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THE BALTIC CHALLENGE AND EURO-AREA ENTRY

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Highlights

- The Baltic states' previous huge current account deficits turned to surpluses by 2009, but competitiveness improvements are still needed.
- The problems of the overvalued exchange rate and the large stock of foreign currency loans cannot be solved by any of the options (maintaining the pegged exchange rate, devaluation, introduction of a floating rate) available to the Baltics.
- The best option would be 'immediate' euro entry at a suitable exchange rate supported by appropriate resolution to manage the debt overhang, but there is no legal basis for this.
- It is in the broader European interest to prevent a collapse in the Baltics, and to help medium-term economic growth. Any solution should not be Baltic-specific and should not incur a risk of moral hazard.
- There are serious concerns about the euro accession criteria. The EU treaty obliges the Council to lay down the details of the convergence criteria and the excessive deficit procedure. It is time to fulfil this task and to strengthen the economic rationale of the criteria.

This policy contribution was prepared for the conference 'The Future of the Baltic Sea Region in Europe', 27-28 August 2009 in Hamina, Finland, organised to commemorate the 200th anniversary of the Treaty of Hamina by Centrum Balticum and Town of Hamina together with the Finnish Prime Minister's Office.

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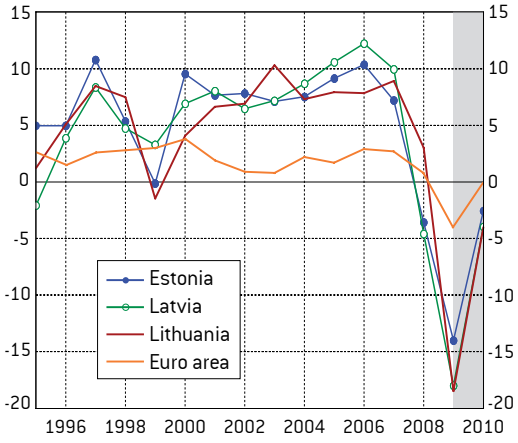
THE BALTIC CHALLENGE AND EURO-AREA ENTRY

ZSOLT DARVAS, NOVEMBER 2009

1. INTRODUCTION

The global economic and financial crisis has hit Estonia, Latvia and Lithuania hard (Figure 1). These countries became increasingly vulnerable before the crisis – for example, they had huge credit, housing and consumption booms and thus high current-account deficits and external debt. It was widely expected even before the crisis that these vulnerabilities would have to be corrected at some point, but the crisis amplified the magnitude of the correction. For the 2008-2010 period, the three Baltic countries are projected to experience the sharpest GDP contraction among the 182 countries of the world for which forecasts are available.

Figure 1: GDP growth, 1995-2010



Source: IMF, October 2009 World Economic Outlook.

The cornerstone of economic policy in the Baltic countries has been the maintenance of the fixed exchange-rate system. While many observers advised and predicted devaluation, the three countries have so far managed to survive under their fixed exchange-rate strategy and have engaged in drastic budget expenditure cuts, including nominal wage cuts. Wages and prices have also started to fall in the private sector, and the previously huge current account imbalances have been turned into surpluses. While the adjustment in the economy has started, it is having a severe social impact, and question marks have remained about medium-term economic growth.

This paper aims to contribute to the analysis of the policy choices of the Baltic countries. To this end, we first discuss some aspects of the pre-crisis economic boom in the Baltic countries, describe some scenarios for future growth and consider the issue of the recent current account surpluses. This is followed by a discussion of policy options. As the best option is euro entry, we revisit the issue of euro-entry criteria, both from economic and legal perspectives.

2. THE LEGACY OF THE PRE-CRISIS BOOM

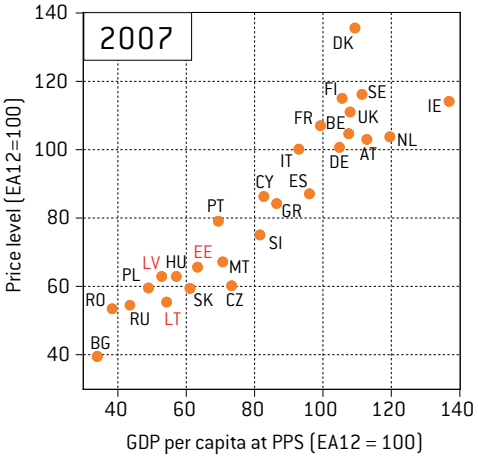
In terms of the main macroeconomic conditions that prevailed during their pre-crisis economic growth phase, most central and eastern European (CEE) countries were different from other emerging countries in Asia and Latin America. After the dramatic crises of the 1990s and around the turn of the millennium, Asian and Latin American countries fundamentally changed their economic models. From being net capital importers, they – especially in Asia – became balanced, or even substantial capital exporters[1]. Capital export from poorer to richer countries is sometimes referred to as capital moving 'uphill'. The CEE region was different: capital moved 'downhill', mostly from rich EU15 countries to poorer CEE countries. The good economic growth prospects and the low level of physical capital, the prospect of eventual EU integration and the related improvement in the business climate, the generally highly-educated labour force and low level of wages, and the low level of domestic credit offering the potential for substantial credit

1. See, for example, Abiad, Leigh and Mody (2009) and Darvas and Veugelers (2009).

expansion, were the main supply-side factors for capital flows into CEE countries. These flows took the form of foreign direct investment (including the buying-up of swathes of the CEE banking systems), portfolio investments and loans.

There were demand-side factors as well, which were particularly strong in the three Baltic countries. As these countries were on an economic-growth path to catch up with the main euro-area countries, their price levels were also set to increase compared to the euro area. Figure 2 indicates that in countries with a higher level of GDP per capita, the price level tends to be higher as well, an observation which has both empirical and theoretical underpinnings. The relationship is not clearly one-to-one and there is country-specific heterogeneity, but the relationship is apparent. Figure 3 breaks down this dynamic correspondence for each of the Baltic states. Figure 3 (and other figures to be presented later) also reports data for the other six Baltic Sea countries, because for various reasons they provide a convenient group of countries with which to compare the three Baltic states.

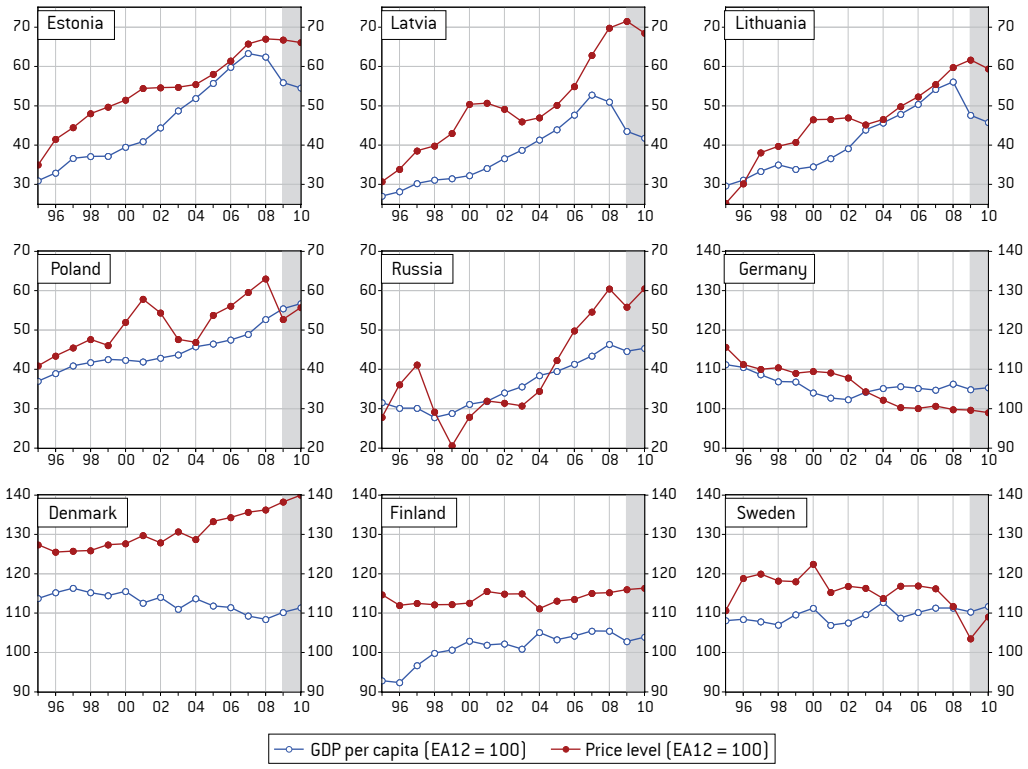
Figure 2: GDP per capita and price levels in the EU and Russia (euro area 12 = 100), 2007



Source: Bruegel's calculations based on Eurostat and IMF data. Note: Luxembourg is not shown due to its outlying GDP/capita figure.

Price level increases compared to the main trading partners can occur through either higher inflation or nominal exchange-rate appreciation. Estonia has had a fixed exchange rate against the euro (and the Deutsche mark before) since it became independent, and hence all price-level convergence toward euro-area price levels took

Figure 3: GDP per capita and price level (euro area 12 = 100), 1995-2010*



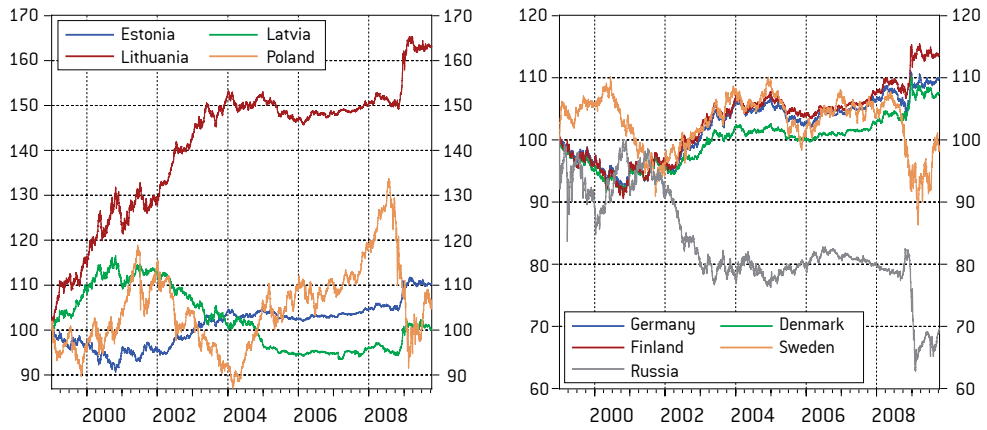
* Source for Figure 3: Bruegel's calculation based on data from Eurostat, the IMF's October 2009 World Economic Outlook forecast, and ECB exchange-rate statistics. Note: For better visual comparability across countries the range of the vertical axis is 50 percentage points in each panel. The relative price levels for 2009 and 2010 were calculated using the IMF World Economic Outlook's inflation forecast for the individual countries and the euro area and our assumptions on exchange rates against the euro. Euro exchange rates for 2009 and 2010 are annual averages and were calculated from actual exchange rates between 2 January 2009 and 11 September 2009 and an assumed constant exchange rate for the rest of 2009 and 2010. The assumed constant exchange rate is equal to the average of actual exchange rates between 3 August and 11 September 2009.

the form of higher inflation. Latvia and Lithuania, on the other hand, had pegs against the SDR (IMF Special Drawing Rights) until 2004 and the US dollar until 2002. As a result of the movements of the euro against the dollar and SDR, Latvia and Lithuania experienced nominal appreciation both against the euro and in nominal effective terms from 1999 to 2002 (Figure 4). Nominal appreciation was especially marked in Lithuania (about 50 percent), which contributed to Lithuania having the lowest inflation rate among the nine Baltic Sea countries in the first few years of the 2000s, and even experiencing deflation in 2003 (Figure 5). However, once these countries pegged their currencies to the euro, price-level convergence with the euro area occurred through higher inflation.

The fixed exchange-rate regime enjoyed high credibility in all three countries because it survived both the turbulent period of the first years of transition in the first half of the 1990s and the Russian crisis in 1998[2]. The stability of the exchange rate created an incentive to borrow in foreign exchange, because the nominal interest rates of euro loans were somewhat below local currency loan rates. As inflation started to pick up after 2004 (Figure 5) people and corporations recognised that their wages and incomes, as well as prices, were rising much faster than the percentage cost of the loan, ie real interest rates became negative. The negative real rate pushed up demand for loans and amplified the boom.

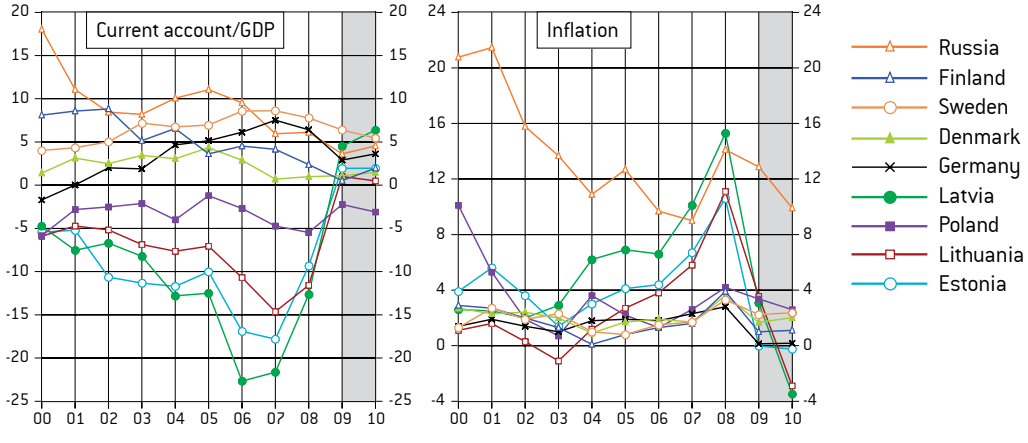
Furthermore, rapid economic growth fuelled

Figure 4: Nominal effective exchange rates (4 Jan 1999=100), 4 Jan 1999 - 12 Oct 2009



Source: Bruegel's calculation based on ECB, Datastream and Central Bank of Iceland data.
Note: Increases in the index indicate nominal appreciation. The nominal effective exchange rate was calculated against 52 trading partners. Weights were derived from average trade flows between 2000 and 2008.

Figure 5: Current account balance (% of GDP) and inflation (%), 2000-2010



Source: IMF - October 2009 World Economic Outlook.

2. Note however that the effect of the Russian crisis on these countries is dwarfed by the current crisis (see Figure 1 and Figure 3).

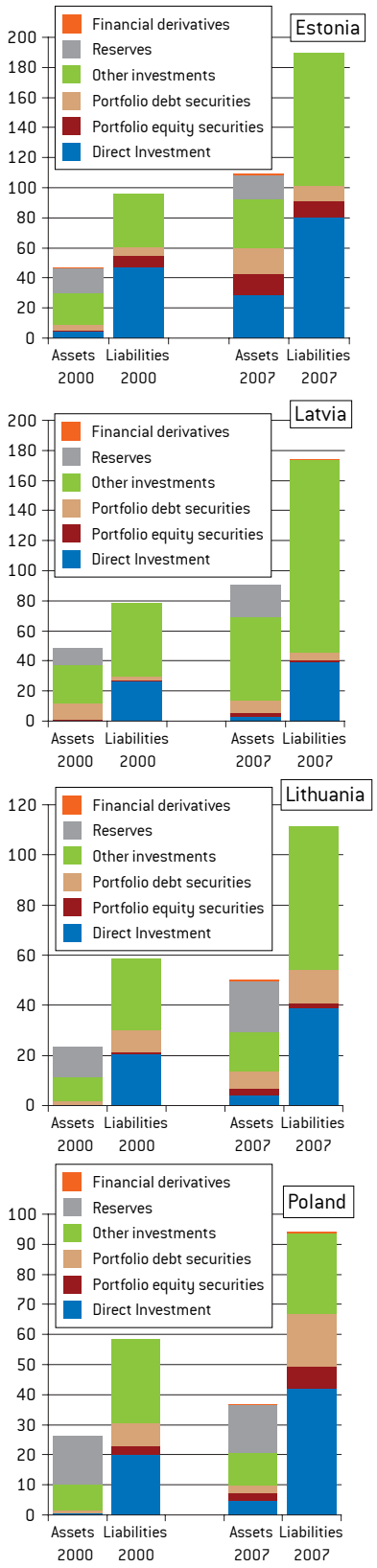
expectations that high growth would continue, encouraging people to borrow against their future income, as depicted by intertemporal optimisation models.

The role of budget policy in amplifying/dampening the boom was different in the three countries. According to our previous calculations (Darvas, 2009b) budget policy was highly pro-cyclical in Latvia before the crisis, somewhat pro-cyclical in Lithuania, but counter-cyclical in Estonia.

Consequently, both supply and demand factors contributed to the emergence of substantial credit booms that fostered construction booms, housing booms, and consumption booms[3]. Budget policy also amplified the boom, especially in Latvia, but to a lesser extent in Lithuania. These factors gradually overheated the economies and, in the years immediately before the crisis, led to a sharp rise in wages[4], inflation and current account deficits (Figure 5). Although considerable foreign direct investment (FDI) flowed into the Baltic countries, most of the current account deficit was financed by borrowing from abroad. As a consequence, massive external liabilities were accumulated (Figure 6), of which the bulk was private sector external debt. As the examples of Poland and a few other new EU countries indicate, such a development was not inherently unavoidable. As also shown in Figure 5, Polish external liabilities were much lower relative to GDP, and exhibited a more favourable composition, than in the Baltics[5].

The risk inherent in private sector net external debt did not matter before the crisis but matters now for market-risk assessment. Figure 7 indicates that the credit default swap (CDS) on government bonds – which is a measure of the cost of insurance against government default – is now related to countries' net external debt and loan liabilities, which – at least in the three Baltic states – are mainly made up of private sector debt held in foreign currencies. Should the economic outlook deteriorate further and/or the exchange rate collapse (eg Baltics), or fall further (eg Ukraine, Hungary), then even deeper economic

Figure 6: External assets and liabilities (% of GDP), 2000 and 2007



Source: Bruegel based on IMF data: International Financial Statistics. Note: 'Other investments' are mainly loans.

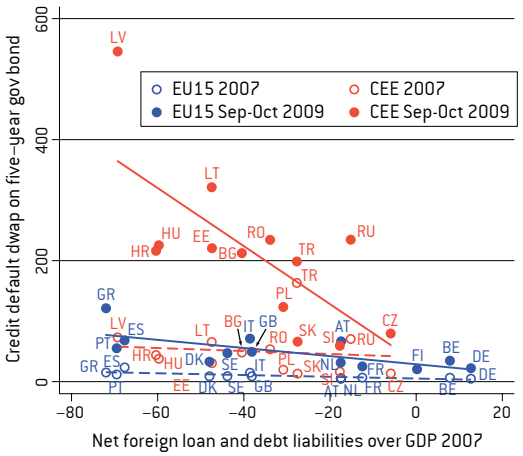
3. Ireland and Spain experienced similar developments after euro entry in 1999 (though to a much lesser extent than in the Baltics), due to their fast economic growth and inflation rate above the euro-area average, as the low euro-area interest rate boosted demand and contributed to the pre-crisis housing and construction booms (see Ahearne, Delgado, and von Weizsäcker, 2008).

4. Migration to western Europe and the shortage of qualified workers have also contributed to wage increases.

5. Bulgaria has also had a fixed exchange-rate system, and has experienced very similar economic developments to the Baltic countries before the crisis, yet Bulgaria has been much less affected by the crisis. It would be worthwhile studying in detail what lies behind this.

crises could emerge, leading to more bankruptcies, unmanageable bank losses and the complete drying-up of foreign capital. These factors may lead to a government default, despite the low level of government debt (Darvas, 2009b). In countries where foreign banks are prevalent, burden-sharing is an issue. Plotting CDS against government debt does not indicate a relationship, suggesting that the current level of government debt is not in itself a concern for fiscal sustainability in eastern Europe. The risk inherent in private sector debt matters more.

Figure 7: Cost of insurance against government default and countries' net external debt



Source: Bruegel's calculation based on Datastream and IMF data. Note: Net foreign loan and debt liabilities refer to the whole economy. CEE refers to new EU member states (except Cyprus and Malta), plus Croatia, Russia, and Turkey. EU-15 refers to the 15 EU countries before 2004 (except Luxembourg and Ireland). The Sept/Oct 2009 CDS values were calculated from the average between 1 September and 12 October 2009.

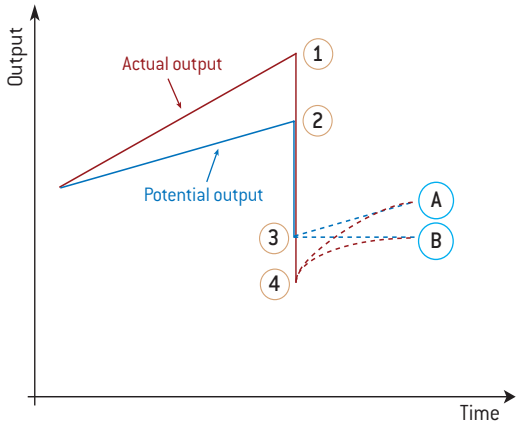
Deceleration of credit growth already started before the global financial and economic crisis but it greatly amplified the correction and led to very sharp drop in GDP with all the associated consequences. The sharp fall in output opened a wide gap between GDP per capita and price levels (relative in both cases to the euro area, see Figure 3). Further, the exchange rates of some other main trading partners depreciated, such as the Swedish krona and the Polish zloty, which helped Sweden and Poland at a time of great contraction in export demand[6]. Indeed, Figure 4 shows that, in nominal effective terms, the currencies of the three Baltic countries appreciated by about five to ten percent in late 2008, which incidentally is similar to what happened in Germany, Denmark and Finland.

3. POST-CRISIS ECONOMIC GROWTH SCENARIOS

Figure 8 provides a schematic picture of actual and potential output before and during the crisis, and offers some scenarios for the future.

The overheated economy, as discussed in the previous section, has led to faster actual output growth than pre-crisis potential growth, and hence the actual output level is now greater than potential output (thus, point (1) is above point (2) in Figure 8).

Figure 8: Schematic depiction of actual and potential output scenarios in the Baltic states



Source: Bruegel.

Cerra and Saxena (2008) have demonstrated that crises tend to generate a sizeable permanent loss in the level of output compared with the pre-crisis trend when all main country groups (ie advanced, emerging market and developing countries) are taken into account. Their findings imply that the level of potential output in the Baltic countries is likely to have fallen during the recent crisis (from point (2) to point (3) in Figure 8).

Actual output should fall markedly between 2008 and 2010 in the Baltic countries (from point (1) to point (4) in Figure 8), while domestic demand should contract even more sharply. The actual output fall can be decomposed into three components:

6. The Polish zloty depreciated by about 45 percent between the summer of 2008 and early 2009, but a proper evaluation of this movement implies looking at what happened before. Figure 4 indicates that the zloty was at record highs in the summer of 2008 and the current level of the exchange rate at the time of writing this contribution is quite close to the average of the past decade. Figure 3 suggests that the zloty may have been overvalued before the crisis (note that the 2008 price level was calculated using the average exchange rate of the full year, ie without the huge depreciation in the fourth quarter, the price level would have been much higher) and also that the current magnitude of the real depreciation was broadly reasonable, because the price levels and GDP per capita (both relative to the euro area) converged.

'The sharp fall in output opened a wide gap between GDP per capita and price levels (relative to the euro area) both taking a historical view considering the Baltic countries themselves and taking a global comparison.'

- Part of the contraction is a correction of previous excess demand (the difference between points (1) and (2) in Figure 8);
- Part of the contraction corresponds to the fall in potential output (the difference between points (2) and (3) in Figure 8);
- But it is also likely that actual output falls below potential GDP (the difference between points (3) and (4) in Figure 8), ie the output gap becomes negative.

While theories of business cycle fluctuations may need to be reconsidered in the light of the findings of Cerra and Saxena (2008), available theories offer a propagation mechanism in which a recession can lead to negative output gaps. Empirical evidence also suggests that recessions typically result in negative output gaps. Furthermore, financial frictions, such as a sudden stopping of capital inflows and a change in the lending behaviour of banks, are likely to have constrained the real economy. This is a further reason why the crisis is resulting in a negative output gap in Baltic countries.

An inconvenient implication of the fall in output is that price levels become too high compared to actual GDP per capita (Figure 3), but probably also relative to potential GDP per capita. The price level became too high in the Baltic countries, both relative to its historic level, and when benchmarked against a global comparison. In other words, the real exchange rates are highly overvalued. While this observation holds for all three countries, Latvia clearly stands out with its GDP per capita standing at 42 percent of the euro-area average, and its price level at 69 percent of the euro-area average (both forecast for 2010, as highlighted by Figure 3).

The future scenarios depicted in Figure 8 are highly uncertain. A good outcome would be Scenario A, ie a return to the previous potential growth rate, starting from the reduced level. Under this scenario, actual output would grow rapidly for a short period until it reaches the potential level of output, and then would continue to grow at the same rate as potential output.

Scenario B would be a no-growth scenario. One cannot exclude the possibility of no potential growth with a highly overvalued exchange rate. Still, actual output may increase in the short run as it converges to the potential level of output by closing the negative output gap.

Obviously, many other scenarios can be envisaged. The rate of potential growth for the pre-crisis period is not known (available estimates are so uncertain as to be practically useless) and hence, in the optimistic Scenario A, it is highly uncertain if future potential growth will be equal to previous potential growth or will be higher/lower. Also, Scenario B may be replaced by scenarios in which potential output grows, but very slowly, or potential output falls.

4. HOW TO EVALUATE RECENT CURRENT ACCOUNT SURPLUSES

Figure 5 showed that the previous high current-account deficits had already been adjusted by 2009 and all three Baltic countries are expected to have current-account surpluses in 2009 and 2010. One may argue that current-account surpluses remove the need for further relative price adjustment (ie devaluation of the currency or 'internal devaluation', which amounts to domestic wage and price falls). However, this claim crucially depends on the fundamental drivers behind this adjustment and its sustainability. We list three possible explanations.

1. **Financing constraints.** One possible explanation of the current-account adjustment is the sudden stop of capital inflows, ie the lack of

financing. In this case, domestic agents have no choice but to cut imports, and the adjustment does not invalidate the need for a significant relative price adjustment, ie the economy may be uncompetitive and an adjustment in relative prices would still be required for economic recovery and for sustaining the adjustment in the current account. A continued lack of financing of the current account imbalance coupled with insufficient adjustment in relative prices may not allow the output gap to turn to zero, with the risk of a scenario where actual output is lower than in Scenario B in Figure 8.

2. **Negative output gap.** A negative output gap[7] (eg idle capacity and unemployment) induces domestic agents to voluntarily postpone imports due to uncertainty about economic prospects. Again, such a case would not remove the need for relative price adjustment. Whenever the output gap moves toward zero, the current-account imbalance will emerge provided that there is a source of financing.

3. **Disappearance of unsustainable consumption and investment booms.** A third possible explanation is that Baltic countries did not have a competitiveness problem, even in the boom years before the crisis, and the huge current account deficit was merely the consequence of an unsustainable consumption boom, fuelled also by intertemporal optimisation (ie agents expecting higher future income and borrowing now against that future income). Unsustainable investment booms (concerning investment in eg the real estate sector) may have also contributed to the build-up of pre-crisis current-account deficits. With the huge recession, consumption has adjusted partly because of cloudier future growth expectations. The unsustainable component of investment has also adjusted because of the emergence of overcapacity in the construction sector, and property price falls and their future outlook. Under these circumstances the adjustment achieved so far in the current account is broadly sustainable and a return to more normal growth without excessive consumption and investment booms will lead to the emergence of 'reasonable' current account balances.

The three explanations[8] have different implications for the need for further adjustment. If the competitiveness problem is serious, then a significant adjustment in relative prices is needed, despite the recently-achieved current-account surplus. If competitiveness problems are minor, then relative price adjustment may not be needed, but the government budget would need to be adjusted (public sector wage cuts, expenditure cuts, revenue increases) to keep budget expenditures in line with new revenue realities. While all three explanations may have played a role (to different degrees in the three countries), it is difficult to identify one of them as dominant.

The recent export performance of the Baltic states is at least not worse than in the other Baltic Sea countries and other EU member states, which is to some extent encouraging (Figure 9). The broadly similar export performance was accompanied by much sharper output falls in the Baltic countries. This implies that the sharp output contraction in the Baltic countries was attributable mostly to sectors producing for domestic sales, and export capacity may have not been affected more than in other countries. Looking at imports, all three Baltic countries indicate a sharper fall than the other countries under consideration. The fall in imports is consistent with all three possible explanations of the recent current-account surpluses described above.

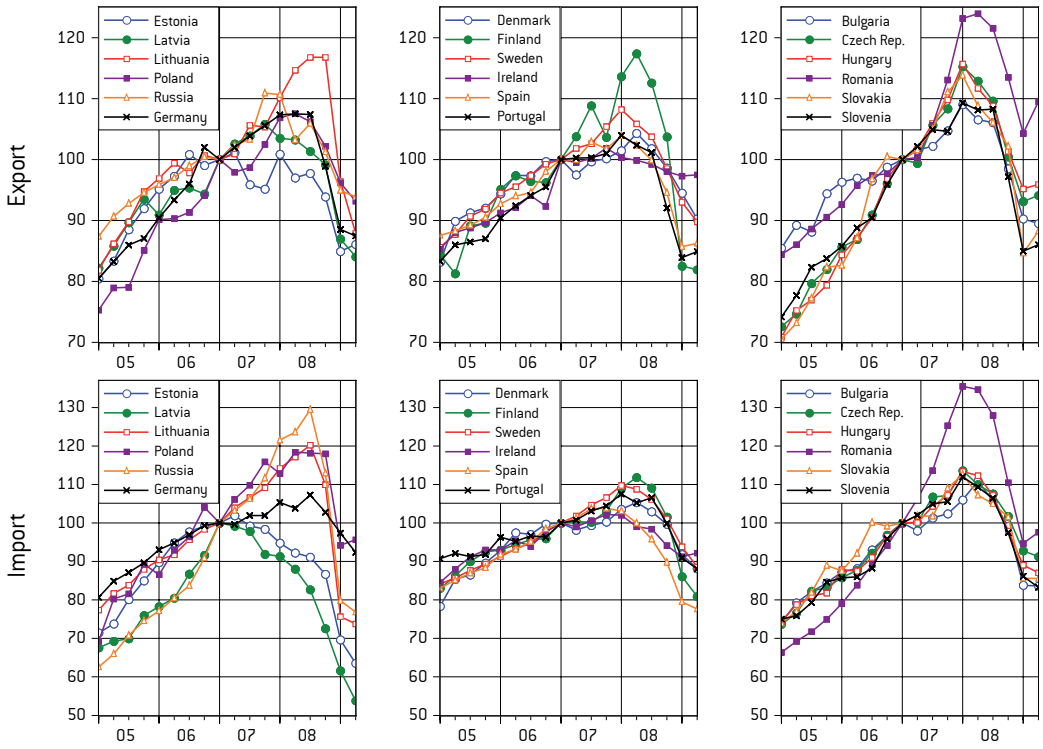
However, there are at least three reasons that suggest that regaining competitiveness is crucial even if the third explanation given above provides the main explanation for the previous high current-

7. A negative output gap can also be of course the consequence of financing constraints.

8. A small part of the improvement in the current account balance is due to less transferring of profit.

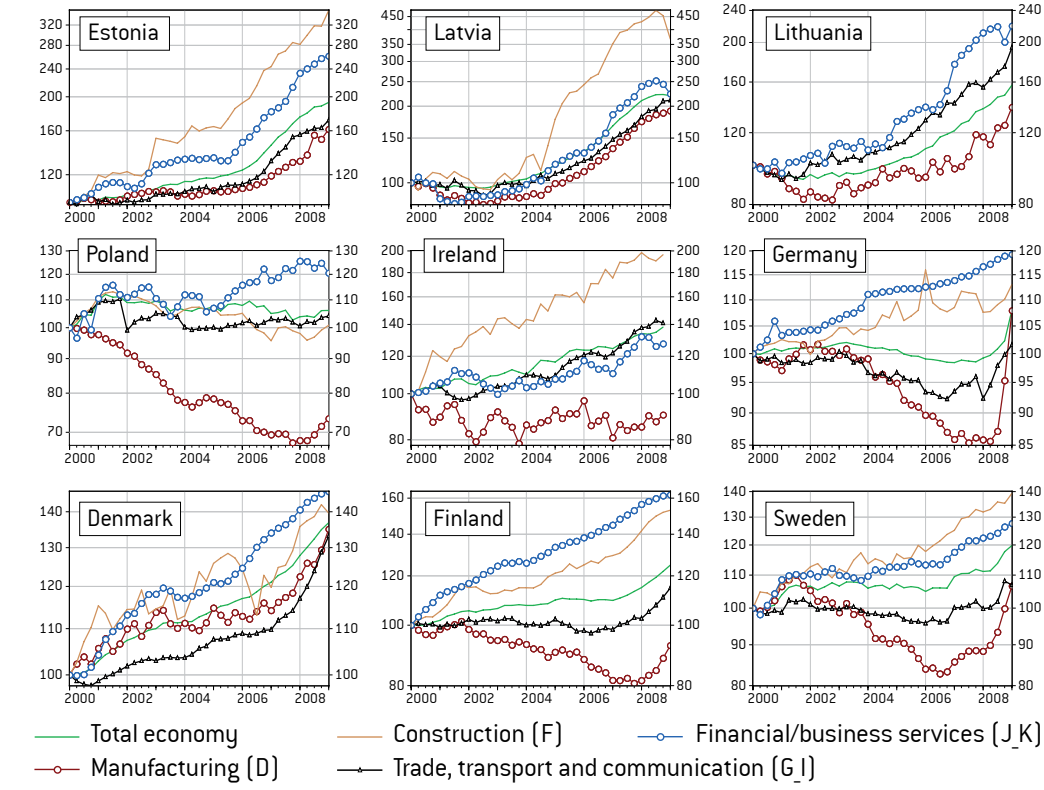
'The recent export performance of the Baltic states is at least not worse than in the other Baltic Sea countries and other EU member states, which is to some extent encouraging.'

Figure 9: Volume of export and import of goods and services (2007Q1=100, seasonally adjusted), 2005Q1-2009Q2



Sources: Eurostat and Federal State Statistics Service of the Russian Federation. Note: We used X-12 to seasonally adjust Russian and Bulgarian data, which was available only in unadjusted form.

Figure 10: Unit labour costs in different sectors of the economy, 2000Q1=100, 2000Q1-2009Q1



Source: OECD. Note: Data for the Lithuanian construction sector is not available. Data for Ireland ends in 2008Q4.

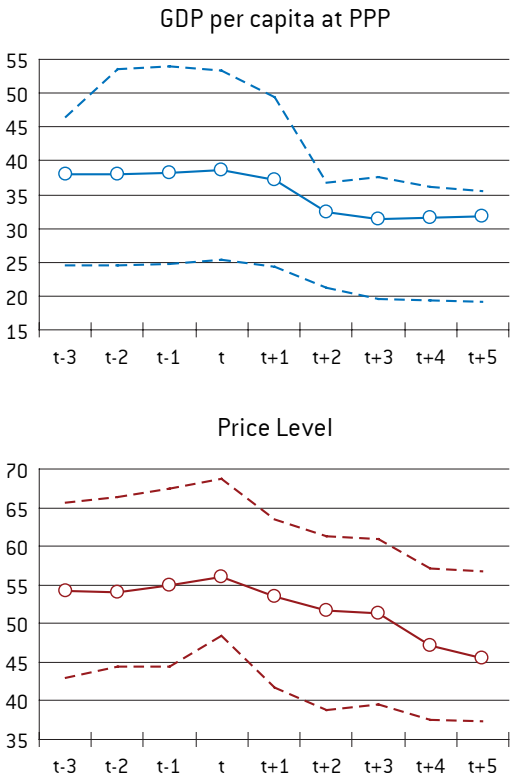
account deficits and the recent surpluses (though this is unlikely in our view).

First, the fact that wages also increased much more quickly than productivity during the boom years suggests that the overheated economy may also have gradually eroded competitiveness. Among the different sectors of the economy, unit labour cost (ULC) increases were mostly concentrated in the non-tradable sectors in Lithuania, as highlighted by Kuodis and Ramanauskas (2009), a finding that also applies to the other two Baltic countries. However, ULC has also increased sharply in the manufacturing sector as indicated in Figure 10, especially since 2005. The international comparison offered by the figure highlights that the Baltic countries lost during the pre-crisis boom a significant degree of competitiveness in manufacturing compared to the other countries shown[9].

Second, the non-tradable sector has developed especially rapidly during the boom years. Without restoring competitiveness it would be difficult to direct capacities from this sector towards the tradable sector.

Third, Figure 3 has already indicated that a wide gap has opened between GDP per capita and price levels compared to the euro area. In other words, the actual exchange rate compared to the purchasing power parity exchange rate, adjusted by the Balassa-Samuelson effect, has become highly overvalued. In order to provide a historical, cross-country overview of what used to happen with the price level after large drops in GDP, we have looked at all episodes among 182 countries of the world between 1950 and 2007 in which GDP per capita has fallen by at least 10 percent within a period of two years compared to the weighted average of 22 industrialised countries. We have selected countries with relative GDP per capita levels between 20 and 100 percent in the starting year and have excluded transition economies and oil-exporting countries. Figure 11 indicates that such episodes also tend to be followed by price level drops. On average, price levels fell somewhat sluggishly, but five years after the start of the depression, the price level decline (19 percent) almost equalled the decline in GDP per capita (18 percent); both are relative to the weighted average of 22 industrialised countries.

Figure 11: GDP per capita and price levels after big drops in GDP (compared to the weighted average 22 industrialised countries)



Source: Bruegel's calculations using IMF and World Bank data.
Note: The data shown refers to 43 episodes in 35 countries between 1950 and 2007 in which GDP per capita at PPP declined by at least 10 percent compared to the weighted average of 22 industrialised countries with a period of two years (country specific weights were derived from Bayoumi, Lee and Jayanthi, 2006). Only countries with GDP per capita between 20 and 100 percent (in the starting year) are considered, and transition countries and major oil-exporting countries were excluded. The line with the symbols shows the mean of the 43 episodes, while the two dashed lines indicate the interquartile range (ie the middle 50 percent of the distribution). Time 't' is the year which precedes the drop in GDP.

5. BALTIC OPTIONS

The cornerstone of the economic policy of Baltic countries has been the maintenance of the fixed exchange rate and the goal of euro entry as soon as possible. There is continued strong political

9. Note that all countries except Poland and Sweden had an exchange rate fixed to their main trading partners. The Polish and Swedish currencies showed in some cases large variations during the sample period shown, but did not have any trend in exchange rate movement (Figure 4). Consequently, a comparison of nominal ULC data shown on Figure 10 well reflects changes in competitiveness among the nine countries.

support for this policy, but it has become the subject of intense discussion.

The Baltic countries face three main choices, and we shall argue that none of these choices clearly stands out as the best, as all have advantages and disadvantages, and pose serious risks. There is a fourth option, which would clearly be the best, but it is not within the power of the Baltic countries to adopt. The policy choice of the authorities and the success in implementing their choice will doubtless have an effect on which of the scenarios shown in Figure 8 will occur. The four options are the following:

- **Option 1:** Preservation of the current exchange rate level and best endeavours to introduce the euro as soon as possible;
- **Option 2:** Devaluation, but maintenance of the fixed exchange rate system;
- **Option 3:** Introduction of a floating exchange rate;
- **Option 4:** Immediate euro introduction at a suitable exchange rate, supported by appropriate resolution to manage the debt overhang.

Option 1: Preservation of the current exchange rate level and best endeavours to introduce the euro as soon as possible[10]

The three Baltic countries have continued to pursue this option, though with different time horizons for euro introduction. Policymakers in all three countries have expressed their aim of introducing the euro as soon as possible, but Estonians seem to be the most ambitious with a target date of 2011, implying that their application for euro-zone membership will be assessed in spring 2010.

There is a clear rationale for choosing this option. With very high foreign currency debt, devaluation would pose many risks, as we shall discuss under Option 2. The Baltic countries have reasonably flexible economies and adjustment through cutting wages and prices could be a solution. More generally, having a fixed exchange rate without introducing the euro implies giving-up monetary policy without enjoying the benefits of the common currency, including the access to ECB facilities. An independent currency in a very small and open economy is a source of risk. It is also sometimes highlighted that keeping the fixed exchange rate, which has survived both the turbulent years after independence in the early 1990s and the Russian crisis, is an important pillar of national pride.

Private sector competitiveness needs to be improved, but the government also has a major role in the adjustment. All three countries have announced substantial public sector wage cuts, and other expenditure and revenue measures to contain the budget deficit.

This strategy implies many risks. The first is whether sufficient adjustment in wages and prices could be achieved or not. Figure 12 on the next page shows data on average monthly nominal wages in local currency. In all three countries public sector wages declined somewhat in the first half of 2009, but to a much lesser extent than announced (about 15, 40, and 25 percent in Estonia, Latvia, and Lithuania, respectively). The reason for the discrepancy could be the time required to implement the wage cuts, but it needs to be seen if nominal wages will fall in the public sector, as announced, and if private sector wages and prices will follow. The good news for the adjustment is that nominal wages in the private sector have also started to decline (Figure 12); thought the actual magnitude is still quite small.

The second key risk is caused by the uncertain economic environment until a definitive solution is found. Although all three Baltic countries have ruled out devaluation, markets are not fully convinced (Figure 7). As long as investors think a country may devalue in the near future, they will not invest, delaying real activity and contributing to the downward spiral.

Third, while the choice is not between devaluation and budget consolidation, because budget consolidation would anyway be needed to keep

10. In principle an additional option would be to keep the peg at the current level but not rush for euro-area entry; instead, use fiscal policy to dampen the economic and social impacts of the crisis and target euro-area entry only after the crisis. While this policy would ease the short run adjustment needed by government and may indeed dampen the short run social impact of the crisis, a prolonged period of uncertainty until euro-area entry would be detrimental for investment, and the many risks discussed for Option 1 would remain. Furthermore, the ability of fiscal policy to boost domestic production is limited in small, open economies.

expenditures in line with new medium term revenue realities (Darvas 2009b), the consolidation requirement is certainly greater if the fixed exchange rate is to be maintained. Clearly, budget consolidation at a time of sharp recession strongly amplifies the recession and the social burden of the crisis. Latvia had to take especially drastic measures by cutting public expenditures by about 40 percent in 2009 and further cuts are required in 2010 in order to fulfill the obligations of the EU- and IMF-led international lending programme. Apart from the direct consequences of cutting all expenditure (other than interest payments and international obligations) by a substantial amount, social unrest may bring down the government, and consequently the international lending programme, leading to unforeseeable consequences.

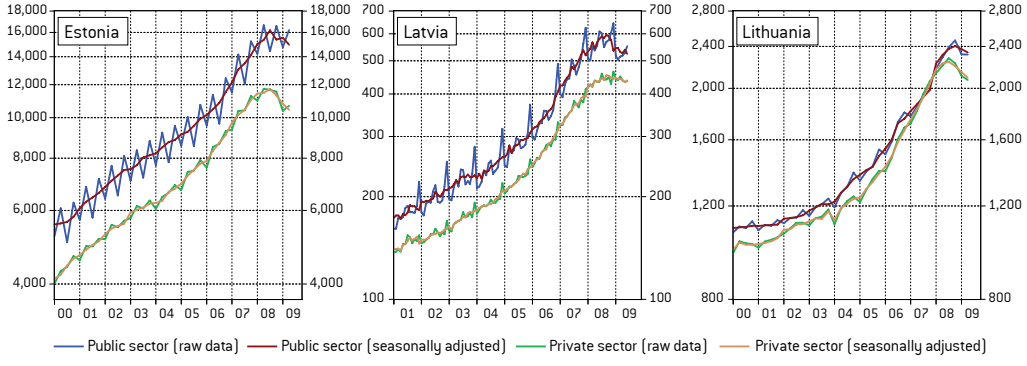
Fourth, the fall in nominal incomes (both among those who continue to be employed and those who have recently become unemployed) will increase the share of non-performing and defaulting loans. The length of the period of increasing bank losses is uncertain but it will probably be considerable, implying that banks will be very cautious in their lending for a prolonged period, thus lengthening the recession (cf. Scenario B in Figure 8). A lengthened recession and the uncertainties about its duration will also lead to postponement of investment decisions, so keeping the economies in a downward spiral.

Fifth, the lengthened recession will make it more difficult for governments to meet the euro-area entry criterion on the budget deficit. Nor can it be taken for granted that the inflation criterion will be met, though the recession, the overvaluation of the exchange rate and the nominal wage cuts will certainly contain inflationary pressures and will probably even drive the economy into deflation.

The sixth risk comes from the unpredictable reaction of European institutions to the inflation sustainability criterion. The protocol annexed to the treaty requires among other things that *"...a Member State has a price performance that is sustainable..."*. Indeed, in the rejection of Lithuania's 2006 euro-area application the sustainability criterion may have played a role[11]. Even if the Baltic countries will meet all (backward-looking) criteria, what if the Commission and the ECB do not regard the situation as sustainable and instead argue that the achievement of low inflation was the extraordinary consequence of the deep recession?

Even if the Baltic countries manage to adopt the euro in the near future, there will be significant risks and challenges for the medium and long run. There is no doubt that having the euro (converted at the current exchange rate) would be better for growth than the current situation where there is exchange-rate risk and associated uncertainty in the business environment. Introduction of the euro may increase the attractiveness of the countries and hence could lead to higher inward investment. However, the large private sector debt

Figure 12: Average monthly nominal wages in the three Baltic countries (in local currency)



Source: Bruegel and Central Statistical Offices of the three countries. Note: We seasonally adjusted the raw data using the X-12 method. Quarterly data is available for Estonia and Lithuania (to 2009Q2), while monthly data is available for Latvia (to June 2009).

11. As we have shown in Figure 4, Lithuania's nominal effective appreciation between 1999 and 2004 was sizeable, which contributed to low inflation in the first half of the 2000s. Further nominal appreciation was not expected.

and the lower capacity to service the debt will remain even after euro-area entry. If the adjustment in nominal wages and prices proves inadequate and the exchange rate remains overvalued, then Scenario B of Figure 8 may materialise. These outcomes are not just detrimental in their own right, but may lead to accelerated migration out of the Baltic countries to EU15 countries once the recession is over in the EU15, which would further undermine the growth prospects of the Baltic countries (Ahearne, Brücker, Darvas and von Weizsäcker, 2009).

The case of Portugal also provides a warning signal: following a prosperous economic catching-up period before euro-area entry in 1999, which was accompanied by credit, housing and construction booms and the build up of large current-account deficits and external debt, Portugal had the slowest growth rate among euro-area countries, and the catching-up process halted and even went into reverse to some extent (Blanchard, 2006). Spain and Ireland continued to grow fast after euro-area entry, but are now facing the most serious recessions among euro-area members.

Option 2: Devaluation, but maintenance of the fixed exchange rate system[12]

Whenever restoring competitiveness and diversion of resources from the non-tradable sector to the tradable sector requires a significant relative price change, exchange rate devaluation or wage and price cuts could both do the job. The most important argument in favour of devaluation is that a large correction in relative prices is needed and it is much easier to do that with an external than with an internal devaluation. Deflation is more difficult to achieve and to manage and also requires more time than devaluation. As devaluation is quicker, it can give rise to a recovery sooner than the wage and price cut strategy. There will be bankruptcies both when the adjustment is carried out by devaluation and by cutting wages and prices. Devaluation would mostly hurt those who have foreign currency loans, while wage and price cuts hurt everyone (Becker, 2009). Furthermore, although markets have stabilised somewhat at the time of writing this policy contribution, there is a risk that the social costs of budgetary cuts and wage reductions will be unbearable, or that markets will anyway enforce devaluation later. A voluntarily and properly designed devaluation is clearly preferable to a market- or social unrest-enforced devaluation, because the latter will most likely result in an exchange rate overshoot with further devastating consequences, as many previous crises have demonstrated.

The key arguments against devaluation are that it would bring about bankruptcies earlier because of the balance sheet effect of foreign exchange loans, while deflation would provide some time to adjust for all concerned. External financing needs may not be reduced, because private sector rollover rates might not improve, as the external debt-to-GDP ratio would increase (IMF, 2009a). A further risk relates to the reaction of foreign banks (mostly Swedish and other Nordic banks) to a large number of simultaneous defaults: banks may decide to withdraw from the Baltic countries, which would further undermine economic recovery. Furthermore, devaluation would create a precedent because the official fixed rates have never been devalued since these countries gained independence after transition. But devaluation may induce markets and local people to expect further devaluations and to speculate accordingly, including possible runs on banks and conversion of domestic currency deposits into foreign currency deposits (Levy-Yeyati, 2009).

Whether a significant change in relative prices is still needed is also not fully obvious. We have shown that current accounts have gone into surplus (Figure 5), and we have discussed in the preceding section three possible mechanisms

'Even if the Baltic countries manage to adopt the euro at the current exchange rate in the near future, there will be significant risks and challenges for the medium and long run.'

12. A milder form of this option is the use of the full +/-15 percent wide ERM2 band (instead of the current policy of keeping the rate in the middle of the band), which would be likely to lead to depreciation to the weak edge of the band.

'The choice is very hard and there is no clear-cut winner among the options facing the Baltic countries. However, there is a further option: immediate euro introduction at a suitable exchange rate supported by appropriate resolution to manage the debt overhang.'

leading to this outcome, one of which does not point towards the need for adjustment. Further, the three Baltic countries are probably different regarding the required size of relative price adjustment as suggested by eg Figure 3 and 10. Furthermore, for Estonia, IMF (2009b) concludes: *"Staff's assessment is that the real effective exchange rate is somewhat overvalued, but that competitiveness is projected to remain adequate as real wage increases are aligned with productivity. Structural policies to ensure market flexibility considered to be crucial for facilitating real adjustment including a reallocation of resources from the non-traded to the tradable sector and from low wage to high-value added activities."* Such a more-or-less positive assessment cannot be found in eg IMF documents dealing with Latvia.

An additional risk to neighbouring countries is that if only one (or two) of these countries were to opt for an uncoordinated devaluation, spillover effects may necessitate a disorderly devaluation in the other country(ies).

Option 3: Introduction of a floating exchange rate

Some CEE countries adopted a floating exchange rate rather successfully. The Czech Republic, for example, achieved high growth, low inflation, below-euro-area interest rates before the crisis, and foreign currency loans had practically no share in household loans and made up a very low share of loans to corporations. Poland and Slovakia also adopted the floating exchange rate quite successfully and these countries are weathering the storm now much better than the Baltic countries[13].

After many years with a fixed exchange rate, Ukraine opted for a floating rate in November 2008 in response to the crisis. The exchange rate of the hrivna depreciated by about 40 percent in a few months (helping the relative price adjustment but hurting borrowers with foreign exchange loans) and was volatile, but it has achieved a remarkable degree of stability since spring 2009.

With the benefit of hindsight, in the Baltic countries the introduction of a floating exchange rate would have been a good option around 2000, ie some time after the Russian crisis but before the huge credit boom started. The floating rate would have disciplined borrowers and the credit boom would probably have been milder, similarly to other floating rate CEE countries. However, there is always a fear that, in very small and very open economies, a floating exchange rate may lead to excessive exchange rate volatility that could be detrimental to investment and growth. The key question, which at this point has only historical relevance, is if the huge boom and bust cycle and all associated consequences caused by the fixed exchange rate or potential exchange rate volatility would have been more detrimental to social welfare in a longer term perspective.

However, moving to a floating rate at the time of panic in a small country with very high external debt risks excessive depreciation of the exchange rate, and consequently many of the dangers associated with devaluation discussed so far would come into play with greater force[14].

The above arguments suggest that the choice is very hard and there is no clear-cut winner among the options. However, there is a further option, which is not at the disposal of the Baltic countries themselves, but could be implemented via EU-wide coordination and agreement.

Option 4: 'Immediate' euro introduction at a suitable exchange rate supported by appropriate resolution to manage the debt overhang[15]

This option would combine the benefits of the other options, eliminate most of their risks and speed up and help sustain the recovery.

13. See Darvas and Szapáry (2008) for a detailed analysis of the experiences with floating exchange rates in new EU member states and the comparison of their economic performance to fixed exchange rate countries.

14. Still, some observers argue for a floating rate especially because it would be likely to lead to an overshooting of the exchange rate and hence may create attractive investment opportunities for foreign investors, thereby helping the recovery and medium term growth (see RGE Monitor 2009).

Why euro introduction? The dilemma around the overvalued exchange rate and the large stock of foreign currency loans cannot be solved properly by any of the options discussed so far. While euro adoption itself is not a solution to the dilemma, a comprehensive package also including the selection of the suitable exchange rate and resolution of the private debt overhang would solve it. It is better to design a comprehensive package than to discuss the individual elements of it. More fundamentally, having an independent currency in a very small and open economy is a source of risk and keeping the rate fixed may not be a viable option under free capital mobility. The credibility and stability brought by the euro would benefit investment and growth. The euro proved to be a shelter during the crisis and crises may occur in the future. Euro-area members have scope to run counter-cyclical fiscal policy during a crisis. Euro introduction at the earliest possible date has been the cornerstone of the economic policy of the Baltic countries and, in any case, all new EU entrants are obliged to introduce the euro at some point.

Why 'immediate'? The Baltic situation, especially in Latvia, is getting more and more dramatic. While Baltic governments and central banks are making every effort to survive with the peg, there is a risk of failure. Eventual collapse in one country may trigger a collapse in the other two. A Baltic collapse is not in the interest of the EU as whole. Of course, euro introduction cannot be done 'immediately' and any action has to respect the treaty of the EU and all other international laws. However, with a unanimous decision of the Council appropriate provisions can be put in place to strengthen the economic foundations of the euro-accession criteria, which would increase the credibility of the euro adoption plan and speed up the convergence. In the next sections we discuss the economic and legal aspects of this reform.

Why at a 'suitable' exchange rate and what does this term mean? Introducing the euro at an overvalued exchange rate risks Scenario B of Figure 8. Defining the appropriate final conversion rate is a difficult task. The evidence we have provided so far indicates that the exchange rate is highly overvalued, especially in Latvia, but also in Estonia and Lithuania. The wage and price falls that have already started are helping to restore competitiveness, but it is questionable how far this process can go. We do not take a stand on the level of the appropriate conversion rate as its determination should be based on detailed calculations considering a large number of factors. The issue of the appropriate conversion rate should be carefully discussed on economic grounds by European and national authorities.

Under what conditions? Euro-area entry conditions are laid down in the treaty. However, the economic rationale behind the criteria was doubtful even before the crisis – but has been especially so during the crisis. We shall argue in the next section that keeping the criteria unchanged violates in the economic sense the equal treatment principle. The entry criteria should be reviewed and fine tuned within the legal framework of the treaty and only countries that meet the reviewed criteria should be allowed to join the euro area. Any solution should not be Baltic-specific but should be equally applicable to any EU country. Any solution should not incur moral hazard, ie should not encourage private sector actors and governments to count on 'cheap' future help in crises.

Why and what kind of resolution of private debt overhang? It is obvious that there will be significant bank losses even if parity is maintained or changed, whether or not the euro is introduced. Neither the people (through indirect channels including those who do not have loans) and governments of the Baltic countries, nor the governments of the home countries of the banks active in the region, are immune to the consequences of bank losses. The recent unilateral announcement of the Latvian government regarding a possible new bill to retroactively intervene in existing mortgage contracts[16] underlines that the country may not be able to solve its problem itself and that the situation may escalate. A potentially escalating situation would disad-vantage all parties concerned. Consequently, appropriate resolution

15. For Latvia, IMF (2009a) argued for immediate euro adoption possibly at the weak edge of the +/- 15 percent exchange rate band, but noted that the EU authorities have ruled out this option. Becker (2009) has also argued in favour of immediate euro adoption at a devalued exchange rate. Levy-Yeyati (2009) would also favour this option, but acknowledging that it would not get EU-wide support he proposes a contained devaluation. Nouriel Roubini suggested depreciating the currency, euroise after depreciation, restructure private foreign currency liabilities without a formal 'default', and boost the IMF plan to limit the financial fallout (see RGE Monitor 2009). For the other two Baltic countries such direct suggestions are rarer. Åslund (2009), on the other hand, opposes devaluation in Latvia and lists six ways in which Latvia differs from Argentina and hence why it is unlikely that Latvia's fixed exchange rate regime will experience a collapse similar to the collapse of the Argentine fixed exchange rate regime in 2001/2002.

schemes should be put in place (see the thorough discussion of this issue in Mitra, Selowsky and Zalduendo, 2009). However, the cross-border ownership of banks re-quires cross-border participation in the design of the resolution schemes; in the extreme case a multilateral burden-sharing agreement should also not be excluded, though negotiations for it can be extremely intricate in legal, political and economic terms. The requirement for not incurring moral hazard is especially critical in designing any resolution scheme.

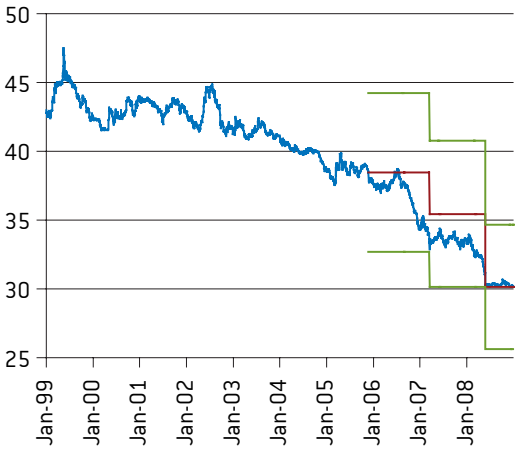
In the next section we briefly discuss the economic rationale behind the review of the euro-area accession criteria, which will be followed by an analysis of the legal options under the treaty.

6. PROPOSAL TO REVIEW THE EURO AREA ENTRY CRITERIA[17]

Even before the crisis, much discussion took place about euro-area entry rules, but a lot more has taken place in the wake of the crisis. Euro-area entry criteria were established in the early 1990s before the euro area existed and when the EU had 12 member states. Intense discussion preceded the drawing up of the rules, and the end result was a compromise between economics, politics and simplicity. Now the euro area exists and there are 27 members of the EU, but the rules remain the same. It is easy to show that keeping the same rules in an expanded EU violates in the economic sense the equal treatment principle – new applicants have to meet tougher criteria than previous ones because two of the criteria are benchmarked on the "three best-performing member states of the EU in terms of price stability", which have been interpreted in a special way. The treaty does not specify how to determine the "three best performers" (see the next section); in practice this been defined as the three EU countries having the lowest non-negative inflation rates. Lewis and Staehr (forthcoming) found that according to this interpretation the expansion of the EU from 15 to 27 members reduces the expected inflation reference value by 0.15-0.2 percentage points, and there is a considerable probability of a larger reduction.

Another long-known factor is the significant price-level convergence of the new EU member states due to their economic catch-up (the so-called 'Balassa-Samuelson effect'), which results in higher inflation if the exchange rate is to be kept stable. Such inflation is structural and not a reflection of unsustainable policies. While this effect was present in some current euro-area member countries, the effect is much stronger in the new EU member states and hence it is much harder for them to meet the inflation criterion than it was for earlier applicants, unless they revalue the exchange rate as Slovakia did (Figure 13). However, continuous appreciation of the currency, while not against the letter of the treaty, questions the usefulness of the exchange-rate criterion, as its rationale must have been to demonstrate that a country can live with exchange-rate stability.

Figure 13: The Slovak koruna against the euro and the ERM-II band, 1999-2008



Source: ECB. Note: A decrease in the exchange rate indicates appreciation of the koruna against the euro. The red line indicates the central parity and the two green lines indicate the edges of the exchange rate band. The width of the exchange rate band was +/-15 percent.

A further long-known factor regarding the inflation criterion (as well as the interest-rate criterion) is that it is benchmarked against all EU countries. While this was a perfectly natural idea before the euro existed, it has become rather questionable. The inflation rates of those EU countries that are not euro-area members may be affected by large exchange-rate swings.

Nevertheless, before the crisis and in the first few

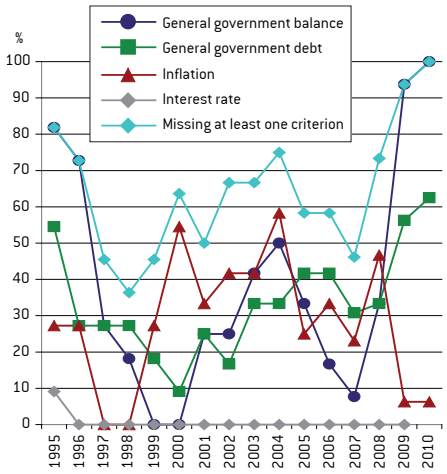
16. According to new reports the proposed legislation (which is incidentally strongly opposed by the Bank of Latvia) is supposed to have two key pillars: (1) limiting mortgage lenders' liability to the value of the collateral instead of the size of the loan and (2) requiring that a bank can repossess a property in case of default only if it provides an alternative home to the debtor with the debtor's agreement. In our view retroactive introduction of this legislation is clearly contrary to international law and hence cannot be implemented. Raising the issue strongly undermines the trust in the enforceability of contracts and the rule of law in general, which may have devastating future consequences for investments in Latvia.

17. Most economic arguments in this section first appeared in Darvas (2009a).

months of it, we shared the view that not all criteria should be reviewed, restricting ourselves to advocating a change to the misguided interpretation of the inflation criterion mentioned above (Darvas and Szapáry, 2008; Darvas, 2008). Also, four new EU member states have so far managed to join the euro area. However, in three of the four cases there was no need for substantial price-level convergence and the fourth case, Slovakia, could only manage it with the substantial nominal exchange-rate appreciation (Figure 13) discussed above.

The crisis has prompted a rethink of many positions, and we ought to rethink the euro-area entry criteria too, because serious asymmetry exists and serious issues are at stake.

Figure 14: Percent of euro-area member states missing the entry criteria, 1995-2010



Source: Bruegel's calculation based on data from Eurostat and the IMF's October 2009 World Economic Outlook. Note: The percentages are calculated from the actual euro-area member states in each year (and the first eleven members before 1999): from 1995 to 2000 the 11 countries that introduced the euro in 1999; in 2001 Greece is added as the 12th country; in 2007 Slovenia is added as the 13th country; in 2008 Cyprus and Malta are added as the 14th-15th countries; for 2009-2010 Slovakia is added as the 16th country. Definition of meeting the general government debt criterion: a country is considered to meet the criterion if either the debt/GDP ratio is below 60 percent or, if above, then projecting the average change in debt/GDP ratio of the latest three years twenty years ahead will lead to a ratio below 60 percent. Three percent is used for the budget deficit criterion. The three EU countries (considering the actual members of the EU of the given year) with the lowest (but non-negative) inflation rate were used to determine the inflation and interest rate criteria.

Asymmetry. Once a country is inside the euro area, it can do almost anything it likes. The Stability and Growth Pact in principle limits the scope of government action inside the euro area, but not much, as many examples show, both in the pre-crisis period but especially during the crisis. Figure 14 shows that 50-60 percent of euro-area member countries have violated at least one entry criterion between 1999 and 2008[18]. In response to the crisis, government deficits and debt are ballooning in euro-area countries, but countries wishing to join are subjected to extremely tough and painful measures if they are, in a few years, to be considered eligible.

The countries that have joined the euro area were judged to have achieved a *"high degree of sustainable convergence"*. The large number of violations after euro-area entry suggests that the criteria are inadequate for judging 'sustainable convergence'. This fundamentally calls into question both the economic and moral foundations of the future application of the current entry criteria.

The asymmetry also highlights that the capacity to meet the current entry criteria depends on the business cycle, which is a highly unfavourable property. Suppose, for example, that Slovakia applies for euro-area membership a year later and hence is evaluated in the spring/summer of 2009 instead of the spring/summer of 2008. Slovakia would have been rejected in 2009 because of the general government balance criterion, though fiscal policy has not become 'irresponsible' between 2008 and 2009. Also, like all regional floating currencies, the Polish zloty, the Czech koruna, the Hungarian forint and the Romanian leu experienced serious pressures and significantly depreciated against the euro between the summer of 2008 and the spring of 2009, and the Slovakian koruna may also have come under pressure at that time without a sure prospect of euro-area entry. This in turn may have qualified it for *"severe tensions"* status according to the letter of the treaty, putting the evaluation of the exchange-rate criterion at risk, and the tensions may have increased government bond yields,

18. The entry criterion for government budget positions is the absence of an excessive deficit procedure, as we will discuss in the next section. Calculations behind the figure assume a pragmatic definition of the government debt criteria (see details in the note to the figure) and use the three percent deficit benchmark. The figure is based on currently available data – at the time of evaluation, real time data was used; this has been revised in some cases.

putting the fulfilment of that criterion at risk as well.

Business cycle dependence is the result of the fact that the two budgetary criteria (deficit and debt) are phrased in absolute terms (the inflation and interest rate are phrased in relative terms). Business cycle dependence implies that most countries can join only in good times[19], which does not make much sense: meeting the criteria in good times obviously does not tell one much about long term sustainability, as Figure 14 has also shown.

High stakes. One may say that the new applicants should have pursued policies similar to those of the four newest euro members. However, the stakes are much higher now than just naming and shaming. As we have discussed, the three Baltic countries are in deep trouble and the current misery is not only their own fault. A Baltic exchange-rate peg failure or a prolonged recession and a halted economic catch-up would not just cause further pain for the populations of these countries. It could undermine trust in the notion of common European values, and lead to a new divide within Europe (Darvas and Pisani-Ferry, 2008). Western European investors in the Baltic countries would also suffer heavy losses. If the Baltic countries do not recover, this will impact the EU's role as driver of reform in other new member states as well as in the neighbourhood countries.

It would be tempting to drop one or the other criterion[20], but that would require changing some key articles of the treaty. This should be possible, but seems highly unlikely. In fact, the treaty includes an obligation for the Council to lay down the details of the convergence criteria referred to in a main article of the treaty, this Council decision replacing the relevant protocol to the treaty; the same obligation exists for the protocol on the excessive deficit procedure (see details in the next section). Consequently, it is possible to strengthen the economic foundations of the numerical requirements of the current four convergence criteria relatively easily, ie with a unanimous decision of the Council. Economic theory does not provide clear guidelines about how to determine the magnitudes, but a few principles can be laid down.

All criteria should be related to the euro-area average for at least four reasons:

- First, all prospective applicant countries are highly integrated into the euro area (if not, they should be), and hence what happens inside matters a lot for those outside. This applies both to the inflation rate and also to the general economic outlook, which has an impact on budget deficits both in the euro area and in applicant countries.
- Second, it would abolish the peculiar possibility that non-euro-area countries or very small countries with which the applicant has virtually no trade may affect the criteria.
- Third, it would alleviate the asymmetry of letting the automatic stabilisers run and helping the economy with discretionary stimulus in euro-area countries while doing the painful opposite of this in applicant countries during a crisis.
- Fourth, as countries in the euro area are declared to have achieved *"a high degree of sustainable convergence"*, the convergence of applicant countries towards the euro-area average seems a natural requirement.

The inflation, interest rate and budget balance criteria should allow some deviation from the euro-area average. New EU member states are small and open economies characterised by larger cyclical swings, and thus need greater scope for counter-cyclical fiscal policy. Moreover, the need for public sector investment is greater than in old EU member states. With regard to inflation, new EU member states have a higher potential growth rate, which implies structural price-level convergence, which should be acknowledged.

One option that would allow some deviation from the euro-area average is to define the maximum deviation. For example, the budget balance criterion could be the average euro-area balance minus 1.0 percentage points (all measured as a

19. Estonia's chances also depend on the business cycle but the opposite way: it could not join in 'good times' because of the inflationary pressures discussed in earlier sections. But if the government squeezes the budget sufficiently in the midst of a drop in GDP of about 15 percent in 2009 (in contrast to euro-area governments that use fiscal policy to dampen their five percent GDP fall), it may have a realistic chance of a positive assessment in the spring of 2010, unless the expected deflation is regarded as 'unsustainable'.

20. For example, Buiter (2005) argues that "achieving fiscal sustainability prior to adopting the euro is essential and it is the only truly necessary condition for euro adoption. It should also be a sufficient condition for Eurozone membership."

percentage of GDP) and the inflation criterion could be the average euro-area inflation rate plus 1.5 percentage points. (If the deviation should be 1.0 or 1.5 percentage points or another similar number should be the subject of discussion.) Another possibility would be to require the applicant to have better statistics than, say, 25 percent of euro-area members.

The requirement for the ratio of government debt to GDP could simply be that this ratio should not exceed the euro-area average (or should be lower than in at least 25 percent of euro-area members), unless the ratio is diminishing sufficiently and approaching the euro-area average at a satisfactory pace.

In order to ensure that the reformed criteria provide a better indication of sustainable convergence than the original criteria, the compliance period could be increased from the current one year to the average of the last two or three years.

Would this change jeopardise the stability and credibility of the euro area? Certainly not. There would still be criteria (but more sensible ones) to keep applicants on their toes. Furthermore, in good times the new criteria would be tougher. For example, when the budget is balanced in the euro area, then the new criterion would (rightly) require a better budget position from the applicants. The most important threat to the stability of the euro area is the lack fiscal sustainability – this is a real threat for many countries currently inside the euro area, but potential applicants have much lower government debt-to-GDP ratios and are undoubtedly much better prospects in this regard. And in any case the EU's surveillance system needs a fundamental revision to ensure stability and growth in the whole EU. Furthermore, prospective applicants from the new member states would make up a very small share of the total euro area, and their inclusion would hardly be noticeable in euro-area aggregates. The argument that inflation will be higher in the euro area after admitting countries in which the Balassa-Samuelson effect is persistent, and hence inflation must be lower in old member states in order to meet the ECB's inflation target for the euro-area average, is offset by the magnitudes. According to Darvas and Szapáry (2008), the impact of the proposed modification of the inflation criterion on euro-area average inflation would be less than an additional 0.05 percent per year – a magnitude well within the measurement error of inflation rates.

Would the revision of the convergence criteria undermine the trust in EU rules? Clearly not. The 'flexible' interpretation of the criteria at many previous euro-area admissions (see the next section) should have already undermined public trust in the process of euro-area enlargement. On the contrary, revising the criteria to be more economically rational and to have less scope for discretionary interpretation would even strengthen the trust.

Would it be difficult to reach consensus among the 27 member states on this particular change? We think not. Countries outside the euro area would certainly support it. Countries inside would feel more comfortable having rules that make more sense. The goal is not to weaken the euro-entry criteria but to make them more sensible. The change should be carefully orchestrated and initiated by euro-area member states or European institutions, not applicant countries.

The suggested change in euro-entry criteria would still require substantial effort from applicants, but it would ease their pain. It would also boost confidence, helping kick-start the private capital inflows – rather than inflows of western taxpayers' money – that these countries desperately need.

'The large number of violations of the criteria after euro area entry suggests that the criteria are inappropriate for judging 'sustainable convergence.'

7. LEGAL OPTIONS UNDER THE CURRENT TREATY FOR INTERPRETING EURO-ENTRY CRITERIA IN ECONOMIC TERMS

A key question is whether the letter of the treaty and the precedents provided by the previous applications of euro-area entry criteria allow a more flexible interpretation of rules in order to require more sensible criteria from future euro-area applicants.

7.1 Full euro-area membership

First of all it is important to recall that for three countries (Finland, Italy and Slovenia) it is not unambiguous from a legal point of view whether or not the exchange-rate criterion was met. The treaty included and continues to include the following requirement: *"the observance of the normal fluctuation margins provided for by the exchange-rate mechanism of the European Monetary System, for at least two years"* and the protocol added that *"...for at least two years before the examination"*[21] (without devaluing its currency on the initiative of the member state concerned). The most neutral interpretation of this regulation is that participation in the exchange-rate mechanism (ERM) is required for at least two years before the examination. Neither the treaty, nor its protocol provided any waiver from the requirement for the minimum period of two years. The three countries mentioned did not spend the minimum two-year period prior to the examination in the exchange-rate mechanism. The 3 May 1998 decision of the Council of course recognised this, but decided in any case:

"Italy fulfils the convergence criteria mentioned in the first, second and fourth indents of Article 109j(1); as regards the criterion mentioned in the third indent of Article 109j(1), the ITL, although having rejoined the ERM only in November 1996, has displayed sufficient stability in the last two years. For these reasons, Italy has achieved a high degree of sustainable convergence." (Official Journal of the European Communities, 1998, p. 32. The article number refers to the treaty in force in 1999. The first, second and fourth indents cited refer to the criteria on inflation rate, excessive deficit procedure and long term interest rate, respectively. The decision for Finland used the same wording except that Finland joined the ERM in October 1996.)

For the other nine countries different wording was used, eg for Belgium: *"Belgium has achieved a high degree of sustainable convergence by reference to all four criteria."* The same wording was used for the other eight countries that had participated for at least two years in the ERM.

Consequently, the Council decision of 3 May 1998 recognised the absence of the two-year period in the ERM, but despite this the Council assessed, based on the recommendation of the Commission and the EMI (European Monetary Institute), that the two countries had a stable exchange rate. One may say that the decision was in line with the spirit of the treaty, but it is far from being obvious whether the letter of the treaty was also fully respected. This 'flexible' interpretation of the treaty should be noted as providing a precedent[22].

On other occasions it was rather questionable if the spirit of the treaty was satisfied, though the letter of the treaty was formally respected. Regarding the government budgetary position the letter of the treaty requires the absence of an excessive deficit procedure (EDP), which is decided on the basis of the ratios of government deficit and debt to GDP. For the latter, the treaty allows a discretionary decision if *"the ratio is sufficiently diminishing and approaching the reference value"*, ie 60 percent of GDP, *"at a satisfactory pace"*. On 1 May 1998 the Council abrogated the EDP against seven countries that joined the euro area in 1999, the decision being substantiated by the discretionary options allowed by the treaty. However, it was questionable whether, eg the decline of Italy's general government debt-to-GDP ratio from 124.9 percent of GDP in 1994 to 121.6 percent by 1997[23] corresponded to the cited requirement. Similar doubts could be raised for some other countries regarding the abrogation of the EDP[24].

21. All citations of the treaty and the protocol annexed to it are taken from the Lisbon "Treaty on the Functioning of the European Union. Consolidated version" (Official Journal C 115 of 9 May 2008). The Maastricht and the Nice versions have the same wording, but the numbering of the articles is different.

22. A possible alternative interpretation is that ERM participation is not required, but only exchange-rate stability. In this case Bulgaria may immediately apply for euro-area membership as it is not a member of the ERM but its exchange rate is fixed to the euro without allowing any volatility.

23. These figures were used in the 1998 assessment, but have been revised somewhat since then.

'The application of the treaty provides precedents where formal adherence to the exchange-rate criterion was suspicious. Even when countries were allowed to join by formally meeting all the criteria, there was questionable exercising of discretionary options.'

To sum up, the application of the treaty provides three precedents where formal adherence to the exchange-rate criterion was suspicious. There were some occasions where countries were allowed to join by formally meeting all the criteria, but these were the results of questionable exercising of the discretionary options allowed by the treaty with respect to the budgetary criterion.

These precedents are encouraging for the prospects of new applicants, but only if these past 'flexible' practices are also applied in the future.

Having reviewed some key features of the past application of the treaty, let us now look at the flexibility offered by the letter of the treaty and its protocol for future euro-area applicants[25].

1. Inflation. The inflation criterion is benchmarked against *"the three best performing countries in terms of price stability"*. Neither the treaty nor its protocol define how to determine the best performers. In practice the three countries with the lowest, but non-negative, inflation rates were used. As highlighted by many authors (eg, Buiter, 2005; Pisani-Ferry *et al*, 2008) the applied definition contradicts the ECB's definition of price stability, which defines it as close to, but below, two percent. There is nothing in the treaty that would hinder the ECB and the European Commission from interpreting the three best performers as the three countries having inflation rates (1) either below or close to two percent, or (2) the closest to the average inflation rate of the euro area.

2. Excessive deficit[26]**.** The room for manoeuvre is 'moderate' for not opening an EDP or for abrogating a previously-opened EDP when the *"ratio of the planned or actual budget deficit to gross domestic product at market prices exceeds a reference value"*, which is three percent. The discretionary options provided in the treaty allow the EDP not to be applied if *"either the ratio has declined substantially and continuously and reached a level that comes close to the reference value, or, alternatively, the excess over the reference value is only exceptional and temporary and the ratio remains close to the reference value"*[27]. The words *"exceptional"*, *"temporary"* and *"close"* are not defined in the treaty, nor in its protocol. EDPs were typically opened for budget deficits somewhat above three percent of GDP, but this does not at all mean that *"close"* must be defined this way. The crisis is clearly exceptional and under exceptional circumstances, temporariness could last for a few years. Consequently, there is some room for manoeuvre, but a proper interpretation of closeness at a time of a deep crisis will require an open attitude similar to past 'flexible' practices.

3. Exchange rate. The precedents for the assessment of this criterion must imply that this criterion is not really binding. The 'flexibility' shown so far (eg Italy, Finland, Slovenia and Slovakia) should be extended to future applicants. There is, however, an unsolved issue regarding this criterion: the conditions for joining the ERM-II. Without ERM-II membership a country can not join the euro area even if it has a stable exchange rate and meets all other criteria[28]. There should be clear and transparent criteria for joining the ERM-II.

4. Interest rate. In principle, the long-term interest-rate criterion serves as a means to assess the sustainability of the low inflation rate. In practice, however, this criterion reflects the credibility of the euro-area accession process: when markets attach a high probability to eventual euro-area accession, interest rates will converge, at least to some extent, regardless of the longer-term sustainability of the inflation rate. The two percentage point deviation allowed by the treaty will almost surely also be sufficient for future euro-area applicants where euro-accession prospects are credible. Whenever economic reasoning supports future euro introduction,

24. Some authors, eg Buiter (1995) and De Grauwe (2009), regard these cases as violations of the letter of the treaty as well.

25. In addition to the four criteria to be discussed below, the adequacy of national legislation, including the statutes of the national central bank, integration of markets, the current-account balance, unit labour costs and other price indices are also examined for countries wishing to join the euro area.

26. The Excessive Deficit Procedure is the crucial common component in the Stability and Growth Pact (that applies to all members of the EU) and the euro accession criteria.

27. The second criterion of the EDP refers to gross government debt and its discretionary option has already been cited above when discussing abrogation of the EDP in the case of Italy in May 1998. However, the precedents of letting countries to join with ratios well above 100 percent of GDP must imply that this criterion will not be binding for any prospective applicants having debt ratios above 60 percent where they are below Italy's and Belgium's 120 percent ratios at the time of their euro area admission.

28. For example, Bulgaria has a fixed exchange rate to the euro and all official documents emphasise the overriding goal of euro introduction as soon as possible. Yet Bulgaria is not a member of the ERM-II and it is difficult to fathom why for an outsider given the current lack of transparency of entry conditions.

European policymakers can increase the credibility of applicants' path toward the euro.

To sum up, there is indeed some room for manoeuvre in the treaty and in its *current* protocol regarding formal inclusion in the euro area. But more importantly, the Council has an obligation to clarify the four convergence criteria and replace the current protocol:

> *"The Council shall, acting unanimously on a proposal from the Commission and after consulting the European Parliament, the ECB as the case may be, and the Economic and Financial Committee, adopt appropriate provisions to lay down the details of the convergence criteria referred to in Article 140(1) of the said Treaty, which shall then replace this Protocol."* (Article 6 of Protocol 13)

The same obligation exists in the treaty to clarify the details of the excessive-deficit procedure that will replace the protocol annexed to the article discussing the EDP. In the case of the EDP, some of the procedures have been detailed, but even the Lisbon version of the treaty includes the reference to the Council's authority to adopt appropriate provisions. It is time to spell out the details of the convergence criteria and of the EDP, to strengthen the economic rationale of the convergence criteria. In particular, the numerical criteria should be benchmarked against the euro-area average as discussed in the previous section. As has recently been noted by von Hagen and Pisani-Ferry (2009): *"the criteria for joining the euro area were introduced in order to ensure that economic logic prevails over political logic, not that legal logic prevails over economic logic"* (p. 25). It is strongly in the European interest to follow this principle.

7.2 Unilateral euroisation

The Council, the Commission and the ECB have repeatedly ruled out the possibility of unilateral introduction of the euro (as legal tender) on the basis that the treaty provides one and only one way to the euro. Therefore, for political reasons it would not be wise to implement a unilateral move which would earn the clear disapproval of European policymakers, which is the current reality. Furthermore, without ECB support, this would be very difficult to do in technical and practical terms. If the unilateral move did not gain credibility, people could start to withdraw their deposits and various other financial assets in cash euros. The banking system may not be able to supply as much euro cash as required, which may lead to a breakdown of the financial system. To take a Latin American example, FitchRatings (2009) argues that in the dollarised Ecuador a rapid decline in bank deposits or accelerated capital flight, combined with limited access to external financing, could lead to a crisis driven exit from dollarisation.

8. SOME CLOSING THOUGHTS

The three Baltic countries face the deepest recessions among all countries of the world and it is not just the fault of the politicians and the people of these countries that they are in this predicament. Other eastern European countries are also suffering disproportionately to their pre-crisis mistakes. The EU has mobilised resources to support crisis-hit countries in central and eastern Europe (Darvas, 2009c) according to its rule-books, but the EU should be more than just a rule-book. When everyone is aware that a rule has deficiencies, action is needed to modify the rule.

On the one hand, there is broad consensus that an immediate euro introduction accompanied by proper other provisions would serve the best interests of the Baltic countries and the EU as a whole, but such a solution is not feasible in the legal sense and would raise many economic and political issues. On the other hand, it is also clear that the economic foundations of the current euro-

'The EU should be more than just a rule-book. When everyone is aware that a rule has deficiencies, action is needed to modify the rule.'

area entry criteria are fundamentally called into question by the fact that it has been a rule rather than the exception that euro-area members have violated the entry criteria since becoming members, both before the crisis and currently. Adherence to the current interpretation of the criteria is also weakened by the precedent of the 'flexible' application of the treaty at the time of certain previous admissions to the euro area. The EU's expansion from 15 to 27 mem-bers also made the rules tougher and hence, contrary to common perception, keeping euro-area entry rules unchanged violates in the economic sense the equal treatment principle.

The coincidence of these two consensuses should be used to grasp an opportunity: reform the euro-area entry criteria and demand more meaningful criteria from all future euro-area applicants. Any solution should not be Baltic-specific but should be equally applicable to any EU country and should not incur the risk of moral hazard. At least the room for manoeuvre in the protocol of the treaty should be exploited by requiring from future applicants criteria that make more sense. The best solution, however, is for the Council to fulfil the obligation placed upon it by the treaty to lay down the details of the convergence criteria and the excessive deficit procedure that will replace the current protocols. In the midst of an unexpectedly deep crisis, two decades after the drawing up of the rules and one decade since the launch of the euro, it is indeed time to reform the convergence criteria. In designing the reform, the economic rationale of the criteria should be strengthened.

REFERENCES

Abiad, Abdul, Daniel Leigh and Ashoka Mody (2009) 'Financial integration, capital mobility, and income convergence', Economic Policy, April 2009, p. 241–305.

Ahearne, Alan, Herbert Brücker, Zsolt Darvas and Jakob von Weizsäcker (2009) 'Cyclical dimensions of labour mobility after EU enlargement', Bruegel Working Paper 2009/02

Ahearne, Alan, Juan Delgado and Jakob von Weizsäcker, 2008, A Tail of Two Countries, Bruegel Policy Brief 2008/4

Åslund, Anders (2009) 'How Latvia Can Escape from the Financial Crisis', Presentation to the Annual Conference of the Bank of Latvia, Riga, October 1, 2009.

Bayoumi, Tamim, Jaewoo Lee and Sarma Jayanthi (2006) 'New Rates from New Weights', IMF Staff Papers Vol. 53, No. 2, p. 272-305.

Becker, Torbjörn (2009), 'Latvia's options – Internal versus external devaluation', mimeo, Stockholm institute of Transition Economics.

Blanchard, Olivier (2006) 'Adjustment within the Euro Area. The Difficult Case of Portugal', MIT Department of Economics Working Paper No. 06-04

Buiter, Willem H. (2005) 'To purgatory and beyond; When and how should the accession countries from Central and Eastern Europe become full members of the EMU?' In: Breuss, Fritz and Hochreiter, Eduard, (eds.) Challenges for Central Banks in an enlarged EMU. European Community Studies Association of Austria Publication Series . Springer-Verlag, New York, p. 145-186.

Cerra, Valerie and Sweta Chaman Saxena (2008) 'Growth Dynamics: The Myth of Economic Recovery', American Economic Review, Vol. 98(1), 439-57.

Darvas, Zsolt (2009a) 'Treaty change is needed to make sense of euro-area entry criteria', VoxEU.org

Darvas, Zsolt (2009b) 'The Impact of the Crisis on Budget Policy in Central and Eastern Europe', Bruegel Working Paper 2009/05, to appear in the OECD Journal on Budgeting.

Darvas, Zsolt (2009c), 'The role of the EU in supporting crisis-hit countries in central and eastern Europe', background paper prepared for the Wold Bank's 'Turmoil at Twenty' volume, to appear as a Bruegel Policy Contribution.

Darvas, Zsolt and György Szapáry (2008) 'Euro area enlargement and euro adoption strategies', European Economy – Economic Papers 304, Directorate-General for Economic and Financial Affairs, European Commission, Brussels. To appear as a chapter in: Buti, Marco, Servaas Deroose, Vitor Gaspar and João Nogueira Martins (eds.), Euro-The First Decade, Cambridge University Press, forthcoming.

Darvas, Zsolt and Jean Pisani-Ferry (2008) 'Avoiding a new European divide', Bruegel Policy Brief 2008/10

Darvas, Zsolt and Reinhilde Veugelers (2009) 'Beyond the crisis: Prospects for transition economies', mimeo, Bruegel.

De Grauwe, Paul (2009), 'The politics of the Maastricht convergence criteria', VoxEU.org

European Commission (2009) 'Public Finances in EMU', European Economy 5/2009 (Provisional Version), Directorate-General Economic and Financial Affairs of the European Commission.

FitchRatings (2009) 'Dollarization in Ecuador: Regime Change?' Sovereigns Ecuador Special Report, May 2009

International Monetary Fund (2009a) 'Republic of Latvia: Request for Stand-By Arrangement—Staff Report', IMF Country Report No. 09/3, January, Washington DC.

International Monetary Fund (2009b) 'Estonia: Article IV Consultation', March, Washington DC.

Kuodis, Raimondas and Tomas Ramanauskas (2009) 'From Boom to Bust: Lessons from Lithuania', Proceedings of OeNB Workshops No. 15 on 'Recent Developments in the Baltic Countries –What Are the Lessons for Southeastern Europe?', p. 102-115, Oesterreichische Nationalbank.

Levy-Yeyati, Eduardo (2009), 'Is Latvia the new Argentina?', VoxEU.org

Lewis, John and Karsten Staehr (forthcoming), 'The Maastricht inflation criterion: What is the effect of expansion of the European Union?' Journal of Common Market Studies.

Mitra, Pradeep, Marcelo Selowsky and Juan Zalduendo (2009) 'Turmoil at Twenty: Recession, Recovery, and Reform in Central and Eastern Europe and the Former Soviet Union' World Bank, Washington DC

Official Journal of the European Communities (1998), L 139, Volume 41, 11 May 1998, http://eur-lex.europa.eu

Pisani-Ferry, Jean, Philippe Aghion, Alan Ahearne, Marek Belka, Jürgen von Hagen, Lars Heikensten and André Sapir, 2008, Coming of Age: Report on the euro area, Bruegel Blueprint.

RGE Monitor (2009) 'Is Devaluation in Latvia Inevitable?' 10 Sep 2009 http://www.rgemonitor.com

Saha, David and Jakob von Weizsäcker (2009) 'EU stimulus packages', Bruegel Policy Contribution 2009/2

von Hagen, Jürgen and Jean Pisani-Ferry (2009) 'To the Commissioner for Economic and Monetary Affairs: Priorities for your term of office'. In: Sapir, André (ed) 'Memos to the New Commission - Europe's Economic Priorities 2010-2015', Bruegel Blueprint