statistics and IMF Government Finance Statistics for 1998 to ensure data availability. We estimate this model using a panel of 22 OECD, 11 Latin American and 10 CEE countries.[5] Our estimated equation has a dummy variable for oil exporting countries in Latin America, which have

[5] The Latin American countries are Argentina, Brazil, Bolivia, Chile, Colombia, Venezuela, Peru, Paraguay, Uruguay, Mexico and Ecuador.

relatively high trade shares, a dummy variable for the CEE countries, and a squared term for the trade variable. This gives the following regression result

$$\frac{G}{Y} = \underset{(2.55)}{13.1} - \underset{(2.69)}{12.1}\,oil + \underset{4.49}{14.5}\,CEEC + \underset{(2.48)}{35.1}\frac{X+\mathrm{Im}}{Y} - \underset{(2.20)}{18.6}\left(\frac{X+\mathrm{Im}}{Y}\right)^2 + \underset{(5.07)}{0.95}\,y \qquad (2)$$

$R^2 = 0.68$, number of observations = 43, $F(6,37) = 15.6$, t-ratios in parentheses.

As expected, openness enters with a positive coefficient.[6] Government size relative to GDP increases with per capita incomes, confirming that the income elasticity of the demand for public services is strongly positive. All parameters are highly significant and the fit seems reasonably good for a simple equation like this. Testing for parameter equality between the Latin American and the other countries or the CEE and the other countries yields no evidence for differences between these groups. The positive and statistically significant CEEC dummy indicates that, given the openness and per-capita income levels in Central and East Europe, the governments of these countries are still considerably oversized. Even the vigorous growth of real GDP since 1998 does not change that conclusion very much; the cumulative growth of per-capita incomes since 1998 has reduced the excess size of the governments by ratios between 0.3 percent (Estonia) and 1.3 percent (Slovenia.)[7]

This implies that we should expect these governments to become smaller relative to GDP over time and that governments will have to cut back or fade out existing policies instead of just increasing total spending and taxes as they take on new tasks and start providing new services in the process of adapting the public sector to a growing market economy and EU membership.[8]

Table 7 looks at the structure of public sector revenues in the new member states in 2003. For comparison, it also reports the (unweighted) average structure for medium-sized and small EU member countries. The group of medium-sized countries consists of Austria, Belgium, and the Netherlands; the group of small countries consists of Denmark, Finland, and Ireland. Medium-sized incumbent countries raise 28 percent of their total current revenues from indirect taxes and 29 percent from direct taxes. Small EU countries, in contrast, rely much more on direct taxes, which account for more than 40 percent of their total current revenues. They also collect more of their revenues from indirect taxes. While medium-sized EU countries collect about 34 percent of their revenues from social security contributions, this type of revenue is much less important for small EU countries. Since direct taxes are more effective instruments for redistribution of income, these differences suggest a stronger focus on redistribution in the small EU states. Since direct taxes are also more effective in providing co-insurance against income shocks, this is consistent with the notion that small states have a stronger preference for insurance against external shocks. Since social security contributions have a direct impact on unit labor cost, they affect the real exchange rate more strongly than direct or indirect taxes. The lower share of social security contributions in the total revenues of

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[6] Note that the derivative with regard to openness turns negative at a trade share above 200 percent, which is impossible.

[7] Using data from the most recent European Commission report on Public Finance in EMU, our model indicates that similar conclusions hold for Cyprus and Malta.

[8] Orban and Szapary (2004) point out several areas in which EU membership implies growing government expenditures for the new member states. Apart from their EU contributions, this includes cofinancing of investment projects and the increased administrative burden to implement EU legislation.

Table 7: Structure of government revenues (%), 2003

	Direct taxes in total revenues	Social security contributions in total revenues	Indirect taxes in total revenues
Medium-sized incumbents	*29.4*	*33.8*	*28.4*
Czech Republic	21.0	32.5	24.7
Hungary	22.9	30.0	33.6
Poland	16.9	35.9	36.9
Small incumbents	*42.3*	*15.6*	*32.8*
Cyprus	26.4	17.7	43.0
Estonia	22.3	27.4	29.6
Latvia	22.7	25.3	32.6
Lithuania	26.7	25.5	37.4
Malta	27.8	18.9	32.4
Slovak Republic	15.0	29.7	23.7
Slovenia	16.2	31.7	41.7

Source: Own calculations based on European Economy Statistical Annex, Spring 2004.
Note: Data for Slovenia are from the 2003 Pre-Accession Report and relate to the year 2000. Data for Cyprus and Malta are from national statistical offices.

small EU countries suggests that these countries are more concerned with their external competitiveness than medium-sized countries.

We take the medium-sized incumbent countries as the standard of comparison for the Czech Republic, Hungary, and Poland. Their shares of social security contributions in total revenues are similar to those of the medium-sized EU countries, but their shares of indirect taxes are considerably larger. Since indirect taxes tend to have undesirable distributional consequences, one may expect political pressures for a more equitable distribution of the tax burden leading to an increase in the share of direct taxes and a reduction in the share of indirect taxes in the future.

We compare the smaller new member countries with the average for Denmark, Finland, and Ireland. In the three Baltic states, the share of indirect taxes in total revenues is comparable to the average small EU country. In the Slovak Republic, in contrast, it is much lower, and in Slovenia much higher than in the small incumbent states. The share of direct taxes is very small and the share of social security contributions very large in the small new member states compared to the small incumbent states. This suggests that future reforms will reduce the share of social security contributions, especially as these states will tend to lower social security contribution rates to improve competitiveness in the EU markets. At the same time, direct taxation should become more important as considerations of distributional equity become politically more important.

In sum, these comparisons lead us to expect that future tax policies in the new member states will be guided by the wish for more distributional equity of the tax system, leading to more effective direct taxation. Furthermore, we expect a reduction of social security contributions in the smaller states.

Turning to the expenditure side, Table 8 shows that medium-sized incumbent EU members have lower shares of public salary payments and of transfers in total expenditures than small incumbent states. Since public sector employment tends to be more stable than private sector employment, this, again, is compatible with the notion that small open economies demand more insurance against economic shocks from their public sectors. Small incumbent states also have lower shares of subsidies paid to the private sector and higher shares of capital spending.

Table 8: Structure of public expenditure (%), 2003

	Compensation of employees	Transfers in total spending	Subsidies	Capital expenditures
Medium-sized incumbents	21.4	55.6	4.2	4.2
Czech Republic	13.8	39.9	5.0	7.3
Hungary	26.7	50.9	4.0	6.1
Poland	25.7	57.0	1.1	7.8
Small incumbents	28.0	61.3	2.8	6.6
Cyprus	32.4	41.7	2.6	8.1
Estonia	26.4	60.4	3.1	12.2
Latvia	23.3	49.0	1.8	5.5
Lithuania	32.9	62.4	3.1	8.1
Malta	28.6	n.a.	4.1	9.9
Slovak Republic	17.5	37.8	2.9	5.1
Slovenia	22.5	40.2	3.1	9.4

Source: Own calculations; European Economy Statistical Annex, Spring 2004.
Note: Data for Slovenia are for 2000.

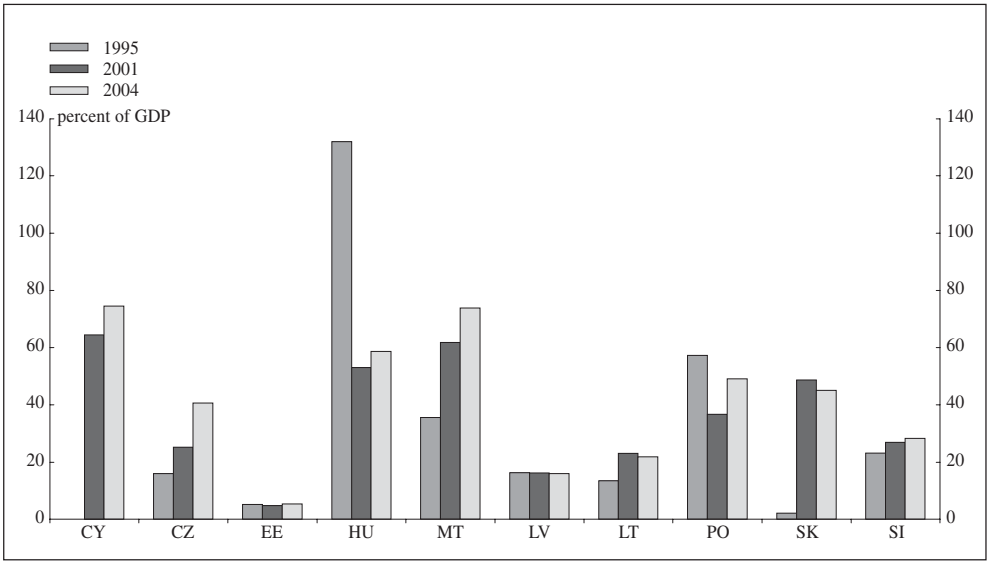
Among the new member states, Hungary and Poland allocate similar shares of total expenditures to salaries and transfers as the reference group. In contrast, the Czech Republic has a relatively low share of wage expenditures and transfers. Among the smaller countries, the Baltic states spend similar shares of their total expenditures on employee compensation as the reference group, and Estonia and Lithuania have very similar shares of transfers compared to that group. In contrast, transfers are still relatively low in Latvia, the Slovak Republic, and Slovenia. All new member states spend larger shares of their expenditures on public sector investment. Interestingly, with the exception of the Czech Republic the new member states do not spend more of their total government outlays on subsidies than the incumbent member states.

3.2 Sustainability

Membership in the EU comes with the unconditional obligation to maintain sustainable public finances. Sustainability is not a very precise concept in practice.[9] In terms of technical economic analysis, it is the requirement that the government operates within its intertemporal budget constraint, i.e., that the discounted sum of all future expected expenditures, including debt repayment, does not exceed the discounted sum of all future expected revenues.[10] The Excessive Deficit Procedure (EDP) and the Stability and Growth Pact (SGP) are – albeit imperfect – attempts to make sustainability operational. The EDP combines the unconditional obligation on the part of the member states to avoid "excessive deficits" with a procedure providing a regular assessment of fiscal policies in EMU and, if necessary, penalties for profligate behavior (Article 104, Treaty of European Union). The European Commission monitors budgetary developments and the stock of public sector debt of the member states, checking in particular their compliance with two *reference values* for the ratio of the deficit to GDP and the ratio of public debt to GDP. These are set at three and 60 percent, respectively

[9] See Perotti et al. (1998) for a detailed discussion.
[10] See e.g. Sargent and Wallace (1981).

Figure 5: Public debt ratios



Source: Own calculations; European Economy Statistical Annex, Spring 2004.

(Protocol on the EDP).[11] The criteria do not themselves define what an excessive deficit is, nor does breaching them imply any sanctions *per se*. The decision whether a deficit is excessive and should be penalized is taken by the ECOFIN Council.[12]

Figure 5 shows the debt-GDP ratios of new member states in 1995, 2001, and 2004.[13] Cyprus and Malta clearly exceed the 60 percent reference value, with an increasing tendency. Hungary and Poland both did so in the mid-1990s, but managed to bring the debt ratios down considerably due to strong economic growth and the real appreciations of their currencies.

A recent European Commission (2003b) paper studies the compatibility of some of the new member countries' fiscal policies with the debt criterion over the longer run. It estimates the debt-GDP ratio in 2005 and 2015 implied by four different scenarios: compliance with the deficit targets expressed in the most recent PEPs, a balanced-budget policy from 2005 on, a small-deficit policy (1 percent from 2005 on), and maintaining the 2002 fiscal positions. All scenarios assume the real GDP growth rates suggested by the countries' PEPs. For 2005, Hungary comes quite close to the 60 percent ratio in all scenarios and breaches it in the scenario maintaining its 2002 fiscal position. All other new member states have comfortable cushions in this regard, suggesting that public debt is not a serious impediment for an early entry into EMU. The Czech Republic is the only country coming close to the 60 percent ratio with its PEP target in 2015. With the large deficit realized in 2003, its position is now

[11] These values are obviously arbitrary. They were derived from the EU average debt ratio in 1991. Note that the IMF finds that in most cases of emerging market economies defaulting on their public debt, the debt ratio was below 60 percent, in 35 percent of the cases it was below 40 percent. (Jonas, 2004).

[12] For a detailed description of the EDP and the SGP, see Fatas et al. (2003).

[13] Note that the 1995 values refer to national data reported in Gleich and von Hagen (2001), while the 2001 data are from European Commission (2003a) and comply with EU accounting rules, and 2004 data are from the 2004 Spring Economic Forecasts.

Table 9: Estimated primary gaps to stabilize current debt ratios

	Real growth rate 3%		Real growth rate 7%	
Real interest rate	2%	6%	2%	6%
CZ	2.4	3.5	1.5	2.5
EE	-1.6	-1.4	-1.8	-1.6
HU	4.9	3.0	3.0	5.3
LV	2.1	2.7	1.5	2.1
LT	0.2	1.1	-0.5	0.4
PO	0.7	2.4	-0.7	1.0
SK	2.9	4.6	1.4	3.1
SI	-0.1	1.0	-1.0	0.1

Source: European Commission (2003b).
Note: Primary gaps indicate the adjustment relative to 2002 fiscal positions in percent of GDP.

probably even more precarious; Hungary and the Slovak Republic would breach the 60 percent ratio in 2015 by maintaining their current fiscal stances. For these three countries, the study illustrates that, for countries with relatively weak fiscal discipline coming from benign starting positions, the debt criterion creates an incentive to seek an early EMU entry. To check the robustness of the results, the study also takes the average growth rate from 1999 to 2004 as the relevant one from 2005 onwards. The results remain qualitatively similar.

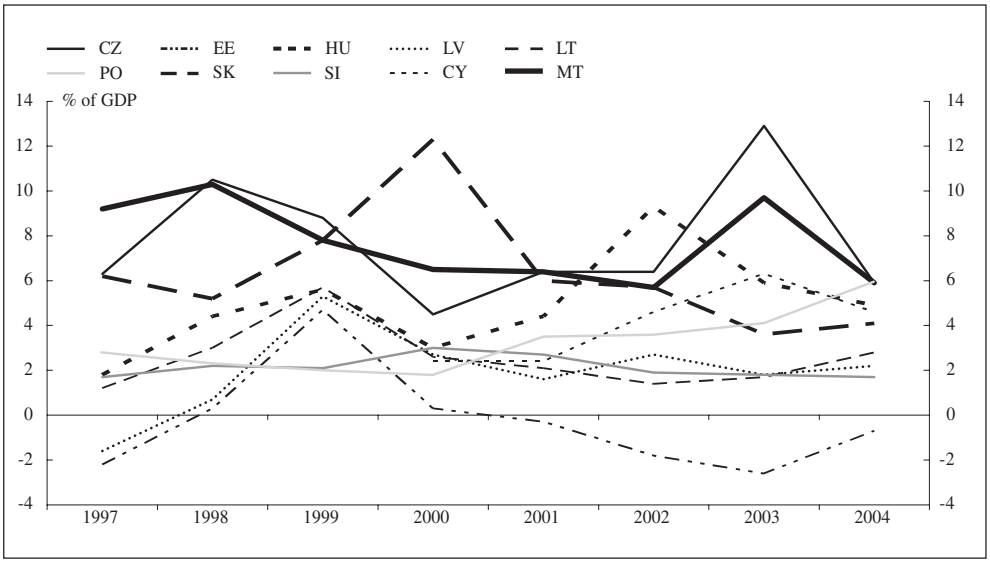
Since there is nothing special about a debt burden of 60 percent, the study also asks what fiscal adjustments would be necessary to maintain the current debt ratios stable. Table 9 gives the results for different assumptions regarding real GDP growth and real interest rates. A combination of low growth and high real interest rates would pose considerable challenges for the Czech and Slovak Republics, Hungary and Latvia. More benign scenarios reduce that pressure, but still leave a need for fiscal tightening in the same countries. Only Estonia and Slovenia have room for lasting fiscal expansions if they wish to maintain their current debt burdens. Orban and Szapary (2004) present a similar exercise asking for the primary-balance adjustment necessary in each country to reach a debt-GDP ratio of 40 percent by 2013. They find that Cyprus, the Czech Republic, Hungary and Malta need significant improvements in their deficits from their current fiscal positions.

Turning to annual fiscal deficits reveals a less rosy picture. Figure 6 plots the deficit-GDP ratios of the new member states from 1997 on. In the CEE countries, deficits sharply increased in the wake of the Asian and Russian currency crises, 1998-1999. But the figure reveals important differences in their fiscal management thereafter. The Baltic states and Slovenia quickly managed to bring their deficits close to balance, reaching levels well below three percent in 2002. For these countries, the flow constraint does not pose a threat to an early EMU membership.

In contrast, the deficit developments seem rather unstable in the Czech and Slovak Republics and in Hungary. The big increase in the Hungarian deficit in 2002 points to the importance of electoral cycle effects on fiscal policy.[14] The sustained, positive trends in the deficit ratios in the Slovak Republic, Hungary and, to a lesser extent, Poland and the high level of that ratio in the Czech Republic cast doubts on the commitment of the governments to their medium-term fiscal frameworks. More serious efforts are required to meet the three-percent limit. This is also true for Cyprus and Malta.

[14] See Hallerberg and Vinhas de Souza (2002) for a study of political business cycles in CEE countries.

Figure 6: General government budget deficits



Source: Own calculations.

Actual deficits are affected by both policy choices and endogenous responses of tax revenues and expenditures to changes in GDP. It is useful to separate these two in order to get a better picture of the policy choices. To do that, we apply a simplified version of the growth-accounting approach proposed by von Hagen et al. (2001, 2002). Let d_t be the deficit ratio in year t, i.e., the difference between general government spending and current revenues over GDP, and let Y_t be real GDP. We define the contribution of real GDP growth to the change in the budget deficit as

$$d_t^g = -d_{t-1} \frac{\Delta Y_t}{Y_{t-1}}. \tag{3}$$

This is the change in the deficit that would have resulted with no change in the spending and revenue ratios between the two years. Using (3), we define the fiscal impulse in period t as

$$\Lambda_t = \Delta d_t + d_t^g. \tag{4}$$

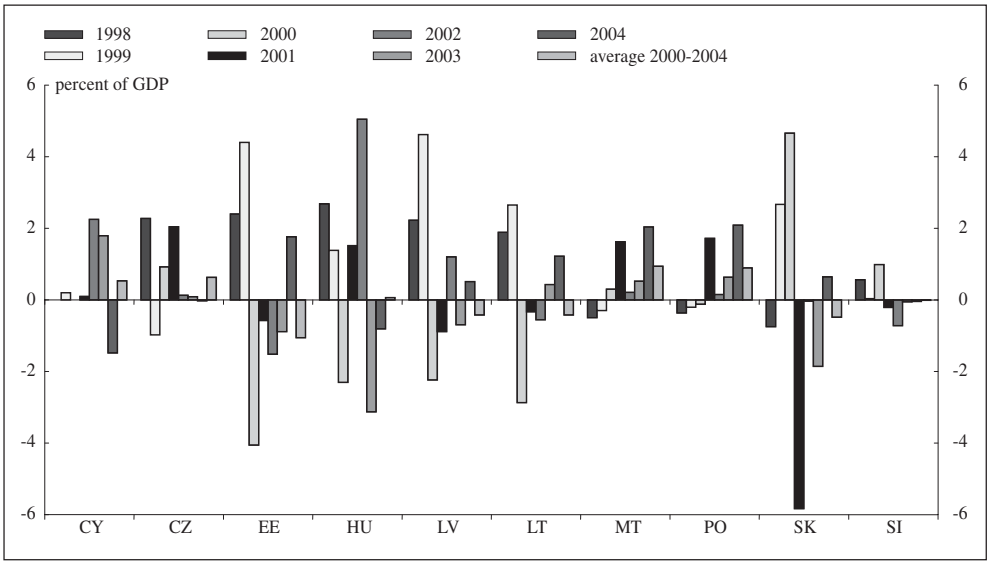
Thus, an active fiscal policy is one that results in a change in the deficit ratio which is not due to real GDP growth. A positive number indicates an expansionary fiscal impulse, while a negative number indicates a fiscal contraction.[15]

Figure 7 plots the annual fiscal impulses for the 10 new member states from 1998 to 2004.[16] In 1998-99, fiscal impulses were expansionary in all CEE countries except Poland, indicating

[15] Note that the acceding states have completed at most one business cycle since the beginning of the transition period. This means that reliable estimates of cyclical elasticities of budgetary aggregates are not yet available.

[16] For the Czech Republic, we take reduce governments spending by expenses connected to an implicit government guarantee that amounted to 6.3 percent of GDP.

Figure 7: Fiscal impulses



Source: Own calculations.

a discretionary, counter-cyclical response to the economic weakening resulting from the Russian and Asian crises. When growth revived in 2000, the Baltic states quickly switched to contractionary fiscal impulses. Lithuania kept this fiscal stance in 2002, while Estonia and Latvia relaxed their fiscal policies slightly in that year. On average over the years 2000 to 2004, fiscal policy in the Baltics was slightly contractionary. Slovenia's fiscal stance was very similar, resulting in a neutral average stance over the past five years.

In contrast, the Czech Republic had positive fiscal impulses in 2000 and 2001 and then turned to a neutral fiscal policy. Hungary's large fiscal impulse in 2002 probably reflects a political business-cycle effect that was sharply corrected in the following year. Poland's fiscal policy was expansionary in 2002-2004, though its fiscal impulses were smaller. The Slovak Republic stands out for a huge fiscal expansion in 2000 followed immediately by a sharp and large contraction in 2001. Cyprus had strong fiscal expansions in 2001 and 2002, while 2003 saw a strong, negative fiscal impulse. Malta's fiscal stance was expansionary in all years since 2000. Malta and Poland are the only two countries that consistently had an expansionary fiscal stance over this period; their average impulses reach 0.9 percent of GDP.

In sum, the deficit and fiscal impulse data paint a more critical picture of fiscal performance in the new member states than the debt ratios. Except in the Baltic states and, perhaps, Slovenia, there is a need for more effective fiscal management to control annual deficits.

3.3 Quality of fiscal adjustments

Successful consolidation of the government budget depends importantly on the quality of the budgetary adjustments undertaken, with "quality" referring to the relative contribution of different budgetary items to the adjustment effort. "Good" fiscal adjustments are marked by a strong emphasis on expenditure cuts rather than increased revenues, and on tackling those expenditures that are politically most sensitive like transfers, subsidies, and wage expenditures (Perotti et al., 1998). A consolidation effort is regarded as a successful one, if the reduction in the budget deficit lasts for a number of years. Recent research in this area (Perotti et al. 1998, von Hagen and Strauch, 2001; von Hagen, Strauch, and Hughes Hallett, 2002) shows that successful consolidations are good consolidations. Perotti et al. (1998) find that spending cuts contribute at least 70 percent to successful fiscal consolidations in EU countries. Countries that rely predominantly on raising more taxes to consolidate their budgets only achieve short-lived deficit reductions.

In Table 10, we report the adjustment patterns in large fiscal expansions and large fiscal contractions in the new member states from 1999 to 2004. We define large expansions and contractions as years in which the general government budget deficit increased or fell by at least one percent of GDP, respectively.[17] If there are two subsequent years in which the deficit increased by more than one percent, as in the Slovak Republic in 1999-2000 and in Hungary 2001-2002, we count both years together as one large fiscal expansion and report the average annual increase in the deficit ratio. Similarly, if a country's deficit ratio fell by more than one percent of GDP in each of two subsequent years, as in Malta 1999-2000 and Latvia 2000-2001, and Hungary 2003-2004, we count both years as one large fiscal consolidation and report the average annual decline in the deficit ratio. We compute the contribution of spending to the expansion by dividing the change in the ratio of general government spending to GDP by the change in the deficit ratio and multiplying the result by 100. A number larger than 100 indicates that spending increased or fell by more than the deficit. A negative number indicates that the spending and the deficit changed in opposite directions. We call a change in the deficit expenditure-dominated, if the contribution of spending is at least 50 percent. There are 16 large fiscal expansions and 14 large consolidations in our data.

The table shows that the average large fiscal expansion resulted in an increase in the deficit ratio by 2.7 percent of GDP. Increasing expenditure ratios contributed on average 103.1 percent to large fiscal expansions; this average is statistically significantly different from zero. 13 out of the 16 large fiscal expansions were expenditure dominated. In 10 cases, the change in the spending ratio accounted for more than 75 percent, in seven cases for more than 90 percent of the increase in the deficit ratio. Thus, like in the EU countries analyzed in Perotti et al. (1998), large fiscal expansions are mainly the consequence of a lack of control over government spending rather than declining fiscal revenues. Only the fiscal expansion in the Slovak Republic (1999-2000) was characterized by a fall in the spending ratio combined with an increasing deficit ratio, i.e. strongly falling revenues.

The average large fiscal consolidation was almost exactly of the same size as the average large fiscal expansion, an observation Perotti et al. (1998) also report for the incumbent EU countries. On average, 77.8 percent of large consolidations were due to cuts in government spending; again, this average is statistically significantly different from zero and it is very close to the 70 percent reported by Perotti et al. (1998) for the incumbent EU countries. There

[17] This is larger than the 0.5 percent of GDP criterion applied in studies of fiscal policy for the OECD. We use a larger cut-off to account for the greater volatility of deficit ratios in the countries considered.

Table 10: Quality of fiscal adjustments

Fiscal expansions			Fiscal contractions		
Country, year	Size	Contribution of spending	Country, year	Size	Contribution of spending
EE 99	4,4	68.2	CZ 99	-1.0	100.0
HU 99	1,2	50.0	MT 99-00	-1.9	76.3
LV 99	4,6	17.4	CY 00	-2.1	0.0
LT 99	2,7	96.3	EE 00	-4.4	105.5
SK 99-00	3.6	-12.7	HU 00	-2.6	-65.0
CZ 01	1.9	189.5	LV 00-01	-1.9	191.9
HU 01-02	3.2	76.1	LT 00	-3.1	245.5
PO 01	1.7	100.0	SK 01	-6.3	133.3
CY 02	2.2	68.2	EE 02	-1.5	0.0
LV 02	1.1	136.4	HU 03-04	-2.2	111.4
CZ 03	6.5	90.8	SK 03	-2.1	-104.8
MT 03	4.0	35.0	CY 04	-1.7	305.9
CY 03	1.7	282.4	CZ 04	-5.9	118.6
EE 04	1.9	89.5	MT 04	-3.8	-42.1
LT 04	1.1	272.2			
PO 04	1.9	89.5			
Average	2.7	103,1	Average	-2,9	77,8

Source: Own calculations.
Note: Size indicates the change in the government budget deficit as percent of GDP. Contribution of spending is the change of the government spending-GDP ratio as percent of the change in the deficit ratio.

are nine "good quality" fiscal consolidations in this data. The consolidations in Hungary (2000), the Slovak Republic (2003) and Malta (2004) are noteworthy for combining a rising spending ratio with a fall in the deficit ratio, i.e. a strong increase in the tax burden.

We can check the "success" of the consolidations occurring between 1999 and 2002. A consolidation is defined as successful, if the deficit ratio in the second year after the consolidation does not exceed the deficit ratio in the year of the consolidation by more than one percent. This is true for the consolidations in Malta (1999-2000), Estonia (2000), Latvia (2000-2001), Lithuania (2000), and Slovakia (2001). In contrast, the consolidations in the Czech Republic (1999), Cyprus (2000), Hungary (2000), and Estonia (2002) were not successful according to this criterion. Even though this evidence is limited, we can use a Chi-square test to check the hypothesis that "good" fiscal consolidations are more likely to be successful than "bad" ones. Putting the data into a 2-by-2 contingency table yields a test statistic $Q = 5.63$, which is larger than the Chi-square with one degree of freedom for a probability limit of 5 percent (3.8). Thus, scant as it is, the data support the hypothesis that consolidations based on expenditure cuts rather than increasing revenues are more likely to produce lasting reductions in the deficit ratio.

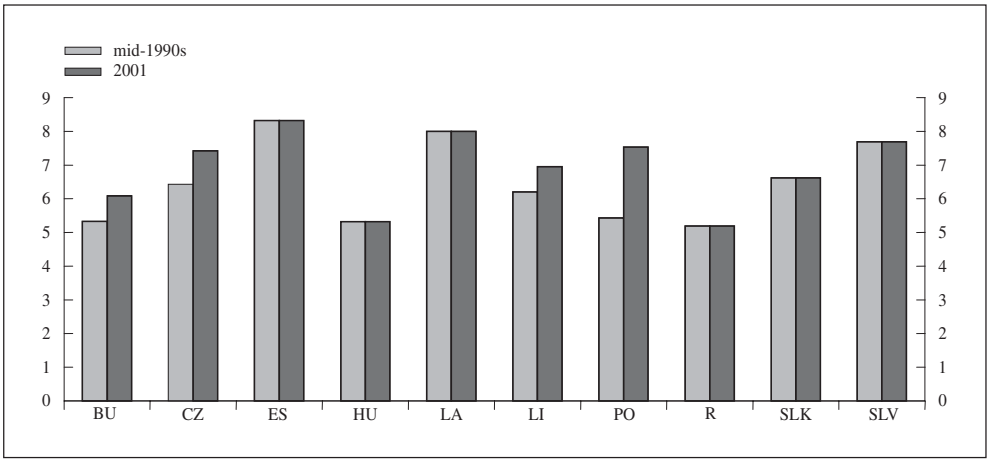
In sum, the evidence indicates that weak fiscal discipline in the new member states is primarily connected with weak control over government spending, and that efforts to reign in deficits must concentrate on cutting government spending. This is consistent with our earlier observation that the public sectors in the new member states tend to be too large.

3.4 The role of budgeting institutions

A growing body of theoretical and empirical research shows the importance of the design of the government budget process for solving this externality problem and achieving lasting fiscal discipline.[18] The budget process consists of the formal and informal rules governing budgetary decisions within the executive and the legislative branches of government, including the rules relating to the formulation of a budget by the executive, to its passage through the legislature, and to its implementation by the executive. The budget process can serve its purpose effectively only if all conflicts between competing claims on public finances are indeed resolved within its scope. Four deviations from this principle undermine its functioning: the use of off-budget funds, which allow policy makers to circumvent the constraints of the budget process and remove decisions altogether from being challenged by conflicting distributional interests, "non-decisions," which occur, when expenditures included in the budget are determined by developments exogenous to the budget process, e.g., by the indexation of spending programs,[19] "mandatory spending laws", i.e., non-financial laws that make certain government expenditures compulsory and the budget a mere summary of spending mandates created by simple legislation, and contingent liabilities such as guarantees for liabilities of public or non-public entities. The 2002 PEPs indicate that these deviations are still important in most new member states.[20]

Political economy suggests that the proper design of the budget process depends strongly on the form of government (Hallerberg and von Hagen, 1999). For multi-party coalition governments, which are the norm in the CEE countries, the appropriate institutional design of

Figure 8: Budgeting institutions



Source: Own calculations.

[18] See von Hagen (2003) for a review of the literature.

[19] Setting the relevant parameters of entitlement programs is part of the annual budget process in several countries. Another approach, used in Denmark, is to set cash limits on welfare appropriations and require the relevant minister to propose spending adjustments and changes in the relevant non-financial laws if these limits are overrun (von Hagen and Harden, 1994).

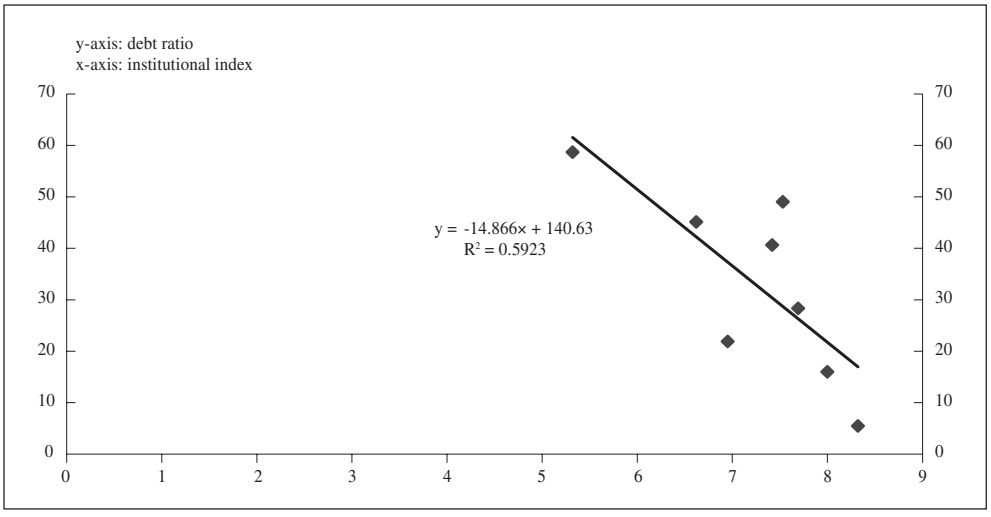
[20] See also European Commission (2003c).

the budget process conforms to the "contract model" (Hallerberg and von Hagen, 1999), which focuses on binding fiscal targets for total spending and the main spending aggregates fixed early in the budget process by a joint agreement among all members of the cabinet. These fiscal targets should be anchored on medium-term fiscal programs laid down in the coalition agreements. Their implementation should be safeguarded by a strong supervisory role of the finance ministry in the execution of the budget, clear and effective rules for expenditure management and rules for dealing with revenue windfalls and unexpected shortfalls.

Gleich (2002) studies the budget processes of 10 CEE countries and develops an index of institutional quality ranging from zero to 10, where a higher number indicates a better quality. Figure 8 shows the values of this index for the 10 CEE countries in the mid-1990s and in 2001. Estonia, Latvia, and Slovenia, had the best institutions, Hungary the weakest ones. Figure 9 plots the institutional index against the debt-GDP ratio and shows that countries with good institutions managed to maintain low debt ratios. The regression fitted through the data shows a significant negative correlation between the quality of budgeting institutions and debt ratios. The rank correlation coefficient between the institutional index and the debt ratio in 2003 is r = (-0.83), which is statistically significant from zero at the 5-percent significance level. Gleich (2002) also uses regression analysis controlling for economic developments and political characteristics to confirm that better institutions are conducive to lower deficit ratios in the same countries.

Another way to look at the interaction of fiscal performance and the design of the budget process is to consider the correlation between the average fiscal impulses in the years 2000-2004, shown in figure 7 above, and the institutional index. The rank correlation coefficient between these two is r = (-0.69), indicating that countries with better institutions had significantly less expansionary fiscal impulses during these years. The correlation is statistically significant at the 5-percent level.

Figure 9: Budget processes and debt ratios



Source: Own calculations.

These results suggest that countries can improve their fiscal performance through institutional reforms of the budget process. While Poland has made considerable progress in this regard in the late 1990s, and some reforms are currently under way in the Slovak Republic (see the 2002 PEPs), more efforts seem necessary especially in Hungary. Importantly, the new member states will have the opportunity to use the framework of the SGP to improve their budget processes. Like the contract approach, this framework focuses on annual fiscal targets embedded in medium-term fiscal plans. The SGP, therefore, gives an external reinforcement to domestic budget institutions in countries, where the contract approach is appropriate. Empirical research for the incumbent EU members shows that states that conform to this model have indeed consistently improved their domestic budget processes in recent years by tying them closely into the framework of the SGP (Hallerberg, Strauch, von Hagen 2001). They have also consistently met their fiscal targets, reduced their debt ratios and stayed within the limits of the EDP. In contrast, Germany, France, and Italy, which have now breached the limits of the EDP for several years, do not conform to the contract model of the budget process. Based on this experience, one can expect that fiscal discipline in the new CEE member countries will be strengthened by the SGP. Similar reasoning applies to Malta but not to Cyprus, which is a presidential democracy.

The move to EMU will add further disciplinary pressure on fiscal policy. Gosh et al. (1998) and Fatas and Rose (2001) in a large cross-section study, argue that countries adopting currency boards or multilateral currency unions have significantly larger budget surpluses than countries with less restrictive monetary regimes. A likely explanation is that currency boards force governments to live without recourse to central bank financing and to avoid excessive fiscal risks. Thus, giving up monetary policy autonomy induces more fiscal discipline at least in small open economies, which dominate the currency-board and monetary-union sample in their study. In an empirical study of fiscal policy in the CEE countries, Grigonyte (2004a) finds a similar result. Countries that adopted currency boards had significantly higher budget surpluses during the 1990s and early 2000s. Her result is particularly interesting for our context, because it holds up after controlling for the quality of the budget process.

4 Coping with large capital inflows

As expected from rapidly growing, small open economies with high investment rates, the new member states have experienced large current account deficits in recent years. Table 11 reports the average deficits in relation to GDP in the years 2000-2003. Estonia and Latvia stand out with deficits exceeding eight percent of GDP, Lithuania and Hungary follow with deficits of 5.6 percent of GDP and the Czech Republic with 5.1 percent. The picture in Malta is different, because its relatively large current account deficit of 6.2 percent of GDP is accompanied neither by similar growth rates nor investment rates as in these four countries. While the Czech current account deficit has not been supported by high growth rates in recent years, either, it does come with a high investment rate. Only Slovenia has kept its current account close to balance on average in recent years. As most new member states have experienced sizeable real appreciations of their currencies in recent years, their large current account deficits are not an indication of weak currencies; instead, they reflect the large capital inflows these countries have attracted in recent years.

The table also reports the capital inflows experienced by the new member states over the period from 2000 to 2003 and the type of financing. All countries in this group have experienced sizable net capital inflows during this period. To put the size of the capital flows into perspective, we compare them with the experience of some incumbent member states

Table 11: External performance 2000-2003

Country	Current account balance	Capital inflows	Direct investment	Portfolio investment	Other investment	Gross foreign debt	Foreign debt/ exports
Cyprus	-4.2	6.4	1.5	-1.2	5.1	70.0	1.27
Czech R.	-5.1	9.9	8.9	-0.8	-0.8	26.6	0.41
Estonia	-8.8	9.9	5.4	1.4	2.6	30.0	0.37
Hungary	-5.6	5.6	2.2	2.6	0.3	44.6	0.65
Latvia	-8.4	9.6	3.8	-1.9	7.2	46.4	1.02
Lithuania	-5.6	7.9	3.2	1.5	2.4	24.8	0.50
Malta	-6.2	9.1	5.2	-19.7	20.2	135.8	1.49
Poland	-3.9	4.1	4.4	1.3	-1.8	22.1	0.77
Slovak R.	-3.4	8.0	10.0	4.0	6.8	n.a.	n.a.
Slovenia	-0.4	7.9	4.3	0.1	3.1	30.8	0.31

Sources: International Financial Statistics, European Commission.
Notes: All entries are averages of annual rates in percent of GDP. Capital inflows include errors and omissions. Investment figures are net. Czech Republic and Poland: 2000-2002, Slovak Republic: 2000.

with large capital inflows in the past 20 years, see Table 12. The experience of Greece, Ireland, Portugal and Spain is interesting, because these were countries that were catching up with the older EU members at the time. It is clear that the average capital inflows experienced by the Baltic countries, Hungary, Poland, and Malta are "large" compared to the experience of these countries.

The sustainability of persistent, large current account deficits depends in part on the type of capital inflows to finance these deficits, as portfolio investment is commonly thought to be more fickle than direct investment.[21] A high share of direct investment, therefore, results in less exposure to sudden reversals of capital flows which might occur due to changing expectations and investor confidence in the international capital market.[22] Table 11 shows that

Table 12: Large capital inflows in incumbent countries

Country	Years of large capital inflows	Average capital inflows (percent of GDP)
Italy	1987-1990	2.0
Portugal	1987-1991	5.4
	1996-1999	5.9
Spain	1987-1991	4.5
	1996-1997	3.0
Greece	1986-1988	4.5
	1998-1999	6.0
Ireland	1986-1988	2.3
	1993	1.9
	1995	0.9
	1998	1.2

Source: Begg et al. (2003).

[21] As Buiter and Grafe (2002) point out, even foreign direct investment can be quickly reversed if there are well developed markets for equity and corporate securities.

[22] Note, however, that even foreign direct investment inflows could be reversed quickly, if foreign investors can sell their assets in liquid domestic securities or equities markets. (Buiter and Grafe, 2003).

Table 13: Marginal product of capital (Multiple of German MPC)

	CY	CZ	EE	HU	LV	LT	MT	PO	SK	SI
1996	2.76	4.17	10.35	4.87	16.36	9.95	1.51	8.07	6.08	2.87
2002	2.23	4.08	6.03	3.88	9.80	6.74	1.34	5.48	4.33	2.15

Source: Own estimates.

there are some striking differences in the type of financing among the new member states. In the Czech Republic, Poland, the Slovak Republic, and Slovenia net foreign direct investment exceeded the current account deficits substantially. In Malta, net foreign investment inflows almost match the current account deficits. The other states, in contrast, took recourse to portfolio and other investment to a much larger extent. It is interesting to note that Estonia and Lithuania, the two countries operating currency boards in this group, have relatively low shares of foreign direct investment in financing their current account deficits. This suggests that the credibility of a hard peg is not the principal factor in determining the financing conditions.

Table 11 also reports the gross foreign debt positions of the same countries at the end of 2001, measured in terms of GDP. Malta and Cyprus stand out for relatively large foreign debts, while foreign debt ratios remain well below 50 percent in the other countries. But relating foreign debt to the annual volume of exports shows that Latvia also has a relatively large foreign debt burden.

The prospect of further, large capital inflows will be an important factor shaping the macro economic policies of the new member states in the years to come. As Lipschitz et al. (2002) and Lipschitz (2004) note, the CEE countries in particular are rich in well-trained labor and poor in capital compared to their main trading partners, implying that the marginal product of capital is relatively high in the new member states. Table 13 reports some estimates of the marginal product of capital relative to Germany in the new member states. Following Lipschitz et al. (2002), these calculations are based on the assumption of Cobb-Douglas production functions with a capital elasticity of 1/3 and equal total factor productivities in all countries.[23] In 1996, the largest relative marginal products of capital estimated in this way prevailed in the Baltic countries, followed by Poland. In Hungary, and the Czech Republic, marginal products of capital were about 4-5 times larger than in Germany, in Slovenia and Cyprus about three times. Since the mid-1990s, these ratios have declined dramatically, reflecting the rapid productivity growth.

EU membership and the adoption of the *acquis communautaire* represents a dramatic improvement in the institutional framework of these economies, which, in macro economic terms, can be interpreted as a rise in total factor productivity adding to the gap in the marginal product of capital in favor of the new member states.[24] Furthermore, EU membership implies a higher degree of legal certainty for investors, which induces a reduction in country-risk

[23] Let $y_i = A_i (k_i)^{\alpha}$ be output per employed worker in country i, with k_i the capital labor ratio, A_i total factor productivity, and $\alpha = 1/3$ the capital elasticity. The marginal product of capital is $MPC_i = \alpha A_i (k_i)^{-(1-\alpha)}$. The capital labor ratios are computed using output in PPP dollars from the World Economic Outlook 2004 data base and labor force and unemployment data from the World Bank's World Development Indicators.

[24] IMF (2003) presents empirical evidence showing that institutional quality affects economic growth. Studying growth patterns in transition economies, Grogan and Moers (2001) find that institutional improvements lead to higher growth and stronger foreign direct investment. Alfaro et al. (2003) find that, in a sample of 50 countries, institutional weakness is an important hindrance against capital inflows to poor countries.

Table 14: Annual average real money and credit growth, 1999-2003

	Real money growth less real output growth	Real domestic credit growth less real output growth
Cyprus	7.7	8.2
Czech Republic	6.4	-1.1
Estonia	14.0	18.5
Hungary	10.2	7.2
Latvia	13.2	28.0
Lithuania	11.3	12.2
Malta	5.8	4.5
Poland	6.7	6.3
Slovak Republic	7.3	-1.2
Slovenia	12.5	13.5

Sources: IMF, own calculations based on International Financial Statistics.
Notes: Average annual growth rates of broad money and domestic credit. Malta: 1999-2002.

premia. Note that the last two arguments also apply to Cyprus and Malta. Based on these considerations, Lipschitz estimates the cumulated potential future capital inflows between 65 percent (Slovenia) and 596 percent of GDP (Lithuania.)[25] Obviously, these estimates must be taken cautiously given model uncertainty and potential limits of supply.[26] Furthermore, the inflows will be distributed over time. The main point, however, is that capital inflows are likely to remain large in the foreseeable future. Other factors contribute to this tendency (Begg et al., 2003). One is the relatively low level of financial development of the former socialist economies, which limits the extent to which capital investments are financed from domestic sources. Another one is the likely increase in the demand for money as inflation expectations continue to fall. Given the limited size of domestic securities markets, much of that increase will likely be accommodated by an inflow of foreign reserves at the central bank.

Large capital inflows are, of course, desirable in principle for relatively low-income countries, because they induce an efficient international allocation of capital and they push the receiving countries' consumption and investment frontier outside, allowing for more investment and higher consumption levels at the same time, and speeding up the growth and real convergence process. However, they also pose potential risks from two sides: overheating and volatility.

The first risk is that of the (in)famous *convergence play,* a combination of real appreciation and declining long-term interest rates due to falling inflation expectations and country-risk premia, which makes the economies even more attractive for short-term capital inflows and portfolio investment. If the demand financed by capital inflows fell entirely on tradables, it would simply be absorbed by large trade deficits. In practice, as witnessed by the experiences of Italy, Spain, and Portugal in the late 1980s and early 1990s, *convergence play* fuels domestic demand for non-tradables, too, where domestic supply is limited, and this leads to a severe overheating of the economy with new inflationary pressures. With a fixed exchange rate, the increase in the price level leads to a real appreciation of the domestic currency. With a floating rate, the central bank can do more to suppress inflationary pressures and let the nominal exchange rate appreciate.

[25] Lipschitz does not give estimates for Cyprus and Malta.

[26] Jonas (2004) notes that global capital flows to emerging market economies have surged in 2003, but predicts that they will be reduced in the coming years.

These conventional demand effects may be augmented by financial market or balance sheet effects (see Calvo 2002, 2003, Calvo et al. 1999, 2004). Calvo and Reinhart (1999) call this the *Fisherian* channel of the transmission of capital inflows. The real appreciation of the home currency induces a rise in the relative price of non-tradables, the more so, the more the central bank tries to stabilize the nominal exchange rate. As a result, producers of non-tradables face a lower ex-post real interest rate and rising cash-flows that raise the value of their assets that can be collateralized against bank loans. Large capital inflows are, therefore, often connected to asset and real estate price bubbles fuelling credit booms. To the extent that they are absorbed by an expansion of international reserves at the central bank, the ensuing monetary expansion contributes to this development. We can assess this risk by looking at recent growth rates of broad money and credit in the new member states, see Table 14.

The table reports the average growth rates of broad real money and real domestic credit between 1999 and 2003. To put them in perspective, we subtract the average growth rates of real GDP over the same period. There are two groups emerging in this table: Cyprus, the Czech Republic, Malta, Poland, and the Slovak Republic, which had growth rates of real money exceeding real GDP growth by 6-8 percent, and Estonia, Hungary, Latvia, Lithuania, and Slovenia, where this difference exceeded 10 percent. Falling rates of interest and inflation expectations may have caused a decline in the equilibrium velocity of money. If the income elasticity of the demand for money exceeds one, strong real GDP growth adds another explanation. Thus, real money growth rates of 6-8 percent annually may not be excessive. However, the strong monetary expansions in the second group raise a warning flag. Turning to credit growth, the ongoing process of financial market development leads one to expect that credit is growing fast in the new member states. Nevertheless, the table indicates four countries with clear signs of a strong credit boom, Estonia, Latvia, Lithuania, and Slovenia. Taking money and credit growth rates together, they seem to be the critical cases in the group. This is interesting because, in the past, these four countries also put the largest weight on stabilizing the exchange rate among the countries in this group (von Hagen and Zhou, 2004; Thimann et al. 2004).

The second risk connected with large capital inflows is their volatility. To date already, capital inflows to the new member states have been quite volatile. Table 15 reports the standard deviation of annual capital inflows relative to GDP between 1994 and 2003. This ratio varied between 2.6 percent of GDP for Poland and 5.0 percent of GDP for Hungary.

Table 15: Volatility of capital inflows

Cyprus	Czech Republic	Estonia	Hungary	Latvia	Lithuania	Malta	Poland	Slovak Republic	Slovenia
Standard deviation									
4.1	4.6	3.6	5.0	5.6	3.0	4.4	2.8	2.6	4.4
Change 1999-2000									
-4.2	0.7	0.3	-1.5	-5.4	-2.0	-2.9	-1.4	-1.5	0.9
Largest capital inflow reversal during 1994-2003									
-8.2 (2003)	-11.2 (1997)	-6.5 (1997)	-19.9 (1996)	-5.8 (2002)	-6.1 (1999)	-17.2 (1995)	-3.8 (2001)	-2.3 (1997)	-9.9 (2003)

Source: Own calculations based on International Financial Statistics.
Notes: Standard deviations for Poland and Czech Republic: 1994-2002, for Slovak Republic: 1994-2000. All entries are in percent of GDP.

Volatility is large compared to the average inflows reported in Table 11. The table also shows that several countries in this group experienced large reversals of capital inflows, *Sudden Stops* in the terminology of Calvo and Reinhart (1999). Between 1999 and 2000, capital inflows slowed down in seven of the ten countries, the exceptions being the Czech Republic, Estonia, and Slovenia. Between 1994 and 2003, eight of the ten countries experienced at least one year in which capital inflows declined by more than five percent of GDP, four experienced a decline of (almost) 10 percent or more. This confirms Calvo and Reinhart's (1999) observation that large capital inflows are often been followed by sudden stops and reversals. Except for Poland and the Slovak Republic, the reversals reported in Table 15 easily qualify as *large* compared to the evidence reported by Calvo and Reinhart. Obviously, they have affected countries with very different exchange rate regimes, supporting Calvo's (2003) argument that exchange rate policies are of secondary importance to the incidence of *sudden stops.* Note also, that the largest reversals occurred around the year 2000, which confirms the observation in Calvo and Reinhart (1999) and Calvo et al. (2004) that sudden stops are bunched in time and across countries.

Sudden stops create macro economic problems through the same channels discussed above in reverse (Calvo and Reinhart, 1999). A *sudden stop* requires a contraction of the current account deficit or the money supply or both, leading to a contraction in aggregate demand. The ensuing real depreciation of the currency entails a drop in the relative price of non-tradables. Producers of non-tradables now face higher ex-post real interest rates and lower values of their assets than anticipated, including those assets they can use as collateral for borrowing from banks. Banks react to the resulting deterioration in the quality of their loans by cutting back lending. The resulting credit crunch makes the recession more pronounced and longer lasting. In principle, this financial effect could be avoided by a large nominal depreciation of the currency. This, however, would increase the burden of foreign currency debt on the government and the private sector.

Coping with large capital inflows is a difficult task for macro economic policy. Since the underlying reason is real, there is not much monetary policy can do. The obvious response would be to tighten monetary policy to prevent aggregate demand from overheating. With a fixed exchange rate, capital inflows then lead to a rapid increase in international reserves. The central bank may try to sterilize their impact on the money supply, but in practice this is costly and ultimately of limited success. Inflationary pressures then result in a real appreciation, a loss in international competitiveness, and a widening current account deficit. With a flexible exchange rate, the central bank may be more successful to keep inflation low, but at the cost of a nominal appreciation of the currency, with the same effect on competitiveness and the current account.

At the same time, episodes of large capital inflows into small open economies generate a preference for low exchange rate variability, even if the official exchange rate regime allows for a high degree of flexibility. This has been dubbed the *fear of floating* by recent literature. The reason is that, since emerging-market countries typically cannot borrow internationally in their own currency, large capital inflows lead to a mounting stock of foreign debt denominated in foreign currency. Exchange rate variations then expose the government and the private sector to fluctuations in their balance sheets. Hausmann et al. (2001) show that *fear of floating* is strongly associated with a country's borrowing in foreign currency and the degree of exchange rate volatility it allows.[27] If this is true for the new EU member states, they

[27] A recent paper by Detken and Gaspar (2004) shows that fear of floating could also stem from the combination of inflation targeting and a specific monetary-policy rule in a new-Keynesian model.

will show a tendency for strongly managing their exchange rates as the capital inflows continue to persist. They may even decide to enter the ERM II for that reason, hoping that it offers more credibility of their commitment to exchange rate targets. Yet, the comfort offered by an exchange rate peg in this situation can be quite betraying. As the risk of exchange rate variability seems to be low, private borrowers and the government are more inclined to borrow in foreign currencies than they would be otherwise, which increases the exposure to *sudden stops* and exchange rate crises. As long as the capital inflows continue to be large, the exchange rate peg causes a monetary and credit expansion that aggravates the tendency for overheating. Once the capital flows dry out, the peg may come under speculative attacks, which, unless they can be successfully defended, are costly and more disruptive than the adjustment under a floating rate.

The ERM II may offer some relief and credibility in such a situation due to the financial support for interventions it provides, but the history of the early 1990s suggests that its usefulness is limited at best. The experience teaches that European exchange rates tend to become objects of politics, especially in situations of market tensions. The countries exposed to *convergence play* failed to adjust their exchange rates timely in the late 1980s and early 1990s, which contributed to the size of the later devaluations and currency crises. When Germany asked for a revaluation of the DM to absorb the post-unification capital inflows, other governments and central banks were unwilling to grant the adjustment. It is not clear a priori, that the new member states would not see similar resistance against repeated devaluations of the euro against their currencies, which might be required to counteract inflationary tendencies if capital inflows continue during their ERM II membership. Thus, the multilateral nature of the ERM II does not obviously add to its economic rationality. It is equally uncertain that the multilateral political negotiations required for devaluations can be completed fast enough in the case of a *sudden stop*. The multilateral political framework may, in contrast, create ambiguities and rumors in the markets, which could undermine the credibility of the pegs.

Since a *sudden stop* of capital inflows is equivalent to a cut in international credit to the home economy, the appropriate response by the central bank would be to expand credit to the private sector. This could be done through open market operations or loans to the banking system under a flexible exchange rate and entail a nominal depreciation of the currency. The latter also reduces the need for the relative price of non-tradables to fall, but increases the domestic value of the foreign debt burden on the government and the private sector to the extent that foreign debt is denominated in foreign currency. Maintaining an exchange rate peg, in contrast, avoids the valuation effect, but the loss of international reserves at the central bank leads to a monetary contraction that makes the credit crunch more severe. Thus, *sudden stops* create a monetary policy dilemma. As recent literature has noted, euroization offers a partial way out of this dilemma.[28] First, it eliminates the valuation effect on the affected country's debt denominated in euros. Second, the supply of bank credit would not be limited by the domestic central bank's supply of bank reserves but by the ESCB's supply of bank reserves. This would make any the credit contraction less severe, as monetary policy would not add to it. As a result, countries facing large (and volatile) capital inflows should have a preference for either floating exchange rates or euroization, but avoid soft pegs, especially if, as in the case of the ERM II, they are unprotected by capital controls.

Fiscal policy is the more appropriate policy instrument for dealing with capital flows. In the face of large inflows, tightening the fiscal stance helps reduce the risk of an overheating

[28] See Begg et al. (2003) and the literature discussed there.

economy. Here, again, the quality of the fiscal adjustment matters. If tightening is achieved by raising tax rates, the result would be buoyant tax revenues and, therefore, a strong temptation to expand fiscal spending. At the same time, initiatives to cut spending in the face of a strong economy will not be very popular. Furthermore, Calvo (2003) points out that, by raising distortionary taxes, the government may reduce the economy's growth potential and this could precipitate a *sudden stop*. Again, it is important to achieve tightening by cutting government expenditures rather than raising taxes. This makes the role of good budgeting institutions especially important. Effective spending controls and medium-term fiscal targets well anchored in the planning and implementation procedures will be important to achieve a sufficient degree of fiscal discipline and use fiscal policy to manage capital inflows.[29]

As most of the new member states need to tighten their fiscal policies to meet the requirements of EMU, managing capital inflows and meeting these requirements are complementary goals for them. However, the countries with the tightest fiscal stance in recent years are also the countries with the strongest credit expansions. For them, as for the others in the future, further tightening to fend off the macro economic effects of large capital inflows may be asking too much of fiscal policy (Jonas, 2004).

There is also a task here for prudential supervision and banking regulation involved in managing large capital inflows. Recent empirical studies show that large credit booms and strong real appreciations are among the best indicators of the risk of currency and banking crises.[30] Banking regulation can help to prevent capital inflows from spilling over into domestic credit booms (Begg et al., 2003.) Strict rules against overlending and overexposure to individual borrowers are one important element. As lending booms are often triggered by bubbles in real estate prices, limits on the use of real estate as collateral can serve as another element of protecting the banking system against adverse developments. Furthermore, currency mismatch in the aggregate balance sheet of the banking sector has been an important part in the link between banking problems and currency crises in recent years. Systemic risk arising from large exposure to international interest rate shocks or sudden capital outflows may not be visible in individual bank balance sheets even when it is in the aggregate balance sheet. Monitoring the entire banking sector's financial position is, therefore, an important part of banking supervision in the new member states.

5 Convergence to the euro and the ERM II

Entry into EMU requires participation in the ERM II for at least 2 years. The ERM II features a central parity against the euro, standard fluctuation bands of ±15 percent around this parity, compulsory interventions at the margins, the availability of very short-term financing for interventions, and the absence of any capital controls to protect the mechanism against speculative attacks.[31] The ECB has the right to suspend interventions in support of weak currencies, if its goal of price stability is jeopardized otherwise. Since there is no formal definition of what this means, markets will never be fully assured of the ECB's commitment to defend the exchange rate bands. Participating countries may choose narrower bands than

[29] Kopits (2000) also notes the usefulness of credible medium-term fiscal plans (*rules* in his terminology) to avert currency crises in emerging-market economies.

[30] For banking crises see Borio et al. (2004) and Ho and von Hagen (2004). For currency crises see Kaminsky and Reinhardt (1999).

[31] The latter is part of the Single Market framework and applies to all EU member states independently of the ERM II. The Treaty allows for temporary limitations under specific, exceptional circumstances.

the standard ones as unilateral commitments, i.e., with no obligation to defend them for the ECB. In particular, the currency boards against the euro would continue to be considered as unilateral commitments. The ERM II allows for changes in the central parities and the width of the bands of fluctuations in a cooperative procedure involving the ECB, the national central banks, the finance ministers, and the Commission. All parties to the mutual agreement have the right to initiate the procedure to change central rates.

5.1 The ERM II: Boot camp or purgatory?

The experience of the original ERM in the early 1990s and of the numerous currency crises in the 1980s and 1990s teaches that soft pegs with no protection from capital controls like the ERM II are inherently unstable, as changes in the markets' perception of the credibility of the peg can trigger large and swift capital outflows. In one sense, this is good, because it subjects monetary and fiscal policy to the scrutiny of international investors and the risk of a currency crisis caused by flawed domestic policies exerts heavy disciplinary pressure on the governments. Empirical research into the causes of currency crises suggests they are indeed linked to weak macro economic fundamentals like high inflation, excessive credit growth, large budget deficits and external deficits, as well variables that may have a role in self-fulfilling crises like unemployment or banking-system fragility (e.g. Eichengreen, Rose and Wyplosz 1995, Goldfajn and Valdes 1997, Kaminsky and Reinhart 1999). Economists from the IMF (Schadler et al., 2004) and the ECB (Thimann et al., 2004) concur with ECB officials[32] and former EU Commissioner Solbes (2003) that the ERM II creates strong incentives for consistent macro economic policies. Hochreiter and Tavlas (2004b) and Papaspyrou (2004) stress the importance of consistent macro economic policies to build the credibility that facilitated Austria's and the Greece's entries into EMU via the ERM and the ERM II. In this view, the ERM II is a policy-makers' *boot camp*, training them for sound domestic policies aiming at macro economic stability.

If this view were correct, one would expect that participants in ERM-type arrangements conduct better macro economic policies than countries with floating exchange rates. Unfortunately, empirical research has very little to offer to support that view. The literature of the early 1990s has shown extensively, that the original ERM did not contribute to better macro economic policies in the member states compared to countries maintaining floating exchange rates (Fratianni and von Hagen, 1990, 1992). Low-inflation discipline was weaker, disinflation took longer and, from the early 1980s onwards, unemployment rates were higher in the countries participating in the ERM except Germany. Perhaps, this was the case because undisciplined policies were still protected by capital controls. However, De Grauwe and Schnabl (2004) find no evidence that hard and intermediate pegs regimes lead to lower inflation among European transition economies. Fatas and Rose (2001) and Grigonyte (2004a) find no evidence that soft pegs lead to more fiscal discipline than floating exchange rates, although very hard pegs and unilateral monetary unions do.

The main problem with the boot-camp view of the ERM II is that it relies heavily on the assumption that financial markets always act rationally and based on sound assessments of every country's individual circumstances. There is ample evidence throwing doubts on that assumption. The relevance of non-rational behavior such as herding effects in foreign exchange markets and crisis contagion has been amply documented in the literature (e.g.,

[32] See the quotes in Thimann et al. (2004).

Eichengreen, Rose and Wyplosz 1995). Grigonyte (2004b) finds that the risk premia contained in foreign-currency denominated debt issued by the Baltic states increased significantly during the Russian crisis in 1998, although their fiscal performance did not deteriorate dramatically. Similarly, Bernoth et al. (2004), Grigonyte (2004b), and Favero and Giavazzi (2004) find that default risk premia (for EU member states in the Bernoth et al. paper) are significantly affected by swings in the degree of risk aversion in the international capital market. This implies that interest rates may sharply increase and a currency peg may come under attack due to a sudden increase in risk aversion in the international debt market unrelated to domestic fundamentals. Calvo (2002) points to informational and institutional deficiencies of international capital markets that explain the contagion of *sudden stops* and currency crises. As noted above, s*udden stops* tend to be bunched in time, and they have affected countries with very different macro economic fundamentals. To the extent that currency crises and *sudden stops* arise in situations characterized by multiple equilibria, macro economic data will not provide clear warning signals (Calvo 2003). All this implies that sound domestic macro policies are not enough to rule out currency crises. The logical flaw of the boot-camp view of the ERM II therefore is that it mistakes a necessary for a sufficient condition for exchange rate stability. The alternative view is that the ERM II is a "purgatory" imposing the risk of unnecessary and potentially large damage on countries before they enter EMU (Buiter and Grafe, 2002). In this view, countries should be allowed to enter EMU as soon as they fulfill the inflation and fiscal sustainability requirements, i.e., the ERM II requirement should be scratched (Buiter, 2004)

Where one comes down between the *boot-camp* and the *purgatory* views of the ERM II is, ultimately, a matter of allocating macro economic risk. Neglecting the risk of financial market crises hitting small open economies with sound fundamentals is easy for incumbent EU authorities, because the economic fall-outs of speculative attacks and financial crises would be borne by the new member states rather than themselves. They insist on the ERM II requirement because they do not wish to see the discipline and quality of EMU monetary policy diluted by potentially less stability-oriented members.[33] Neglecting the disciplinary potential of the *boot camp* is easy for policymakers in the new member states, who rightly fear the cost of financial crises and do not consider themselves as being less stability-oriented. In the end, therefore, the issue is a distributional one, i.e., it is about who carries more macro economic risk before the new member states enter EMU.

If immediate euro-adoption is not allowed, the best strategy for the new member states is to minimize the time spent in the ERM II, i.e. to enter the system no sooner than two years before the planned convergence assessment. The question then is how soon that should be achieved. The answer depends mainly on each country's ability to achieve and maintain a large degree of monetary stability based on its own currency. For the larger countries, Poland and the Czech Republic, there is a plausible potential for monetary policy to be effective in that regard.[34] For the smaller countries, that potential is virtually non-existent. For them, keeping a national currency with a fixed exchange rate is a dangerous luxury (Buiter and Grafe, 2002; Buiter, 2004). They would do best entering the ERM II immediately, working hard to meet the entry requirements and adopting the euro in 2006. The two other countries could continue their regimes of inflation targeting without much regard to exchange rate

[33] This is a kind of replay of the policy debate among the current EMU member countries in the early and mid-1990s. See e.g., Alesina and Grilli (1993) and Fratianni and von Hagen (1992).

[34] Cf. Orlowksi (2000).

management until they have achieved sufficient degrees of fiscal sustainability and low inflation rates.[35]

5.2 Converging towards the euro

To analyze the macro economic issues involved in the passage to the euro, it is useful to consider the standard monetary model of the exchange rate. The fundamental relationship of this model holds that the exchange rate at any point in time, t, depends on a stochastic fundamental, x(t), and the expected change in the exchange rate,

$$s(t) = x(t) + \frac{1}{\alpha}\frac{E_t d(s(t))}{dt} = \frac{1}{\alpha}\int_t^{\infty} E_t[x(v)]e^{-(v-t)/\alpha}dv, \tag{5}$$

where $E_t(.)$ denotes the conditional expectation at time t, and t, $\alpha > 0$. Suppose that the monetary authorities announce the conversion of the currency into the euro at some future date T. Then the exchange rate path becomes

$$s(t) = e^{-(T-t)/\alpha}E_t c_T + \frac{1}{\alpha}\int_t^{T} E_t[x(v)]e^{-(v-t)/\alpha}dv, \tag{6}$$

where $E_t c_T$ is the expected conversion rate of the national currency into the euro applied at time T. The first term in equation (6) shows that the expected conversion rate anchors the exchange rate, while the second term represents the impact of the fundamentals until the time of conversion. Note that

$$e^{-(T-t)/\alpha} + \int_t^{T} e^{-(v-t)/\alpha}dv = 1 \tag{7}$$

Thus, the exchange rate is a convex combination of the expected conversion rate and the expected fundamentals. As the conversion date comes closer, forward-looking speculation drives the exchange rate towards the announced conversion rate until it converges to this rate at time T. Furthermore, assuming that the fundamental x(t) follows a Brownian motion without drift and conditional variance σ_x^2, the instantaneous variance of the exchange rate along the path (6) is,

$$\sigma_e^2(t) = (1 - e^{-(T-t)/\alpha})\sigma_x^2 \le \sigma_x^2, \tag{8}$$

which declines steadily as t approaches T. The inequality in (8) says that the announcement of a fully credible conversion rate c_T generates a volatility benefit in the sense that it stabilizes the exchange rate on the way to the conversion date. No central bank intervention is necessary to make that happen. As Wilfling and Maennig (2001) show in a similar model, uncertainty

[35] While an official position of "benign neglect" of the exchange rate would contradict the rule of the European Treaty that EU member states regard their exchange rates as matters of common concern, the examples of Sweden and the UK suggest that de facto such a policy is acceptable in the EU.

about the date of conversion adds to the exchange rate volatility during the run-up to the conversion date, although the volatility is never larger than in a free float.

This model has several policy implications. A first implication is that policy makers cannot "leave it to the market" to determine the appropriate conversion rate, a contention that was popular in the run-up to EMU (see Begg et al., 1997). Suppose, the monetary authorities simply announce that the conversion rate will be the market equilibrium rate at the time of conversion, T, i.e., $c_T = e(T)$. Letting t approach T, equation (6) then implies $\lim_{t\to T} s(t) = s(T)$, which is true for any level of the exchange rate. Hence, the exchange rate at the time of conversion is indeterminate. To avoid indeterminacy, a conversion rate must be announced.

A second implication is that any change in the expected conversion rate prior to conversion translates into changes in the exchange rate. Thus, public statements by the monetary authorities and the governments that change market expectations about the conversion rate will change the exchange rate in the run-up to conversion. Once the intention to join the euro has been declared, exchange rate movements reflect both fundamentals and the markets' perceptions of euro-adoption politics. Therefore, the actual market rate is no longer a reliable indicator of the fundamental appropriateness of any exchange rate, let alone an ERM II central parity.

A third implication arises, if the conversion rate is set conditional on the exchange rate prior to the conversion date. De Grauwe et al. consider linear rules of the type

$$c(t) = \lambda c + (1-\lambda)\int_{t_L}^{T} w(v)e(v)dv, \tag{9}$$

where $0 \leq \lambda \leq 1$, w(v) is a weighting function, $t \leq t_L < T$, and $c_T = \lim_{t\to T} c(t)$. According to equation (9), the conversion rate is the weighted average of a constant and an average of the realized exchange rate taken over a time period from t_L to T.[36] As De Grauwe et al. (1999) show, this implies that shocks to the fundamentals x(t) affect the exchange rate in two ways: Once through the standard impact shown in the second term of equation (6) and once through the effect on the expected conversion rate. While the details depend on the specific averaging rule, w(t), the general conclusion is that such rules make the exchange rate more sensitive to such shocks than in the presence of a fixed conversion rate.

Fourth, the announcement of the conversion rate by the authorities at time t* causes a discrete jump of size J_{t^*} in the exchange rate. Suppose that markets expected this announcement to happen at time t* with a subjective probability γ. The size of the jump due to the announcement can be derived as

$$J_{t^*} = (1-\gamma)e^{-(T-t^*)/\alpha}[E_{t^*}c_T - x(t^*)]. \tag{10}$$

It depends on three elements. First, the more the announcement takes the markets by surprise, the larger will be the jump. Second, the larger the time-gap between the announcement date and the conversion date, the smaller will be the jump. Finally, the larger the gap between the expected conversion rate and the fundamental at the time of the announcement, the larger is the jump in the exchange rate. Note that the jump is smaller than

[36] The rule proposed by the first president of the European Monetary Institute, A. Lamfalussy for the original conversion of the national currencies into the euro is a special case of this; see Begg et al. (1997).

indicated in (10) if the announced conversion date is not fully credible (Wilfling and Maennig, 2001).

Finally, since our model is derived from the standard monetary approach to the exchange rate, it embeds a solution for the price level during the time until the euro is adopted. Let P(t) be the log of the equilibrium price level that would prevail in the new member state under flexible exchange rates. We assume that the euro-area price level is exogenous relative to the price level in a new member state adopting the euro. Between the announcement of the conversion rate and date to the euro and the adoption of the euro, the equilibrium price level follows the following path:

$$p(t) = P(t) + \frac{1}{\alpha}\int_{T}^{\infty} E_t[c_T - x(v)]e^{-(v-t)/\alpha)}dv = P(t) + [E_t c_T - x(t)]e^{-(T-t)/\alpha} \qquad (11)$$

The second equation again makes use of the assumption that the fundamentals follow a Brownian motion. The second term in equation (11) shows that any gap between the conversion rate, c_T, and the fundamental exchange rate at the time of adopting the euro leads to an adjustment in the price level of the new member states already before the adoption of the euro. The impact of this gap on the price level becomes larger, as the time of adopting the euro comes closer, i.e., the price level converges smoothly to the value compatible with equilibrium in the monetary union. In particular, the expectation of a too high conversion rate – which might seem desirable for the new member state to gain a competitive edge in the euro area – only leads to a higher inflation rate in the time before the euro is adopted. Since this might defeat the country's adoption of the euro through the inflation criterion, equation (11) implies that the incentive to go for a high conversion rate is limited. In fact, equation (11) indicates that countries might even have an incentive to choose a too low value of the conversion rate to fight domestic inflationary pressures in the run-up to joining the euro.[37] Furthermore, the relationship between the exchange rate and the price level supports the call for an early announcement of the terms of the euro adoption, since it gives the economy more time to adjust prices. Popular fears that locking in the conversion rate too early would lead to a misalignment of the exchange rate and, therefore, the price level of the new member state after the adoption of the euro, overlook the simple fact that, while the fundamentals are real, nominal quantities will adjust to whatever level is necessary.[38]

This analysis has important implications for exchange rate management in the ERM II. First, the idea that the ERM II could serve as a "testing phase for the central rate and the sustainability of convergence in general" (ECB 2003, p. 2) is ill-conceived. It relies on the presumption that, in the run-up to the adoption of the euro, a new member state's exchange rate with the euro reflects its fundamental economic performance relative to the euro area. Instead, the exchange rate will be tainted by markets expectations about the terms of the adoption of the euro, and the closer the critical date, the stronger its dependence on these expectations. The point is best revealed by the indeterminateness of the exchange rate when the authorities wish to leave the determination of the conversion rate to the market. As the date

[37] This is consistent with the Greek experience in the late 1990s as described in Hochreiter and Tavlas (2004a). When entering the ERM II in 1998, Greece chose a central parity that had the Drachma undervalued relative to the euro, allowing for the exchange rate to appreciate in the subsequent months.

[38] One might argue that price level adjustments downwards have more significant economic costs than upwards adjustments due to the nature of nominal rigidities. If the period of adjustment is relatively short, this would suggest a preference for erring on the high side when choosing the conversion rate.

of conversion draws nearer, the exchange rate simply has no more information value regarding the fundamental exchange rate or the appropriateness of the central rate in the ERM II.

Second, if uncertainty about the exchange rate fundamentals increases with the length of time over which they are predicted (as it does if the fundamentals follow a Brownian motion), the analysis indicates the trade-offs to be considered in announcing the terms of euro adoption. Early announcements are desirable, because they keep the effect of the announcement itself on the exchange rate small (equation (10)), and they allow countries to enjoy the announcement benefits in terms of low exchange rate variability (equation (8)) earlier. However, early announcements create a bigger risk that a gap develops between the announced conversion rate and the fundamentals at the time of adopting the euro. In view of this, early announcements may not be considered credible and may have to be changed if fundamentals develop in an unexpected way, which generates new exchange rate volatility. Yet, given the possibility of choosing a conversion rate that differs from the fundamental rate, early announcements have the advantage of leaving the relevant nominal variables, the exchange rates, prices and wages, time to adjust smoothly. It is difficult to judge these trade-offs in a general way. In the specific situation of the new member states, the conclusion is that countries striving for a fast adoption of the euro should not postpone the announcement of the terms of conversion, while countries that have chosen a longer waiting period anyway should refrain from making any hints in this regard.

Third, our analysis implies that, once a new member state has announced its intention to adopt the euro in the near future, it is of paramount importance to anchor market expectations about the conversion rate and the date of adopting the euro firmly. As market uncertainty about the terms of euro adoption and changing expectations translate into possibly large swings in the exchange rate itself, improper information management could easily undermine the viability of the ERM II. This, again, speaks for an early announcement of the terms of conversion. Leaving the relevant decisions until very late in the process will make the conversion rate the subject of political haggling over short-term economic benefits. This would create noise and volatility that could easily derail the smooth adoption of the euro.[39]

Furthermore, the ECB and the European Commission should give up their current position of keeping the terms of the euro adoption open as long as possible. Public statements that "countries that operate a euro-based currency board deemed to be sustainable *might not* be required to go through a double regime shift …" (emphasis added) rather than *will not* be required to first float "the currency within the ERM II only to repeg it to the euro at a later stage" (ECB 2003, p. 3), that their central parities remain open to negotiations, and that central parities within the ERM II, even if set by mutual agreement of all relevant parties, "in no way prejudice the ultimate choice of the central rate" for conversion (ibid. p. 4) simply create exchange rate uncertainty which is completely unwarranted and can impose large economic costs on the new member states. Clearly, the countries currently operating currency boards with the euro have no other choice but announce their current parities as the future conversion rates to the euro. Any deviation from that, and even the possibility of this happening perceived by the markets could easily destroy the currency board, with no obvious

[39] See Begg et al. (1997). The wish to avoid such political effects was, perhaps, one of the motivations that led the ECOFIN to announce the fixed-conversion rule at its Summit in Mondorf, 13-14 September 1997, i.e. more than seven months prior to the EU Summit in Brussels, 2-3 May 1998, where the members of EMU were decided. Although this was not made explicit, markets widely interpreted this decision as taking the existing central parities as the internal conversion rates to the euro.

benefit for anybody. As a minimum contribution to the monetary stability of the new member states, the ECB should refrain from such general announcements.

Finally, our analysis shows that the announcement of a credible conversion rate and conversion date sets the exchange rate on a path smoothly converging to the final rate. In the absence of counterproductive policy announcements, the market forces of speculation hold the exchange rate close to this path, without any intervention from the central banks. From this perspective, the debate over the appropriate width of the bands in the ERM II seems largely irrelevant at first sight. Nevertheless, wide bands are clearly desirable for two reasons. First, an early announcement could come with a conversion rate that requires adjustment of the exchange rate of more that a narrow band might allow. In such a situation, the narrow band would render the early announcement impossible. However, the benefits from an early announcement in terms of exchange rate stability are likely to far outweigh the benefits of narrow bands around an adjustable central rate before the announcement of the terms of euro adoption.

Second, exchange rate bands invite markets to test the central banks' resolve to defend them, i.e., they create opportunities for one-sided bets against the central bank. The history of the 1990s teaches that such bets greatly increase the instability of exchange rate arrangements. In contrast, the original members of the ERM used the wide bands to let their currencies converge to the pre-announced conversion rates without central bank intervention. The new member states should simply replicate that experience and, unless they already operate currency board with the euro, refrain from any unilateral commitments to narrower bands.

6 Macroeconomic adjustment under EMU

With the adoption of the euro, the new member states will surrender their own monetary policy and participate in the common monetary policy of the ESCB, instead. Since EMU monetary policy cannot differentiate between different geographical parts of the euro area, member countries must use the remaining tools of economic policy to adjust to asymmetric shocks, i.e., shocks that hit them in different ways or shocks to which their economies react in different ways than the aggregate EMU. To evaluate a country's expected economic performance in a monetary union, literature in the tradition of Mundell's (1961) theory of *optimum currency areas* has, therefore, asked two main questions: How likely will the country's cyclical stance differ from that of the aggregate EMU, and what is the country's ability to cope with asymmetric shocks. In this section, we focus on two aspects of these questions. First, we look at the symmetry or asymmetry of business cycles between the euro area and the new member states. Next, we consider the degree of labor market flexibility in several of the new member states, since labor market flexibility is commonly regarded an important mechanism for adjustment to asymmetric shocks.

6.1 Convergence of business cycles

A high degree of business-cycle synchronization is widely taken as an indication that the probability of asymmetric shocks is low and, therefore, the cost of monetary policy independence is limited (Frankel and Rose, 1998, Alesina, Barro and Tenreyro, 2002, Artis et al. 2003, Frankel, 2004). For the transition economies among the new member states, this is a difficult issue to assess, because their cyclical behaviour was shaped predominantly by the large drop in economic output and employment following the opening of their economies in

the 1990s, and the subsequent, strong recovery. Furthermore, the period for which macro economic data exist is still too short to contain much more than one cycle. Thus, the analysis of cyclical patterns for these countries must be interpreted with caution.

Nevertheless, several empirical studies exist. Backé et al. (2004) note that average growth rates were higher in the new member states than in the euro area between 1996 and 2003, and so was the volatility of growth rates. The same authors compare the correlation between quarterly, detrended GDP growth rates in the new member states and the euro area with the correlation between detrended GDP growth in Sweden, Denmark, the UK (pre-ins), Portugal and the euro area. They find that all these correlations are substantially lower for the new member states except Hungary and Slovenia. Artis et al. (2003) use a variety of filters to extract the cyclical components from real GDP and industrial production in the eight Central European new member states and estimate the correlations with the cyclical GDP and industrial production series in the euro area. They find a low correlation of business cycles with the euro area, but a high correlation of the business cycles with Germany. Backé et al. (2004) also estimate correlations between HP-filtered industrial output in the new member states and the euro area. While the correlation between the industrial output series is generally stronger, only Hungary, Slovenia and the Slovak Republic have correlation coefficients with the euro area close to those of the pre-ins, a result consistent with those in Darvas and Szapary (2003) and Süppel (2003).

Boone and Maurel (1999) argue that economic cycles in the CEE countries are similar to the business cycle in Germany. They estimate that between 55 and 86 percent of the fluctuation in unemployment in CEE countries can be explained by "German" shocks. Babetsky, Boone and Maurel (2002) confirm this conclusion. Fidrmuc and Korhonen (2003) use a structural VAR approach to decompose cyclical fluctuations of output and inflation into demand and supply shocks, and then estimate the correlation between these shocks in the new member states except Cyprus and Malta and the euro area. They, too, find generally low correlations except for Hungary, and that demand shocks in the new member states are less correlated with their counterparts in the euro area than supply shocks.

We estimate bilateral correlation coefficients of the business cycles in the Central European new member states (CE-EU-8) and the incumbent members of the euro area. We use a Baxter-King (1999) filter to extract the cyclical components from quarterly real GDP series from 1990:1 to 2003:3. The results are shown in Table 16. The table shows that correlations of business cycles among the current euro-area countries are higher than the correlations between them and the CE-EU-8 countries. Correlations of business cycles between the CE-EU-8 countries are lower. Among the euro area countries, Belgium, Austria and the Netherlands have the highest average correlations with the euro area countries and Portugal, Greece and Germany the lowest. The Netherlands, Germany, Belgium and Austria have the highest correlations with the acceding countries while Greece, France and Italy the lowest. Among the acceding countries Poland, Slovenia and Hungary are the most correlated with the euro-area countries while Lithuania, Slovakia and the Czech Republic are the least correlated. Hungary, Slovenia and Estonia are the most correlated with the other Central European countries and the Czech Republic, Lithuania and Poland the least correlated. These results are in line with the earlier results reported above.

Based on this evidence, it is clear that the new member states do not form part of an *optimal* currency area, as they will have to cope with relatively frequent, asymmetric shocks. The countries most exposed to such shocks are Lithuania, Latvia, Estonia, and the Czech and the Slovak Republics. Among these, the Baltic countries have not had an independent monetary policy in recent years anyway. For the Czech and Slovak Republics, maintaining flexibility of

Table 16: Correlations of business cycles with the euro area and with the new EU members

	Correlations of business cycles [1], with the euro area, 1990:1-2003:3	Correlations of business cycles [1], with the new EU countries, 1990:1-2003:3
Euro area countries		
Belgium	0.56	0.06
Germany	0.31	0.06
Greece	0.33	-0.00
Spain	0.44	0.05
France	0.46	0.04
Italy	0.38	0.04
Netherlands	0.50	0.06
Austria	0.55	0.06
Portugal	0.28	0.04
Finland	0.42	0.05
New EU countries		
Czech Republic	-0.09	-0.04
Estonia	-0.03	0.03
Hungary	0.18	0.04
Lithuania	-0.29	-0.01
Latvia	-0.03	0.01
Poland	0.40	-0.01
Slovenia	0.32	0.03
Slovakia	-0.26	0.00

Source: Traistaru (2004).
1) Weighted averages using population shares as weights.

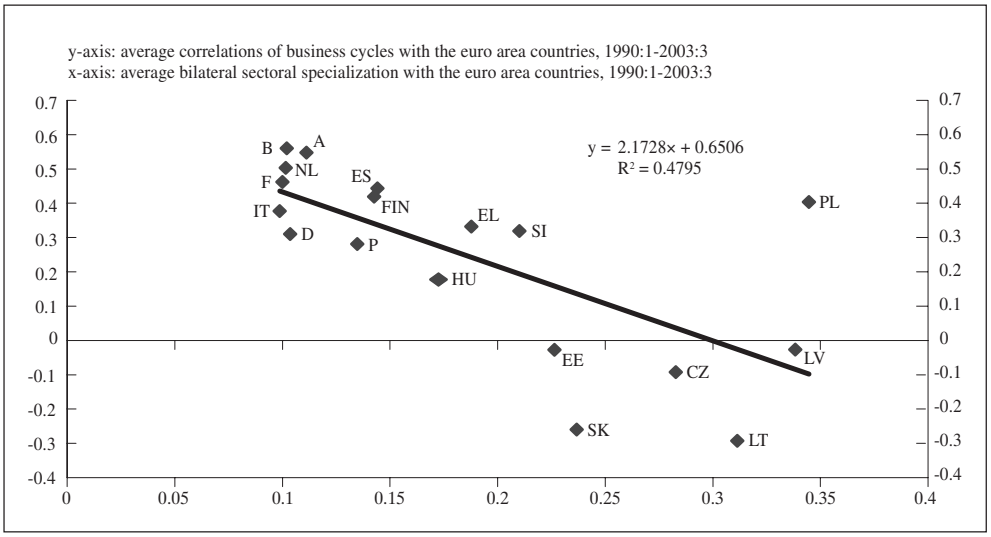
exchange rates and independence over the monetary policy may have some value in terms of macro economic stabilization.

At the same time, it is noteworthy that the cyclical correlation among the new member states is fairly low, too. This is good news for their EMU membership. It implies that the new members would not enter EMU with strongly coherent interests regarding the monetary stabilization policy of the ECB. They are, therefore, unlikely to frequently find themselves in a coalition voting for an adjustment of interest rates in their common favor, which might pose a problem for ECB decision making if the new members were a strongly coherent group.

The conclusion regarding the appropriateness of EMU membership must be put into perspective. First, as pointed out before, the value of having a national currency is not very large from the perspective of macro economic stabilization for the majority of the new member states. Second, the general conclusion of the empirical literature on EMU in the 1990s was that the current member states were far from forming an optimum currency area, too (Eichengreen, 1992; Bayoumi and Eichengreen, 1993 and 1997). Third, and related to that point, while the optimum-currency area literature treats business-cycle correlation patterns as exogenous to the monetary regime, there are good reasons to believe that they are not. Cyclical correlation patterns are shaped by structural characteristics such as the similarity of production structures and trade patterns (Clark and van Wincoop, 2001; Rose and Engel, 2002; Calderon, Chong and Stein, 2003, Frankel, 2004), which are likely to change due to increasing economic and monetary integration.

To illustrate this point, Figure 10 plots the degree of business-cycle correlations with the euro area against the index of structural dissimilarity defined above. Recall that a high value

Figure 10: Similarity of economic structures and business cycles synchronization



Source: Own computation based on EUROSTAT data.

of this index means a low degree of similarity. The figure reveals a strong, negative correlation between the two. That is, countries which exhibit more structural similarity also exhibit more strongly correlated business cycles. The regression shown in the figure indicates that this correlation is statistically significant.

While Figure 10 is informative, the causality of the relationship between the similarity of sectoral structures and correlations of business cycles must be treated more formally (Traistaru, 2004). We do this by estimating a two-equation model for sectoral specialization and business-cycle correlation. The first step is to regress the dissimilarity index on a set of instruments:

$$(SPEC_{ij})_T = \underset{0.51***}{-3.90} \underset{0.09***}{-0.85}\, EURO_{ij} + \underset{0.004***}{0.009}\ln(POP_i * POP_j)_T + \underset{0.01***}{0.08}\ln(GDP_i * GDP_j)_{1996} \quad (12)$$

$$+\underset{0.58}{0.09}\ln DIST_{ij} - \underset{0.11***}{0.28} BORDER_{ij} + \omega(i,j)_T.$$

$R^2 = 0.44$

Here, $(SPEC_{ij})_T$ is the index of bilateral dissimilarity of sectoral structures in countries i and j[40] and $\omega(i,j)_T$ is the error term. $EURO_{ij}$ is a dummy variable which is equal to one, if countries i and j are members of the euro area, and zero for the other country-pairs. $(POP_i)_T$ denotes the average population in country i during the period T. $DIST_{ij}$ is the distance between the capitals of countries i and j measured as the shortest road connection in km. $BORDER_{ij}$ is a dummy

40 $SPEC_{ij} = \sum_{k=1}^{6} |s_{ki} - s_{kj}|$. s_{ki} is the share of sector k in the GDP in country i calculated as average over the analyzed period. The index is calculated using data on gross value added in constant prices for six sectors according to the NACE-6 classification.

variable which is equal to one, if countries i and j share a common border, and zero otherwise. The numbers below the coefficients are standard errors; ** and *** indicate statistical significance at the five and one percent levels, respectively. The regression uses data from 1990 to 2003 and is based on all country-pairs in our sample, i.e., 153 observations.

Next, we use the estimated dissimilarity index from (12) to explain the bilateral correlation of business cycles.

$$CORR(Y_i^c, Y_j^c)_T = \underset{0.16***}{-0.68} \underset{0.10***}{-0.58} \ln(SPEC_{ij})_T + \varepsilon(i,j)_T. \quad (13)$$

$R^2 = 0.09$

$CORR(Y_i^c, Y_j^c)_T$ denotes the bilateral correlation of the cyclical components of real GDP in countries i and j. The regression analysis indicates that, after correcting for the reversed causality, more dissimilar sectoral structures cause a lower correlation of the business cycles between two countries. The obtained coefficients are statistically significant at the one-percent level of confidence. To the extent that the structural similarity between the new member states and the incumbent euro-area countries will continue to grow, this suggests that the correlation of business cycles between them and the euro area will increase.

We perform a similar analysis with regard to the bilateral trade intensities between the new member states and the euro area countries. Figure 11 shows a clear, positive relationship between the trade intensity and business cycles correlations over the period 1990:1-2003:3. Again, this result is only a simple correlation. The causality of this relationship can be accounted for with a regression analysis (see Traistaru, 2004). As before, we first estimate an instrumental variables model for the bilateral trade intensities:

$$\ln(TRADE_{ij})_T = \underset{2.43**}{-6.28} + \underset{0.28***}{1.59}\, EURO_{ij} - \underset{0.009***}{0.02}\, \ln(POP_i * POP_j)_T + \quad (14)$$

$$0.24 \ln(\mathrm{GDP}_i * \mathrm{GDP}_j)1996 - 0.71 \ln \mathrm{DIST}_{ij} + 0.88\, BORDER_{ij} + \upsilon(i,j)_T.$$

$R^2 = 0.60$

Here, $(TRADE_{ij})_T$ is the bilateral trade intensity between countries i and j[41], the other variables have been explained above, and $v(i,j)_T$ is the error term. Next, we regress the bilateral correlation coefficients on the instrumented trade intensities, which yield the following estimated result for the bilateral correlations of cyclical components of economic activity (real GDP) in countries i and j over the period 1990:1-2003:2:

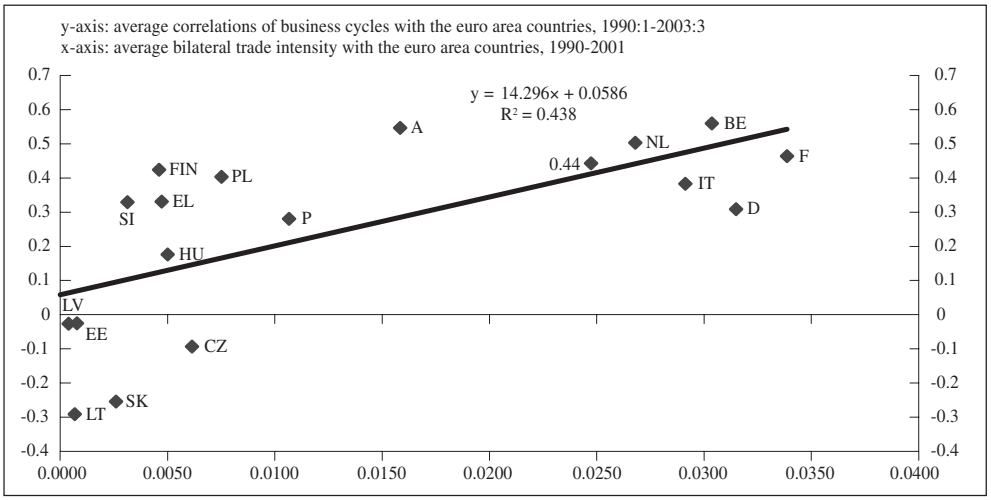
$$CORR(Y_i^c, Y_j^c) = \underset{0.11***}{1.09} + \underset{0.02***}{0.16} \ln(TRADE_{ij})_T + \psi(i,j)_T. \quad (15)$$

$R^2 = 0.19$

The obtained coefficients are statistically significant at the one-percent level of significance. The results indicate that countries with more intensive trade links exhibit more similar business cycle patterns. Again, this evidence suggests that cyclical patterns of the new member states will converge to those of the incumbent euro-area members as trade intensity

[41] $(TRADE_{ij})_T = \frac{1}{T}\left(\sum_{t=1}^{T} \frac{X_{ijt} + M_{ijt}}{F_{it} + F_{jt}}\right)$ X_{ijt}: exports of country i to country j in year t; M_{ij}: imports of country i from country j in year t; F_{it}: total trade flows of country i in year t.

Figure 11: Trade integration and business cycles synchronization



Source: Own computations based on EUROSTAT data.

grows. Since these above results might be sensitive to non-observed, country-specific characteristics, we estimated the same models excluding first Greece and Portugal, then Germany and then Poland. The results are qualitatively similar.[42]

6.2 Wage flexibility

The Optimum Currency Area (OCA) literature underlines that flexible labor markets in the countries wishing to join a monetary union mitigate the cost of losing independence over monetary policy. As an adjustment mechanism to asymmetric shocks, labor market flexibility has gained increasing importance in the context of EMU (Pissarides, 1997, European Commission, 2004).

Existing empirical evidence indicates that mobility of labor across sectors and regions in the new EU countries is low, like in the incumbent countries (Fidrmuc, 2004; Huber, 2004). However, the new EU countries perform better in other areas of labor market flexibility such as employment protection legislation, unemployment benefit systems, minimum-wage policies wage-setting and wage flexibility (Backé et al., 2004; Ederveen and Thissen, 2004; Boeri, 2004).

Wage flexibility has been given increased attention in the context of the EMU (European Commission, 2004). An often-used measure of wage flexibility is the responsiveness of wages to the rate of unemployment, or real wage flexibility. If wages were responsive to unemployment, they help equilibrate demand and supply in labor markets. A particular case of real wage flexibility is the responsiveness of regional wages to local labor market conditions.

A growing empirical literature flowing from Blanchflower and Oswald (1994) has looked at the relationship between regional wages and local unemployment in the EU accession

[42] The results are available from the authors on request.

countries during the 1990s and uncovered a negative relationship between these two variables suggesting that regional wages adjusted to the local unemployment rates. For example, Kertesi and Köllo (1997, 1999) found unemployment elasticities of pay in Hungary in the range of (-0.09) to (-0.11) using micro data matched with data from 170 labor office districts. Duffy and Walsh (2001) used individual data from labor surveys and data for 49 regions for Poland and found that the unemployment elasticity of pay was in the range of -0.08 to -0.11. In the case of Eastern Germany, Elhorst et al. (2002) obtained an unemployment elasticity of pay of -0.112 using individual data for 114 districts. Iara and Traistaru (2004) find that regional average wages adjusted contemporaneously to local market conditions in Bulgaria and Poland while in Hungary the adjustment of regional average pay to local unemployment took place with a two-year delay. Kállai and Traistaru (1998) use aggregate regional data from 41 regions in Romania and find an unemployment elasticity of pay of -0.09. Blanchflower (2001) finds unemployment elasticities to pay ranging from 0.003 to (-0.052) in regressions for nine EU accession countries and six successors of the former Soviet Union.

These results suggest that wages could act as an adjustment mechanism to region-specific shocks in the new EU countries. Furthermore, in comparison to the incumbent EU countries, the unemployment elasticities of pay in the new EU countries are found higher (see Büttner, 2003). Nevertheless, in some countries, this adjustment is likely to take place, with a certain delay, which implies that labor market disequilibria might persist.

Here, we bring further evidence about the responsiveness of regional wages to local unemployment rates using a panel of 41 *NUTS-2* regions in the ten new EU countries over the period 1993-2003[43]. We estimate the following model as suggested by Blanchflower and Oswald (1994):

$$\ln w_{r,t} = \alpha + \beta \ln U_{r,t} + \gamma X_{r,t}' + \mu_r + \lambda_t + \varepsilon_{r,t} \qquad (16)$$

where $w_{r,t}$ is the average compensation per employee in region r at time t, α is a constant, $U_{r,t}$ is the unemployment rate in region r at time t, $X_{r,t}$ is a vector of variables controlling for the regional economic structure (the shares of regional gross value added in agriculture, industry, market and non-market services in regional GDP), μ_r is a time invariant region-specific effect, λ_t is a region-invariant time specific effect and $\varepsilon_{r,t}$ is the stochastic error term.

Table 17 shows the country-specific unemployment elasticities of pay[44]. Our results indicate that regional wages are responsive to local unemployment rates in the Baltic countries and Slovakia. A doubling of the unemployment rate is associated with a 15 percent reduction in the average wage in the three Baltic countries and a reduction of 6 percent in Slovakia. In contrast, in Cyprus, Malta and Hungary, a rising in the local unemployment is associated with an increase in the regional wages suggesting a mechanism of "compensating differential" across regions. In these cases, a doubling of the unemployment rate results in an increase of the regional wage by 55 percent in the case of Cyprus and Malta and 15 percent in Hungary, respectively. Furthermore, we do not find evidence for the responsiveness of regional wages to local unemployment conditions in the cases of Poland and the Czech Republic.

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[43] Data were taken from the European Regional Database, Cambridge Econometrics.

[44] The country specific unemployment elasticities of pay are the coefficients of an interacted variable obtained by interacting country-specific time dummies with the variables of interest. Given the small number of observations we pooled together Cyprus and Malta as well as the three Baltic countries.

Table 17: Wage flexibility in the new EU member states, 1993-2003

	Elasticity of regional wages with respect to local unemployment rates	Regional wages responsiveness with respect to changes in the local productivity levels [1)]
Cyprus and Malta	0.5551***	0.2890
	(0.0406)	(0.4230)
Estonia, Latvia, Lithuania	-0.1567***	1.9353***
	(0.0384)	(0.2670)
Czech Republic	0.0324	1.3186***
	(0.0222)	(0.1408)
Hungary	0.1487***	0.0415
	(0.0343)	(0.1590)
Poland	0.0037	1.4768***
	(0.0150)	(0.1038)
Slovak Republic	-0.0633***	0.7386***
	(0.0224)	(0.1772)
Time fixed effects	Yes	Yes
N obs	451	369
R^2	0.7044	0.3773

Source: European regional database, Cambridge Econometrics.
1) Gross value added per employed.
Notes: Robust standard errors in parentheses. ***, **, * significant at 1, 5, 10 percent. The regressions include a constant and the following control variables: the shares of agriculture, industry, market-services, non-market services in regional gross value added. The data covers 41 NUTS 2 regions in the ten new EU countries. The number of NUTS 2 regions in each country is as follows: Cyprus: 1; Malta: 1; Estonia: 1; Latvia: 1; Lithuania: 1; Slovenia: 1; Czech Republic: 8; Hungary: 7; Poland: 16; Slovakia: 4.

An additional measure of wage flexibility is the responsiveness of wages to changes in productivity. We look at the responsiveness of regional wages to changes in local productivity by estimating the following model:

$$\Delta \ln w_{r,t} = \alpha + \beta \Delta \ln W_{r,t-1} + \gamma X_{r,t}' + \mu_r + \lambda_t + \varepsilon_{r,t} \qquad (17)$$

$\Delta \ln w_{r,t}$ is the change in the compensation per employee in region r at time t, α is a constant, $\Delta \ln W_{r,t-1}$ is the change in the productivity (gross value added per employee) in region r at time t-1, $X_{r,t}$ is a vector of variables controlling for the regional economic structure (the shares of regional gross added value in agriculture, industry, market and non-market services in regional GDP), μ_r is a time invariant region-specific effect, λ_t is a region-invariant time specific effect and $\varepsilon_{r,t}$ the error term. We use the same panel of 41 regions in the ten new EU countries over the period 1993-2003 which gives a total of 369 observations. The country-specific estimates[45] are shown in Table 17.

Our estimates indicate that, in the Baltic countries, Poland and the Czech and Slovak Republics regional wages are responsive to changes in local productivity. The magnitude of this wage adjustment is the highest in the Baltic countries where an one percent increase in the local productivity in the previous period translates into a rise by 2 percent of the average compensation per employee. The respective wage increases are lower in the other three countries mentioned above, 1.3 percent in the Czech Republic, 1.5 percent in Poland and about 0.75 percent in the Slovak Republic. This evidence suggests that in these six countries changes in productivity have a positive impact on wage demands while in Cyprus, Malta, Slovenia and Hungary productivity changes do not seem to influence the outcome of wage negotiations.

These findings suggest that in the new EU countries there is a fair degree of wage flexibility that can facilitate the adjustment to demand and supply shocks.

7 Conclusions

Over the past decade the ten new EU members have achieved a high degree of market integration and macroeconomic stabilization as part of their accession process. The main challenges ahead for these countries are to cope with large and potentially volatile capital inflows and to achieve the nominal convergence required for the adoption of the euro. These challenges must be tackled under constrained fiscal policies: there is little room for the public sectors to grow, and several governments must make efforts to reign in deficits.

Several conclusions emerge from our discussion of macro economic adjustment. First, macro fiscal policies will be at the forefront of macro economic policies in the years to come. They will have to focus on meeting the sustainability requirement for EMU, and help absorb the aggregate demand effects of large capital inflows. As long as capital inflows persist, these two requirements are complementary. Macro economic stability would best be promoted by more effective spending controls and improved budgeting procedures.

Second, large capital inflows create a risk of sudden stops leading to large economic and financial imbalances. Prudent banking and financial market supervision are necessary to avoid credit booms and asset price bubbles that make such scenarios more likely, but also to reduce the vulnerability of the financial sector and the exposure of the government to implicit liabilities that could result from a capital account crisis. Governments would be well advised to keep substantial safety margins both with regard to deficits and debt to assure that they can respond to a sudden stop with the necessary financial rescue of the banking system and a fiscal expansion to partly absorb the fall in aggregate demand without losing the prospect of making it into EMU for a long time. This adds to the incentives to curtail the growth of the public sector.

Third, the best way to enter EMU would be to set monetary policy in accordance with the low-inflation and low-interest rate criterion and to enter EMU as soon as these and the sustainability criterion are met. We argue that Poland and the Czech Republic are the only two new member states for which a late entry makes sense, given that they have demonstrated the potential for an autonomous, stability-oriented monetary policy based on inflation targets. The advantage of the late entry for them then is to pursue further structural reforms as necessary in a less restrictive macro economic environment. For the remaining countries, the best strategy is to enter EMU as fast as possible.

Fourth, the decision to insist on the ERM II requirement or to let countries that meet the other nominal convergence criteria enter EMU immediately is essentially a decision about allocating macro economic risks. There is little reason to believe that ERM II membership leads to better policies. Nor is ERM II membership required for a smooth conversion of the national currencies to the euro. While the question of who carries more risk ultimately can only be settled by political agreement, one should note that the downside risk is by far greater for the new members, if they are forced to go through the ERM II, since their influence on EMU monetary policy would be very limited even if they became full members immediately. One has to assume a very high degree of risk aversion of the incumbent relative to the new

[45] Estimates obtained by interacting country-specific dummies with the variable of interest.

members, or that the new members would push EMU monetary policy towards much higher inflation rates to justify the ERM II requirement.

Finally, the new member states are obviously not part of an optimum currency area in the traditional sense, but this is not different from the first members of EMU. Yet, there are good reasons to believe that their business cycles will converge to the euro-area cycle as trade integration with the EU proceeds. At the same time, the new member states' labor markets are characterized by a fair degree of wage flexibility, which will facilitate macro economic adjustment to asymmetric shocks once they are in EMU. From this perspective, there is no reason to advocate a slow route to EMU.

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Comment

Zsigmond Járai

Macroeconomic adjustment and the road to euro adoption
A central banker's perspective

It is a pleasure for me to discuss the paper by Jürgen Von Hagen and Iulia Traistaru on macroeconomic adjustment in the new Member States. Their paper gave us a broad and thought-provoking analysis of the macroeconomic adjustment of the new EU Member States on the road to euro adoption and also as full participants of Economic and Monetary Union (EMU). Its scope covers a wide range of issues including real convergence, fiscal sustainability and the quality of fiscal consolidation, challenges related to large-scale capital flows, and exchange rate policy in the run-up to euro adoption.

In my discussion, I would like to reflect on some issues in the paper from the point of view of a central banker. In particular, I would like to address the role of central banks in the process of nominal and real convergence in an environment where expectations about the date of euro adoption are prone to sizeable changes.

As my first figure illustrates, over the course of the last two years, market expectations concerning Hungary's euro area entry date have shifted by almost as much as three years. The early euro area entry scenario, meaning adoption of the euro in 2007 or 2008, is no longer on the cards. This delay with respect to the euro adoption timetable has been accompanied by an increased perception of macroeconomic risk. Similar shifts regarding the expected entry date have taken place in some of the larger new Member States. I would like to focus on the factors that caused the postponement of euro area entry and the consequences this has for the conduct of monetary policy.

It has been clear from the outset that convergence would require a considerable effort from society, and we were aware of the challenges ahead, such as the Hungarian economy's vulnerability to international capital flows or conflicts between certain convergence objectives. However, we had expected that the ultimate goal of euro adoption could serve as a stabilising end-point for macroeconomic developments and might orient the expectations of market players, thereby reducing the costs of real and nominal convergence. Moreover, we hoped that the institutions of the European Union (EU), in particular the Stability and Growth Pact (SGP), would provide a stable framework and an efficient incentive for the convergence process, an expectation also voiced by Von Hagen and Traistaru in their paper.

In reality, as entry to the euro area has been postponed and the target date remains uncertain in a number of central European countries, its role as a stabilising end-point has also weakened. The impression that early euro adoption is now out of reach was created by the slowdown of the convergence process, most importantly by the poor fiscal track record: budget deficits are high in a number of new Member States, and efforts to bring them down have proved to be insufficient so far. Therefore I can only agree with the special emphasis that the paper puts on fiscal policy. As Von Hagen and Traistaru have highlighted, public spending levels are excessive in a number of the new Member States. Indeed, some of these countries could well be characterised as "premature welfare states", with excessive social transfers exerting continuous pressure on budgets and keeping deficits stubbornly high. These features call for thorough public sector reforms aimed at reducing the degree of redistribution.

The second figure shows budget deficits as a percentage of GDP from 1997 to 2003 in the Visegrad countries. Deficits in some countries have been persistently high in this period, while in others their widening trend is the source of major concern. As also pointed out by the authors, the cyclical pattern observed in the figure has more to do with the electoral cycle than the economic cycle. The next figure shows that the 2004 budgetary target has been edging up since 2001 in all of the central European countries, as they have been revised upwards twice since the 2002 Pre-accession Economic Programme (PEP): first in the 2003 PEP, and then in this year's Convergence Programme. Even these revised values are expected to be missed according to the European Commission's forecasts. The persistence of high fiscal deficits is one reason why the chances of a quick adoption of the euro in these countries have become low.

The paper deals with the issue of budgeting institutions in great detail and, I believe, the emphasis is again well placed. As demonstrated in the paper, deficiencies in the different areas of budgeting institutions – forecasting, planning, implementation and monitoring – lead to a loss of control over expenditures, repeated budgetary slippages and sometimes ex post revisions of data. Improving budgeting institutions in some of the new Member States is perhaps an even more urgent task than launching large-scale structural reforms. At the same time it is a task that offers a greater pay-off in the short run. These problems are present not only in the new Member States but also in some of the EU15, and must be tackled in order to make EU fiscal rules enforceable.

Budgetary discipline is not an end in itself: it is a means to sustaining higher growth rates in the long term. By reducing savings, persistent deficits increase long-term real interest rates, crowding out private investment and curbing the growth potential of the economy. This effect on interest rates is magnified if doubt is cast over the sustainability of public finances and, as a result, risk premia required by investors increase.

A flexible fiscal policy is also an essential macroeconomic policy tool in coping with the challenges faced by the new Member States in the run-up to euro adoption and even later on. The paper stresses the role of fiscal policy in managing potentially volatile capital flows during the convergence period. I would add that fiscal discipline also helps to achieve exchange rate stability within ERM (Exchange Rate Mechanism) II while making progress in convergence. In the whole central European region, the risks of a credit boom are growing, given the expected rise in household disposable income, falling interest rates, the low level of private savings and the low initial stock of household debt. In such a scenario, the burden is increasingly on fiscal policy to maintain a sustainable external position. As for macroeconomic adjustment within EMU, besides the importance of synchronised business cycles and flexible labour markets, which are highlighted in the paper, I would like to point to the fundamental role that fiscal policy can play in containing potential overheating related to rising demand pressures created by the abrupt fall in short-term real interest rates after euro adoption.

Unfortunately, fiscal discipline in the new Member States has not become significantly tighter in the recent past, in spite of participation in the EU fiscal policy coordination process. This framework had been applied to the new Member States in the form of PEPs even before joining the EU. Fiscal rules in the EU were undoubtedly a very effective means of achieving convergence in the EU15 Member States, where they played a very positive role in the reduction of budget deficits prior to 1999. However, the perspective of participation in monetary union before the establishment of EMU gave an incentive for countries in the euro area to adjust, an incentive that disappeared once they had joined EMU. As a result, the credibility of the present institutional set-up has been weakened. The decision of the ECOFIN

council last November to suspend the Excessive Deficit Procedure initiated against some larger euro area Member States contributed to the weakening of the SGP. Furthermore, the timing and the communication of the Pact's reform have posed some risks which the European authorities could not fully avoid: new Member States may now be interpreting the amendment of the SGP as a process of softening up fiscal policy rules in the EU. The divergence from the 2004 Convergence Programmes only months after their submission may be an indication of an opportunistic interpretation of the SGP reform initiative, as well as an expectation of weakening "peer pressure" in the future.

These developments have led to a situation in which investors' expectations are no longer guided by a credible euro adoption timetable, and nor is there any faith in prospective peer pressure to keep convergence on track. The bottom line is that markets are left in uncertainty with respect to the medium-term macroeconomic path of some of the new Member States. This uncertainty may manifest itself in large swings in investor sentiment: markets tend to process information with a delay and to overlook fiscal problems for some time. When they react, however, that reaction usually comes in the form of overshooting long-term yields and excessive exchange rate volatility.

The disappearance of early euro adoption as a stabilising end-point therefore heightens the role of central banks in providing a credible nominal anchor for the period of increased uncertainty that lies ahead. In practical terms, in a number of new Member States this could take the form of a reinforcement of the already existing inflation targeting strategies.

The present Hungarian institutional set-up is an inflation targeting regime combined with the exchange rate floating within a wide band. This set-up is in many respects very similar to the ERM II arrangement, and therefore our experience may be useful for would-be ERM II members.

The financial market turbulence we experienced while operating this regime taught us at least two major lessons. First, the success of such a regime depends to a large extent on the support of fiscal policy. Therefore the monitoring of fiscal policy by Magyar Nemzeti Bank has been of prime importance in the management of this shadow ERM II-type regime. At the beginning of 2005, we started to publish independent forecasts of fiscal developments. This practice has proven to be an effective way of smoothing investor sentiment, by preparing markets for deviations in fiscal targets well ahead of time. We see this practice as worthwhile and recommendable to other central banks.

Another lesson for new Member States seeking to participate in ERM II at some point is that such an exchange rate regime requires convergence to have reached a fairly advanced stage which anticipates euro adoption in the "foreseeable" future. This is essential both in terms of having a safe and orderly exit from ERM II and in order to avoid a major failure which could reverse the whole convergence process and substantially delay the introduction of the euro. The basic principle here is: "you only have one chance to make a good first impression". A failure in ERM II can severely affect the exchange rate regime's ability to guide expectations and foster the convergence process later on.

Ladies and gentlemen, allow me now to conclude my discussion.
Looking at the pace of the convergence process and the challenges faced by central European countries in the run-up to the euro, I would conclude that for some of these countries, the period we regarded as a transitory phase seems more prolonged. In addition, we must cope with these challenges in an environment of unlimited, and sometimes erratic, capital flows. In this situation there is an increased role for independent central banks which are able to provide a credible nominal anchor for macroeconomic developments.

Last but not least, it is important to see that a central bank can only play this role if its institutional independence is safely established and respected. Unfortunately, a recent initiative by Hungarian politicians to modify the Central Bank Act in a way that clearly limits the personal independence of Monetary Council members shows that this is far from the case in Hungary. It is especially odd seeing that the modification initiative was submitted to Parliament just one day after two distinguished economists were awarded the Nobel Prize partly for describing time inconsistency, which has lead to the general recognition of the importance of central bank independence. Much of their work was done back in the 1970s. My impression is that we cannot afford to learn so slowly.

Comment

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Executive Summary

It is likely that Economic and Monetary Union (EMU) will be enlarged within two years. Some of the new Member States – e.g. Estonia, Lithuania and Slovenia* – have adopted already ERM (Exchange Rate Mechanism) II and will join EMU probably after a two-year period, as they do not have an opt-out clause. Having recently entered the European Union, the new Member States face a difficult decision. It seems likely that the divergence of inflation will be further increased in a larger monetary union. Although estimates of the so-called Balassa-Samuelson effect differ substantially, it seems likely that the new Member States will have higher inflation levels than the current countries in the euro area. The new Member States will have to trade off exchange rate stability and price stability depending on their inflation differentials with the current euro area Member States. This implies that the Maastricht Treaty convergence criteria for price stability and exchange rate stability are in their present form incompatible. This may lead to speculative attacks against some of the currencies of the new Member States. The European Central Bank (ECB) should clarify how strong its commitment will be to intervening within ERM II to reduce the probability of these speculative attacks, and also to state how it will interpret the convergence criteria of price stability and exchange rate stability in formulating its advice to the European Council on euro adoption by the new Member States. Finally, the rule of law is essential for strengthening the actual independence of the national central banks in the new Member States. Central bankers in these countries have to learn to behave independently, and politicians have to learn to accept this behaviour. This learning process will take time, perhaps a generation, and should be fully supported by the ECB.

Introduction

The purpose of this paper is to discuss the implications of the upcoming enlargement of Economic and Monetary Union (EMU) in Europe. The current euro area Member States will soon be joined by a number of new EMU entrants that have a substantially lower income per capita. As of May 2004 the Czech Republic, Estonia, Cyprus, Latvia, Lithuania, Hungary, Malta, Poland, Slovenia and Slovakia are now members of the European Union (EU). These new EU Member States will be members of EMU with a so-called derogation. After a two-year waiting period, their convergence will be evaluated based on the Maastricht Treaty convergence criteria. It is likely that EMU will be enlarged within two years. Some of the new EU Member States – e.g. Estonia, Lithuania and Slovenia – have already adopted ERM (Exchange Rate Mechanism) II back in June 2004 and will join EMU probably after a two-year period, as they do not have an opt-out clause.*

Von Hagen and Traistaru (2004) evaluate macroeconomic adjustment in the new Member States from a very broad perspective, including real convergence, nominal convergence, fiscal policy adjustments, coping with large capital inflows ("convergence play"), ERM II and convergence to the euro, the convergence of business cycles, and the flexibility of labour markets. Nevertheless, they do not really discuss the new Member States' problem of trading

* Cyprus, Latvia and Malta joined ERM II on 2 May 2005.

off exchange rate stability and price stability during the process of real and nominal convergence before euro adoption. We will mainly focus on this problem as well as on the role of the European Central Bank (ECB). First, we will assess the Maastricht Treaty convergence criteria and how consistent they are for the heterogeneous set of new Member States. Then, we analyse the implications for the new Member States of entering the so-called waiting room of ERM II. Furthermore, we evaluate the potential inflation differentials (the Balassa-Samuelson effect) between the new Member States and the euro area, and its consequences for the ECB's decision-making process. Finally, we discuss the effectiveness of monetary policy in defending exchange rates during speculative attacks, and the ECB's commitment to intervening within ERM II.

The Maastricht Treaty convergence criteria

EU membership does not imply immediate membership of EMU. However, the new Member States have no formal derogation from EMU membership as obtained earlier by the UK and Denmark. In other words, the new Member States have an obligation to join EMU. Before they can enter EMU, they have to fulfil the criteria as stipulated in the Maastricht Treaty. However, whether and when the former accession countries satisfy the Maastricht criteria will be to a significant extent at their discretion. After all, Sweden has thus far evaded the obligation to join EMU by not satisfying the exchange rate criterion (Buiter and Grafe, 2002). The Maastricht Treaty contains four convergence criteria:

1. *price stability*: an average inflation rate (measured on the basis of the consumer price index) that does not exceed by more than 1.5 percentage points that of, at most, the three best performing Member States.
2. *a sustainable fiscal position*, meaning that there is no excessive deficit. An excessive deficit exists if:
   - the budget deficit is higher than 3% of GDP, unless either the ratio has declined substantially and continuously and has reached a level that comes close to 3%, or the excess over the 3% reference value is only exceptional and temporary and the deficit remains close to 3%;
   - the ratio of gross government debt to GDP exceeds 60%, unless the ratio is sufficiently diminishing and approaching the reference value at a satisfactory pace.
3. *exchange rate stability*, meaning that the currency has respected the "normal" fluctuation margins of the ERM without severe tensions for at least two years (with especially no devaluation on the initiative of the Member State in question).
4. *a low interest rate*, meaning that the average long-term interest rate should not exceed by more than 2 percentage points the interest rates in, at most, the three best performing countries in terms of price stability.

Although these criteria have been criticised for their lack of theoretical foundation (see for example Eijffinger and De Haan, 2000), the EU15 have made it very clear that the new Member States have to stick to this part of what is called the *acquis communautaire*. In this paper we will focus primarily on the convergence criteria of price stability (1) and exchange rate stability (2), and on whether or not they are compatible with each other (3).

Many studies have addressed the question of the proper exchange rate regime for the new Member States in the period between entering the EU and becoming a (full) member of EMU. The exchange rate regime is a key determinant of a country's macroeconomic stability, which in turn affects the investment climate. Apart from the perspective of future EMU membership, the choice of exchange rate regime is therefore of great relevance for the former accession

Table 1: Exchange rate regimes of the new (and potential) Member States

Country:	Exchange rate regime:
Bulgaria	Fixed peg to euro (currency board)
Cyprus	Fixed peg to euro with band ±2.25% (additional monetary aggregates targeting)[1)]
Czech Rep.	Managed float to euro (inflation targeting)
Estonia	*Exchange Rate Mechanism II*
Hungary	Crawling peg to euro with band ±15% (implicit inflation targeting)
Latvia	Fixed peg to Special Drawing Rights (SDR) (quasi-currency board)[1)]
Lithuania	*Exchange Rate Mechanism II*
Malta	Fixed peg to weighted basket of euro, USD, GBP[1)]
Poland	Full float (inflation targeting)
Romania	Managed float (monetary aggregates targeting)
Slovakia	Managed float (monetary aggregates targeting)
Slovenia	*Exchange Rate Mechanism II*

Source: De Haan, Eijffinger and Waller (2004).
1) *Exchange Rate Mechanism II* since 2 May 2005.

countries. Table 1 shows the exchange rate regimes of the new (and potential) Member States at the moment.

An important political issue that will influence the timing of EMU membership is the interpretation of the exchange rate criterion as provided for in the Maastricht Treaty. A strict interpretation is that each of the new Member States should be a formal member of ERM II for *two or more* years following EU accession.[1] However, Buiter and Grafe (2002) argue that the exchange rate criterion can be satisfied without the candidate country being an ERM II member. Italy and Finland (and later Greece) joined EMU right from the start, even though they had not spent two years in the ERM when they were admitted. More substantive is the question of the proper exchange rate regime from an economic perspective. An important consideration in choosing an exchange rate regime is that the accession countries have to liberalise international capital flows as part of the *acquis communautaire*, making them more vulnerable to speculative attacks.

As follows from Table 1, some countries – for example Estonia, Lithuania and Slovenia – have adopted ERM II, while others – such as Bulgaria and Latvia – have a (quasi) currency board. Estonia and Lithuania have on their own initiative waived the scope for fluctuation of their currencies within ERM II by retaining their existing currency board arrangements. These voluntary and unilateral commitments, however, do not place any additional

[1] At its meeting in Amsterdam in June 1997, the European Council decided to replace the "old" Exchange Rate Mechanism of the European Monetary System (ERM I) by the "new" *Exchange Rate Mechanism Mark II* (ERM II). ERM II offers the opportunity to stabilise the exchange rates of EU Member States that participate in EMU (the "ins"), as well as of those that do not (the "outs"). According to the Maastricht Treaty, each Member State that is not yet allowed to participate in the euro area shall treat its exchange rate policy as "a matter of common interest". In principle, this should also apply to the countries with an opt-out clause, i.e. Denmark and the UK. Nonetheless, membership of ERM II is voluntary for all "outs". The operating procedures for ERM II have been laid down in an agreement between the ECB and the national central banks outside the euro area. ERM II is designed as an *asymmetrical*, euro-centred exchange rate system. The main feature of ERM II is the wide fluctuation of ±15 per cent between the euro and the currency of the country participating in the mechanism.

obligations on the ECB. By contrast, Slovenia had previously allowed the exchange rate of its currency to fluctuate within a specific band around a depreciation path as part of a crawling peg system.[2]

A *currency board* can be considered as the most credible form of a fixed exchange rate regime, as the country's own currency is convertible against a fixed exchange rate with some other currency/currencies. This arrangement is codified, either in a law or elsewhere. The anchor currency is generally chosen for its expected stability and international acceptability. There is, as a rule, no independent monetary policy, as the monetary base is backed by foreign reserves.

A currency board is a strong, "double-barrelled" commitment device (Buiter and Grafe, 2002). Through the currency peg, it represents a commitment to price stability, while the "no domestic credit expansion" constraint shows a commitment to budgetary restraint. The value of these commitments depends either on the currency board arrangement being perceived as credible and permanent, or on the belief that, if it is abandoned, it will be replaced by something representing a comparable commitment to price stability and budgetary responsibility as a credible currency board, such as EMU.

At the other extreme, a country may choose a floating exchange rate regime with an independent central bank with some kind of an inflation targeting strategy. Berger, De Haan and Eijffinger (2001) show that a currency board becomes, *ceteris paribus*, more attractive under the following conditions:

- the imported foreign monetary policy is in the hands of an independent and conservative (i.e. inflation-averse) foreign central bank;
- the home country's central bank is relatively dependent and output-oriented compared to the foreign central bank;
- the correlation between the home and foreign country's output shocks is high.

Compared to a full-fledged central bank, a currency board is a cheap way of managing monetary policy. As pointed out by Buiter and Grafe (2002), all that is needed is a sufficient number of modestly skilled bank clerks who exchange, at a fixed rate, domestic currency for the foreign currency in terms of which the peg is defined. Given that a currency board implies that the central bank cannot (fully) act as lender of last resort, no country should consider a currency board unless it can afford to do without a lender of last resort. As this safety net for the financial sector is missing, a prerequisite for a currency board is a reasonably healthy financial system. Likewise, no country should consider a currency board unless it has a sound fiscal framework that will not require discretionary access to central bank financing by the general government.

A currency board runs the risk of a real misalignment. If a country's inflation remains higher than that of the pegging country, the currency can become overvalued (Pautola and Backé, 1998). While fixing the exchange rate is a fast way to disinflate an economy starting with a higher inflation rate, pegging the exchange rate will not necessarily reduce the inflation rate instantaneously to that of the pegging country. There are several reasons why inflation will not fall right away (Roubini, 1999). First, purchasing power parity does not hold exactly in the short run, since domestic and foreign goods are not perfectly substitutable and the mix of goods and services in the countries concerned may differ. Second, non-tradable goods prices do not feel the same competitive pressures as tradable goods prices, and thus inflation in the non-traded sector may fall only slowly. Third, as there is significant inertia in nominal

[2] From the launch of the euro at the beginning of 1999 up to Slovenia's entry into ERM II, its currency lost 21% of its value against the euro. The success of Slovenia's ERM II membership will depend on whether the depreciation trend of its currency vis-à-vis the euro can be broken in a credible way.

wage growth, wage inflation might not decline right away. Often wage contracts are backward-looking and the adjustment of wages will occur slowly. Finally, differing productivity growth rates may be reflected in differences in price increases (the Balassa-Samuelson effect). If domestic inflation does not converge to the level of the pegging country, a real appreciation will occur over time. As Roubini (1999) points out, such a real exchange rate appreciation may cause a loss of competitiveness and a structural worsening of the trade balance, which makes the current account deficit less sustainable.

It follows from the preceding analysis that a currency board with a peg to the euro may be the proper exchange rate regime for accession countries on their road to full EMU membership. However, apart from the (related) risk of misalignment, there may be a serious problem with this. Taken together, the exchange rate and the inflation criterion restrict the scope for changes in the real exchange rate of the accession countries vis-à-vis the euro. Due to the Balassa-Samuelson effect, the accession countries may experience higher inflation than the euro area in case of a nominal fixed exchange rate. This even leads Szapary (2000) to argue that the inflation criterion of the Maastricht Treaty should be relaxed or reinterpreted. To examine whether this conclusion is justified, we will now first discuss the literature on the Balassa-Samuelson effect in the transition countries.

The implications of EMU enlargement

It is often argued that due to the Balassa-Samuelson effect, transition countries have experienced a real appreciation of their real exchange rates. Owing to economic restructuring, many have benefited from rapid productivity growth in their industrial sectors. As productivity growth in the traded goods sector exceeds that in the non-traded goods sector, non-traded goods prices increase due to the wage equalisation process between both sectors. When productivity growth in the transition countries exceeds productivity growth in the countries in the euro area, the transition countries will have a higher inflation rate. According to Eurostat (2001), average productivity in manufacturing in the transition countries was only about 40% of the EU average in 1998. Therefore, we can expect further high productivity growth. This restructuring will, however, take some time. During this period, these countries will probably experience higher inflation than the current EMU countries. This raises two questions. First, how large are these inflation differentials between current and potential future EMU members? And second, what are the policy implications?[3]

There is clearly no consensus in the literature on the magnitude of the Balassa-Samuelson effect in the transition countries. Table 2 provides a summary of various recent studies. Estimates vary widely. Whereas Rogers (2001), for instance, estimates that the Balassa-Samuelson effect is likely to imply two additional percentage points of annual inflation in the accession economies, Égert (2002a, 2002b) finds little evidence of a higher inflation rate due to the Balassa-Samuelson effect in the Czech Republic and Slovakia. The extremely high inflation differentials implied by sectoral productivity developments and labour shares for Hungary and Poland as reported by Backé et al. (2002) deserve some attention. According to the latter study, their figures reflect mainly the massive gains in productivity in the tradable goods sector that were achieved during the 1990s in these two countries. They argue, however,

[3] Apart from the impact of the Balassa-Samuelson effect on inflation differentials, there are other reasons why enlargement may lead to more asymmetries in EMU. First, business cycles in the accession countries may be out of line with the rest of the euro area. Furthermore, asymmetry in monetary transmission in comparison to the rest of the euro area may also make ECB policies more difficult. See for a further analysis De Haan, Eijffinger and Waller (2004) and Von Hagen and Traistaru (2004).

that past figures are probably not a good guide for the future as convergence implies that productivity increases will tend to decelerate as higher productivity levels are reached.

These diverging outcomes are partly the result of differences in method. An important factor is that not all the studies summarised in Table 2 are restricted to estimates of the Balassa-Samuelson effect. The literature has pointed out various other channels than can give rise to inflation differentials. Some of the studies take these into account. For instance, Halpern and Wyplosz (2001) have estimated the Balassa-Samuelson effect for a panel of nine transition countries, including demand factors as well. The same is true for Coricelli and Jazbec (2001), who, in addition, add a variable capturing structural misalignments. Pelkmans, Gros and Nunez Ferrer (2000) have followed a very different estimation procedure. These authors have based their estimation on relative price levels in accession countries compared to existing EMU Member States rather than on productivity growth differentials. The authors proceed in four steps. First, they regress the deviation of inflation rates of euro area Member States from the euro area average on the relative consumer price levels in these countries. Next, they regress the relative consumer price levels of 29 OECD countries on the GDP-based comparative price levels of these countries (i.e. on ratios of GDP measured in purchasing power parity (PPP) and at current exchange rates). The coefficients of the independent variables in both equations are negative and highly significant. In a third step, Pelkmans et al. (2000) calculate the relative consumer price levels of the ten central and eastern European accession countries, based on their comparative price levels and the coefficient estimated for the OECD countries in the second equation. Finally, the authors use the coefficient estimated in the first equation for the euro area Member States to compute the accession countries' inflation differentials from the euro area average, which are implied by their relative consumer price levels. Their results show on average an inflation differential of 3.8 percentage points between the accession countries and the euro area average due to estimated differences in price levels.

Turning to the policy implications, the evidence reviewed suggests that accession countries with a fixed exchange rate regime may have problems in meeting the inflation criterion of the Maastricht Treaty. Countries with a somewhat more flexible exchange rate regime are unlikely to have problems meeting the Maastricht criteria owing to the Balassa-Samuelson effect. The Balassa-Samuelson effect is unlikely to exhaust the 15% bands of ERM II in two years.

Some observers have argued that the convergence criteria should be modified (see for example Coricelli and Jazbec, 2001). One could, for instance, compare the inflation rates of the accession countries with those in the least developed EMU countries or allow for a higher differential than 1.5 percentage points. These suggestions have, however, met with little support from the current EMU countries. Admitting countries with relatively higher inflation rates could increase Harmonised Index of Consumer Prices (HICP) inflation in the euro area. However, this argument should not be overstressed as the weight of inflation in the accession countries in the total euro area inflation rate is quite low. For instance, a 3% difference in inflation rates between the 1998 accession group and the rest of the euro area would only imply a 0.1% increase in the euro area's GDP-weighted inflation (Égert, 2002a).

Buiter (2004) has warned very recently that forcing the new Member States to enter the ERM II waiting room for the euro is "pointless and potentially dangerous". He thinks that creative reinterpretation is essential if unnecessary risk to the financial stability of the EMU candidates is to be avoided. According to Buiter, no monetary authority should be asked to pursue more than one nominal target. The simultaneous pursuit of three nominal targets (the nominal exchange rate, inflation target and nominal interest rate target) greatly enhances the

Table 2: Estimates of the inflation differentials (%) in the transition countries

Study:	Countries:	Vis-à-vis (if relevant):	Size:
Jakab and Kovacs (1999)	Hungary		1.9
Pelkmans et al. (2000)	CEE 10	29 OECD countries	3.8
Rother (2000)	Slovenia		2.6 during 1993-98
Sinn and Reutter (2001)	Czech Rep. Hungary Poland Slovenia Estonia	Germany	2.88 6.86 4.16 3.38 4.06
Halpern and Wyplosz (2001)	Panel of nine transition countries (incl. Russia)	Based on model for service-to-consumer goods price ratio	2.9-3.1 for the period 1991-99
Corizelli and Jazbec (2001)	Panel of 19 transition countries	Based on model for relative price of tradable goods	1 in the medium term (1990-98)
De Broeck and Sløk (2001)	Panel of transition countries		On average 1.5
Égert (2002a)	Czech Rep. Hungary Poland Slovakia Slovenia	Germany	0.648 0.303 for 1991-2000 2.589 1.295 for 1991-2000 3.245 1.901 for 1991-2000 -0.154 -0.075 for 1993-2000 1.321 0.661 for 1993-2000 [1)]
Égert (2002b)	Panel of Czech Rep., Hungary, Poland, Slovakia and Slovenia	Germany	With the share of non-tradables as in GDP, the size ranges from 0.094 to 1.903 depending on the time period and data. Estimates for 1996-2001 range from 1.707 to 1.903. With the share of non-tradables as in CPI the range is from 0.810 to 1.059.
Backé et al. (2002)	Czech Rep. Hungary Poland Slovenia	Main trading partners [2)]	0.35 1995-2000 3.84 1995-2000 9.76 1995-2000 3.88 1995-2000

1) The first column shows results using the GDP deflator, and the second column shows results using the Consumer Price Index (CPI).
2) Based on the assumption that there are no productivity-inflation differentials between tradable and non-tradable goods in the main trading partners, which seems unrealistic.

Source: De Haan, Eijffinger and Waller (2004)

likelihood that a "major financial accident" will happen. He states that EMU candidates should be allowed to have a free floating exchange rate between the time their date of and rate for joining the euro are announced, as well as the time their currency is locked into the euro. Buiter urges euro membership as soon as possible in the national interest of the new Member States, noting that even Poland, the largest country, is too small, too open and too financially vulnerable to run its own currency. Therefore, he concludes that without new rules for euro membership, there are risks that the accession of a country that is not ready for the euro could harm other old and new EMU members.

Equally important is that the increase in the dispersion of inflation rates in the euro area may increase the risks implied by the decentralised set-up of the ECB. As the catching-up process of the new Member States will continue after they have joined EMU, the enlargement of the monetary union implies more inflation divergence. If national considerations play a role in the behaviour of national central bank (NCB) governors in the Governing Council of the ECB, the focus on euro area-wide developments may be increasingly undermined. From this perspective, the future enlargement of EMU only underscores the need for reform of the ECB in the sense of strengthening the Executive Board at Frankfurt vis-à-vis the presidents and governors of the NCBs within the Governing Council (see Eijffinger, 2003).

The effectiveness of monetary policy in defending exchange rates during speculative attacks: theory and evidence

The theoretical literature on the effectiveness of monetary policy in supporting a currency during episodes of severe speculative pressure can be distinguished into two groups, "traditional" and "revisionist". The *traditional view* argues that the monetary authority can support the exchange rate by raising interest rates. Higher interest rates discourage capital outflows and cause the exchange rate to appreciate. The *revisionist view* argues that when speculative attacks are accompanied by balance sheet problems in the financial and corporate sectors, monetary tightening may have a depreciating effect on the exchange rate.

We start by summarising the traditional view on the effectiveness of monetary policy in case of speculative attacks. Furman and Stiglitz (1998) raise two important concerns regarding the traditional effect of monetary policy. As the interest rate increase is likely to be temporary, so is the support of the exchange rate. Moreover, a 1% expected nominal deprecation the following day would require, according to Furman and Stiglitz, no less than a 3,678% annualised interest rate increase.

In response to these doubts, the proponents of the traditional view argue that increases in interest rates might be able to strengthen the exchange rate permanently through their effect on the expected future exchange rate. Three possible channels of this effect can be distinguished. First, the Dornbusch (1976) "overshooting" model of the exchange rate argues that an interest rate increase will lower inflation and will lead to a stronger expected future nominal exchange rate.[4] Second, Backus and Driffill (1985) and Drazen (2000, 2003) explain how raising the interest rate could signal the willingness or ability of the monetary authorities to defend the exchange rate. When the interest rate returns to its initial level, the change in expectations persists, causing a permanently stronger exchange rate.[5] Finally, Furman and

[4] Under that assumption purchasing power parity (PPP) applies in the long run.

[5] According to Drazen, the opposite could also hold, where raising interest rates signals the lack of other means to defend the exchange rate, for example because of a low level of reserves.

Stiglitz (1998) mention that a temporary interest rate defence provides policy-makers with time to implement reforms that can strengthen the exchange rate permanently.

The revisionist view, however, argues that tighter monetary policy affects the probability of bankruptcy and uncertainty about the future. Firms and banks will face higher costs of borrowing, which will decrease investments and profits. If they are negatively exposed to higher interest rates, their net worth will drop as well. Consequently, the probability of default in the corporate and banking sector increases, and this adverse effect may more than offset the traditional effects and cause the nominal exchange rate to depreciate instead of appreciate.

Empirical evidence on the effectiveness of monetary policy is mixed. Two approaches can be distinguished. The first approach assesses the time series relationship between interest rates and exchange rates in one or more countries. Goldfajn and Baig (2002), using daily data, find little impact of interest rates on exchange rates or vice versa in the 1997/1998 Asian crisis countries. Dekle, Hsiao and Wang (2002), using weekly data, show that interest rates had a small supportive effect on nominal exchange rates during the crises in Korea, Malaysia, and Thailand. Gould and Kamin (2001) also use weekly data and find that monetary policy did not significantly affect exchange rates in Thailand, Indonesia, Korea, Malaysia, the Philippines and Mexico.

The second approach looks at a large cross-section of currency crises or speculative attack episodes, and determines whether raising interest rates had a supportive effect on the exchange rates in those periods. Furman and Stiglitz (1998) look at nine developing countries in the 1990s and assess whether episodes of sustained high interest rates were followed by an appreciation of the domestic currency. Using daily data, they find a significant depreciating impact of interest rates on exchange rates in low inflation countries. Goldfajn and Gupta (1999) ask whether a tightening of monetary policy made it more likely that the post-crisis real appreciation would take place through nominal appreciation rather than through higher inflation. Looking at crisis episodes in 80 countries, they find that monetary tightening causes the nominal exchange rate to appreciate, but only in countries with strong banking sectors. Kraay (2003) identifies episodes of severe speculative pressure preceded by relatively fixed exchange rates in 54 developed and developing countries. He asks whether high interest rates defend currencies during speculative attacks. Using monthly data, Kraay finds no impact of interest rates on the outcome of speculative attacks.

The empirical assessment of monetary policy effectiveness is likely to suffer from endogeneity. Regressing the exchange rate (as a dependent variable) on the interest rate (as an independent variable) might cause problems, as the interest rate (monetary policy stance) is likely to depend on third factors, some of which also affect the exchange rate. Kraay (2003) instruments for monetary policy but still finds no significant impact of monetary policy on the exchange rate. Therefore, the empirical evidence of both time series and cross-section approaches is mixed and inconclusive with regard to the effectiveness of monetary policy in defending exchanges rates during speculative attacks.

The operating procedures for ERM II, which are laid down in an agreement between the ECB and the non-euro area NCBs, are crucial for defending the currencies participating in ERM II against speculative attacks. For each of these currencies, a central rate vis-à-vis the euro and a standard fluctuation band of $\pm$15 % are defined, *in principle* supported by automatic unlimited intervention at the margins, with very short-term financing available. However, the ECB and the participating NCBs could suspend automatic intervention if this were to conflict with their primary objective of maintaining price stability. Exchange rate policy cooperation may be further strengthened, for example by allowing *closer* exchange rate links between the euro and the other currencies in ERM II where, and to the extent that,

these are appropriate in the light of progress towards convergence (ECB, 2004). So it is up to the ECB to decide whether it has a hard or soft commitment to exchange rate intervention *within* the fluctuation band of ±15 % and on the basis of which conditions with respect to the country's fiscal and monetary policy. These *intramarginal* interventions will play, just as they did during ERM I, a crucial role in deterring speculative attacks against the ERM II currencies. A soft commitment on the part of the ECB to intramarginal intervention may provoke speculative attacks should the financial markets have serious doubts regarding the real and nominal convergence process of the country involved. Conversely, a hard commitment to intervening within ERM II on the part of the ECB is only realistic when it is combined with *conditionality* in terms of fiscal and monetary policy. The question is, of course, whether or not (constructive or creative) ambiguity in intervention policy will be beneficial to the exchange rate stability of the ERM II currencies. I think that ambiguity – creative or not – will not aid exchange rate stability. Therefore, it is essential that the ECB clarifies how strong its commitment is to intervening within ERM II to reduce the probability of such speculative attacks, and how it will interpret the convergence criteria of price stability and exchange rate stability in formulating its advice to the European Council on euro adoption by the new Member States.[6]

Finally, the role of central bank independence in the new Member States should not be underestimated. The fifth implicit convergence criterion is the independence of the NCBs of these countries. They have to comply with the *legal* independence of their central banks in order to make the position of the central bank in accordance with the Maastricht Treaty and the Statute of the European System of Central Banks. What matters is, however, the *actual* independence of the central bank. Only the actual practice of central bank independence determines the effectiveness of monetary policy to assure price stability. Legal independence is a necessary but not sufficient condition for a truly independent central bank, and can be seen as a fundamental basis for building the institutional climate needed for actual independence. Translating legal independence into actual independence is primarily determined by compliance with the law or the *rule of law* in a country. Eijffinger and Stadhouders (2003) have empirically investigated the impact of the rule of law on the rate of inflation. Several institutional quality indicators (IQIs) are integrated into their empirical test between the rate of inflation and legal central bank independence. When a country has developed a credible institutional framework, the rule of law is expected to be relatively larger than in countries with an inadequate legal, political and regulatory framework. IQIs are used as a proxy for the rule of law to test empirically the potential interaction between legal central bank independence, the rule of law and inflation. These IQIs (*Repudiation of Contracts by Government, Rule of Law* and *Bureaucratic Quality*) measure some aspects of the credibility of the government to protect property rights and enforce contracts. Eijffinger and Stadhouders find that the rule of law matters for the relation between legal central bank independence and the rate of inflation in a country. The individual IQIs are each significantly and negatively related to the rate of inflation for 44 developed and developing countries

[6] Vice-President Papademos (2004) of the ECB has advised the new Member States to focus monetary policy on price stability as the primary objective, both before and after ERM II entry. Participation in ERM II can play a very useful role in fostering policy discipline and consistency, but also in assessing the appropriateness of the "central parity" of a currency's exchange rate against the euro. According to Papademos, this is essential for deciding on that currency's permanent conversion rate to the euro. Policy consistency over time and across policy areas is paramount for sustainable convergence. It will help to stabilise expectations, avoid shifts in market perceptions and improve credibility, thereby facilitating disinflation and progress towards real convergence. Nominal and real convergence are interdependent, can be mutually reinforcing, and should therefore be pursued in parallel.

during the period 1980-1989. This result becomes stronger when two or three IQIs are combined. Although they are highly correlated to each other, a combination of IQIs may give a more complete picture of the qualitative institutional environment in a country. Therefore, the rule of law is essential for strengthening the actual independence of NCBs in the new Member States. Central bankers in these countries have to learn to behave independently, and politicians have to learn to accept this behaviour. This learning process will take time, perhaps a generation, and should be fully supported by the ECB.

Conclusions

It is likely that EMU will be enlarged in two years. Some of the new Member States – e.g. Estonia, Lithuania and Slovenia – will join EMU probably after a two-year period, as they do not have an opt-out clause. The new Member States face a difficult decision in trading off exchange rate stability and price stability, depending on their inflation differentials with the current euro area Member States. This implies that the Maastricht Treaty convergence criteria for price stability and exchange rate stability are in their present form incompatible. This may lead to speculative attacks against some currencies of the new Member States. The empirical evidence of both time series and cross-section approaches to the effectiveness of monetary policy in defending exchange rates during speculative attacks is mixed and inconclusive. It is therefore up to the ECB to decide whether it has a hard or soft commitment to exchange rate intervention within the fluctuation band of $\pm$15 % and on the basis of which conditions with respect to the country's fiscal and monetary policy. A soft commitment on the part of the ECB to intramarginal intervention may provoke speculative attacks should the financial markets have serious doubts regarding the real and nominal convergence process of the country involved. Conversely, a hard commitment to intervening within ERM II on the part of the ECB is only realistic when it is combined with conditionality in terms of fiscal and monetary policy. Ambiguity in intervention policy will not be beneficial to the exchange rate stability of the ERM II currencies. The ECB should clarify its commitment to intervening within ERM II to reduce these speculative attacks, as well as its interpretation of the convergence criteria in formulating its advice to the European Council on euro adoption.

Finally, the rule of law is essential for strengthening the actual independence of NCBs in the new Member States. Central bankers in these countries have to learn to behave independently, and politicians have to learn to accept independent behaviour by central bankers. This learning process will take time, perhaps a generation, and should be fully supported by the ECB.

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General Discussion

In response to Zsigmond Járai's question as to whether fixing the date for ERM II entry is really necessary, **Jürgen von Hagen** agreed with Járai that the answer is yes, but that a date should only be fixed if one is confident of being able to keep it. In addition, von Hagen argued that a fixed date should be announced in order to reduce the volatility of the nominal variables.

Regarding the Balassa-Samuelson effect mentioned by both discussants, von Hagen pointed out that in their paper they only address it in a footnote, as so much has been written on the topic. He added, however, that the Balassa-Samuelson effect is a relative price movement and does not have to do anything with inflation. This point should sink deep into policy-makers' minds, and is particularly applicable to the countries that are already in the euro area, where every country necessarily has the same inflation rate, and everything that differs from that should be regarded as a relative price effect. Von Hagen illustrated his point by saying that monetary policy-makers do not worry about the relative price of shoestrings because they have no instruments to control this price. For the same reason, monetary policy should not be concerned by the relative price of non-tradables in Ireland, for example. There is no policy authority that should make open market interventions in non-tradables in Ireland. Therefore, the Balassa-Samuelson effect is simply not a policy issue, and it should thus disappear from the agenda.

Von Hagen reacted to Sylvester Eijffinger's discussion on ERM II by picking up two points Eijffinger made on currency board arrangements. First, within ERM II, currency boards are allowed as unilateral arrangements. Second, currency boards are a commitment device and rely on credibility. Having said that, von Hagen argued that there is an important role for the ECB and the Commission in making the currency boards within ERM II viable by avoiding any statements that could increase unnecessary uncertainty about the central rates. As an example, he quoted the ECB's view that "countries that operate euro-based currency boards deemed to be sustainable might not be required to go through a double regime shift". This statement should not read "might not be required", but rather "will not be required", as the use of the word "might" creates uncertainty in the market that could destroy the currency board. Such statements should be avoided. Regarding the fluctuation margins of ERM II, he commented that the width of ±15% suggests that ERM II is either bad or irrelevant, which in either case would call for it to be abolished.

In response to Eijffinger's discussion of the effectiveness of monetary policy in defending exchange rate pegs, von Hagen argued that any empirical test on whether monetary policy is able to defend a peg is really a test on how well-informed market participants are about the size of the reserves of the central bank. Thus, this has inherently nothing to do with monetary policy. He justified this position by recalling that such attacks are part of the market equilibrium, which means that market participants when they start an attack have a clear view of what the outcome of the attack will be, namely that it will be successful.

Finally, von Hagen questioned Eijffinger's proposal to make the ECB's intramarginal interventions conditional on sound fiscal policy in the new Member States. This would imply that the ECB must have an official view of whether a non-euro area EU Member State has a sound fiscal policy or not – something that would be asking too much of an independent central bank.

Andrej Rant (Banka Slovenije) made a few comments on von Hagen's presentation. He argued, the term "violation" of the Maastricht criteria seems inappropriate for the new Member States because even if there is a rule for the euro area Member States concerning the

fiscal criteria, there is no violation for those Member States with a derogation. He argued that, especially concerning the price stability criterion, there is no sanction for the violation of the latter. At the end, Rant repeated what was said by Erkki Liikanen: we should stop speaking about "new" and "previous" or "old" Member States, as nobody wants to be characterised as being old. Rant suggested that von Hagen should argue for equal treatment for the new Member States, not special treatment.

Maciej Krzak (City Bank Handlowy Warsaw) wondered why von Hagen did not mention Hungary in the group containing Poland and the Czech Republic, as these are the only countries for which maintaining separate currencies would be feasible. If one thinks about Hungary in terms of an optimal currency area, it seems to be very similar to the Czech Republic. He asked whether the argument in the case of Hungary was based on the relative ineffectiveness of macroeconomic policy.

Tibor Schindler (Raiffeisen Zentralbank Austria) supported the need for independent central banks in the new Member States. In this regard he added that more politicians should attend this conference in order to learn about good policies. He wondered whether the independence of central banks in new Member States was sufficiently well anchored. Problems may arise when a central bank faces a reality check, as Narodowy Bank Polski (NBP) did some years ago, when it held interest rates at very high levels for a number of years, putting the economy under pressure. Consequently, NBP had to reduce interest rates. In this context, he raised the question how many years a country from central and eastern Europe can afford real interest rates in the range of 4-5%, like Hungary has now. Furthermore, he disagreed with an early announcement of the conversion rate, because this would be, like entering ERM II, an invitation to financial markets to challenge the central banks.

Anders Møller Christensen (Danmarks Nationalbank) commented on von Hagen's remark that in many small open economies, an independent currency is rather a shock creator. He found this to be too strong a statement. Furthermore, he was surprised that in a model in which there is no interest rate and no clear role for the central bank, an early announcement of the convergence rate could ensure smooth entry to EMU. In his view, there could be no role for independent monetary policy if the convergence rate were announced, because any attempts to use interest rates independently (unless due to exchange rate considerations) would lead to movements away from the smooth path to the conversion rate.

Jürgen von Hagen first replied to Rant by saying that the word "violation" may indeed be too strong, even though he purely used it to denote an inflation rate above the critical rate and did not mean to give it any political connotations.

In response to Krzak's question as to why Hungary was not mentioned in the group with Poland and the Czech Republic, von Hagen answered that the estimate was based on the size of the economy in terms of GDP, and that Hungary is smaller than the other two countries.

Von Hagen disagreed with the comment that an early announcement of the conversion rate invites attacks. First of all, in his model there are no central bank interventions, so there is nothing to attack. These are all market forces, and the process that drives the exchange rate in the model is interest rate parity. Addressing Møller-Christensen's remark, von Hagen replied that the important components of the model are interest rate parity and forward-looking exchange rate expectations. The model also has a term called "fundamentals", which is not precisely specified, but can be interpreted in two ways. In a version of the model with floating exchange rates, these fundamentals would be the differences in GDP, money supplies, etc. In

a version with currency pegs, the fundamentals would be the pegged exchange rate. So either way the model could be solved. This approach allows monetary policy to be hidden behind the market outcome, which is really what we are interested in. The logic of the model is that once you have announced the end-point in this forward-looking framework, market forces will drive the exchange rate to this end-point, as indeed we experienced in 1998. In late 1997 the ECOFIN council said we could not announce the terminal conversion rates because of the rule that they need to be equal to market rates. However, we could say that for the bilateral conversion rates for the Deutsche Mark and French franc and alike, we would use the central parities in the ERM. This is exactly what happened: only a firm commitment was required, that said "in the very last minute of trading in the franc against the Mark we will intervene in whatever amount necessary to make this central parity happen". Then, in equilibrium, intervention was not needed as the markets' expected it, which sufficed for exchange rates to be equal to the central parities. In the context of the model it is exactly the same: one should announce the final conversion rate and promise the markets that "whatever will happen in the very last minute of trading, we will intervene to make the last minute rate equal to the central parity". If the above is carried out, then this intervention will have no monetary policy effect and the market process will drive the exchange rate to the announced rate. A speculative attack would not arise, because there will be no need for either central bank interventions or exchange rate bands.

Zsigmond Járai responded to the question how long a central bank needs a high real interest rate**.** A very simple answer would be as long as market circumstances require. Rephrasing it more complicatedly, the answer could be: as long as inflation is high, budget policies are not disciplined, household saving is low and the markets are not happy to finance increasing debt servicing in the country. Járai felt that this constitutes the central bank's independence: to leave interest rates high as long as circumstances require, and only lower them if market circumstances permit.

Sylvester Eijffinger argued that there is a game-theoretical perspective to foreign exchange interventions: if the markets know that a central bank will and can intervene at any given moment, thus acting as a Stackelberg leader, then its interventions will be very infrequent and sometimes effective. For example, the Bundesbank and now the ECB have full disposition over their foreign exchange accounts and can act as Stackelberg leaders, which would deter the market from playing the non-cooperative game. On the other hand, if a central bank follows the market like the Bank of Japan, which acts more or less as a Stackelberg follower in the whole process (on occasions always being in the market, so that one could not distinguish between intervention and normal participation) then there is little effectiveness to interventions. The frequent interventions by the Bank of Japan are caused by the directives of the Japanese Ministry of Finance, which has full control over the foreign exchange account. The interventions of the Federal Reserve System are more complicated to analyse because of the involvement of the Board of Governors, the Federal Reserve Bank of New York and the Treasury, and they both [the Treasury and the Federal Reserve System] have the disposition on the foreign exchange account. In addition, the Anglo-Saxon countries show more of an inclination to intervene relatively frequently in the market than in continental Europe, even though the frequency and effectiveness of interventions are inversely related to each other. However, the important thing is whether the central bank's intervention is assessed as a credible threat or not, which represents the game-theoretical aspect of interventions. The intuition is that if market participants are afraid of interventions, they will not try to attack the exchange rate.

7

Introduction to the Policy Panel
EU enlargement and monetary integration

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1 Introduction

Only a few months ago, on 1 May 2004, the European Union (EU) was enlarged with ten new Member States. This enlargement is a historic milestone. The event has not come overnight. A process of deeper integration with the EU15 Member States has preceded it and still continues. In the case of the eight central and eastern European new Member States, an enormous transformation from centrally planned economies to modern market economies is part of it. The process of deeper economic integration associated with EU membership goes hand in hand with monetary integration and ultimately monetary unification, the adoption of the euro. The ten new Member States will at some point in the future adopt the euro. As such, economic integration and monetary integration are instrumental processes leading to an ever-closer union of Europe characterised by lasting peace, stability and prosperity.

Monetary integration, before adoption of the euro as foreseen in the Treaty, implies subscription to the convergence criteria, also known as the Maastricht criteria. These criteria relate to price stability, the government budgetary position, participation in the exchange rate mechanism and the convergence of long-term interest rates. Abiding by these criteria is the way to achieve sustainable convergence.

The convergence to the new single currency area was a historic challenge faced by the current Member States of the euro area. Looking back, one can say that this challenge has been taken up successfully. When drawing up the Maastricht Treaty, it was realised that success in monetary integration could only be achieved when accompanied by sound fiscal policies and convergence towards price stability. To a large extent, the new Member States face the same historic challenge, with the difference that now a credible monetary union, with an independent central bank whose primary objective is price stability, is already in place. The challenge the new Member States are facing is how to proceed with monetary integration in order to enter a large and already existing monetary union. The same Maastricht criteria again guide the examination of the sustainability of convergence. Together, these criteria form a coherent package based on a set of economic indicators that is neither negotiable nor subject to change. From a legal viewpoint this ensures continuity and equal treatment, while from an economic point of view, the logic of lasting convergence has not changed. Sound fiscal policy and lasting nominal convergence towards price stability are indispensable in order to ensure that the foundations on which the euro is based remain solid. Macroeconomic stability, sound government finances and a monetary policy geared towards price stability are also in the interest of each individual country. Indeed, the Maastricht criteria are based on the European consensus that stability-oriented policies provide for the best possible environment fostering growth and employment creation.

2 Initial conditions: diversity across countries

Before embarking on an analysis of the process of monetary integration, it is useful to consider briefly the initial conditions under which this takes place. The economic fundamentals with which the new Member States entered the EU are different from those of the earlier adopters of the euro. Eight of the ten new Member States are so-called transition economies. These former centrally planned countries have already gone many miles towards transforming their economies into modern market economies. In some respects they already resemble the EU15 Member States, although not in others.

First and foremost, through their membership, the new Member States fully subscribe to the principles, institutions, rules and practices of the EU. They are fully functioning modern market economies. Second, the feature in which the new Member States most closely

resemble the smaller of the EU15 Member States is the openness of their economies. Many of the new Member States can be considered to be textbook small open economies. Their main trading partners are usually situated in the euro area.

The greatest difference between the new Member States and the EU15 is the level of economic development measured in terms of GDP per capita, which is below the average EU level for all new Member States, although it shows a broad range. This implies that a process of real convergence, whereby living standards are gradually catching up over time with the rest of the EU, is ongoing. Coinciding with a lower level of economic development is the lower degree of financial market development. Both the degree of intermediation through the banking sector and the level of stock market capitalisation are generally lower than the average EU level.

Table 1: Macroeconomic situation of the new Member States

	GDP per capita[1)]	General government surplus (+) or deficit (-)	HICP inflation gross	General government debt
Czech Republic	69.2	-5.0	1.8	37.9
Estonia	51.2	0.3	2.0	4.8
Cyprus	80.8	-5.2	2.1	72.6
Latvia	41.5	-2.0	4.9	14.7
Lithuania	47.1	-2.6	-0.2	21.4
Hungary	58.0	-5.5	6.5	59.9
Malta	66.3	-5.2	2.6	73.8
Poland	45.2	-5.6	2.5	47.2
Slovenia	73.3	-2.3	4.1	30.8
Slovakia	50.4	-3.9	8.4	44.5

Sources: ECB, Eurostat.
1) GDP per capita as a % of the EU12, EC Services projections for 2004.
2) Convergence report 2004, ECB.

The macroeconomic situation is quite diverse across countries and cannot be easily summarised in one paragraph (see Table 1). With respect to public finances, the situation is mixed. Whereas six countries have large fiscal deficits above 3% of GDP, four have a deficit below 3% as required by the EU Treaty, or even show a surplus. Likewise the level of general government gross debt is for most countries well below the Maastricht criterion of 60% of GDP. Inflation in many cases remains still too high and so price stability has not yet been achieved on a sustainable basis for many countries. In addition, in some cases the deficit and the inflation rate can be very volatile.

To achieve lasting price stability, the new Member States have to undergo a process of nominal convergence. The process of sustainable convergence is a prerequisite for adopting the euro. The real and nominal convergence in the new Member States coincides with two particular noteworthy macroeconomic phenomena. The first of these is that many new Member States have experienced large capital inflows in the form of foreign direct investment (FDI). The prospect of future productivity increases, the low capital stock and the abundance of a well-educated work force has fostered these inflows. FDI has several positive effects on the economic performance of the new Member States. It clearly fosters capital accumulation and has brought in transfers of technology. Additionally, it has increased the linkage of these

new Member States with the EU15 Member States. In this respect it helps the achievement of real convergence and cohesion. The second phenomenon is an expected trend appreciation of the real exchange rate. This has partly been due to the occurrence of the so-called Balassa-Samuelson effect. Since the catching up of productivity levels in the tradable sector is generally accompanied by faster productivity growth than in the non-tradable sector, prices in the non-tradable sector tend to rise faster than in the tradable sector. To the extent that this catching up is associated with greater productivity growth differentials between tradables and non-tradables in the new Member States versus the EU, the relative price of non-traded goods will rise faster than in the EU.

3 The process

Against this macroeconomic background, the new Member States are transiting towards a final goal, the adoption of the euro. The institutional framework that they need to follow is given. First, economic policies are subject to a number of multilateral rules and procedures such as those laid down in the Stability and Growth Pact (SGP). Second, the new Member States are required to treat their exchange rate policy as a matter of common interest, and need to pursue price stability as the primary objective of their monetary policy. By joining the EU, countries subscribe to a stability-oriented culture that is in their interest as well as in the common interest of all EU members. Third, at some point the new Member States are to join the Exchange Rate Mechanism, ERM II. And fourth, when they are found to fulfil the necessary conditions for the adoption of the single currency, they will adopt the euro.

This broad policy framework leaves the choice of specific monetary and exchange rate strategy open. This responsibility is in the hands of the new Member States themselves. Specifically, the choice of which policies to follow in the transition period has occupied the minds of policy-makers and academics in recent years. The main challenge that determines the choice of policy is how to foster both price and exchange rate stability against the macroeconomic background of real convergence and nominal convergence. The economic literature that investigates this challenge is a large and diverse one.

4 Some observations from the economic literature

Before discussing how I view the transition, let me briefly discuss what I think are the main messages of the economic literature. The older optimum currency area (OCA) literature developed by Mundell (1961), McKinnon (1963) and Kenen (1969) emphasises features of the economy that make a common currency more preferable. If economies are similar, they are less likely to be faced with asymmetric shocks, so that nominal exchange rate changes are less needed as an instrument of adjustment. In addition, flexible labour and product markets make the exchange rate instrument redundant in reducing the impact of shocks on income and employment. The main message here is that structural reforms should aim at preserving and fostering flexible product and labour markets. There is less need for strong fiscal policy and monetary policy reactions in the presence of flexible markets.

The old insights of this literature have however been augmented with more recent ones. These new insights stress the endogeneity of the structure of the economy and are part of the so-called new OCA literature. (For an earlier overview of this literature, see Tavlas (1993). Mongelli (2002) provides a more recent assessment.) Too much fixation on historical patterns of shocks and movement of business cycles is misleading. As Frankel and Rose (1998) argue, "*Countries that enter a currency union are likely to experience dramatically different*

business cycles than before". They back up their claim with empirical evidence that close international trade links result in more closely related business cycles across countries (Frankel and Rose, 1997). There is also earlier evidence by Artis and Zhang (1995), who show that most European countries' income became more correlated with Germany within ERM, whereas in the period before (from 1961-79) they were more correlated with the United States. One can expect therefore that the integration of the new Member States into the EU will cause closer business cycle synchronisation with the euro area. Currently available evidence suggests that overall correlation with the economic fluctuations of the euro area is weaker for the new Member States than for the euro area Member States themselves. However, the synchronisation of cycles shows considerable differences across countries (Backé et al., 2004; and Fidrmuc and Korhonen, 2003).

More recently a new strand of the literature has been investigating the integration effects in currency areas.

A first insight of this literature is that a currency union can use financially integrated capital markets more easily to share risk. For instance, cross-country ownership of assets will smooth income shocks. It is a central theme in this literature that output shocks only lead to strains in a currency union if they create asymmetry in the development of income and consumption. Asymmetric output shocks can be mitigated by inter-country risk-sharing. Asdrubali et al. (1996) find that for the US up to 39% of shocks to individual states are smoothed through capital markets, and 23% through credit markets. It is interesting to note that only 13% are smoothed by the federal government. For the European Union, recent evidence by Kalemli-Ozcan et al. (2004) shows that risk-sharing has increased over the last decade. Furthermore, risk-sharing is found to be a causal determinant of industrial specialisation (Kalemli-Ozcan et al., 2003). Although this might lead to less correlated output shocks, risk-sharing does provide insurance against these.

A second aspect is that integration may have a large effect on the level of trade and output. Rose (2000) proposes that being part of a currency area increases trade by a factor of three. In later research this effect is estimated to be smaller, but nevertheless still substantial (Rose and Van Wincoop, 2001; Melitz, 2001; and Persson, 2001). Alesina et al. (2002) show that currency unions have important positive effects on bilateral trade and co-movement in prices. These new insights might imply that the beneficial effects of financial and trade integration in terms of increasing the level of output (through increased trade) could be of an order of magnitude larger than the beneficial effects of business cycle stabilisation.

The lesson to be drawn here is that further trade integration and financial integration will happen after the adoption of the euro, and will even be fostered by this adoption. However, they should not be misread as a prescription to adopt the euro overnight. Early adoption of the euro is no guarantee that the benefits of closer integration would outweigh the potential cost of adjustment in the short run. Indeed, just the opposite might be true. As the work by Bayoumi, Kumhof, Laxton and Naknoi has shown us today, trade integration takes time. The same is true of financial integration.

5 Challenges in the transition process

Let me now turn to the transition as I see it. First and foremost, any transitional monetary policy framework needs to be tailored to the individual needs and circumstances of the individual countries. However, a number of elements that determine the specific choice of a monetary and exchange rate strategy are more general and hold for every new Member State.

The first element is the development and strengthening of the institutional structure of the financial system. Monetary integration is more than just adopting a common currency; it also implies financial market integration. More than just the liberalisation of capital flows, which has de facto taken place, it also implies a level playing-field with common standards, structures, regulation and institutions and a sound banking system. This is important for a number of reasons. First, a successful implementation of monetary policy requires a functioning stable domestic financial sector. The central bank has to rely on the smooth functioning of the financial system for the transmission of monetary policy. Second, an inadequate institutional structure may lead to financial vulnerability in the financial system. Effective regulation and supervision of domestic financial institutions and markets is therefore of the utmost importance.

Credibility is another important element in the choice of monetary and exchange rate strategy. Credibility is here a first-order issue. In the process of nominal convergence, a credible monetary policy aimed at reducing inflation can significantly lower potential output losses (Ireland, 1995). A credible disinflation policy can occur more quickly (even in the presence of nominal rigidities) without necessarily reducing output. However, even if the policy is credible, transition towards low inflation might take a considerable time (Calvo et al., 2003). Conversely, a lack of credibility might cause inflation inertia and output losses (Ball, 1995 and Calvo and Vegh, 1993). Several new Member States have made significant progress in reducing inflation over the last few years. Maintaining the credibility of the disinflationary process is important to ensure that low inflation expectations become entrenched in wage and price setting. How can this credibility be maintained? As I have argued in the past, first, remain committed under all circumstances to the mandate of price stability. Second, explain as clearly as possible what you plan to do, i.e. announce a strategy. Third, follow a policy in line with your strategy, without being dogmatic (Issing, 2003).

Finally, any monetary policy strategy has to deal with uncertainty. As the structure of the economies of the new Member States is undergoing continuous changes, the uncertainty of the environment poses an extra challenge on the monetary policy decisions to be made. The uncertainty is aggravated by a number of factors. First, there is no long track record (at least not for the central and eastern European new Member States) in conducting monetary policy, as the countries evolved from centrally planned economies. Second, long time series do not exist and there is often uncertainty about the quality of the available data. Third, where data are available, structural changes pose problems for understanding and modelling the economy.

To some extent the difficulties faced by the central banks of the new Member States remind me of those faced by the European Central Bank (ECB) in the initial phase of the EMU. As a new central bank for the currency area that had no track record, the choice of monetary policy strategy was of particular importance to ensure effective policy actions and to foster credibility. The strong commitment to the medium-term objective of price stability provides a focal point around which the strategy is formed. An important element in the strategy is the definition of price stability as an annual increase in the Harmonised Index of Consumer Prices (HICP) in the euro area of below but close to 2%. This clear benchmark promotes transparency and accountability and anchors expectations, which is particularly important in the absence of a historical record. The medium-term orientation reflects the long and variable lags of monetary policy transmission. Policy decisions are taken in a forward-looking and pre-emptive way. The analysis that underlies this strategy is broad-based and takes into account a large set of information derived from two analytical perspectives. The economic analysis focuses mainly on the assessment of current economic and financial developments

and their likely impact on price stability. The monetary analysis recognises the stable relationship that exists between prices and money in the euro area in the medium to long term.

However, does this imply that the ECB strategy should be the model strategy that the new Member States should follow during the transition period? Such a conclusion would be unwarranted. The ECB strategy is chosen taking into account the specific features of the euro area. These features are not likely to be present in the new Member States at the moment. The choice of a monetary strategy in the transition towards the adoption of the euro should depend on the individual country-specific features during the transition period. First, since monetary aggregates are likely to be unstable in the face of structural change in the financial system, a prominent role for money specified by a specific aggregate may not be ideal for the new Member States. Second, since most of the new Member States are small open economies in relation to the large, relatively more closed euro area, their domestic aggregates are likely to be less stable. Some countries have chosen inflation targeting as their strategy. Notwithstanding all relevant caveats, not least the uncertainty in the forecast itself, this might well be the optimal choice for them under the circumstances. Inflation targeting provides a clear quantified target that anchors expectations. Anchoring expectations is especially important when undergoing a disinflationary process. Inflation targeting also provides a simple language in which to convey policy decisions. Announcing disinflation paths in advance may steer inflation expectations and wage developments. From the moment price stability has been achieved, setting a definition of price stability in line with the one that holds for the euro area may prepare agents for the adoption of the monetary policy of the ECB. If at the end of this process the exchange rate with the euro becomes fixed and stable, then money becomes endogenous and the new Member States will be implicitly adopting the monetary policy strategy of the ECB.

Any strategy has to take into account that a minimum presence of two years in the ERM II system is a precondition for the eventual adoption of the euro. A country entering ERM II fixes its exchange rate vis-à-vis the euro with a central rate with a fluctuation band of 15%. There are a number of good reasons to suggest that entry in ERM II should not be considered before a sufficient degree of nominal convergence and structural adjustment has been reached.

A first reason to avoid premature entry in ERM II is that in setting the central rate, misalignments need to be avoided. When major structural adjustments have not yet been achieved and nominal convergence is not in an advanced stage, equilibrium exchange rates are extremely difficult to assess and exchange rates might be exposed to large swings.

Another reason for a cautious approach is the stabilisation of expectations. Since the new Member States will eventually adopt the euro, markets will have already formed an expectation as to when this will happen even before entry into ERM II. More precisely, markets form expectations not only about the conversion date but also about the conversion rate. Clearly, these expectations are vulnerable to change. Changes to the adoption date of the euro can potentially have an effect on capital flows and the market exchange rate, given the fact that there is full capital mobility (De Grauwe et al., 1999). Changes in expectations could be caused by market revisions of expectations as to whether the Maastricht criteria will be met at the prospective date of entry.

Finally, if participation in ERM II occurs too early, maintaining simultaneously price stability and exchange rate stability could become extremely difficult, and at times impossible.

In the case of large shocks that affect the equilibrium exchange rate, adjustment of the central parity is likely to be the best solution. Today we can still learn from the currency crisis

in ERM in 1992-1993. Clearly this crisis took place under very specific circumstances that are not likely to be replicated today, comprising simultaneously competitive problems in a number of countries, large public debts and a large asymmetric shock, namely German unification. However, the pegs in ERM II are adjustable, so that in the face of large shifts in fundamentals, timely adjustment of these central rates is needed.

Let me finally say that countries should make as much use as possible of the benefits that lower long-term interest rates will bring when adoption of the euro is on the horizon. Lower long-term interest rates will not only stimulate investment, but fiscal authorities should use this period to put their house in order. It would be a shame if this opportunity were squandered.

6 Conclusion

The adoption of the euro by the new Member States will be the ultimate final step in monetary integration. The process of monetary integration can only be successful if it follows the broader process of economic and financial integration. True, the economic literature shows that economic and financial integration is a process that will go on after entry into the euro area. However, one cannot put the cart before the horse; a sufficient degree of economic and financial integration is a prerequisite for first joining ERM II and later for adopting the euro. The passing of the Maastricht criteria is a mark that successful and lasting convergence has been achieved. The role of the monetary authorities is crucial. They should lead this process by establishing a credible policy aimed at price stability.

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Leszek Balcerowicz

Otmar Issing's paper is, as always, so good that if I were to limit myself to direct reference I would not exhaust my ten minutes.

So instead I will focus on some selected points, including the structure of thinking about entering the euro area. In every sensible strategy there are two parts: first the target, and then the transition. An obvious, perhaps provocative, question is whether the euro is a desirable target.

The answer to this question has several components. The first concerns the future of the euro. The second concerns the impact of a common monetary policy as opposed to a domestic monetary policy on the most important variable, which is long-term economic growth, or, in other words, real convergence. Would first targeting membership in the euro area and then actual membership help or hamper real convergence?

As to the first component, I will only say that I assume the euro has a good future, because I assume the essence of the Stability and Growth Pact (SGP) will be upheld. We know that every effective constitution goes through a testing period. It is very rare for a good constitution to become binding without undergoing such a period in order to prove itself.

Now let me focus on the second component. The literature on this issue is extensive, and some very useful papers have been presented today. I would just like to focus on a few points.

I think it is very convenient to conceptualise the consequences of switching from a domestic to a common monetary policy in terms of microeconomically-based consequences and macroeconomically-based ones. What we know about microeconomic consequences (trade, financial integration) is that there is no doubt that they are beneficial to the prospective members of the euro area. So the whole debate comes down to the macroeconomic consequences. Nicholas Garganas gave a very interesting speech today, in which he mentioned that macroeconomic consequences can also be beneficial. This contrasts with conventional wisdom, which calls these consequences "costs", i.e. negative effects. An empirical issue should not be settled by a terminological convention. Whether these consequences turn out to be costs or benefits will depend on two related factors. First, the initial conditions, including long-lasting ones: how large is the economy? how open? how integrated? And secondly: what would the macroeconomic policy be if a given country were to remain outside the euro area?

With respect to the second issue, we should distinguish between two cases. In the first case, the degree of macroeconomic discipline would be the same both with and without the euro. Perhaps this is the Swedish example. In the second case, switching to a common currency would improve the country's macroeconomic discipline via the related constraints. The benefits of the euro are clearly larger in the second than in the first case. This difference is not reflected in the formal models.

To continue with the macroeconomic consequences, I think they could be divided into those that will appear before the adoption of the euro – thanks to the mere fact of targeting the euro – and those that will appear after entering the euro area. The fiscal stance might be changed because of targeting the euro, but that would depend on the prior existence of sufficient fiscal discipline. This is perhaps the case for the Baltic countries. However, larger countries among the new members are in a worse fiscal situation. They already have to consolidate their public finances in the interest of economic growth, and so no new sacrifices are required from them in order to qualify for the euro. What is more, a decisive fiscal consolidation focused on reduction in spending may generate non-Keynesian effects, i.e. bring about an acceleration not only in long-term but also short-term economic growth. According to recent research carried out at Narodowy Bank Polski, this was the case in the recent fiscal consolidation in the Baltic countries.

The main issues related to the consequences of targeting the euro refer to ERM (Exchange Rate Mechanism) II. I am speaking here as a policy-maker and not as an academic economist, so I naturally hope that those countries that are in transition from free-floating and direct inflation targeting will not be exposed to unnecessary risks by a rigid interpretation of the stability of the exchange rate criterion. Imagine what the political consequences of a macroeconomic accident caused by an unduly narrow range of allowable exchange rate fluctuations could be. I think that a great deal of British euro-scepticism is related to what happened in the UK in 1992. Another question that is interesting for those countries that currently lack sufficient fiscal discipline is what minimum degree of it is necessary for entering ERM II?

With respect to the macroeconomic consequences of entry into the euro area, I would like to mention three points.

First, I think it is interesting to question the extent to which the real flexibility of the economy is endogenous. To what extent can it improve as a result of being deprived of the mechanism of nominal flexibility, that is, of a floating exchange rate?

Second, in making comparisons one should not assume that if domestic monetary policy is maintained, everything will be perfect. There is the question of potentially volatile capital flows and a volatile exchange rate, and one should also realise that domestic monetary institutions risk becoming subject to political pressures, as indeed we discovered two years ago. The problem was overcome thanks to a sufficiently strong and early reaction, but it seems that the danger of politicising the central bank has appeared in other countries. I am particularly thinking of my friends from Hungary.

I would like to end with a point on the political economy. In some countries the very prospect of joining the euro area can be an important incentive to accelerate reforms – namely, in those countries where the euro has not been demonised and where domestic currency has not been made part and parcel of national sovereignty. This leads me to a final remark. Economists have a tendency to disregard the role of language. I know this from past experience when the expression "shock therapy" was first used, and I think that most misunderstandings about the reform of post-Communist economies have been related to this particular phrase. But let me give you another example: "Loss of an independent monetary policy". How does it sound? Very bad! Because the loss of something very precious – "independence" – is, by definition, extremely undesirable. So I would suggest the use of neutral terms, and thus, I think that speaking about "a shift from a domestic monetary policy to a common monetary policy" sounds much better.

Zdeněk Tůma

It is only recently that we became members of the European Union (EU). It is only natural that, once the immediate effects of the enlargement have subsided, policy-makers' attention should shift towards the next step – monetary integration of the 25 current EU Member States.

The first thing to be considered when discussing European monetary integration is how the different countries will go about adopting the euro. There is no universal strategy that can be used by all new EU Member States. The euro may either be adopted rapidly, or after a longer interim period. In the pre-EMU (Economic and Monetary Union) period, the emphasis can be put either on ensuring the low inflation required by the Maastricht Treaty domestically, or on importing it by fixing the exchange rate. The key factors that determine which strategy to adopt are, in my opinion, the size and flexibility of the domestic economy, the current monetary policy regime and its credibility, as well as the state of public finances.

Specifically, small countries that have lived with fixed exchange rate regimes for the last ten years, and have thus developed economies flexible enough to compensate for fixed exchange rates, will most likely benefit from faster adoption of the euro. They are also likely to rely on importing price stability from abroad during the interim period. Larger countries that have invested heavily in developing a credible independent monetary policy, but still have more to do in the area of fiscal policy reforms and flexibility of domestic economies, will probably opt for a more cautious approach. They are likely to prefer avoiding double regime switches, opting instead for a smooth and fast transition from the current regime to euro adoption.

The Czech Republic belongs to the latter group. The Czech strategy for euro adoption is based on a cautious timescale. In the pre-EMU period, we want to ensure low inflation domestically, not import it. As part of this strategy, we have pointed to the period 2009-10 as the most likely for entry. In comparison to other new Member States, this timescale was initially viewed as relatively cautious. However, it should be noted that other countries in the region have recently pushed back their initially more optimistic estimates. The primary reasons for this more cautious timescale are – in all cases – fiscal developments.

In the pre-EMU period, we will continue to target inflation. This strategy has gained a substantial degree of credibility in the Czech Republic since its introduction in 1997. Our inflation target for the period beyond January 2006 is set at 3% (for Consumer Price Inflation (CPI)), which should allow us to fulfil the monetary side of the Maastricht convergence criteria, and at the same time to reflect the long-term real convergence needs of the Czech economy. In our experience, inflation targeting is capable of producing a sufficiently strong nominal anchor for the economy, and consequently also of stabilising the exchange rate, obviously in the absence of large external shocks.

Hence, in favourable circumstances, inflation targeting will allow us to achieve price and exchange rate stability simultaneously. Should circumstances become less favourable, the simultaneous achievement of both will be difficult no matter which monetary strategy is adopted. That is why we do not consider ERM (Exchange Rate Mechanism) II to be a policy regime superior to the current one. In line with this stance, we have agreed with the government to stay out of the ERM II mechanism for the time being. We plan to introduce ERM II after conditions for meeting all Maastricht criteria within a two-year timeframe have been established.

There are still a number of issues to be discussed, of which I would like to address two. First, is inflation targeting compatible with ERM II? Second, what is the impact of policy debate about the modifications to the Stability and Growth Pact (SGP) on our forthcoming

effort to meet the Maastricht criteria? As far as the compatibility of the two regimes is concerned, namely inflation targeting and ERM II, the specific arrangements have not yet emerged from the ongoing debate. We believe that, relying on the economic analysis and intuition rather than on background legal documents as a guide, there is no need to modify the current strategy significantly, as it will be able to deliver both price and exchange rate stability. However, monetary policy alone cannot guarantee the smooth progress of adopting the euro. It is of crucial importance that the whole policy mix is supportive of this goal. The recent failure to enforce SGP rules in the existing euro area should not be taken as an excuse for postponing fiscal reforms in the new Member States. On the contrary, it should be interpreted as a warning signal that the Maastricht criteria should be met by a sufficient margin prior to euro adoption in order to create an adequate buffer for difficult periods.

Having said that, I would like to emphasise that monetary integration is not only about the adoption of the euro by the new Member States; it is a more general process – a continuous improvement of our common institutional framework, monetary strategy and analytical techniques.

There is a very solid foundation upon which to build a common future for the 25 EU Member States. This year the euro celebrates its fifth anniversary. Let me take this opportunity to congratulate the European Central Bank (ECB) for the successes achieved so far. The currency changeover, the lack of historical euro-data, the need to build the credibility of the newly established central bank – these were all challenges that have been successfully overcome. The euro has emerged as a stable, highly credible and important international currency. As a result, we can now discuss the monetary integration of all current EU Member States with confidence.

The word "integration" can mean different things in different circumstances. For me today, it means that all current EU Member States will contribute as much as they can to these improvements with their own ideas, knowledge and experience. The new members of the European System of Central Banks (ESCB) are prepared to contribute their share. They have gained a wealth of experience from a decade of economic transformation, a decade during which they used a wide variety of monetary policy strategies, from inflation targeting to currency boards, in order to deliver low inflation. Let me mention just a couple of lessons that were learnt:

- how to make decisions and produce good-quality economic forecasts when faced with a large degree of uncertainty (e.g. about available data);
- how to bring the economy back to low inflation after a series of supply-side shocks, and how efficient communication is crucial in such circumstances;
- how maintaining low inflation is much easier, providing that fiscal discipline and policy coordination can contribute to the task.

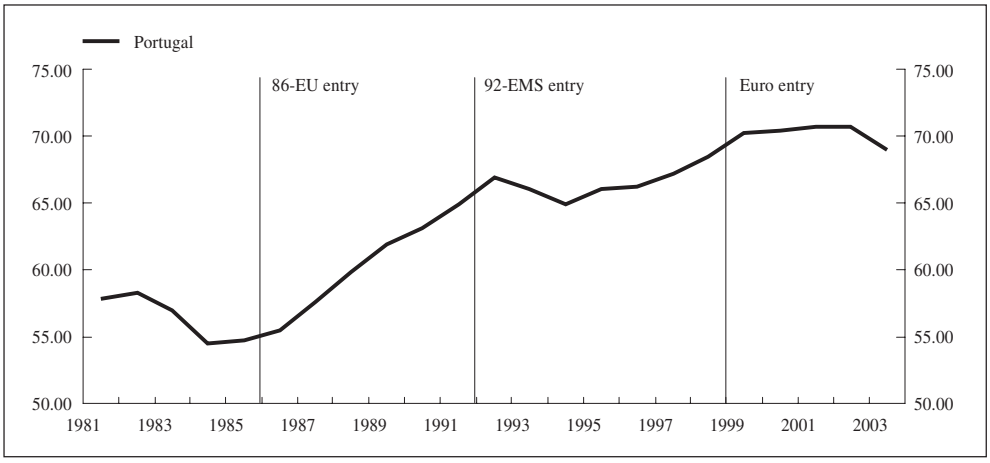
These issues will surely be familiar to others. The knowledge gained during the transformation period will enrich the policy debates of the ESCB's councils and working groups. This is how monetary integration will happen on a day-to-day basis, both in countries that already use the euro, and in those that will introduce it in the future.

Vítor Constâncio

European monetary integration and the Portuguese case

The Portuguese case is a good illustration of both the benefits and the risks associated with monetary integration. To properly assess our case, however, we should consider the long period of membership since 1986. In this time span we can certainly be seen as a success story, which is also true if we start the analysis in 1992 – when we joined the Exchange Rate Mechanism (ERM).

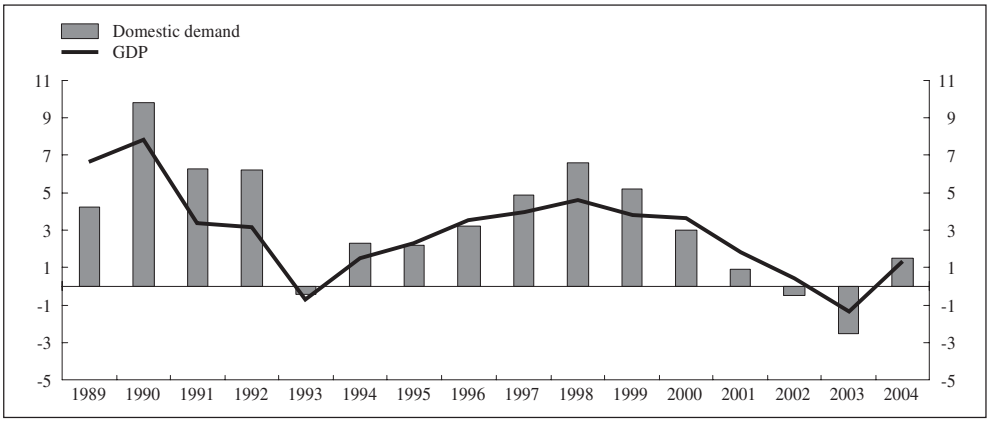
Figure 1: GDP per capita
(PPS in % of EU-15 average)



More recently, however, we have suffered a marked slowdown in growth and in 2001 we breached the 3% budget deficit limit imposed by the Treaty (Figure 2). The slowdown, which attained recession level with -1.3% growth last year, was very much influenced by the international economic slowdown, but stemmed also from the adjustment of economic agents after a period of high growth fuelled by a credit boom. I will maintain below that this type of see-sawing development is the result of a practically unavoidable adjustment to a new intertemporal equilibrium associated with monetary unification.

Nevertheless, the recent economic evolution also stemmed from some mistakes of our own. It can be said that the macroeconomic aspects of a successful monetary integration are all about economic agents adopting new rules regarding fiscal policy and wage behaviour. Fiscal policy needs to play a counter-cyclical role to act as a shock absorber. Wage behaviour should take as a reference wage cost developments in the euro area as a whole, and should deviate from these only if there is a productivity growth differential. A difference in performance can lead to dangerous losses of competitiveness and can feed a divergent inflation process. In a monetary union, however, no country may have an inflation rate for a long period that greatly differs from the average. Only inflation differentials that are justified by equilibrium movements of the real exchange rate are sustainable. In view of the recessionary nature of the adjustment, when price and cost inflation diverge, sensible wage behaviour is essential to minimise future unemployment.

Figure 2: Growth rates of GDP



These new realities of life in a monetary union are only with difficulty taken on board by economic agents who have for decades been used to other regulation mechanisms. As a consequence, our fiscal policy has been mostly pro-cyclical and our relative unit labour costs have increased more than the euro area average. We have aggravated, therefore, the risks of boom and bust behaviour. This is a considerable risk which, at an initial stage, confronts all countries coming from a relatively high inflation regime to join a low inflation monetary union.

There are several causes for the initial growth acceleration effect or even for real overheating. The first one stems from the decrease, and possible temporary misalignment, of interest rates and the credit boom that follows from this. The second reason is associated with large capital inflows that add to demand pressures and may be caused either by foreign direct investment (FDI) or short-term capital movements related to interest rate convergence plays. Finally, the third group of causes is related to more direct pressures on prices coming from several possible factors: a strong Balassa-Samuelson effect; a catching-up movement in price levels; the liberalisation of administrative prices; the harmonisation of VAT; the adoption of Common Agriculture Policy prices, etc.

All the factors mentioned above create pressures that may lead to several problems:

a) Boom and bust cycles followed by a possible recession;
b) Overheating in asset markets (housing and stock exchanges);
c) Competitiveness problems with consequences for the current account, especially if unit labour costs become misaligned.[1]
d) Financial stability risks if credit institutions are allowed to incur excessive risks in the context of an overheated economy.

As I have mentioned already, these problems may occur before joining the euro within ERM or after the adoption of the euro in spite of the regime change. This implies, among other things, that for candidate countries to optimise the speed of convergence, they should make proper use of ERM II, control the risks associated with overheating, and continue to implement reforms to improve their growth potential and increase total factor productivity without being misled by the initially positive performance of the economy.

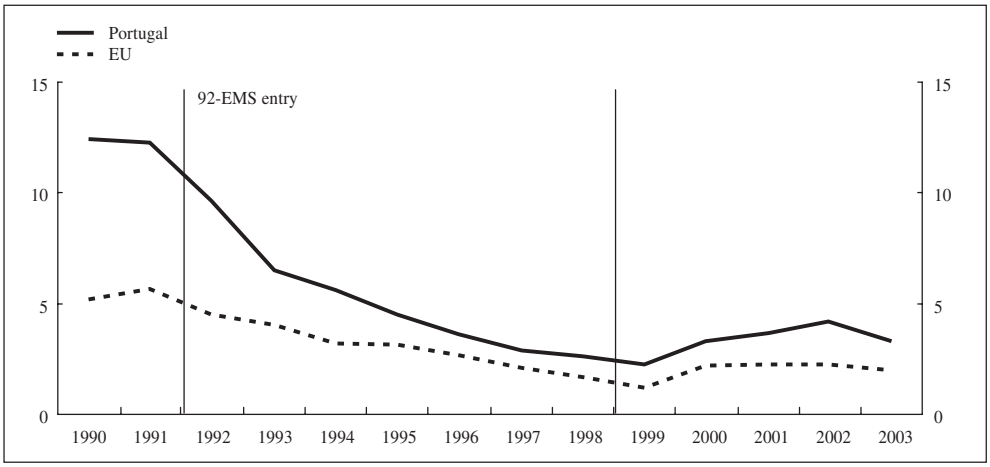
[1] Before countries join the euro, the pressure will be exerted on nominal exchange rates. We should nevertheless be aware that even after joining the euro, a country continues to have a real exchange rate, given by inflation differentials, and excessive appreciation may emerge or be exacerbated.

ERM participation

The Portuguese experience has some lessons of interest both for the case of ERM participation and of euro adoption. I will first address ERM participation. ERM is both a test of the capacity of countries to participate in a monetary union and a useful mechanism to steer economies to comply with the Maastricht criteria. I can understand the reluctance of some new Member States to accept the need to undergo ERM participation before joining the euro. There are of course two different cases. Small countries with fixed exchange rate regimes can understandably envisage staying in the ERM for as short a period of time as possible. For countries with flexible exchange rate regimes, including those shadowing ERM, participation in the ERM can be useful, as the ±15% band allows exchange rate flexibility to help stabilisation and absorb inflationary pressures. At the same time, ERM acts as a disciplinary framework, since adequate domestic policies are essential to ensure compliance with the commitment to exchange rate stability. But the ERM is also a flexible framework: realignments are possible and should be used if necessary. This means that the initial central rate should not be seen as the future conversion rate. In addition, with the wide bands, the ERM – although giving priority to exchange rate stability – still allows room for an independent monetary policy to target inflation, in what is a workable hybrid system.

Our experience illustrates many of the points I have just mentioned about the ERM. Portugal initiated an exchange rate-based stabilisation programme in 1990 and entered the ERM in April 1992. Inflation was consistently reduced throughout the decade (Figure 3).

Figure 3: Inflation in %

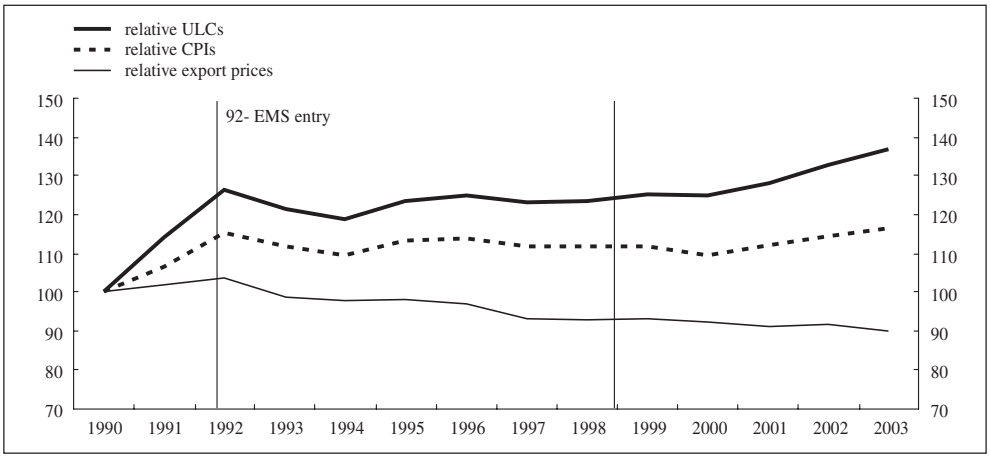


The disinflation process, based on nominal exchange rate stability, was of course accompanied by real exchange rate appreciation (Figure 4), although until 1999 there was no significant current account deficit.

The following graph[2] (Figure 5) illustrates the exchange rate developments and some of the policies used to defend the parity during the period of our participation in the ERM. In the top

[2] Extracted from B. Adão and J. Pina (2003), "A experiência do escudo no MTC e a eficácia da gestão cambial" *Boletim Económico do Banco de Portugal,* June.

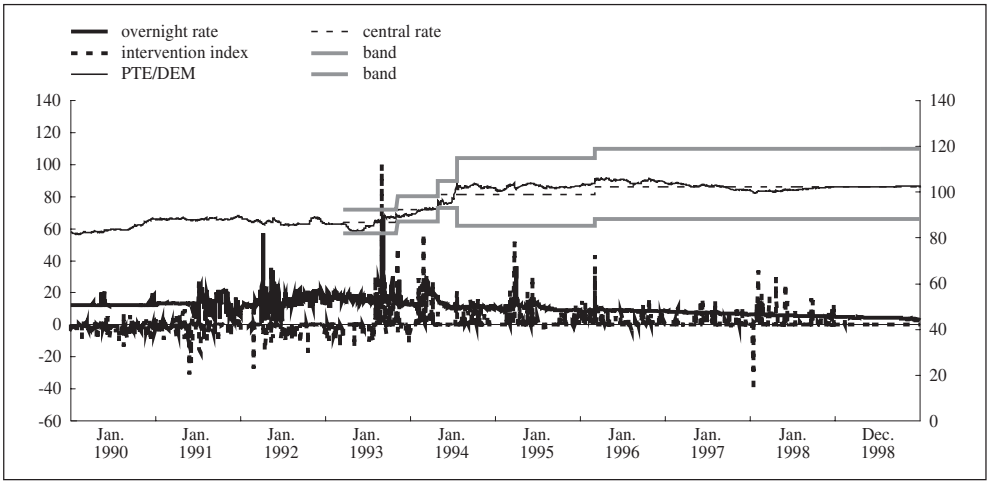
Figure 4: Competitiveness Indicators
(1990 = 100)



Sources: BP and OECD.
Note: ULCs = unit labour costs; CPIs = consumer price indices

part of the graph we have the escudo/Deutsche Mark exchange rate with the respective central rate and permitted fluctuation bands. In the lower part, the left-hand scale, we have in green the overnight interest rate and in brown an intervention index (the amount of daily intervention divided by the highest amount in the period 1992-1998)

Figure 5: Escudo exchange rate v. the Deutsche Mark, interventions and the overnight rate



Initially, in 1990-1992 there were capital inflows and a tendency for nominal appreciation. All capital inflows were sterilised, which was naturally very expensive. Sterilisation increased interest rates, which were already very high to fight inflation. This led to more capital inflows (4% of GDP in 1990, 8% in 1991 and 7% in 1992). We suffered from the well-known contradiction between a tight monetary policy to fight inflation on the one hand, and the objective of exchange rate stability on the other. This happened in spite of some existing capital controls that were only totally dismantled in December 1992.

Entry into the ERM was helpful notwithstanding the initial turmoil in the system. We were victims of contagion and the escudo was under attack after September 1992, when Portugal did not follow a realignment of central rates by other countries. This led to a significant speculative episode that was nevertheless successfully resisted. The policy response consisted in a determined and simultaneous use of interventions in forex markets and interest rate moves. Active episodes of intervention (interventions or interest rate moves above 2.5 standard deviations of the period) involved 4.4% of the total days of the period and were successful 91% of the time – successful in the sense that after an intervention the exchange rate appreciated (the Frankel criterion[3]) or depreciated less than before (the Humpage criterion[4]).

During the period of turmoil in the system, we changed the escudo's central parity three times (November 1992, -6%, March 1993, -6.5%, and May 1995, -3.5%) without ever having reached the band limits. These realignments helped to offset the initial high appreciation of the currency. They also did not harm the disinflation process, which continued to be based on a tight monetary policy and a nominal exchange rate that did not completely offset inflation differentials. As an IMF working paper[5] on exchange-rate-based stabilisations in Greece, Ireland, Italy and Portugal stresses, there was no relation in all these countries between fiscal policy and disinflation. The credibility of the disinflation process was more related to a general sustainability assessment than with the speed of deficit reduction. All these points prove the flexibility of the ERM and the advantage in not seeing the initial central rate as the future conversion rate.

We stayed in the ERM for six years with exchange rate stability after 1993, as domestic policies gradually gave credibility to the objective of participating in Economic and Monetary Union (EMU). The disinflation proceeded smoothly, without excessive demand pressures or inflation surges. This development was influenced by very high interest rates in the first few years and by the European recession of the early 1990s that also led to a recession in Portugal in 1993. So, during this period, we did not suffered the exchange rate-based stabilisation syndrome of high growth, high capital inflows, high real appreciation, and high current account deficits, common features in other experiences. That came later as euro adoption approached and during the first two years of EMU membership.

In different experiences where inflationary pressures become intense, a contradiction may appear between the Maastricht criteria of exchange rate stability[6] and of inflation performance, which may explain why some countries would only like to stay a very short

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[3] J. Frankel (1994), Commentary on Catte, Galli and Rebecchini, "Concerted Interventions and the Dollar: An Analysis of Daily Data", in P. Kenen, F. Papadia and F. Saccomani (eds), "The International Monetary System in Crisis and Reform: Essays in Memory of Rinaldo Ossola", Cambridge: Cambridge University Press.

[4] O. Humpage (1996), "U.S. Intervention: Assessing the Probability of Success", Federal Reserve Bank of Cleveland Working Paper, No 9608.

[5] E. Detragiac and A. Harmann (1997), "Exchange Rate Based Stabilization in Europe: Greece, Ireland, Italy and Portugal", IMF Working Paper, No 97/75.

[6] I refer here to the requirement of staying two years before joining the euro without any realignments or severe tensions affecting the exchange rate.

period in the ERM. This is more understandable for countries with hard pegs, as pressures for higher inflation could not be offset by allowing the currency to appreciate within the band. For countries with flexible exchange rate regimes, the possibility of allowing exchange rate moves within the wide bands may be useful, provided they do not stay long without credibly achieving a situation approaching compliance with the Maastricht criteria. For this reason, they should carefully consider the timing of joining the ERM. It would be preferable if they were to join when already well-advanced on the path to compliance with the criteria. In practice, of course, the concrete situation of each country has to be properly assessed.

To conclude on this point, I would stress that the first condition for successful preparation of the way for entry into the euro area is the correct use of participation in the ERM as a disciplinary framework and as a flexible way of managing the pressures associated with the convergence process.

Monetary Union: risks and policy response

Risks of overheating: an unavoidable adjustment to a new intertemporal equilibrium?

The tendencies for higher inflation and possible overheating will continue to exist in a monetary union and can even become stronger and unavoidable. There is a sort of EMU shock as countries undergo a true change of economic regime. The main features of this change of regime with the adoption of the euro are the following:

a) Increased substitutability of financial assets;
b) Consolidated reduction in the cost of capital;
c) Increase in wealth and reduced liquidity constraints;
d) Changed meaning of the current account and the primacy of credit risk.

All these aspects are a direct result of monetary and financial integration, which equalises monetary rates, reduces risk premia as national currencies disappear, and promotes the integration of capital markets. This facilitates debt financing and equity issuance with an overall reduction in the cost of capital. Member States no longer suffer from what Eichengreen and Hausman[7] called "original sin", i.e. the difficulty of providing long-term domestic financing at fixed rates or of issuing external debt in their own currency. As a result, the current account deficit is financed in their own currency and ceases to be a macro-monetary problem, becoming just the result of the budgetary constraints of all resident economic agents. What matters now is predominantly credit risk, and this totally changes the nature of current account problems.

For countries coming from an economic regime of higher inflation, all these features create the conditions for demand/credit booms and possible overheating that may emerge through the following two channels:

a) The drop in interest rates increases wealth, reduces liquidity constraints and favours intertemporal smoothing of consumption, which decreases savings in the present period (Blanchard and Giavazzi[8]).

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[7] B. Eichengreen and R. Hausmann (1999), "Exchange Rates and Financial Fragility", in "New Challenges for Monetary Policy", a symposium sponsored by the Federal Reserve Bank of Kansas City.

[8] O. Blanchard and F. Giavazzi (2002), "Current Account Deficits in the Euro Area. The End of the Feldstein Horioka Puzzle?", mimeo.

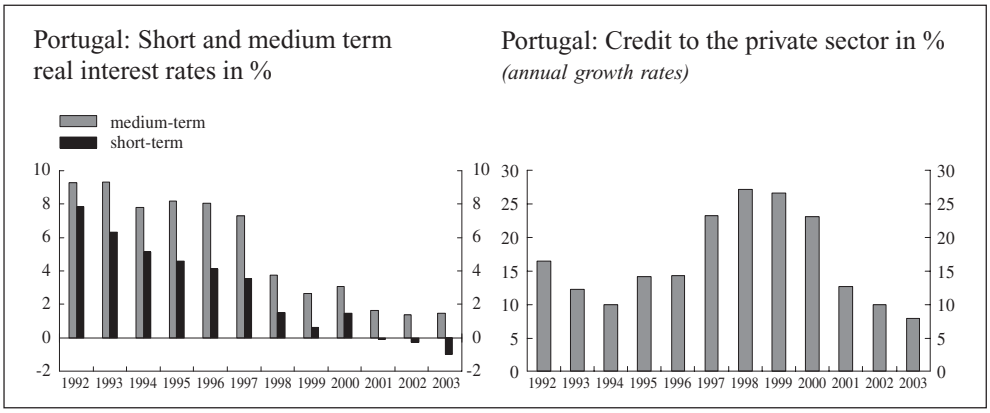
b) The reduction in the cost of capital and the prospects of higher growth as a result of goods markets integration (the so-called Rose effect[9]) lead to investment growth.

The two types of mechanisms just mentioned are, of course, two of the more important channels of transmission of the positive effects of euro membership. Nevertheless, they also create risk, thus confirming that there can always be too much of a good thing.

The most important instruments to deal with these problems are the anticyclical use of fiscal policy; sensible wage policy; and good prudential supervision of the financial sector.

The Portuguese case illustrates well some of the developments just mentioned. In fact, the drop in interest rates was significant after 1995 – and by then, membership of Monetary Union seemed more assured. As a consequence, we experienced a credit explosion (Figure 6).

Figure 6:

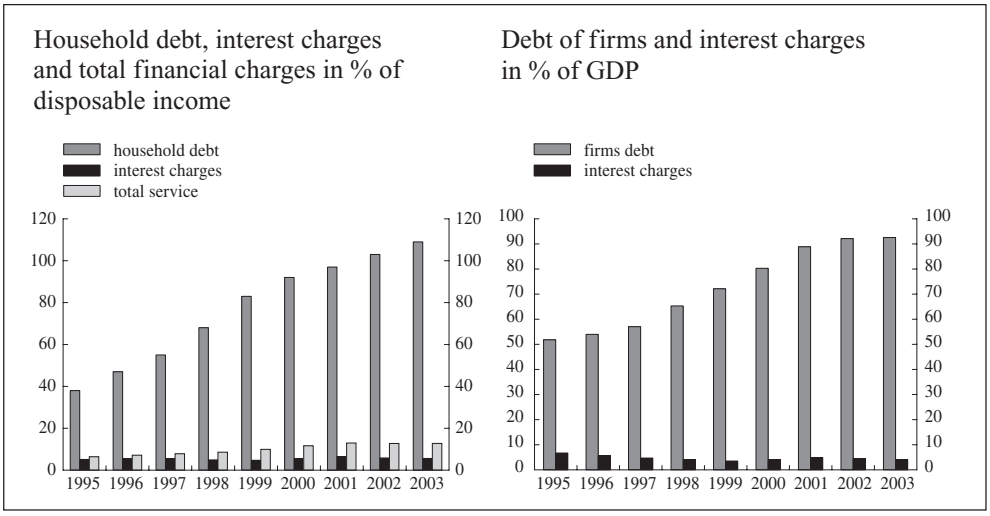


This is mostly a process of adjustment to a new steady state as rational agents implement intertemporal consumption smoothing and investment jumps to take advantage of higher growth prospects and the lower cost of capital. The surge in both consumption and investment was financed by the banking system, which was able to obtain funding abroad in euro and so could increase credit much more than deposits as the savings rate continued to decline.

There was, of course, an explosion of debt in both households and companies, which was possible because total interest rate charges increased only marginally for households and actually decreased for firms throughout the decade (Figure 7). Total financial charges (interest and principal) for families now stand at 14% of disposable income, as indebtedness was overwhelmingly related to housing in the form of long-term credits with low annual amortisation.

[9] A. K. Rose (1999), "One Money, One Market: Estimating the Effect of Common Currencies on Trade", NBER Working Paper, No 7432.

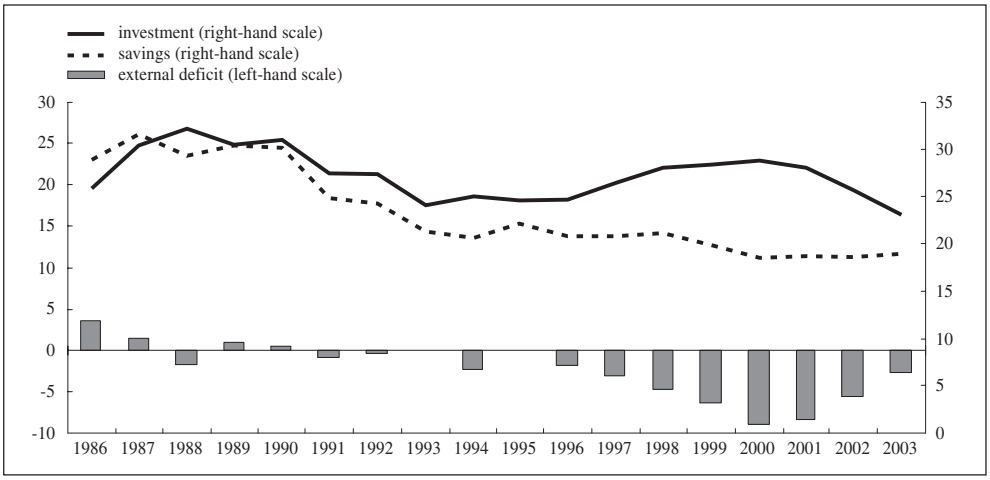
Figure 7:



The increase in indebtedness was associated with an increase in the investment rate and a decline in the savings rate, in the latter case continuing a movement that has been under way since disinflation began (Figure 8). The counterpart of these developments was an increase in the external deficit (current account plus capital account).

However, as I mentioned before, the current account of a member of a monetary union means something totally different from that of a country that has its own currency. In a monetary union, the financing of a Member State's current account is carried out in the common currency with reduced liquidity constraints. The balance of payments is no longer an autonomous macro-monetary restriction, but is instead the result of the borrowing requirements of domestic agents

Figure 8: Portugal: investment and savings rate in % of GDP

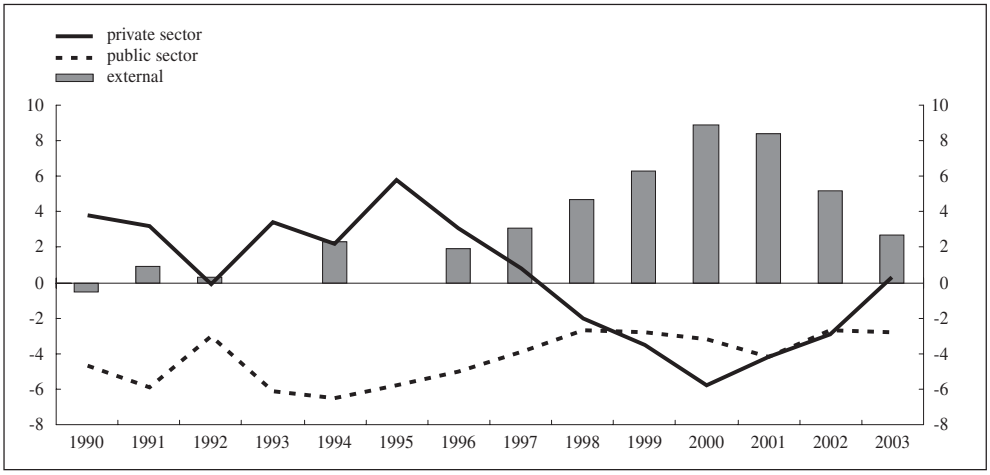


conditioned by their own budget constraints. Rational agents' behaviour will reflect these constraints, and microeconomic credit risk analysis as performed by the financial sector is now the important mechanism of control. The consequence of all these factors is a gradual decline in the Horioka/Feldstein effect within the euro area, as Blanchard and Giavazzi (2002)[10] have pointed out. In fact, investment can become less correlated with domestic savings as a result of in-depth monetary and financial integration.

After 2000, the external deficit started to decrease and it is important to underline that this evolution resulted from the spontaneous change in behaviour of indebted private agents, proving that the two self-correcting mechanisms mentioned above were playing their role.

The private sector as a whole had in 1995 a positive financial balance of 5.7% of GDP, but this changed to a deficit of 5.8% in 2000, whereas the public sector reduced its excess of investment over savings (Figure 9). Since 2000 private agents have started to reduce investment and increase savings, reaching a balanced position last year. What happened was clearly a market-driven adjustment by the private sector. The initial surge of expenditure was as unavoidable as the correction was spontaneous and equally rational.[11]

Figure 9: Net lending (+) or net borrowing (-) by the public, private and external sectors



External = - (current account + capital account).

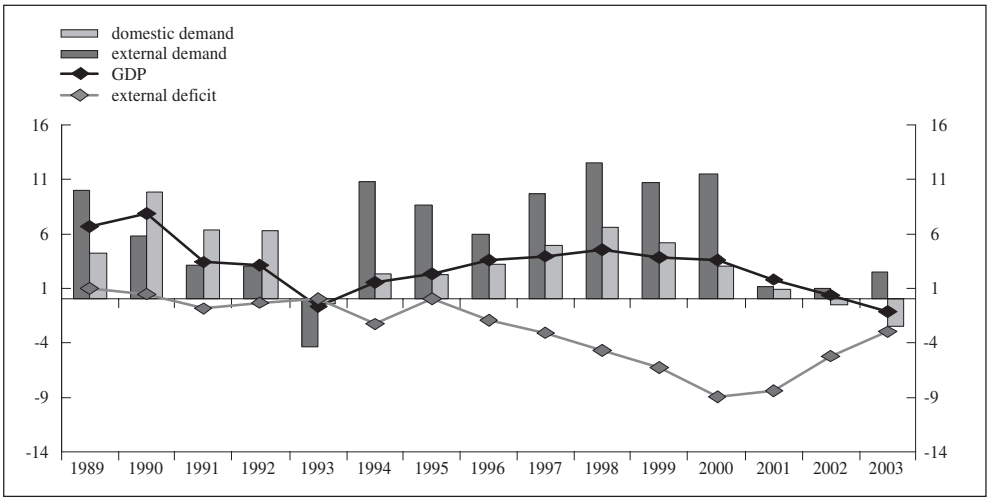
The problem is not the current account imbalance as such if it is the result of a one-off rational adjustment to a new intertemporal equilibrium. Imbalances that stem from a rational adjustment by private agents have market-driven self-correcting mechanisms that operate through changes in competitiveness and the effect of budgetary constraints monitored by the financial sector.

Regarding the more recent developments of the Portuguese economy, it should be stressed that the drop in domestic demand associated with the self-correcting adjustment of the private sector contributed to last year's recession (Figure 10). Another important factor was the large decrease in external demand directed to the Portuguese economy. This fell from an average of

[10] O. Blanchard and F. Giavazzi (2002), "Current Account Deficits in the Euro Area. The End of the Feldstein Horioka Puzzle?", mimeo.

[11] Nevertheless, I should mention that in the first half of this year we had an unexpected surge in imports, implying an elasticity to domestic demand that is historically an outlier but will unavoidably affect this year's current account.

Figure 10: GDP and domestic demand growth
(current account in % of GDP)

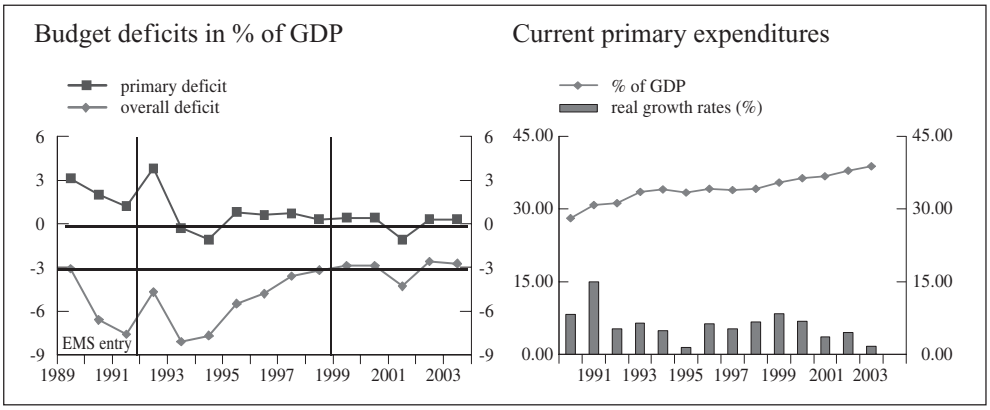


9% (1995-2000) to 1.4% in 2001 and 0.8% in 2002. Fiscal policy did not help either as, after breaching the 3% limit in 2001, we subsequently had to adopt a pro-cyclical stance. This leads me to my next point about the role of fiscal policy.

The role of fiscal policy and self-correcting mechanisms

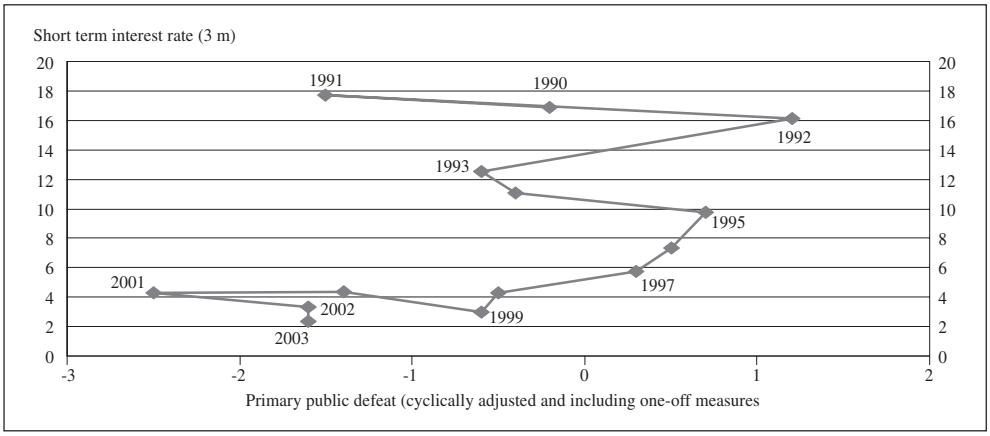
Portugal misused fiscal policy twice in the decade. The first time was at the moment of entering the ERM, which may have contributed to some contagion effects at the time of ERM turmoil in 1992. The second time was after 1996, when the savings from the decrease in public debt interest charges were used to increase current expenditures. In fact, twice in the decade we experienced significant increases in current primary expenditures, basically in the wage bill (Figure 11).

Figure 11:



The reduction in interest payments generated unjustified optimism about what the State could spend. The consequence was a pro-cyclical fiscal policy, which, when the economic deceleration came in 2001, led suddenly to a deficit above 4%. To correct this excess, policy had to continue to be pro-cyclical, this time in the restrictive direction. Figure 12 illustrates this by combining the evolution of interest rates and the State's primary deficit (cyclically adjusted and without one-off revenue measures) to show periods of a restrictive change in macroeconomic conditions (when the line moves to the right and upwards) and periods of expansionary change in policies (when it moves to the left and downwards).

Figure 12: Macroeconomic policy stance



The lesson to draw from this is that a country within the euro area must always keep a margin of safety in fiscal policy to be able to face an economic slowdown without the risk of breaching the 3% limit.

Another point worth mentioning refers to the limits of fiscal policy in the context of the initial stages of monetary union participation. As our case illustrates, the budget stance did not create a demand boom and it would be asking too much of fiscal policy to think that it could have been able to significantly offset the explosion of private expenditure. Fiscal policy should undoubtedly, have been counter-cyclical in terms that would have allowed us to avoid breaching the Stability and Growth Pact (SGP). Nevertheless, it is also important to note that a reasonable policy could not have smoothed the cycle very significantly. The reason is that the budget multipliers of very open economies like ours are in general fairly small.

As stated in an OECD Working Paper[12] on this subject: "With low fiscal multipliers, big swings in expenditure or revenues would be needed to dampen the cycle. Such volatility would undermine the effectiveness of fiscal policy and the credibility of a rules-based fiscal policy."

Simulations using the Banco de Portugal model show that to bring the 2001 budget deficit 2 percentage points lower, through a policy of slowing down primary expenditures since 1998, the cost in terms of GDP growth would have been 3.5% in accumulated terms, i.e.

[12] P. Hoeller et al. (2002), "Overheating in Small Euro Area Economies: Should Fiscal Policy React?", OECD Working Paper, No 323.

Figure 13: Fiscal revenue and expenditure multipliers

	QUEST	
	Revenue	Expenditure
Austria	0.1	0.5
Belgium	0.1	0.5
Finland	0.3	0.4
France	0.1	0.5
Germany	0.2	0.4
Greece	0.1	0.5
Ireland	0.1	0.4
Spain	0.0	0.7
Portugal	0.1	0.5

Source: P. Hoeller et al. (2002) "Overheating in small euro area economics: should fiscal policy react?" OECD WP n° 323, Feb. 2002.

around 20% of the growth achieved in that period. In such a scenario, the current account deficit would have been reduced only from 8% to 6% of GDP.

To conclude this point about the role of fiscal policy, it should be underlined that fiscal policy, in spite of its limitations, is essential to counter the more negative effects of a demand/credit boom and partially to smooth the cycle. In particular, the Portuguese experience shows the importance of some other points. Countries should maintain at all times an anticyclical fiscal policy. A prudent approach requires that real budget consolidation with a deficit well below 3% should be achieved before adopting the euro. On the other hand, the structural deficit should never exceed the level compatible with the full play of the automatic stabilisers without breaching the 3% limit. Finally, countries should introduce structural reforms early on to contain future budget pressures, and should adopt efficient institutional procedures for the preparation and implementation of the budget. These should include, for instance, multi-year expenditure commitments approved by Parliament. Also, in view of the need to invest in infrastructure and the limitations of the SGP, which does not allow the use of debt over the cycle to finance those expenditures, adequate rules for public-private partnerships (PPP) and project finance should be introduced to ensure real transfer of risk, transparent accounting of multi-year commitments and limits to future expenditures.

All the preceding points justify some general conclusions about the appropriate policy responses for countries acceding to the European Union and the euro. The list is very simple and contains some very well-known points:

a) Adequate use of the ERM should be ensured with flexibility but also with a sense of the primacy of the exchange rate commitment. This implies that monetary policy cannot be conducted according to a regime of pure inflation targeting, and this fact must be made clear to the markets. In addition, the initial central rate should not be seen as being necessarily the future conversion rate to the euro.
b) A permanent anticyclical fiscal policy has to be applied to be able to absorb shocks coming from fluctuations of external demand or capital inflows. From this perspective, a very solid and cautious budgetary position should be built up before joining the euro.
c) Realistic wage behaviour has to be ensured to avoid excessive real appreciation in terms of relative unit labour costs.
d) Efficient prudential supervision of the financial sector must be guaranteed, taking financial stability risks seriously.

We can look at these principles just as a particular case of the general recommendations that are derived from modern growth theory. Besides the aspects related to macroeconomic stability, the openness of the economy and non-distorted markets, the modern approach underlines the importance of institutions and good governance. Countries should make sure that they are continuously making progress in this respect. In our case we have made great strides in the past couple of decades. However, having attained a good intermediate position,

we now face the difficult task of making further progress. In the present world conditions, no country can rest on its past achievements. A permanent and determined policy of structural reforms is essential to increase or even just to maintain the rate of potential growth. Combined with the need to achieve a real fiscal consolidation, the effort to increase our growth potential constitutes the main challenge now facing Portugal. This is a challenge that we are certainly better positioned to overcome within the demanding framework of EMU.

Jens Thomsen

Having pursued a fixed exchange rate policy for many years, Denmark has gained extensive experience in this area. The present central rate was fixed more than 17 years ago in January 1987. Some of this experience is also relevant in relation to the new EU Member States' participation in ERM (Exchange Rate Mechanism) II. In my contribution, I will focus not only on ERM II, but also on the broader question: how should individual Member States design an appropriate stabilisation policy in a monetary union? This means that the conclusions drawn will be applicable to both new and EU15 Member States.

In Economic and Monetary Union (EMU), there is obviously no national monetary policy. National stabilisation policy must therefore be based on alternative instruments.

ERM II is an integral part of the EMU process. For as long as the broad fluctuation band is utilised, monetary policy may still form part of a country's stabilisation policy. However, it cannot stand alone. As I will describe, its impact will diminish as the date of EMU entry approaches. All the new Member States have stated that they want to participate in ERM II for as short a period as possible.

This means that fiscal and structural policies – the only national policy instruments in EMU – should already be appropriately designed within ERM II. This will ensure, among other things, that the terms of the Stability and Growth Pact (SGP) are met or are, at least, immediately in sight. This is a simple but important point to always keep in mind.

Denmark has decided to stabilise its exchange rate close to the central rate.[13] On account of the high degree of convergence, the stability of the Danish krone in the market, and the sustained stability-oriented economic policy, Denmark participates in ERM II with a narrow fluctuation band of ± 2.25%. This band is, however, far from utilised. In other words, fiscal and structural policies are the only stabilisation policy instruments available to Denmark – as will also be the case in EMU.

This means that the exchange rate – and the exchange rate alone – determines the interest rate spread. Intervention in the foreign exchange market is also an option, for brief periods of time, to counter adverse exchange rate movements. Intervention cannot stand alone, however.

Organisationally, this also implies that we must be able to adjust our interest rates when required, without being tied down by the meeting schedule of a monetary policy committee. This is a well-known fact in the market and thus highly transparent. Alternatively, one could say that our monetary policy committee convenes every day and as required.

Central bank independence is a prerequisite in this respect. Without it, the implementation of necessary measures can be endangered.

We have a clear division of labour regarding intramarginal interventions. The Board of Governors, in collaboration with Market Operations, establishes a strategy based on current market conditions. The Board of Governors has access to real-time information on any interventions, but is not consulted in advance. Interventions within one day are never capped, but are subject to ongoing assessment in order to establish whether strategy adjustments are called for. The European Central Bank (ECB) is kept informed on an ongoing basis.

In principle, one might ask whether the design of our stabilisation policy is appropriate. Theoretically, there are two arguments for acting as we do.

Firstly, the institutions are designed to be in compliance with maintaining a fixed exchange rate and thus also with EMU participation and the provisions of the Treaty. At some future point in time we expect Denmark to enter EMU, and when it does, we will not have to alter our

[13] The Danish fixed exchange rate policy is described in Danmarks Nationalbank (2003), *Monetary Policy in Denmark.*

fiscal policy, since it is already based on government finances that are in surplus or close to balance. There is strong political support for this rule-bound division of labour in economic policy. The awarding of this year's Nobel Prize in Economic Science to Finn Kydland and Edward Prescott demonstrates that the design of institutions is also considered to be of great theoretical importance.

In their path-breaking work, Kydland and Prescott point to the risk of optimal policies being time inconsistent.[14] The main policy implication is that rules-based policies are preferable to discretionary policy-making. But committing to a price stability-oriented monetary policy – and sticking with it – has historically proven difficult for politicians. During the last decades, delegating the implementation of monetary policy to an independent central bank has therefore become standard practice in many countries.

A second theoretical argument for our policy set-up builds on the "impossible trinity": in a world of free capital movements, it is not possible to set interest and exchange rates independently of one another.[15] The central bank has one instrument, and one instrument only, at its disposal: the short-term interest rate. Any attempts to stabilise the exchange rate while at the same time meeting other targets are thus futile in theory. In practice, they generate a number of problems which are aggravated the closer one seeks to stabilise the exchange rate.

A number of central banks, including several from the new Member States, currently base their monetary policy on inflation targeting. In principle, the central bank seeks to meet approximately not only one, but two targets: an inflation target and an output gap target, using just one instrument, the short-term rate. The reason that this is viable is that usually the targets work together. The problem in supplementing these targets with an exchange rate target is that this may easily conflict with the need for internal stabilisation.

Spain formally continued its inflation targeting up to its EMU entry. This was, however, also a period in which the interest rate spread to Germany progressively narrowed, and never widened, while the fiscal policy was put in place. Meeting the convergence criteria was the central aim of the overall economic policy – irrespective of how monetary policy was classified.

Theoretically, inflation targeting in ERM II gives rise to an additional complication in that the impact of the national interest rate on domestic activity and future inflation rates diminishes as the date of EMU accession approaches.[16]

If the country is expected to enter EMU in, say, one year, the national interest rate will exist for only one year. From then on, the yield curve in the Member State in question will be bound to the yield curve in the euro area. Monetary policy will therefore only be able to affect interest rates whose maturity does not go beyond the time of the expected introduction of the euro. So to the extent that consumption and investment respond to medium to long-term interest rates, national monetary policy in the run-up to EMU membership will only have limited influence on aggregate demand. In short, the closer the date of entry, the greater the interest rate changes needed to influence activity.

If the inflation-targeting country is expected to enter EMU with a specific exchange rate, there is, on the other hand, a risk of wide exchange rate movements in the run-up. Interest rate parity links the rate of interest in the ERM II Member State to the rate of interest in the euro

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[14] F. E. Kydland and E. C. Prescott (1977), "Rules Rather than Discretion: The Inconsistency of Optimal Plans", *Journal of Political Economy,* Vol. 85, No 3.

[15] See for example J. A. Frankel (1999), "No Single Currency Regime Is Right for All Countries or at All Times", Princeton University, *Essays in International Finance,* No 215, August.

[16] See for example P. E. Storgaard (2004), "Monetary Policy Targets and Instruments", Danmarks Nationalbank, *Monetary Review,* 2nd Quarter.

area and the spot and expected future exchange rates. Taking the euro area interest rate and market expectations of the entry exchange rate as given, a change in the short-term interest rate in the prospective EMU Member State will lead to a change in its spot exchange rate vis-à-vis the euro. Or to put it differently: without a corresponding change in the expected entry exchange rate, a change in the monetary policy interest rate during the run-up to euro membership will lead to an immediate exchange rate change. Meeting an inflation target by adjusting monetary policy interest rates may thus be difficult without creating excessive exchange rate volatility.

This issue, trivial as it may seem, is rarely mentioned in the literature.

This means that, in practice, new EMU Member States are well advised to abandon inflation targeting well before EMU entry and should rely on fiscal and structural policies for stabilisation purposes. Monetary policy loses its effectiveness in controlling inflation and stabilising the economy as the EMU entry date draws nearer. However, monetary policy should not become less effective in stabilising the exchange rate as long as euro area participation remains credible.

In Denmark's experience, this division of labour in economic policy is no hindrance to appropriate economic performance.

Monetary policy is reserved for keeping the exchange rate stable and close to the central rate within ERM II. In conjunction with sound public finances, this has ensured an anchoring of inflationary expectations in line with the ECB's definition of price stability.

We have used structural improvements and symmetric fiscal policy, in compliance with the requirements of the SGP, to achieve sound public finances. Our clear medium-term objective is to reduce the government debt.

The fiscal policy stance is determined annually in connection with the Finance Bill for the coming year and allowing for the expected cyclical development. Discretionary fiscal policy measures are rarely used in the course of the year and have in the past typically included structural improvements.

In the long term, the structural policy is most important. As long as the world keeps turning, structural reforms in principle never end. The most appropriate speed and sequence of reforms depend on whether the output gap is positive or negative. This makes it difficult to draw a clear distinction between structural and fiscal policy.

In international terms, including countries that apply best practice inflation targeting, Denmark has seen very moderate volatility in inflation as well as output in recent years.[17] We attribute this, in large measure, to the use of stabilisation policies as described above. This can be contrasted to the 1970s and early 1980s, when a very activist fiscal policy was pursued. As a result, our government debt rose steeply and the exchange rate policy was anything but consistent. In those years, Danish volatility was high by international standards.

The Danish experience thus speaks against fiscal as well as monetary fine-tuning of the economy. Efforts to stabilise the economy often end up rocking the boat. Our experience, in the main, corroborates the focus on structural economic factors stressed by Kydland and Prescott.

[17] See A. M. Christensen and N. L. Hansen (2003), "Volatility in Inflation and Economic Activity in the Nordic Countries", Danmarks Nationalbank, *Monetary Review,* 4th Quarter.

I would like to make one final point:

It is appropriate that drivers practise and qualify for a driver's licence before getting behind the wheel.

Similarly, it is appropriate that a country documents that it is ready for EMU prior to entry. Part of this documentation is ERM II membership.

General Discussion

Gonzalo Capriolo (Ministry of Finance, Slovenia) asked Vitor Constâncio whether from today's perspective any Portuguese policy during or before monetary integration could have been different.

Vítor Constâncio replied that Portugal adopted the euro with a deficit that was very close to 3%. And in view of what happened later on, Portugal would have been better off if it had entered with a more balanced fiscal situation. He stressed that it was essential to use fiscal policy properly to ensure at all times that if a surprise occurs, one is in a position to let the automatic stabilisers operate without risking the 3% limit.
He also added that the difficult part, both in Portugal's case and also in some other countries (including those now approaching EMU membership), was to convince the trade unions and employers that a single currency represents a completely different economic regime. He stressed the need to adjust to this new economic regime, since the alternative is higher unemployment later on. He also explained that there was no other adjustment mechanism within EMU. One must look at the average of wage developments and unit labour costs in the euro area as a whole and allow deviations only if there is a difference in the growth of productivity. If economic agents do not understand this, he said, then there is a problem. The size of the problem became clearer after Portugal had joined EMU.

Laslo Halpern (Hungarian Academy of Science) asked Otmar Issing if a previously non-currency board country could enter ERM II with a very narrow band, and if yes, how ERM II could fulfil its mission?

Otmar Issing started by saying that he thought one should separate two aspects, the institutional, or legal, one from the economic one. From the institutional aspect he said that this has to be decided in a joint agreement and that from the ECB's position, this option should be used as rarely as possible. On the other hand, he argued that for a currency board country, moving from a regime in which the country itself has given up monetary policy long ago, entering ERM does not represent a major change, because if it keeps a de facto fixed exchange rate regime, it just means that it continues with an endogenous monetary policy as before. He did not see any specific problem if the country had a stable exchange rate and no domestic monetary policy for a long period as long as this regime is credible. Continuing within ERM would not make any difference. Furthermore, there would be no need for a formal agreement – indeed, such an agreement on a narrow band might even create problems.

Tae-Dong Kim (Bank of Korea) stated that for nominal as well as real convergence, macro-financial stability may be important and that for financial stability, the independence of the financial supervision agency may be necessary.

Willem Duisenberg (former President of the ECB) agreed that independence of financial supervision is necessary, but that does not mean the supervisory agency should not be accountable. He argued that it should be accountable to national governments. He pleaded in favour of the Dutch model, where the supervision of banks and pension funds and the insurance business has recently been merged into one institution, namely the central bank. He argued for an independent central bank, but independent only insofar as monetary policy is concerned. With regard to supervision, he stated that the central bank should be accountable to national parliaments. He argued that that form of organisation provides the best guarantee

of both, i.e. that the independence of the institution that oversees the supervision of the total financial system and accountability are all concentrated in the institution that has the best knowledge of the financial sector as a whole.

Vítor Gaspar referred to Duisenberg's compliment concerning Denmark's successful use of the interest rate to defend a fixed exchange rate regime. He asked Duisenberg to share his reading of the Dutch experience. Gaspar referred both to the early Dutch experience in the currency "Snake" between 1974 and 1979 and the ERM I period.

Willem Duisenberg argued that when the Netherlands was a member of ERM I, there was a willingness to use interest rates aggressively to defend the exchange rate. He recalled the Basel-Nyborg rules of the game. These state that when the exchange rate is under attack, there are three lines of defence. The first is changing interest rates, the second interventions, and the third to give in and realign. He added that there was strong adherence to the reasoning that you can punish speculators with rather dramatic changes in interest rates whenever necessary. Duisenberg argued that it was often said that the UK was pushed out of ERM I, but that in his opinion the UK pulled itself out, because it did not use the first line of defence, namely interest rates to an adequate extent, instead relying heavily on the second line of defence, namely interventions.

Zdeněk Tůma commented further on the Portuguese experience. He saw a difference between this and the current situation in ERM II because when Portugal started, the whole construction process of the euro was just starting and there was no institutional framework as there is today. He argued that it is a very different situation when a country has some form of fixed exchange rate regime and other countries adjust their monetary policies so that they are in line with each other, and the situation when there is a clear anchor of price stability defined by the ECB, while at the same time, the joining country already has a credible monetary policy regime. He argued therefore that in today's situation there is a possible problem with a double shift of monetary policy regimes, which was not the case for Portugal.

Otmar Issing remarked further that when the ECB started in 1998, there was no experience to help with such a historically unique experiment. He argued that although the convergence criteria marked the way forward, there was no experience with regard to implementation. He advised Member States to avoid the error of "pathological learning". Learning can take two forms, according to Issing: either we learn from good examples and avoid mistakes others have made before, or there is pathological learning, which is making one's own mistakes or even worse, repeating mistakes already made by others, which is inexcusable. Issing stressed that this is an important point with respect to communication with the authorities and the general public.

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Closing address

Jean-Claude Trichet

Ladies and Gentlemen,

It is my honour and pleasure to draw some conclusions at the end of the third European Central Bank (ECB) Central Banking Conference on "The New Member States: Convergence and Stability". I hope that you found the last two days inspiring and stimulating. The road from European Union (EU) enlargement to the euro is indeed a fascinating challenge for policy-makers, academics and economic agents. During these two days we engaged in in-depth discussions about the past, present and future paths of the new Member States joining the European Monetary Union (EMU) and the challenges that these countries are confronted with. Let me briefly elaborate on the main arguments and issues that were raised at the Conference. I would then also like to take the opportunity to share with you the ECB's view about the main challenges for the new Member States on their way to the euro.

In his presentation, **Gérard Roland** raised some key **institutional and structural questions** concerning the enlargement of the EU. First, how have the institutions of the new Member States changed during the last decade? Second, what role has the EU played during the transition phase, and finally how will EU enlargement affect the functioning of the EU25 in the future? As expected, institutions matter. The idea of the EU acting as an "external anchor" for most of the new Member States has played a major role, and incentives to meet the entry conditions set by the EU have worked well for the new Member States. According to many of the indicators which Roland presented yesterday, the performance of the new Member States has been good; for example, price and trade liberalisation have been fully adopted, competition policy has been successful and, most importantly, individuals live in democratic societies. This success can also be seen in how these countries have adopted and implemented the *acquis communautaire*.

Taking stock of the progress made so far, the paper stresses that more work still needs to be done. Reforms and progress, especially in the banking and other financial sectors, should be continued in order to create a solid and sustainable base for the economies of the new Member States, which can also be seen as important requirements for joining the euro area. I agree with discussants that the new Member States will be active and will contribute positively to the functioning of the EU.

Jürgen von Hagen's presentation complements Roland's contribution. His findings also support the **macroeconomic stabilisation** achieved by the new Member States. On top of that, most of the new Member States have undertaken major reforms to restructure their public sectors. Spending ratios have fallen remarkably, and public sectors operate in a much more efficient manner than previously; however, there still seems to be room for improvement. A well-structured public sector and sound fiscal policy are necessary ingredients for a successful participation in a monetary union today and in the future. Von Hagen also commented on the future adoption of the euro, and I will shortly touch upon this topic later in this address.

Michael Kumhof's presentation dealt with the macroeconomic performance of the new Member States, or more specifically the performance of the Czech Republic, taking a different angle to the two other presentations. It is an extremely challenging task to utilise a modern **structural Dynamic Stochastic General Equilibrium (DSGE) model** to study the

pros and cons of joining EMU. I think Bayoumi, Kumhof, Laxton, and Naknoi have done an excellent job in their brave attempt. Because of the nature of the model, in theory, one is able to obtain a coherent picture about the **costs and benefits of joining EMU**. In the analysis, the authors concentrate on the trade sector where trade is determined endogenously between the two countries. The results from the exercise are intuitive and mostly convincing. A reduction in trade costs creates a significant long-term increase in trade and, most importantly, the main winners will be the joining members. The single currency will lower the uncertainties and costs of transferring money, leading eventually to welfare gains. I share the view of commentators that the exact values of outcomes are not that important because of the uncertainties involved in numerical exercises utilising macro models. What is important is to show the basic outcomes and most likely scenarios. I also share the point raised by the commentators that the inclusion of analysis on the effect of financial integration on welfare would be beneficial.

In his speech, my colleague **Otmar Issing** talked about EU enlargement and monetary integration. The adoption of the euro by the new Member States will be the final step in monetary integration. As Otmar mentioned, a sufficient degree of **economic and financial integration** is necessary for a successful adoption of the euro. Fulfilling the Maastricht criteria is a sign that sustainable convergence has been reached and that countries are on the right path. Monetary authorities also play an important role in this process by conducting a credible policy which leads to price stability, thus creating an environment which will make entry into the Exchange Rate Mechanism (ERM II) smooth and credible.

Most of the results presented here are broadly in line with the ECB's view that EU enlargement has positive implications for economic growth and welfare in both the "previous" and "new" Member States; unfortunately, these benefits have often been set aside in the public debate. The prospect of the new countries joining the EU has already had positive implications. As trade and capital movements were to a large extent liberalised well before accession, the degree of integration had already reached a significant level between the new Member States and the EU15 Member States. In fact, on the eve of EU enlargement the euro area directed around 11% of its total exports and imports to the new Member States, an increase of almost 50% in ten years; the ten new Member States as a group represent one of the main trading partners of the euro area, exceeding trade with Japan (8%), and only somewhat lower than Europe's trade with the United States (14%). Similarly, the share of the EU15 total foreign direct investment (FDI) oriented towards the new Member States was also around 12%, and has tripled since 1999. While these figures are still low compared to the FDI flows directed to the US, they are considerably higher compared to those flowing to Japan. In addition, the prospect of EU enlargement has significantly sheltered the new Member States from adverse spillover effects from other emerging markets. With this latest EU enlargement now complete, economic and financial integration will advance further. With the extension of the Single Market to the new Member States, all remaining barriers to trade and capital flows have now been removed, thereby supporting further integration. It is already observable that small and medium-sized enterprises from the EU15 countries are becoming significantly more active in the new Member States, as the economic and legal environment has become more stable upon accession. Let me stress that enlargement has also led to greater competition in the EU and enhanced the scope for economies of scale following the increase in the size of the market. As a result, productivity will rise, thereby contributing to an increase in the potential growth rate of the EU. It is important to note that the EU15 will also be affected by higher levels of competition in the EU, which could accelerate structural reforms in these countries. In fact, the new Member States seem to be overall rather competitive and have already made considerable progress in implementing structural reforms in some areas, which

in turn is an incentive for the EU15 to embark actively on their reform agenda, as Tommaso Padoa-Schioppa stressed yesterday evening.

As you know, accession to the EU is only the beginning of a process which ends with the eventual **adoption of the euro**, given that these countries have no opt-out clause. The path towards euro adoption is embedded in a well-defined multilateral institutional framework. To guide the process of joining EMU, the **Governing Council of the ECB released a comprehensive policy position** on relevant exchange rate issues in December 2003. Given its importance, I would like to speak about the main implications of the various phases of joining EMU. **Upon EU accession** and before joining ERM II, the new Member States are required to treat their exchange rate policies as a matter of common interest and to pursue price stability as the primary objective of monetary policy. With respect to **ERM II participation**, there are no formal criteria to be met prior to entry. Nevertheless, a successful and smooth participation in the mechanism requires them to undertake major policy adjustments – such as sound fiscal policy frameworks and price liberalisation – before joining the mechanism. Depending on the monetary and exchange rate strategies in place, ERM II can help orient macroeconomic policies to stability and anchor inflation expectations. At the same time, the mechanism allows for a degree of flexibility, if needed, through the wide standard fluctuation band and the possibility of adjusting the central parity. Eventually, the new Member States are expected to join the euro area. Their readiness to adopt the euro will be examined on the basis of an extensive and precise analysis of their performance with respect to the Maastricht convergence criteria. This examination will be performed in the so-called Convergence Reports, which are regularly prepared by both the European Commission and the ECB. As you probably know, the 2004 Convergence Report was published two days ago, including for the first time the ten new Member States.

The process of monetary integration with the euro area is based on a number of general principles, which are defined by the Treaty and other key documents. One principle is that there is **no single trajectory** towards the euro that can be identified and recommended to all new Member States at all times. This principle reflects the fact that the new Member States differ substantially with respect to the size and structure of their economies, the present state of their fundamentals, and the monetary and exchange rate regimes that are currently in place. The wide diversity across the new Member States implies that the economic situations and strategies of countries will have to be assessed on a case-by-case basis. Against this background, it is natural that ERM II entry and the preferred length of participation in the mechanism will differ across countries. In fact, three new Member States, namely Estonia, Lithuania and Slovenia, joined ERM II with effect from 28 June 2004, whereas the others have not yet specified a date when they intend to join.[1] Another key principle is that of **equal treatment**. This means that comparable situations and cases will be treated in a comparable manner, both across countries and over time. With respect to the examination of nominal convergence in the ECB Convergence Report 2004, this implies that the same convergence criteria laid down in the Treaty have been applied as in the past. Thus, no new criteria were added, and the existing criteria were not relaxed.

The process of monetary integration with the euro area should be accompanied by overall consistent and **stability-oriented economic policies**. Moreover, a stable macroeconomic environment and progress in structural and fiscal reforms are also essential to take full advantage of the benefits of EU enlargement. In my view, the most pressing challenges for the new Member States are to maintain price stability and to advance with fiscal consolidation.

1 In the meantime Cyprus, Latvia and Malta have also joined ERM II with effect from 2 May 2005.

With respect to **price stability**, the new Member States will be confronted with the challenge to complete the disinflation process and/or to contain increases in inflation rates in a controlled fashion, without entailing substantial adverse effects on inflation expectations and wage developments. Besides solid macroeconomic policy frameworks and prudent wage policies, progress with structural reforms is conducive to price stability. With respect to **fiscal consolidation**, it is clear that this is a demanding challenge for most of the new Member States, as they are confronted with competing expenditure demands. And this is why policy-makers have to design and implement a credible consolidation path based on durable and growth-enhancing structural reforms.

Ladies and Gentleman.

It is time for me to close the third ECB Central Banking Conference. We have had some very intensive and inspiring discussions. While there are still a number of open questions and issues, I am sure that we will all go home with some new thoughts and ideas in our minds.

Let me also take the opportunity to thank the authors of the papers for their remarkable work. My thanks also go to the discussants, chairpersons and participants for their personal contributions, which were enlightening and ensured that this conference was a success. Let me also express my deep gratitude to all the staff of the ECB that have been involved in the organisation of the conference.

Dear friends, I wish you all a safe trip back home.

Thank you very much for your attention.

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