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Rainer Schweickert\*

## The Integration of Accession Countries into EMU – Concerns about Convergence

*Accession countries willing to enter EU and EMU as soon as possible face concerns on the part of the EU about incomplete convergence. This paper looks into the progress of convergence à la Maastricht and argues that a broader measure of convergence is needed. An indicator is used to assess the convergence of accession countries in a broad sense and in comparison with a reference group of EMU member countries.*

With Central and Eastern European countries queuing up for entry into the EU, the enlargement of the European Monetary Union (EMU) is already a relevant issue. This has already been recognized by academics<sup>1</sup> but not by European monetary authorities.<sup>2</sup>

Given the rather low negotiating power of accession countries, neither opt-out clauses nor fast track access are likely. Therefore, accession depends on convergence efforts as defined in the Maastricht Treaty some ten years ago. This paper looks into the progress of convergence à la Maastricht already achieved and argues for a broader convergence concept including aspects of institution building and capital market development.

In order to refrain from arbitrary judgements, the results will be in a comparative setting. For this reason, two groups of CEECs which are in the process of negotiating their entry into the EU – labelled accession countries in the following – are compared with a reference group:

### Accession Group I:

Czech Republic, Estonia, Hungary, Poland, Slovenia.

### Accession Group II:

Bulgaria, Latvia, Lithuania, Romania, Slovak Republic.

### Reference Group:

Greece, Ireland, Portugal, Spain.

The two accession groups are separated according to their entrance into accession negotiations (1998 for Accession Group I; 2000 for Accession Group II). Comparing their results with those EMU members with the lowest per-capita income allows us to determine the advantages of fixing in relative terms. The underlying reasoning is that the inclusion of peripheral EU members into EMU so far had no negative effects on those countries or on Euroland. Hence, if accession countries outperform reference countries this can be interpreted as signalling advantages of fixing to the Euro and good prospects for the inclusion of these accession countries into EMU.

### Convergence à la Maastricht

A discussion on convergence has to start with the Maastricht criteria because this is how the EU defines convergence. Although the political debates in the 1990s have shown that these criteria are open to interpretation and manoeuvring, all accession countries will have to pass them in one way or another. Arguably, the criteria will be more strictly applied to the newcomers because their voting power in the EU Council will be weak at best.

<sup>1</sup> R. Baldwin, E. Berglöff, F. Giavazzi, M. Widgrén: EU Reforms for Tomorrow's Europe, Centre for Economic Policy Research, Discussion Paper 2623, London 2000.

<sup>2</sup> European Central Bank: The Eurosystem and the EU-Enlargement, Monthly Report, February 2000, pp. 39-52; ECOFIN: Report of the ECOFIN Council to the European Council in Nice on the Exchange Rate Aspects of Enlargement, Press Release 13055/00, Brussels 2000.

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# CONVERGENCE INDICATORS

**Table 1**  
**Convergence of Accession and Reference Countries: The Maastricht Criteria, 2000<sup>a</sup>**

	Inflation Rate		Interest Rate		Fiscal Deficit		Public Debt		Total
	per cent	stand- ardised (1)	per cent	stand- ardised (2)	per cent of GDP	stand- ardised (3)	per cent of GDP	stand- ardised (4)	(1) + (2) + (3) + (4)
Reference Value	2.8		7.3		3.0		60.0		
Czech Republic	1.3	-0.1	0.4	-0.2	2.2	-2.5	-31.0	1.4	-1.4
Estonia	1.2	-0.1	-0.2	-0.1	-1.9	-0.2	-49.0	2.1	1.6
Hungary	7.1	-0.7	1.7	-0.3	0.0	-1.3	10.5	-0.0	-2.4
Poland	7.2	-0.7	5.7	-0.8	-0.6	-1.0	-16.3	0.9	-1.5
Slovenia	6.2	-0.6	5.7	-0.8	-2.0	-0.2	-35.0	1.6	0.0
<b>Accession Group I</b>	<b>4.6</b>	<b>-0.4</b>	<b>2.7</b>	<b>-0.4</b>	<b>-0.5</b>	<b>-1.0</b>	<b>-24.2</b>	<b>1.2</b>	<b>-0.7</b>
Bulgaria	7.4	-0.7	-2.3	0.1	-1.5	-0.5	35.5	-0.9	-2.0
Latvia	0.6	-0.1	3.1	-0.5	-1.1	-0.7	-49.4	2.1	0.9
Lithuania	-1.3	0.1	0.9	-0.3	-0.1	-1.2	-33.7	1.5	0.2
Romania	41.4	-3.9	36.1	-4.0	0.5	-1.6	-28.7	1.3	-8.2
Slovak Republic	9.3	-0.9	0.4	-0.2	2.5	-2.7	-33.0	1.5	-2.3
<b>Accession Group II</b>	<b>11.4</b>	<b>-1.0</b>	<b>7.6</b>	<b>-1.0</b>	<b>0.1</b>	<b>-1.3</b>	<b>-21.9</b>	<b>1.1</b>	<b>-2.3</b>
excl. Romania	(4.0)		(0.5)						
Greece	-0.6	0.1	-0.8	-0.1	-1.4	-0.5	44.4	-1.2	-1.8
Ireland	1.4	-0.1	-1.9	0.0	-5.0	1.5	-7.6	0.6	2.0
Portugal	-0.8	0.1	-1.7	0.0	-1.0	-0.7	-3.2	0.4	-0.2
Spain	0.1	-0.0	-1.8	0.0	-1.9	-0.2	3.5	0.2	-0.0
<b>Reference Group</b>	<b>0.0</b>	<b>0.0</b>	<b>-1.6</b>	<b>0.0</b>	<b>-2.3</b>	<b>0.0</b>	<b>9.3</b>	<b>0.0</b>	<b>0.0</b>
excl. Greece							(-2.4)		

<sup>a</sup> 1999 for fiscal deficit and debt of reference countries.

Sources: Deutsche Bank Research (DB Research); EU Enlargement Monitor Central and Eastern Europe 2, Frankfurt/Main 2000; EUROSTAT: Money, Finance and the Euro: Statistics (7), 2000; own calculations.

Table 1 shows the progress in convergence which accession countries have already achieved according to four criteria:<sup>3</sup> inflation rate, long-term interest rate, fiscal deficit ratio and public debt ratio. The table shows the differences between the reference value<sup>4</sup> and the actual values for each country and each criterion. Positive values show the need for further convergence while negative values indicate that the criteria have already been fulfilled.

The convergence values also appear in standardised form in order to make them comparable. Standardisation means that the difference between the convergence values and the means of the convergence values achieved by the reference countries is divided by the standard deviation of the convergence values of all countries. Hence, the standardised variables measure the differences to the reference countries in terms of standard deviations. This allows for an overall assessment by adding up the results for the single criteria.<sup>5</sup>

<sup>3</sup> The exchange rate criterion is not discussed here because, according to the Treaty, the evaluation period does not start before entry into EMS II.

<sup>4</sup> The average of the three best performing Euroland countries in the case of the inflation and interest rates and the threshold values defined in the Treaty for the deficit and debt ratios.

The results presented in Table 1 for the year 2000 show that on average the accession countries have already made good progress towards convergence:

- The average inflation rates of the accession country groups were only 4.6 and 4.0 per cent above the reference value if Romania is excluded. In the Baltic countries and in the Czech Republic inflation rates were already lower than in booming Ireland, which showed the highest inflation rate in Euroland. All countries except Romania showed single digit inflation rates. Arguably, the financial crisis in Russia which affected most of the accession countries helped to reduce demand pressures.
- Fiscal deficits were also reduced significantly. In this respect, convergence has been even more pronounced. Notwithstanding the unfavourable impact of the Russian crisis, eight out of ten accession countries had fiscal deficits below or only slightly above 3 per cent of GDP. This implies that only the Czech and the Slovak Republics still have to face substantial consolidation efforts.<sup>6</sup>

<sup>5</sup> For each criterion, the resulting standardized value has been multiplied by (-1) so that the value of the indicator increases the better the performance of a country.

- The same applies to the public debt burden showing that public debt plays only a minor role in accession countries. Only Hungary and Bulgaria have debt ratios above 60 per cent of GDP and all accession countries have lower debt ratios than Greece. Even if Greece is excluded, the average debt ratio of the reference countries is well above the averages for the accession country groups.
- Convergence performance with respect to interest rates is much more difficult to analyse. Capital markets with long-term debt instruments do not yet exist in most accession countries and the interest rates, therefore, reflect monetary policy influences to a larger extent than is the case for the reference countries. Moreover, the four reference countries already gain from definitely fixed exchange rates or from participation in EMS II. It can safely be assumed that the exclusion of the currency risk significantly contributed to lower interest rates in the reference countries and thus helped the convergence of long-term rates.<sup>7</sup> Spain, e.g., does not pay a premium for its high public debt ratio. The results for the accession countries also reveal a strong impact by exchange-rate policies because both countries with currency boards and fixed euro exchange rates have already passed the interest rate test as well as met the other criteria. The explanation is that the institutional backing for the fixed exchange rate reduces exchange-rate risks, meaning that a credibly fixed exchange rate furthers convergence. In contrast, interest rates are among the highest in Poland and Slovenia, i.e. in two countries which allow for a high flexibility of exchange rates.

All in all, the accession countries have good chances of achieving full convergence by the time of entry into the EU. The most serious problem remaining is the reduction of interest rates. Obviously, the high level of long-term rates is not related to high fiscal deficits or a high public debt burden. Even more solid fiscal policies will, therefore, not do the trick. It is reasonable to assume that risk premia depend on the fact that countries which lack the possibility of issuing debt in their own currency always face exchange-rate

risks. As already argued above, the causality runs more from eliminating exchange-rate flexibility to lower interest rates than the other way round. This, however, implies that the interest-rate criterion is inconsistent. Convergence would be more or less immediate if membership in EMU were declared, i.e. convergence is endogenous. This endogeneity hypothesis has often been stressed by those arguing against the so-called coronation theory and for the vehicle theory, seeing EMU as a vehicle to goods and factor markets.<sup>8</sup>

Additionally, accession countries which experience high GDP growth rates face a dilemma. This is because high growth rates lead to the need for real appreciation, which has to be achieved either by exchange-rate revaluation or by higher inflation rates.<sup>9</sup> This implies that countries which sped up convergence by fixing the euro exchange rate will be likely to face inflationary pressure during the year of transition towards EMU. Therefore, it cannot be excluded that they will either miss the inflation criterion or that they will have to give up fixing the euro exchange rate. This argumentation shows that the current inflation rates do not necessarily reflect inflationary preferences as implicitly assumed in the Maastricht Treaty and in political economy models of European monetary integration based on partisan behaviour.<sup>10</sup>

Generally, it should be clear that the Maastricht criteria do not constitute a set of criteria adequate to measure convergence efforts in the case of the accession countries. This is in line with the fact that they have already been heavily criticized in the context of the formation of EMU in the 1990s.<sup>11</sup> Nevertheless, they are the only criteria which are legally defined and represent a fact for all countries seeking to join Euroland.

<sup>8</sup> For the coronation theory, see e.g. H. Siebert: *The Euro: A Dozen Do's and Don't's*, Institute of World Economics, Kiel Discussion Papers 312, Kiel 1998; R. Ohr: *Exchange Rate Policy in Eastern Europe*, in: F.P. Lang, R. Ohr (eds.): *Openness and Development*, Heidelberg 1996, pp. 217–242; for the vehicle theory, see e.g. P. DeGrauwe: *Economics of Monetary Union*, 4th ed., Oxford 2000.

<sup>9</sup> Generally, high growth rates are accompanied by higher productivity gains in the tradable rather than in the non-tradable sector and induce prices for non-tradables to rise faster than prices for tradables. On real exchange-rate strategies see e.g., R. Schweickert: *Alternative Strategies for Real Devaluation and the Sequencing of Economic Reforms in Developing Countries*, in: *Kyklos*, Vol. 46, 1993, pp. 65–85.

<sup>10</sup> See A. Jochem, F.L. Sell: *Währungspolitische Optionen für die Mittel- und Osteuropäischen Beitrittskandidaten zur EU*, in: *Schriften zur angewandten Wirtschaftsforschung*, Tübingen 2001; R. Vaubel: *The Future of the Euro: A Public Choice Perspective*, Universität Mannheim, Institut für Volkswirtschaftslehre und Statistik, Beiträge zur angewandten Wirtschaftsforschung 570, Mannheim 1999.

<sup>6</sup> Of course, the result for Poland is biased because it does not include the huge quasi-fiscal deficits which have been published only very recently.

<sup>7</sup> Generally, high growth rates are accompanied by higher productivity gains in the tradable rather than in the non-tradable sector and induce prices for non-tradables to rise faster than prices for tradables. On this point, see B. Eichengreen, R. Hausmann: *Exchange Rates and Financial Fragility*, NBER Working Paper 7418, Cambridge/Mass. 1999.

**Table 2**  
**Institution Building in Accession and Reference Countries, 2000**

	Market and Trade				Financial Institutions				Sum of	
	Price Liberalisation	Trade and Foreign Exchange	Competition Policy	Average	Standardised Average	Bank Reform and Interest Rate Liberalisation	Security Markets and Non-Bank Financial Institutions	Average	Standardised Average	Standardised Averages
					(1)				(2)	(1) + (2)
Czech Republic	3.0	4.3	3.0	3.43	-1.68	3.3	3.0	3.15	-1.11	-2.79
Estonia	3.0	4.3	2.7	3.33	-2.04	3.7	3.0	3.35	-0.71	-2.74
Hungary	3.3	4.3	3.0	3.53	-1.32	4.0	3.7	3.85	0.30	-1.02
Poland	3.3	4.3	3.0	3.53	-1.32	3.3	3.7	3.50	-0.40	-1.72
Slovenia	3.3	4.3	2.7	3.43	-1.68	3.3	2.7	3.00	-1.41	-3.09
<b>Accession Group I</b>	<b>3.18</b>	<b>4.30</b>	<b>2.88</b>	<b>3.45</b>	<b>-1.61</b>	<b>3.52</b>	<b>3.22</b>	<b>3.37</b>	<b>-0.67</b>	<b>-2.27</b>
Bulgaria	3.0	4.3	2.3	3.20	-2.50	3.0	2.0	2.50	-2.42	-4.92
Latvia	3.0	4.3	2.3	3.20	-2.50	3.0	2.3	2.65	-2.12	-4.62
Lithuania	3.0	4.0	2.7	3.23	-2.39	3.0	3.0	3.00	-1.41	-3.81
Romania	3.0	4.0	2.3	3.10	-2.86	2.7	2.0	2.35	-2.73	-5.58
Slovak Republic	3.0	4.3	3.0	3.43	-1.68	3.0	2.3	2.65	-2.12	-3.80
<b>Accession Group II</b>	<b>3.00</b>	<b>4.18</b>	<b>2.52</b>	<b>3.23</b>	<b>-2.38</b>	<b>2.94</b>	<b>2.32</b>	<b>2.63</b>	<b>-2.16</b>	<b>-4.55</b>
<b>Reference Group</b>	<b>3.70</b>	<b>4.30</b>	<b>3.70</b>	<b>3.90</b>	<b>0.00</b>	<b>3.70</b>	<b>3.70</b>	<b>3.70</b>	<b>0.00</b>	<b>0.00</b>

Sources: European Bank for Reconstruction and Development (EBRD): Transition Report 2000: Employment, Skills and Transition, London 2000; own calculations.

It is, therefore, interesting to calculate an overall index for convergence à la Maastricht in order to evaluate the chances of accession countries of passing this test. The last column in Table 1 shows the sum of the standardised convergence values assuming equal weights for the single criteria. One result which was to be expected is that the Reference Group outperforms Accession Group I and that Accession Group I outperforms Accession Group II. However, looking at the results for individual countries reveals quite striking results:

- the Baltic countries and Slovenia outperform all reference countries except Ireland;
- a rather heterogeneous group consisting of the Czech Republic, Poland, Bulgaria, the Slovak Republic and Hungary does not perform as well as Portugal and Spain but comparably to Greece, which recently became a member of EMU;
- only Romania lags far behind Greece in terms of convergence.

This result tends to confirm the arbitrariness rather than the meaningfulness of the Maastricht criteria. From an economic point of view, well-functioning

competition on goods and capital markets is much more important for the functioning of a currency union than fiscal and monetary convergence. The reason is that the countries participating in a monetary union give up their independent monetary and exchange-rate policy as a means of reacting to external shocks. They will also lack the possibility of stabilising the financial system in the case of a crisis because there will be no regional lender-of-last-resort. According to this argument, convergence would be required with respect to institution building and capital market development.

### Institution Building

Institution building is especially difficult to measure in quantitative terms. For this reason, the analysis relies on the convergence indicators as provided by the European Bank for Reconstruction and Development (EBRD). The classification according to the EBRD source ranges from 1.0 (no or only minor progress) to 4.3 (standard of advanced industrialised countries). Because data is not provided for the reference countries it is assumed that they reached a value of 3.7 (standard of average industrialised countries with qualifications).

The results for two groups of indicators which are relevant for institution building in goods and capital markets are shown in Table 2. For both groups the averages are calculated and standardised according to the procedure adopted in the case of the Maastricht criteria. The last column, then, shows the

<sup>11</sup> See e.g. R. Schweickert: Harmonisierung versus institutioneller Wettbewerb zur Sicherung realwirtschaftlicher Anpassung und monetärer Stabilität in der Europäischen Währungsunion, in: Beihefte der Konjunkturpolitik, Vol. 44, 1996, pp. 181-212; P. Bofinger: Europa: Ein optimaler Währungsraum?, in: B. Gählen, H. Hesse, H.J. Ramser (eds.): Europäische Integrationsprobleme aus wirtschaftswissenschaftlicher Sicht, Tübingen 1994, pp. 125-151.

# CONVERGENCE INDICATORS

**Table 3**  
**Capital Market Development in Accession and Reference Countries, 1998/2000<sup>a</sup>**

	Credit rating Long-term public debt				Capital supply				External debt				Total (1) + (2) + (3)
	Internal (index)	External (index)	Average	Stand- ardised average	Bank credits (per cent of GDP)	Stock market capitali- sation (per cent of GDP)	Sum	Stand- ardised sum	External debt (per cent of GDP)	Current account excl. FDI	Potential external debt 2003 <sup>b</sup> (per cent of GDP)	Stand- ardised potential debt	
				(1)				(2)				(3)	
Czech Republic	8.0	6.5	7.25	-0.53	64.29	21.36	85.65	-1.27	44.86	-2.04	55.07	-1.11	-2.91
Estonia	6.5	6.0	6.25	-1.06	32.24	9.98	42.22	-2.09	15.04	-3.31	31.57	-0.16	-3.31
Hungary	7.0	6.0	6.50	-0.93	49.20	29.34	78.54	-1.41	59.83	0.76	56.03	-1.15	-3.48
Poland	7.5	6.0	6.75	-0.79	36.48	12.90	49.38	-1.96	30.00	-0.02	30.10	-0.10	-2.85
Slovenia	8.5	7.0	7.75	-0.26	40.12	12.55	52.67	-1.90	56.90	1.33	50.27	-0.92	-3.08
<b>Accession Group I</b>	<b>7.50</b>	<b>6.30</b>	<b>6.90</b>	<b>-0.71</b>	<b>44.47</b>	<b>17.23</b>	<b>61.69</b>	<b>-1.73</b>	<b>41.33</b>	<b>-0.66</b>	<b>44.61</b>	<b>-0.69</b>	<b>-3.13</b>
Bulgaria	3.5	3.0	3.25	-2.64	18.13	8.09	26.22	-2.39	80.57	3.58	62.67	-1.42	-6.46
Latvia	6.5	5.5	6.00	-1.19	17.21	5.97	23.18	-2.45	11.81	-0.15	12.56	0.62	-3.02
Lithuania	6.0	5.0	5.50	-1.45	13.08	10.00	23.08	-2.45	18.22	-5.74	46.94	-0.78	-4.69
Romania	2.5	2.0	2.25	-3.17	23.92	2.66	26.58	-2.39	24.90	-4.12	45.52	-0.72	-6.28
Slovak Republic	6.0	4.5	5.25	-1.59	67.50	4.74	72.24	-1.53	48.48	-8.71	92.03	-2.62	-5.73
<b>Accession Group II</b>	<b>4.90</b>	<b>4.00</b>	<b>4.45</b>	<b>-2.01</b>	<b>27.97</b>	<b>6.29</b>	<b>34.26</b>	<b>-2.24</b>	<b>36.80</b>	<b>-3.03</b>	<b>51.95</b>	<b>-0.98</b>	<b>-5.24</b>
Greece	6.5	6.5	6.50	-0.93	57.14	66.26	123.40	-0.56	33.10	-3.03	48.26	-0.83	-2.32
Ireland	9.0	9.0	9.00	0.40	98.61	36.55	135.16	-0.34	12.40	5.67	-15.93	1.78	1.83
Portugal	8.5	8.5	8.50	0.13	107.81	59.00	166.81	0.26	37.20	-3.66	55.51	-1.13	-0.74
Spain	9.0	9.0	9.00	0.40	114.51	72.70	187.21	0.64	30.60	1.49	23.14	0.19	1.23
<b>Reference Group</b>	<b>8.25</b>	<b>8.25</b>	<b>8.25</b>	<b>0.00</b>	<b>94.52</b>	<b>58.63</b>	<b>153.15</b>	<b>0.00</b>	<b>28.33</b>	<b>0.12</b>	<b>27.74</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> 2000 for credit rating; 1998 for capital supply and external debt; average 1996-98 for current account excl. FDI.

<sup>b</sup> External debt in 1998 plus five times the current account deficit excl. FDI.

Sources: Standard & Poor's: Sovereign Ratings Service November, New York 2000; World Bank: World Development Indicators - CD-Rom, Washington D.C. 2000; IMF: Greece: Staff Report for the 1999 Article IV Consultation, Staff Country Report 99/131, Washington D.C. 1999; IMF: Ireland: Staff Report for the 2000 Article IV Consultation, Staff Country Report 00/97, Washington D.C. 2000; IMF: Portugal: 2000 Article IV Consultation, Staff Country Report 00/152, Washington D.C. 2000; IMF: Spain: 2000 Article IV Consultation, Staff Country Report 00/151, Washington D.C. 2000; own calculations.

overall assessment with respect to institutional convergence.

It becomes evident that convergence up to now is significantly more advanced for goods markets than for capital markets. This holds above all for the "Trade and Foreign Exchange" category. With the exception of Lithuania and Romania all accession countries have reduced tariffs and non-tariff barriers to trade to the level shown by industrialised countries,<sup>12</sup> they became members of the WTO, and they have introduced full current account convertibility. Of course, this also applies to the reference countries being members of the customs union. Looking at the standardised averages for the "Market and Trade" category, however, demonstrates that the accession countries still lag behind the reference countries.

The picture changes somewhat when "Financial Institutions" are considered. Here, Accession Group I

and especially Hungary, Poland and Estonia reduced the institutional backlog even more than was the case with respect to "Market and Trade". However, Hungary remains the only case where an accession country reached the level assumed for the reference countries. Therefore, the overall result is quite different from the picture provided by focusing on the Maastricht criteria: convergence in general is still rather a long way to go for most accession countries and convergence in particular is most advanced in Hungary and Poland.

## Capital Market Development

Table 3 shows the results with respect to capital market development. Three groups of indicators have been considered. First, the credit rating by Standard & Poor's was transformed proportionally into a range between 0 (D: default) and 9.5 (AAA: best quality). Values above 5.0 signal investment grade implying that the market for government debt is open for investment by international institutional investors. The credit standing is then determined by the average of the credit rating with respect to internal and external

<sup>12</sup> Although the EU external tariff level is still lower; see R. Langhammer: European Union Enlargement: Lessons for ASEAN, in: M. Than, C.L. Gates (eds.): ASEAN Enlargement - Impacts and Implications, ISEAS, Singapore 2000, Table 5.3.

long-term government debt. Second, credit supply is measured as the sum of bank credits and capitalisation of stock markets. Third, the potential external debt position is calculated as potential external indebtedness in 2003, i.e. the first year when accession countries may enter the EU. These three indicators are thought to measure the qualitative and the quantitative aspects of capital market development.

The results for all three indicators of capital market development have in common that they reveal a clear ranking of the country groups. As was the case with institution building, Accession Group II lags far behind with a credit ranking below investment grade, capital supply below 50 per cent of GDP, and external debt above 50 per cent of GDP. Accession Group I is closer but still significantly behind the reference group.

However, looking at the averages does not provide a complete picture. It is only with respect to capital supply that all reference countries show top rankings. Credit ratings for Slovenia, the Czech Republic and Poland are better than for Greece. Higher external debt positions are shown only by Hungary and Bulgaria – with a clear downward trend – and Romania. The overall result shown in the last column is that the countries forming Accession Group I and Latvia are quite close to the standard established by Greece, which is significantly worse than capital market development in the other reference countries, especially in Ireland and Spain.

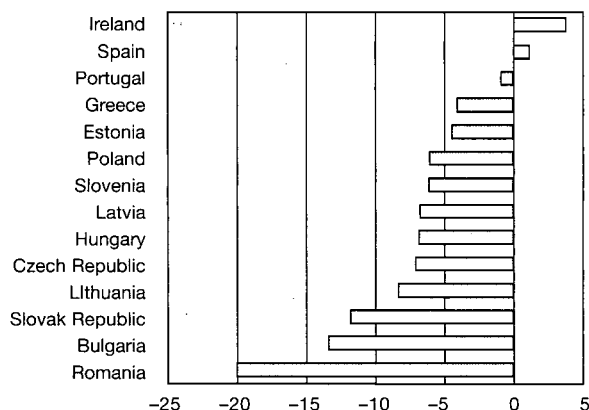
### A Broader Convergence Indicator

All in all, the Maastricht criteria, the institutional indicators and capital market development reveal a rather heterogeneous picture of convergence achieved by the accession countries. The baseline, however, is that institutional and capital market convergence toward the standards set by the reference countries has yet to be achieved. Taking these indicators as complementary to those provided by the Maastricht criteria implies summing up the results shown in the last columns of Tables 1 to 3.

Figure 1 shows the graphical representation of the overall convergence indicator for the year 2000:

- the four reference countries perform better than all accession countries;
- convergence achieved by Estonia, which ranks best among the accession countries, comes close to the

**Figure 1**  
**A Broad Convergence Indicator for Accession and Reference Countries**



Sources: Tables 1-3.

convergence achieved by Greece, which ranks worst among the reference countries;

- taking the performance of Greece as a yardstick, the other countries from Accession Group I and the other Baltic countries lag somewhat behind;
- only the Slovak Republic, Bulgaria and especially Romania are far from reaching the level of convergence shown by the reference countries.

### Conclusions

It can be concluded that from the perspective of the EU and based on convergence data available in 2001, entry into EMU could start with Estonia, which could function as a pilot case. Estonia could be followed by the other countries which started accession negotiations in 1998 and by Latvia. In other words, a fairly rapid inclusion of these countries into EMU cannot be expected to be more harmful to the euro than the inclusion of the reference countries.

In the meantime, access to EMS II is prohibited until entry into the EU and does not constitute a proper training-field either. With its wide bands and low support profile, it is actually a dirty block floating regime. Hence, accession countries have to target both exchange rates and inflation rates in a kind of muddling through strategy whereas fixing the exchange rate has been shown to constitute a reasonable strategy for most of them.<sup>13</sup>

<sup>13</sup> See R. Schweickert: Assessing the Advantages of EMU-Enlargement for the EU and the Accession Countries: A Comparative Indicator Approach, Kiel Institute of World Economics, Kiel Working Paper 1080, Kiel 2000.