# Macroconvergence in CESEE

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The fall of the Iron Curtain revealed large differences between East and West in institutional, legal but also economic terms, which had built up over almost four decades of separation. Two decades after this event, we have witnessed an impressive catching-up process, which has resulted in considerably decreased income differences – albeit after an initial deepening of these differences due to the immediate post-transformation recession. This process was further characterized by radical structural change in the East and almost complete institutional and legal harmonization between the former blocs. Europe has grown together again and the East-West distinction has become obsolete in many respects. In this article we review some of the major developments observed in the real economy sphere of the Central, Eastern and Southeastern European (CESEE) countries since the start of transition. One of the major characteristics is the closing of the income gap, which we outline in the first section. Not only have income differences narrowed between East and West over these 20 years, greater equality has also been observed in the enlarged EU since the accession of ten CESEE countries, a further sign of successful European integration. We then turn to several indicators of structural and institutional convergence, which show no notable differences between East and West after 20 years of transformation. Finally, we touch upon the impact of the current financial and economic crisis on the integration process.

## 1 Real Income Convergence during the Transition Phase

The fall of the Iron Curtain 20 years ago implied tremendous disruptions for the formerly centrally planned CESEE economies. At the beginning, real incomes in those countries fell and living standards deteriorated immediately after the long-awaited and deeply desired opening up to the Western market economies.[2] As can be seen from chart 1, the bottom was reached in 1992. After three years of real income losses, a process of catching-up set in very rapidly. Between 1992 and 2007, the average real per capita income measured in 2005 purchasing power parities (PPPs) in today's ten CESEE EU Member States (EU-10)[3] rose continually from 37% to 52% of the level of the 12 initial euro area Member States (EA-12)[4]. As a comparison, per capita GDP in Portugal remained constant at 67% of the euro area level over the same period, while average incomes in Greece and Spain rose moderately from 72% and 82%, respectively, to 85% and 90% over the 15-year period. By contrast, average per capita income in the most successful cohesion country, Ireland, rose from 74% to 130%.

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[2] *The loss in real income was sometimes substantial; see Landesmann's contribution "Twenty Years of East-West Integration: Reflections on What We Have Learned" in this issue.*

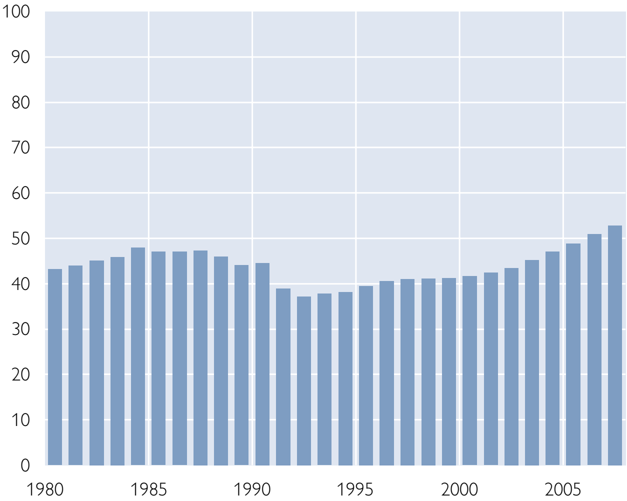
[3] *Bulgaria, the Czech Republic, Estonia, Latvia, Lithuania, Hungary, Poland, Romania, Slovenia and Slovakia.*

[4] *Belgium, Germany, Ireland, Greece, Spain, France, Italy, Luxembourg, the Netherlands, Austria, Portugal and Finland.*

Chart 1

**GDP per Capita of the EU-10**

*as a percentage of the EA-12 in PPPs*



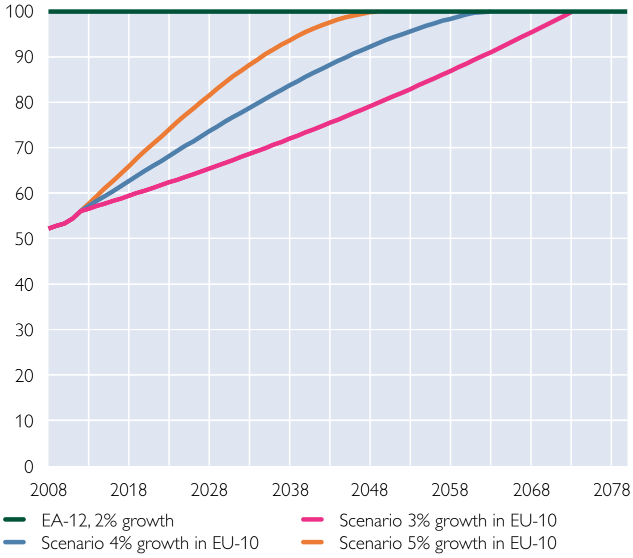

*Source: World Development Indicators 2009.*

*Note: EU-10: BG, CZ, EE, LV, LT, HU, PL, RO, SI, SK; EA-12: BE, DE, IE, GR, ES, FR, IT, LU, NL, AT, PT, FI.*

Chart 2

**Convergence Simulations for the EU-10**

*as a percentage of the EA-12*

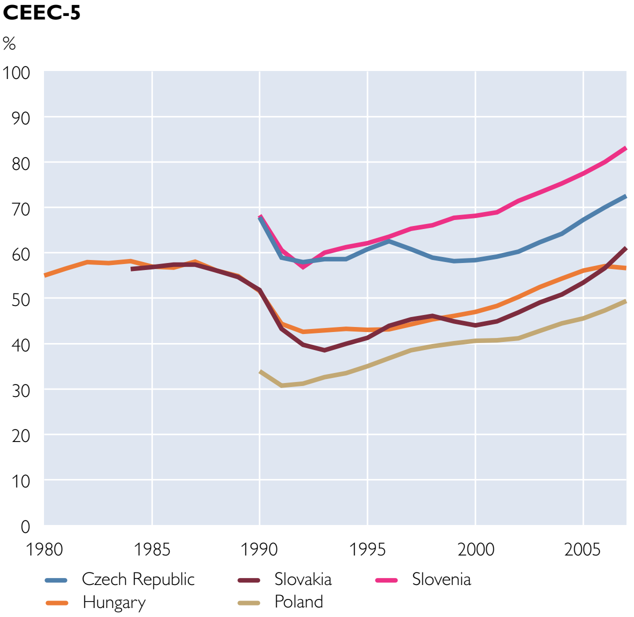


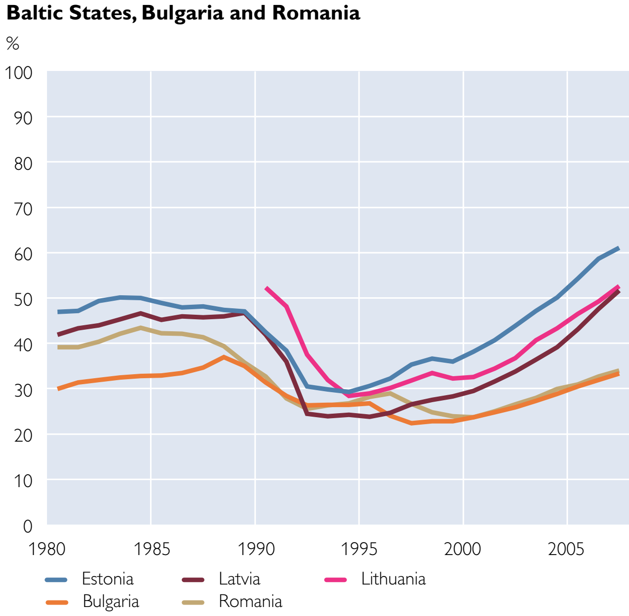

*Source: Authors' calculations.*

Despite this impressive catching-up performance, there is still considerable potential for convergence. The long-run impact of the current economic and financial crisis on this process remains an open question. Provided that the growth differential – albeit diminished in the short run – remains positive throughout the turbulent times, the crisis will delay the convergence process only marginally. The simulations in chart 2 are based on IMF projections (IMF, 2009) until 2015 and on three different assumptions concerning the average growth differential between the EU-10 and the EA-12 (which we keep as a fixed aggregate) beyond this date. The dates for reaching full convergence depicted above are purely hypothetical and are based on three different catching-up scenarios: In our most pessimistic scenario, the growth differential remains squeezed to only 1 percentage point after the financial crisis that began in 2008. We further assume an annual deceleration parameter which leads to a slowdown in the speed of convergence every year. In the most pessimistic scenario, this parameter is set at a very low level, which implies a reduction in the growth differential of 0.001 percentage points every year. In the moderate scenario, we assume a long-run growth differential of 2 percentage points and an annual reduction of 0.033 percentage points. Finally, in the most optimistic scenario we project that the 3 percentage point growth differential of the past five years will reemerge after the crisis, with an annual deceleration of 0.077 percentage points. This would lead to full convergence within approximately 40 years, which may seem a long time. However, it must be kept in mind that the benchmark – i.e. average income in the EA-12 – will also rise over this period, so that convergence will occur at a higher income level than today. Further, the scenarios depict the convergence of the EU-10 average. Given the large differ-

Chart 3

**GDP per Capita of the EU-10 as a Percentage of the EA-12 in PPPs (1980–2007)**




Source: *World Development Indicators 2009.*

ences within this group, some countries will of course reach the benchmark considerably sooner and others later.[5]

Of course, such figures mask considerable differences between individual countries, which have been witnessed in the past (chart 3). Slovenia already started from a per capita income level of 60% of the EA-12 average in the early 1990s, and overtook one of the initial euro area countries, Portugal, in 2002. The Czech Republic, starting from a somewhat higher level, followed suit in 2006. Apart from these two instances, average income levels in the EU-10 remained below those of the EA-12 countries in 2007, ranging from 33% of the EA-12 mean in Romania to 83% in Slovenia. The timing of the catching-up process also varied substantially between individual countries. It began in the CEEC-5 (the Czech Republic, Hungary, Poland, Slovenia and Slovakia), and even within this narrow group very different dynamics were observed with respect to the growth performance. In the Baltic states, the turnaround to positive growth rates occurred in the mid-1990s, followed by extremely high growth rates and thus a steep convergence process. Unfortunately, the Baltic countries also became an example of the very narrow borderline between a steep convergence process and an overheated economy, as growth rates proved to be unsustainably high and triggered a deep

[5] *Given the high uncertainty about such long-run developments, the literature is rather silent on this issue. Using sophisticated econometric techniques, Hlouskova and Wagner (2005) estimated a convergence time varying between 9 and 71 years, depending on the country, to reach 80% of the average per capita income level of the EU-14 (the EU-15 without Luxembourg) based on a mean growth differential ranging from 1.8% to 1.3%. Recently, Lein, Leon-Ledesma and Nerlich (2009) estimated in a simple manner a convergence period for the EU-9 as a group (Bulgaria, the Czech Republic, Estonia, Latvia, Lithuania, Hungary, Poland, Romania and Slovakia) of between 10 and 32 years, depending on assumptions concerning the annual catching-up rate, i.e. the percentage rate at which the gap in per capita GDP between the euro area and the EU-9 is expected to shrink. This rate is set to range between 3% and 7%.*

recession even before the current global crisis. Bulgaria and Romania showed no signs of convergence until 1997 and 2000, respectively. Since then, the growth performance of these two "EU latecomers" has been in line with that of the CEEC-5.

## 2 Further Evidence of Convergence

The economic and legal integration of two initially distinct economic systems implied a rather high degree of inequality in Europe immediately after the beginning of the transformation process. Chart 4 illustrates the flip side of the rapid catching-up process, namely the dispersion of per capita incomes across European countries since 1995 (after the effects of the post-transformation recession had largely been overcome). In other words, in this section we examine inequality between countries in Europe.[6] In analogy to the economic growth literature, a reduction in national inequality can be referred to as evidence for "sigma-convergence." We have found clear evidence for the closing of the average income gap between the EU-10 and the EA-12 (which corresponds to "beta-convergence" in the economic growth literature). This convergence in means is corroborated by a reduction in the variance of per capita income levels across individual countries, a process which can be observed for the enlarged EU, as indicated by the falling line for the EU-27 in chart 4. Inequality within the EU-27 has of course to date been driven most strongly by the large income gap between the eastern Member States and all other Member States (including the southern ones). However, these differences have narrowed, particularly in 2000, after the recessions ended in Romania and Bulgaria, and again in 2005 following the EU enlargement round.

It is often stressed that the EU-10 are not a homogeneous group of countries. Indeed, the data underline this. Inequality between countries in the EU-10 is much higher than within the EU-15[7]. Further, we see an initial increase in inequality within the EU-10 in line with the different catching-up dynamics outlined in the previous section. Up until 1999, inequality between the eastern Member States rose, and started to decline only thereafter. The recent reduction in cross-country inequality has been quite pronounced, so that the EU-10 countries are now again more homogeneous than the enlarged EU as a whole. This development suggests that formal integration into the EU has promoted convergence further by helping those countries which were lagging behind to grow more rapidly.

Convergence is, however, observed not only in real terms, but also nominally. The right-hand panel of chart 4 complements the picture by showing the concurrent trend toward price level harmonization. Average price levels have converged much faster toward those in the EA-12 than real incomes, and the process has accelerated since the enlargement round in 2004, reflecting again the reinforcing effect of institutional integration on the convergence process via, for example, common rules, common price-setting behavior and open borders.

All this suggests that accession to the EU helped smooth out income gaps between the EU-10 countries. To be fair, one should mention that the EU enlarge-

[6] *"National" inequality measures the variation of incomes at the country-wide level, while "regional" inequality refers to the distribution of incomes within countries. The developments in regional inequality, i.e. real income differences between individuals or regions within each country, are discussed in Landesmann's contribution in this issue.*

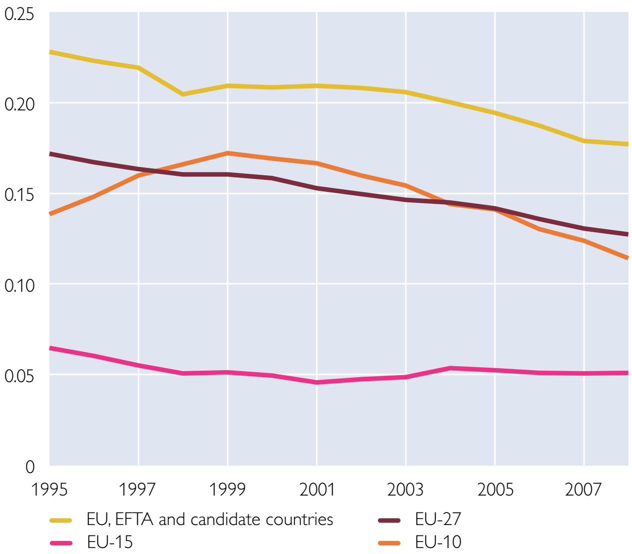
[7] *Belgium, Denmark, Germany, Ireland, Greece, Spain, France, Italy, Luxembourg, the Netherlands, Austria, Portugal, Finland, Sweden and the United Kingdom.*

Chart 4

## Income and Price Convergence

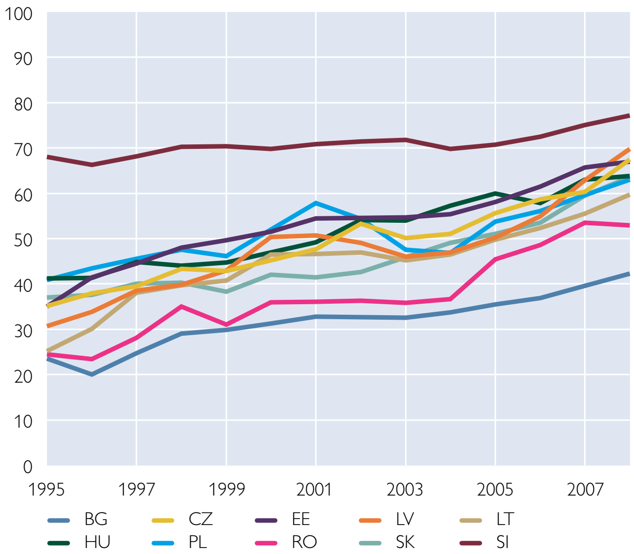
**Gini Index for Inter-Country Inequality Based on per Capita GDP**

*Scale: 0 (total equality), 1 (maximum inequality)*




**Comparative Price Level Index for GDP**

*EA-12 = 100*




*Source: OeNB, Eurostat.*

ment process coincided with ongoing globalization, and that it is difficult to disentangle the effects. In any case, the increased mobility of capital and labor supported equalization, as did the termination of the relatively strict East-West orientation of trade, foreign direct investment (FDI) and even infrastructure. All these developments helped overcome income differences, leading to a rather homogeneous economic area, which benefited all countries.

Another aspect of the catching-up process is the relatively fast wage convergence, which – among other factors – has kept migration within bounds. The above-mentioned income differences clearly exceeded those prevailing in countries of former enlargement rounds (up until 1995), representing strong incentives to migrate. On the other hand, convergence in per capita GDP and wage levels was also faster in the 2004 and 2007 enlargement rounds; in addition, transport costs declined considerably following enlargement. Along with temporary restrictions, all these factors explain why lower-than-expected migration flows into neighboring EU-15 countries were observed, and why migration into the U.K., Ireland, Spain and Italy was higher than expected. The number of foreign residents from the EU-10 in the EU-15 increased from 1.6 million to 3.8 million between 2003 and 2007, with 80% of the migrant population originating from Poland or Romania (Brücker and Damelang, 2009). The erosion of monetary migration incentives through the fast catching-up process, together with the recent global crisis, will reduce immigration from the EU-10 and promote return migration in the short run (Brücker, Damelang and Wolf, 2009). The robust growth performance of Poland in 2009 has in particular inverted the incentives for migration and triggered substantial return migration by Polish nationals.

## 3 Structural Convergence and Institutional Reform Progress

Real convergence comprises more than just catching up in terms of income levels: Adjustments to common economic structures are equally important, as is the development of appropriate institutions and the adoption of best practices in terms of regulations, legal frameworks and corporate governance (see, for example, ECB, 2002). In this section, we briefly review the progress observed in the EU-10 with respect to these issues over the past two decades.

The impressive growth performance of the EU-10 is grounded in substantial structural change, which was triggered by the transformation shock. While economic structures – very broadly speaking – have remained rather stable in the western countries, the share of agriculture in total value added has decreased in the EU-10, and the share of services has increased notably. Especially in the first years of transition, deindustrialization was very pronounced and a consequent restructuring toward services occurred, leading to structural convergence between the two regions.

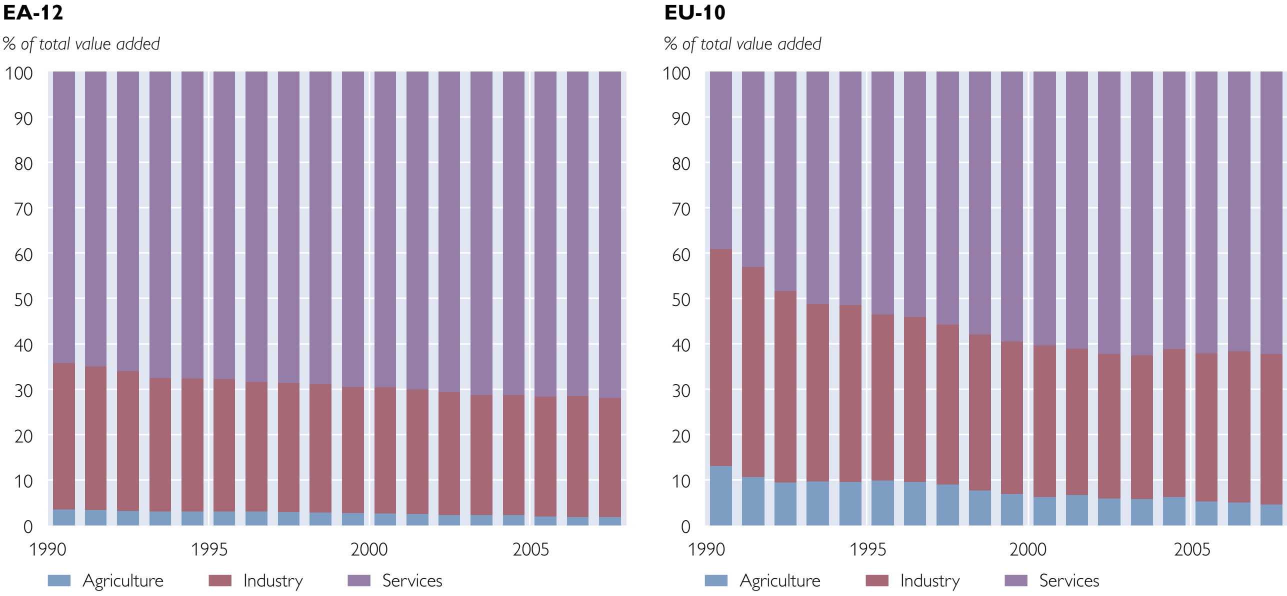
Also at the more disaggregated level, we find strong evidence for the greater structural similarity between the EA-12 and the EU-10 toward the end of the transition period. According to data from the EU KLEMS database (Timmer, O'Mahony and van Ark, 2008), the manufacturing sector accounted for only 12% of total value added in the EU-10[8] in 1995 compared with around 20% in the EA-12. By 2005, this share had risen to 26% in the EU-10 and remained stable in the EA-12. While the manufacturing sector has gained strongly in importance, sectors such as utilities and construction have declined. Many service sectors, such as wholesale and retail trade, hotels and restaurants, and real estate, renting and business services, have gained in importance. There is still a gap to fill with respect to the globally most dynamically evolving category of business services. The increase in the EU-10 from only 1.6% of total value added for this sector in 1995 to 11% ten years later is notable. In the EA-12 this share lies at around 20%. To sum up, economic structures have remained rather stable in the EA-12, while the EU-10 countries have seen a substantial amount of structural change, becoming structurally more similar to the EA-12.

Over the past two decades, economic integration between Eastern and Western Europe and the establishment of production networks spanning across countries in the enlarged EU have proceeded at an increasing pace, with positive effects for both sides arising from the potential for increased specialization and thus the realization of economies of scale. As a consequence, the openness of the EU-10 has increased dramatically. In the decade up to 1989, their ratio of exports and imports to GDP rose from 34% to 39%, while the same ratio remained rather stable at 53% in the EA-12. Immediately after the fall of the Iron Curtain, the EU-10 countries became more open than their Western European counterparts. In 1990, the trade-to-GDP ratio jumped to 65% and rose further to 116% by 2007, compared with an increase to only 80% for the EA-12. Given their generally smaller size, a higher degree of openness was to be expected for the EU-10 countries, but the difference, and in particular the speed at which it occurred, is nevertheless impressive. Skyrocketing growth in imports and exports was not only the result of

[8] *Bulgaria and Romania are excluded from these calculations since they were not included in the EU KLEMS database.*

Chart 5

## Structural Change: Shares of Sectors in Value Added




Source: World Development Indicators 2009.

investment decisions. It also reflected new possibilities for private consumption, as households were overwhelmed by the variety (and the availability) of consumer goods. This development was not only spurred by increased income levels (and decreased unemployment rates), it was also enhanced by the widespread availability of consumer credit.

The rapid and comprehensive economic integration is partly a result of the concurrent global trend toward increased international fragmentation of production chains. Nevertheless, integration has been particularly pronounced between Western and Eastern EU Member States owing to the massive flows of FDI that have taken place since the very beginning of the transition. Already by the end of 1990, almost all countries had passed privatization laws and accompanying legislation encouraging FDI inflows into Eastern Europe. At the beginning, FDI was mostly concentrated in the manufacturing sector, but it soon started to be directed toward services, in particular communication and financial intermediation. The contribution of FDI to subsequent economic growth is manifold and substantial. Foreign capital financed to a considerable extent the catching-up process, but in addition to providing financial means for investment, it also made possible important technological and knowledge spillovers, which were vital for the catching-up process.

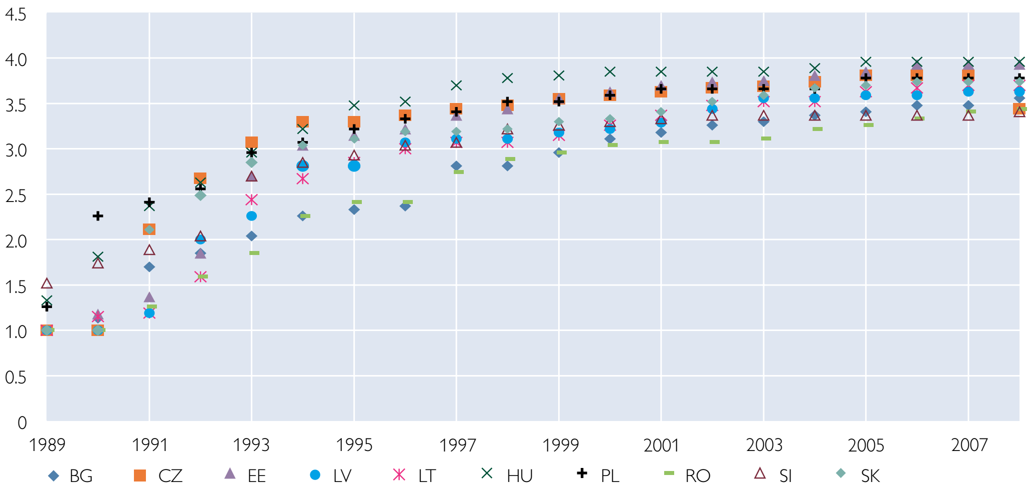
There is evidence that the productivity gains, which are reflected in per capita GDP growth rates of 4.2% on average over the period 1995 to 2008 (and as much as 5.5% on average since accession in 2004), have to a large extent been brought about by quality improvements (see Dulleck et al., 2005; Landesmann, 2003). Thus, the catching-up process has not been based solely on the price competitiveness of these countries, but has been accompanied by a successful shift toward increased quality in the goods produced and in the underlying production processes.

Far-reaching developments have also been observed in institutional terms in the CESEE Member States. The transition indicator constructed by the European Bank for Reconstruction and Development (EBRD) shows two important developments: First of all, the transformation to an "ideal" market economy is very advanced, according to the overall transition score, which is taken as the average over all categories (large- and small-scale privatization, enterprise restructuring, price liberalization, trade and foreign exchange system, competition policy, banking reform and interest rate liberalization, securities markets and nonbank financial institutions, and overall infrastructure reform). Second, a process of institutional convergence can be observed within the region. The initially rather large differences with respect to institutional performance were on average greatly reduced by the end of the 1990s. Some differences prevail in individual components of this overall transition score, in particular with respect to infrastructure (mostly road infrastructure), competition policy and probably also environmental issues, although the latter are not explicitly measured by EBRD transition indicators. There is still a relatively high degree of catching-up potential in some countries with regard to environmental issues. This comes as no surprise, as reaching these goals is costly and time-consuming, and private-public partnerships have proven to be complicated even under much more favorable circumstances. On the other hand, the transition can be regarded as having been complete throughout the region since the late 1990s with respect to small-scale privatization, price liberalization as well as the trade and foreign exchange system as defined by the EBRD.

Chart 6

**Average Transition Score, EBRD Indicator (1989–2008)**

*Index: 1 = lowest; 4.33 = highest*




*Source: EBRD.*

## 4 Outlook

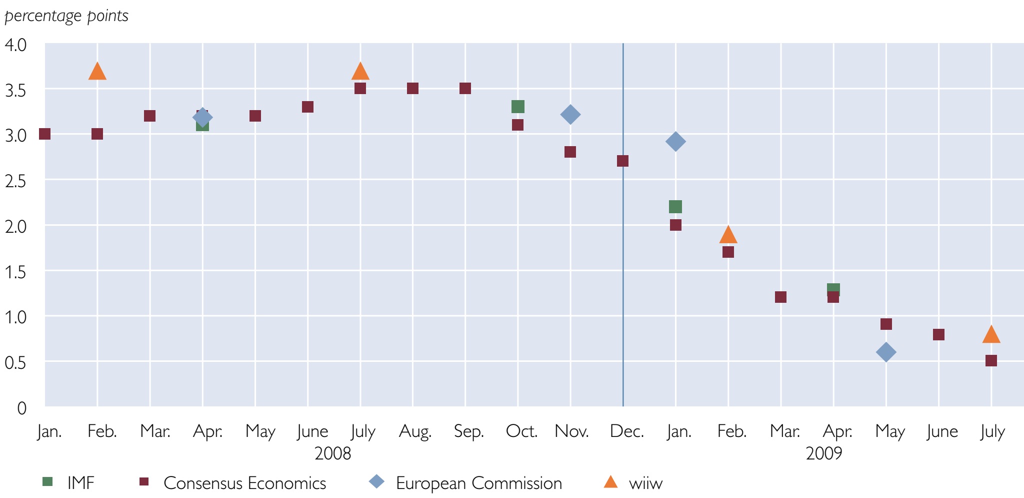
Over the past 20 years Europe has witnessed impressive progress toward economic integration. After four decades of radically different economic regimes in East and West, Europe has grown together quite impressively in only two decades since the fall of the Iron Curtain and the start of transition toward modern market-based economies by the formerly centrally planned economies in the East. This is reflected in income convergence in terms of average income levels as well as – to a smaller extent – in terms of intraregional income dispersion.

The catching-up process has encompassed a variety of aspects and has manifested itself in structural convergence at the sector level, increased trade and FDI integration, improved infrastructure, greater regulatory and legal homogeneity and the adoption of best practices with respect to the setup of institutions and corporate governance. This rapid progress in institutional reform has not yet been mirrored by equal progress in income convergence. For some countries, income convergence is still lagging substantially behind, but the progress in institutional and legal reform and improvements in the business environment provide a sound basis for income convergence to follow.

The economic and financial crisis will certainly affect the convergence process to some extent, either in a transitory manner, by delaying the catching-up process, or permanently, if potential output moves in opposite directions in East and West because of the crisis. In the wake of the global crisis, growth differentials between East and West are likely to have been eroded. This has been reflected in the growth projections with a certain delay. Chart 7 shows how, starting in spring 2009, the large positive growth differentials between the EU-10 and the euro area projected for 2009 were reduced from above 3 percentage points to below 1 percentage point.

Chart 7

**Projected GDP Growth Differential between the Euro Area and the EU-10 for 2009**




*Source: IMF, Consensus Economics, European Commission, wiiw.*

However, the catching-up process will continue when the crisis has eased, as the factors triggering this process are still in place: The continued income gap implies that the region is to be considered a catching-up region for some time to come; the newly created institutions and legal frameworks are functioning well (and will even improve further, as the European Commission has made this a precondition for further structural funding); and former restrictions on the free movement of goods, capital and labor have not been revived. In addition, the crisis may even have helped in some cases (e.g. in the Baltic states), as the reality of a hard landing meant that very popular but unsustainable policies had to be changed into more reliable ones. And although short-run forecasts are still gloomy and adjustment costs high, it is very unlikely that the catching-up process will be put on hold forever or even reversed.

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