



**The World Bank**

**EU10**

# **Regular Economic Report**

**Main Report**

**Recovery and Beyond**

**April 2011**

**Focus Notes:**

**Fueling Growth and Competitiveness through Employment, Skills, and Innovation**

**Household and Government Responses to the Global Financial Crisis**

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EU10 refers to Bulgaria, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, the Slovak Republic and Slovenia



## EU10 April 2011

### Summary of Main Report

In early 2011, about two and a half years after the global financial crisis broke, economic output in the EU10 had returned to the pre-crisis level. Helped by aligned business cycles and close trade and production linkages, economic activity in the EU10 rebounded in parallel with the EU15. Growth strengthened in the second half of 2010, supported by restocking, a double-digit expansion of industry, and a rebound in consumption. The economic sentiment in the EU10 exceeded its long-term average in December 2010 for the first time in 26 months. The pace of the recovery in the EU10 is set to accelerate in 2011 and 2012. Firms are expected to raise investment with higher capacity utilization and strong global demand for capital goods and durables, and households to step up consumption with improving confidence about future prospects.

The pace of the recovery differs across the EU10. The performance of Slovakia and Poland is set to remain solid thanks to low pre-crisis imbalances, deep integration into European production networks, EU funds, and, in the case of Poland, solid consumption. Estonia, Lithuania and Latvia are likely to build on the export-led upswing as domestic demand continues to recover. Romania and Bulgaria, where the crisis hit later than elsewhere, are set to see the biggest improvements in growth in 2011, aside from Latvia and Lithuania. Growth in Hungary and Slovenia is likely to increase at a more measured pace, while growth in the Czech Republic is set to slow down somewhat in line with trends in the EU15.

EU10 growth prospects remain subject to risks. By the end of 2010, only exports had recovered to pre-crisis levels, benefiting from the strong rebound in global trade. Private investment remains weak across the EU10 in view of feeble demand, the winding down of construction projects, and tight international financial conditions. Uncertainty prevails, as euro area sovereign debt markets remain volatile, international prices of energy and food are high, Japan is grappling with the natural disaster, and the Middle East is undergoing political change.

In addition, the EU10 recovery is still jobless. One and a half years after the resumption of output growth, labor markets in the EU10 continue to be slack. The pace of the recovery remains too subdued to generate enough jobs. Employment remains below pre-crisis levels. Unemployment is especially high among the young and the low-skilled, and long-term unemployment is rising. In spite of the recovery, enterprises are still responding to increases in demand through raising productivity per worker, mainly by expanding hours worked. Bolstering financial sector stability, shoring up fiscal sustainability, and tackling structural bottlenecks for growth are vital for sustaining the economic expansion in the EU10 beyond the recovery phase and for creating jobs.

Policy action to ensure the stability of the financial sector is essential for growth. In the EU10, relative to October 2010, sovereign risk spreads and interbank rates spreads have declined, bank group spreads and stock markets have stayed unchanged, and capital inflows have continued. However, spreads of major European banking groups active in the EU10 diverged somewhat over the last six months in

response to large financing needs. Non-performing loans continued to increase in some EU10 countries, making banks wary to extend credits, especially to enterprises. Building on recent policy measures, financial policy priorities include additional credible bank stress testing, with follow-up plans for recapitalization and restructuring; strengthening the euro area wide resolution mechanism, and bolstering macro-prudential regulations, including at the global level. Accommodative monetary policy is set to aid the recovery of credit growth, although policy rates could increase from low levels as inflation is likely to pick up further due to higher commodity prices.

Shoring up fiscal consolidation remains high on the policy agenda. Most EU10 countries reduced fiscal imbalances already in 2010. Preliminary data suggests that fiscal deficits decreased in eight EU10 countries. The fiscal adjustment was larger in countries with higher sovereign bond spreads, as governments were keen to strengthen market confidence. The EU10 countries are targeting ambitious fiscal adjustments in the coming years in order to comply with the requirements of the Stability and Growth Pact. Public finances are set to improve on the basis of planned fiscal measures and improving cyclical positions. Nevertheless, public debt burdens in the EU10 countries are likely to stay higher than prior to the crisis, in many cases significantly. More progress is therefore needed, also to provide a safety margin for public finances to meet future crises.

Structural policies in support of growth can help to overcome the financial, labor and fiscal challenges. The global financial crisis has harmed the supply potential of the EU10 economies through lower capital flows, restrained investment, possibly higher structural unemployment and lower total factor productivity growth. Aging is also set to lower potential growth over the longer run. Following the Europe 2020 strategy, member states are preparing their national reform programs with country specific targets. These strategies will build on lessons from government policies during the crisis. The reform agenda is vast, ranging from absorbing EU funds and FDI flows, increasing labor force participation, strengthening skills, and improving technology.

Projected GDP growth in EU10 countries

	2010	2011	2012
EU10	2.1	3.1	3.8
Bulgaria	0.2	2.5	3.4
Czech Republic	2.5	2.2	2.7
Estonia	3.1	3.7	3.9
Hungary	1.2	2.8	3.0
Latvia	-0.3	3.3	4.0
Lithuania	1.3	4.3	3.2
Poland	3.8	4.0	4.2
Romania	-1.3	1.5	4.4
Slovak Republic	4.0	4.1	4.3
Slovenia	1.2	2.2	2.5

## Recent Developments and Future Prospects

### Growth

The global recovery advanced in 2010, helped by robust growth in developed economies and buoyant growth in developing economies. Improving private consumption and stimulus measures supported the upswing in the US and Japan. Strong domestic demand and intra-regional trade accelerated growth in China, India, Brazil and Mexico. World industrial production and world trade expanded by 9.1 percent and 21.7 percent, respectively, recouping their losses from 2009. The rebound in external demand supported the recovery in Europe. Growth in the EU reached 1.8 percent in 2010 after the decline of 4.2 percent in 2009 (Table 1).

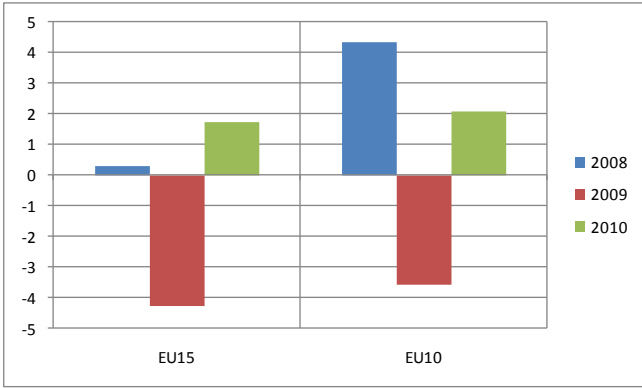
**Economic activity in the EU10 and EU15 rebounded in parallel.** The business cycles aligned through the global upswing and close trade and production linkages within Europe made for a synchronized upswing across the EU10 and EU15. Growth improved by about 6 percentage points from 2009 to 2010 and reached 2.1 percent in the EU10 and 1.7 percent in the EU15 (Figure 1). While the annual growth numbers are similar, the growth dynamics differed between the EU10 and EU15. Year-on-year growth in the EU15 peaked in the second quarter of 2010 at 2.8 percent. Volatile financial markets, the end of the restocking cycle and an unwinding of fiscal stimulus dampened growth to 2.0 percent in the fourth quarter of 2010, even though net exports continued to support the expansion (Figure 2). In contrast, in spite of sluggish investment and weakening net exports, year-on-year growth in the EU10 improved continuously from 0.6 percent in the first quarter to 2.8 percent in the fourth quarter. This reflected persistent restocking on the back of increased capacity utilization and a rebound in consumption as households became more confident about the economic outlook (Figure 3).

Table 1. Global growth, percent

	2009	2010
World	-0.6	4.8
EU10	-3.6	2.1
<b>High income</b>		
EU27	-4.2	1.8
EU15	-4.2	1.7
Japan	-6.3	3.9
United States	-2.6	2.8
<b>Emerging economies</b>		
Brazil	-0.7	7.5
China	9.2	10.3
India	7.0	8.6
Mexico	-6.1	5.5
Russia	-7.8	4.0

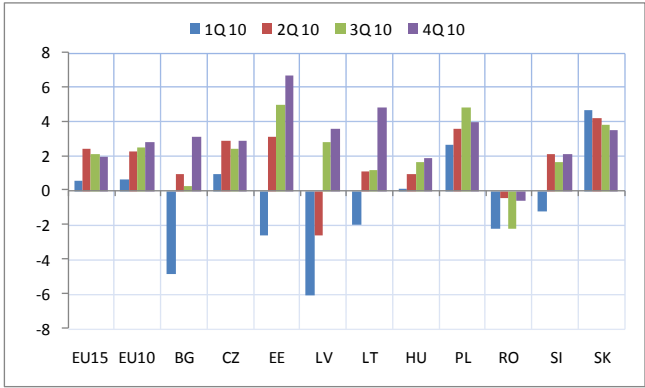
Source: World Bank, Eurostat.

Figure 1. EU10 and EU15 annual growth rates, year-on-year, percent



Source: Eurostat, World Bank staff calculations

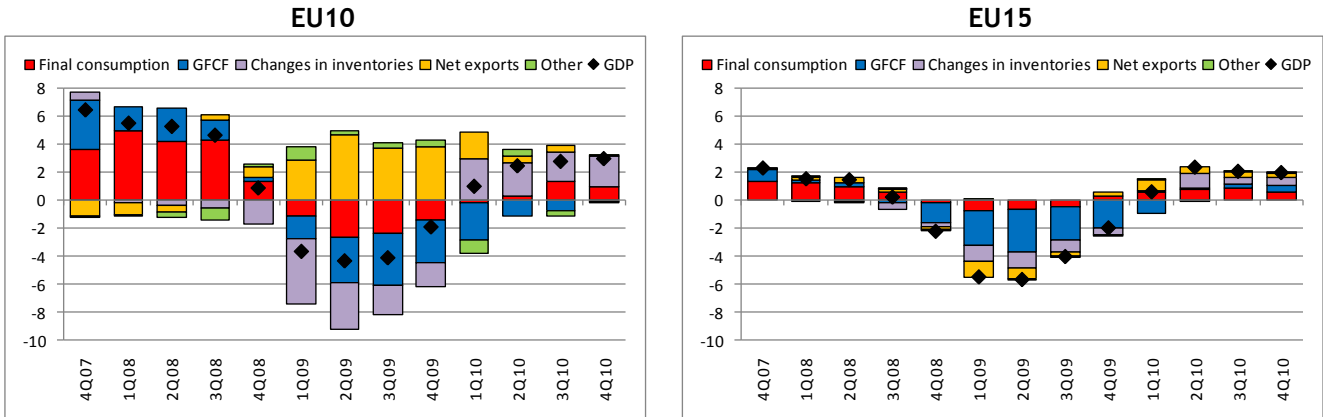
Figure 2. EU10 and EU15 quarterly growth rates, year-on-year, percent



Source: Eurostat, World Bank staff calculations

Note: BG stands for Bulgaria, CZ for Czech Republic, EE for Estonia, LV for Latvia, LT for Lithuania, HU for Hungary, PL for Poland, RO for Romania, SI for Slovenia, and SK for Slovakia.

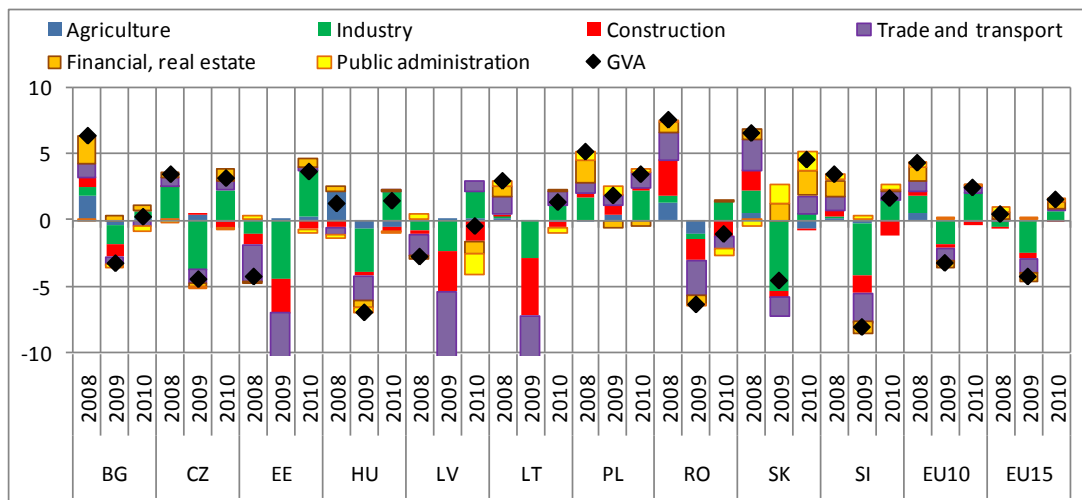
Figure 3. Contribution to GDP growth in the EU10 and EU15, percent, year-on-year, not seasonally adjusted



Source: Eurostat, Central Statistical Offices, World Bank staff calculations

The accelerating growth in the EU10 during 2010 came with a broadening of growth across sectors. EU10 countries saw double-digits growth of industry, reflecting the rebound in global demand for capital goods and durables and the deep integration with European production chains. In Estonia, industrial output, mainly manufacturing of radio, TV and communication equipment, reached record highs, as year-on-year growth accelerated from 4.2 percent the first quarter of 2010 to close to 30 percent in the fourth quarter of 2010. Growth in some EU10 countries spread to finance and real estate and strengthened trade, hotels and restaurants, and transport in the second half of the year. Public administration and community services remained subdued in light of fiscal pressures across the region (Figure 4).

**Figure 4. Contribution to GVA growth in the EU10 countries and in the EU15, percent, year-on-year, not seasonally adjusted**

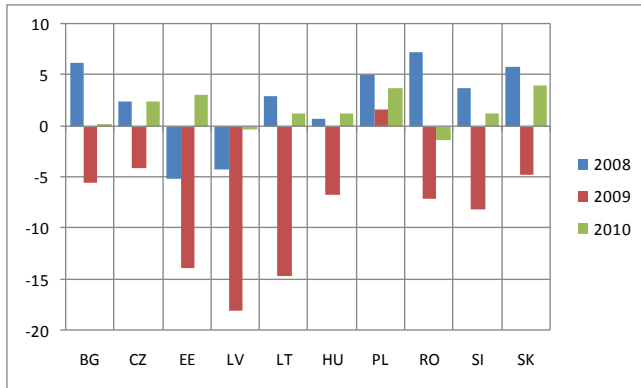


Source: Eurostat, Central Statistical Offices, World Bank staff calculations

**While growth improved across the EU10, the recovery remained multi-speed.** The upswing was mainly driven by external demand, as domestic demand was restrained by weak labor market conditions, higher commodity prices, deleveraging and the short-term effects of fiscal unwinding. Countries with the most significant overheating prior to the crisis and largest contractions in 2009, such as Latvia, Estonia and Lithuania, experienced the biggest growth improvements in 2010. As a result, growth differences across the EU10 region narrowed from almost 20 percentage points in 2009 to just over 5 percentage points in 2010. Nevertheless, country differences remained important. Slovakia, Poland – both countries with limited pre-crisis imbalances – and Estonia expanded by 3.1 percent or more (Figure 5). Strong restocking was supported by solid net exports in the case of Slovakia and Estonia, and by consumption in the case of Poland. Growth remained close to zero in Bulgaria and negative in Romania and Latvia in light of weak consumption and even weaker investment. In the other countries, growth varied between 1.2 percent and 2.4 percent, bolstered by restocking in the Czech Republic, Hungary and Slovenia and very strong restocking in Lithuania.

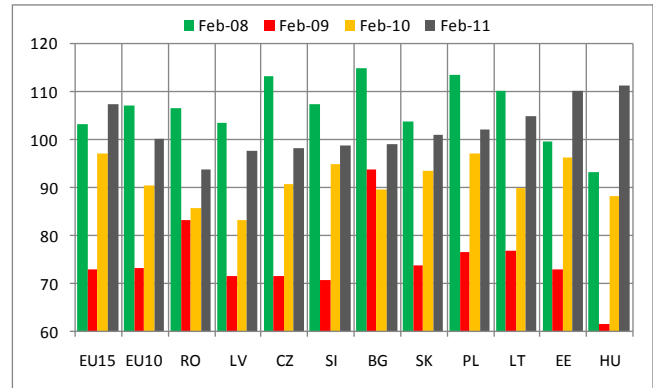
**High frequency indicators point to a continued growth momentum in early 2011.** Economic sentiment in the EU10 exceeded its long-term average of 100 in December 2010 for the first time in 26 months. However, it remained in February 2011 below 100 in Romania and Latvia, where economic activity still contracted in 2010 (Figure 6). In the EU10, industrial production continued to expand at double-digit rates, and retail sales at the brisk pace of 7 percent. In January 2011, industry grew fastest in open economies such as Estonia, Latvia, Lithuania and Slovakia, while retail sales continued to perform especially well in Poland.

Figure 5. EU10 countries annual growth rates, year-on-year, percent



Source: Eurostat, World Bank staff calculations

Figure 6. Economic Sentiment Indicator



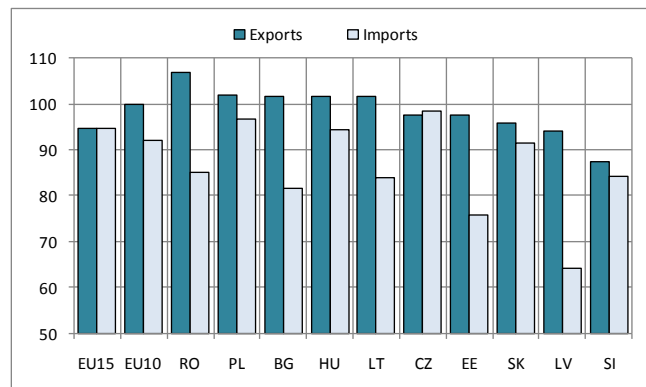
Source: European Commission, World Bank staff calculations

## Trade and External Developments

While global trade is set to moderate from the double-digit expansion in 2010, it is likely to remain a key engine of growth in the EU. Trade volumes increased strongly in Asia, driven by high GDP growth and intra-regional trade, and for commodity exporters. This helped to lift EU trade. During the last quarter of 2010, extra-EU trade increased in current US Dollar terms 18 percent. Intra-EU trade increased only 7 percent, as it is held back by weak domestic demand in a number of member countries.

The revival of global trade continues to support growth in the EU10. In 2010, imports of goods rose by 22.7 percent, largely due to higher international prices of oil and other primary commodities, and goods exports by 23.1 percent, on account of increased volume. Despite relatively strong growth, 2010 imports were still below the average level of imports in the pre-crisis year. By the end of 2010, EU10 exports had returned to pre-crisis levels, while EU10 imports trailed by some 8 percent (Figure 7). The level of exports outpaced the pre-crisis level, except in the Czech Republic, Estonia, Slovakia, Latvia, and Slovenia. The lag in the recovery of imports was biggest in countries that underwent the largest adjustments in domestic demand, including Latvia, Estonia, Romania, Bulgaria and Lithuania. Still, import growth increased steadily with the rebound in domestic demand, and was higher than export growth in five EU10 countries in January 2011 (Figure 8).

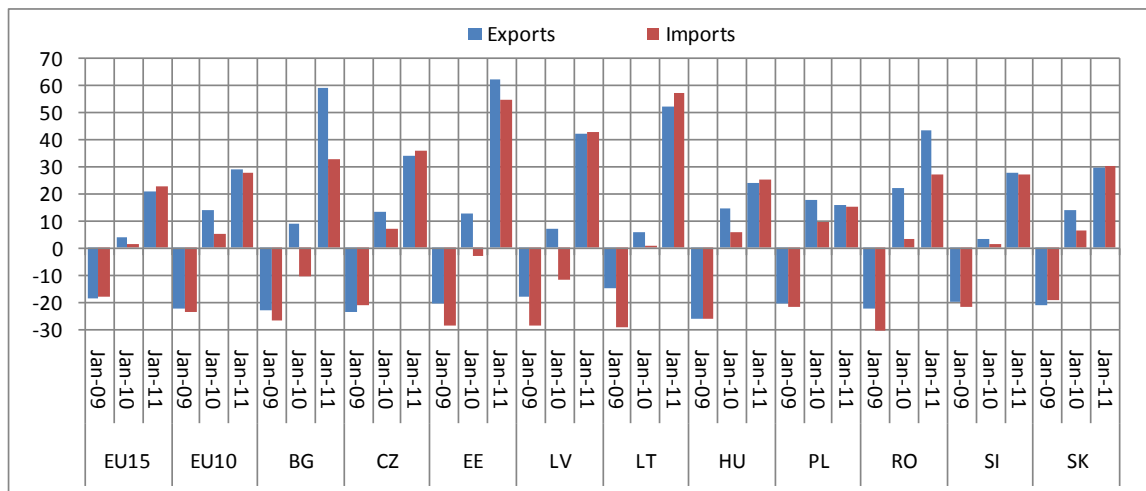
Figure 7. Exports and imports recovery relative to pre-crisis peak, index, peak = 100



Source: World Bank staff calculations

Notes: Pre-crisis peak refers to the best quarter within the period 2006-2008.

Figure 8. Imports and exports growth, percent, year-on-year

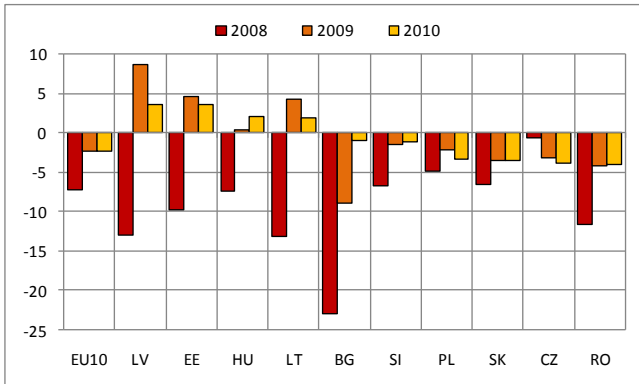


Source: Eurostat, World Bank staff calculations.

While trends in current account balances varied across the region, the overall EU10 current account deficit remained unchanged at a moderate level. Current account deficits widened

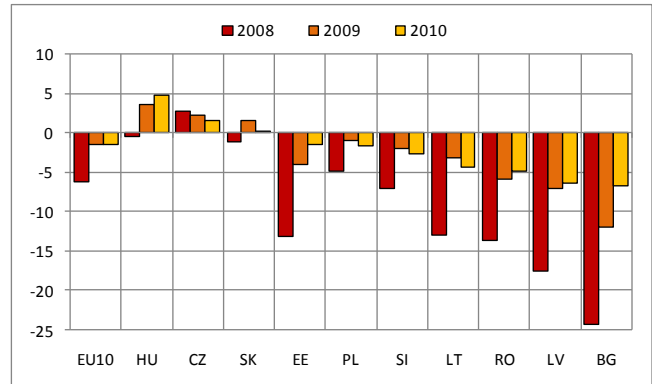
in Poland due to solid domestic demand, and in the Czech Republic due to a deterioration of the services surpluses to deficits and outflows of interest and reinvested earnings (Figure 9). They stabilized in Slovakia and Romania. In Bulgaria, the reduction in the trade deficit lowered the current account deficit from 8.9 percent of GDP in 2009 to 1 percent of GDP in 2010 (Figure 10). Latvia, Lithuania and Estonia continued to run surpluses, although at lower levels as income balances weakened. While current account deficits could widen further with strengthening domestic demand and renewed capital inflows, they are projected to stay low relative to pre-crisis.

**Figure 9. Current account balances in EU10 countries, 2008-2010, percent of GDP**



Source: World Bank staff calculations

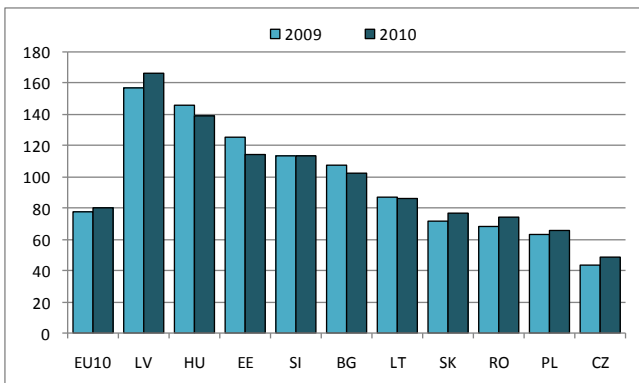
**Figure 10. Balances of trade in goods in EU10 countries, 2008-2010, percent of GDP**



Source: World Bank staff calculations

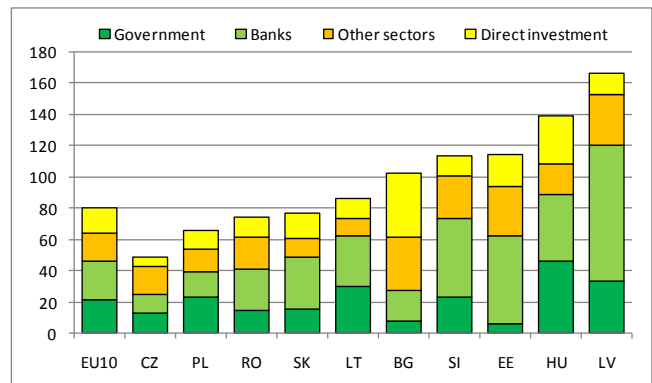
Gross external debt-to-GDP ratios increased moderately, as low current account deficits and the rebound in growth compensated partly the impact of large government external borrowing. The ratio increased by 2 percentage points of GDP to close to 80 percent from 2009 to 2010 mainly due to external financing of sovereign debt (Figure 11, Figure 12). Government external debt was at the end of 2010 almost as high as bank external debt. Gross external debt-to-GDP ratios ranged from 46.5 percent in the Czech Republic to over 160 percent in Latvia.

**Figure 11. Gross external debt to GDP ratio in EU10 countries in 2009 and 2010, percent**



Source: Central Banks, World Bank staff calculations

**Figure 12. Structure of gross external debt to GDP ratio in 2010, percent**





## Inflation and Exchange Rates

Inflation edged upwards over the last six months due to higher international commodity prices (Box 1). Headline inflation in the EU10 reached 3.8 percent in February 2011, the highest level since April 2009 (Figure 13). The rise reflects the surge in international prices of energy and food, and increases in indirect taxes and administrative prices in some member states. Energy prices rose to 9.9 percent in January 2011 in the EU10, the highest level since October 2008. This rise was particularly large in Slovakia, Latvia, Bulgaria, Poland and Lithuania. Food inflation increased to 7.3 percent in the EU10, the highest level over the last four years. Food prices rose especially strongly in Estonia, Romania, Latvia, and Lithuania since September 2010. However, core inflation, which excludes energy and unprocessed food, was 2.4 percent in the EU10, which is broadly unchanged since September 2010 (Figure 13). Negative output gaps and high unemployment continued to keep price pressures low. However, second-round effects from large increases of food and energy prices and rising domestic demand could increase inflationary pressures in some countries.

### Box 1. Commodity Price Increases

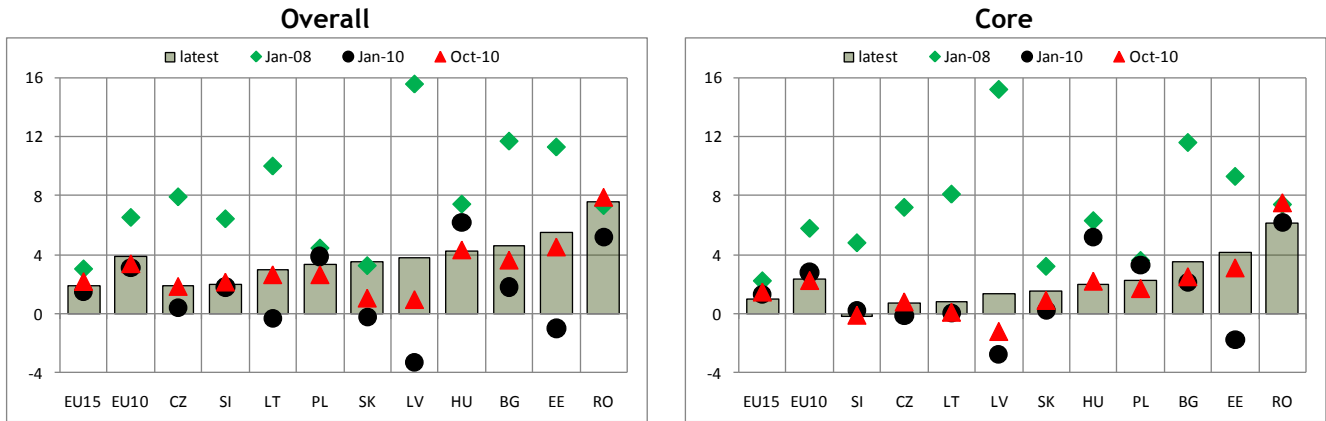
On April 4, 2011, crude oil prices rose to a 30-month high in New York. Crude oil for May delivery broke through USD108 a barrel, the highest level since September 2008. Oil prices climbed about 19 percent during first three months of 2011, on the back of a 28 percent rise in 2010. The price increase is the result of stronger than anticipated demand growth, especially in China, the US and Europe; supply constraints linked to the political unrest in the Middle East; as well as a weak US Dollar. The short-term price outlook will depend mostly on the pace of the global economic recovery and OPEC supply responses.

In addition, food prices increased and were in March 2011 close to their 2008 peaks. The increase is mainly driven by weather related supply shocks. High food prices might persist in the coming months, especially if large grain importers in the Middle East and elsewhere step-up their purchases to maintain low domestic food prices.

*Source: World Bank staff.*

The picture is varied across the region reflecting the impact of food and energy price increases and other country specific factors. Since September 2010, prices increased most in Latvia, Slovakia, Estonia, Lithuania and Bulgaria. These are countries affected by large food price increases and/or energy price increases. In February 2011, inflation was highest in Romania, reflecting partly the impact of a VAT increase introduced in mid-2010, and is likely to decline in the second half of 2011, as the effects of the VAT hike from July 2011 taper off. Inflation is also declining in Slovenia, as the recovery remains sluggish. In February 2011, Slovenia was the only country with negative core inflation, after Latvia reported positive core inflation in the first two months of 2011.

Figure 13. HICP overall and core inflation in EU10 countries and EU15, year-over-year

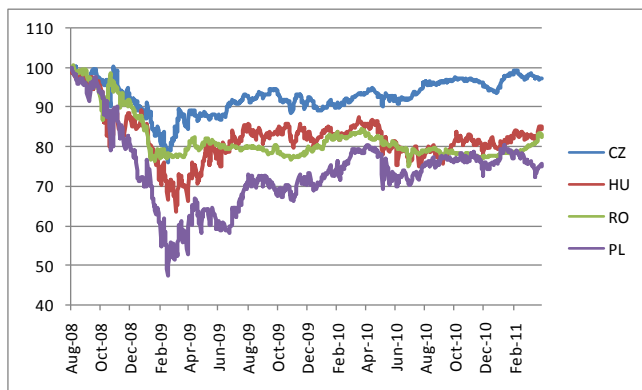


Source: Eurostat, World Bank staff calculations

Notes: Core inflation is overall index excluding energy and unprocessed food

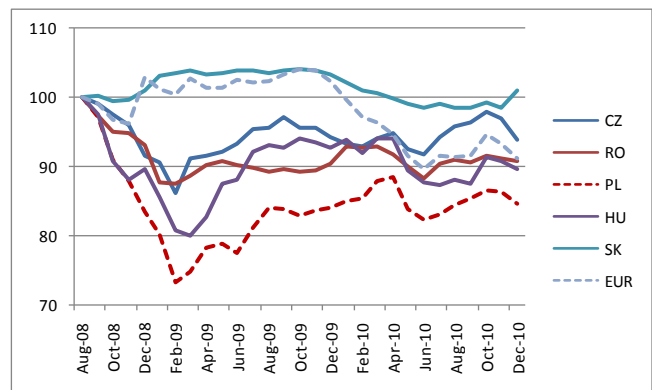
In spite of persistent concerns over sovereign debt in some euro area countries, several EU10 currencies remained broadly stable. The euro experienced large swings to other currencies of the 20 most important trading partners. These changes were driven by shifting market sentiment over the fiscal and economic prospects of some euro area countries and the strength of the euro area recovery relative to the global economy. The euro appreciated from mid-2010 to early November 2010, depreciated until mid-February 2011, and then appreciated again. Overall, the euro remains broadly unchanged compared to its average level in 2010 in nominal effective terms. Supported by a rebound in capital flows, the Hungarian forint and the Romanian lei appreciated vis-à-vis the euro in nominal terms by 4 to 6 percent since October 2010 (Figure 14). Overall, real effective exchange rates for Poland, Hungary, Romania and the Czech Republic remain visibly below pre-crisis levels in contrast to countries with pegged exchange rates, which are close to the level from August 2008 (Figure 6).

Figure 14. Exchange rates to EUR, index, Aug 2008=100



Source: Eurostat, World Bank staff calculations

Figure 15. Real effective exchange rates

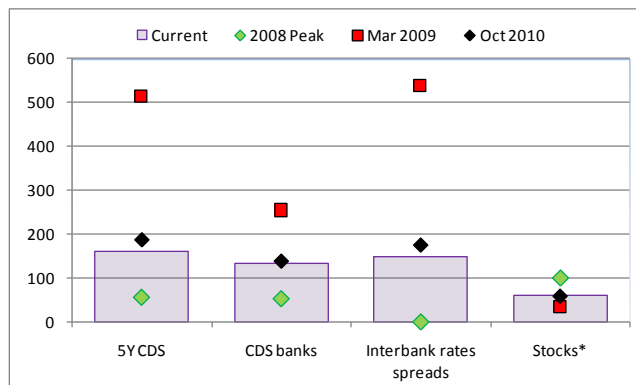


Source: IMF IFS, World Bank staff calculations

## Finance

**Financial markets in the EU10 improved but vulnerabilities persist.** Thanks to the economic recovery, ample liquidity and policy support, global financial markets performed well during the past six months. Risk spreads declined, lending conditions improved and equity markets increased. These improvements also lifted financial markets in the EU10. Relative to October 2010, sovereign and banking group risk spreads have declined, stock markets have risen and interbank spreads have narrowed (Figure 16). Nevertheless, financial markets in Europe remain volatile. In spite of the steady economic expansion, stepped-up fiscal consolidation in some countries, interventions of the European Central Bank and economic governance reforms in the EU, investors remain concerned about large funding needs of banks for refinancing and recapitalization and links between banking and sovereign risks in parts of the euro area.

**Figure 16. Asset class performance in the EU10 region**



Source: Reuters, Bloomberg, World Bank staff calculations

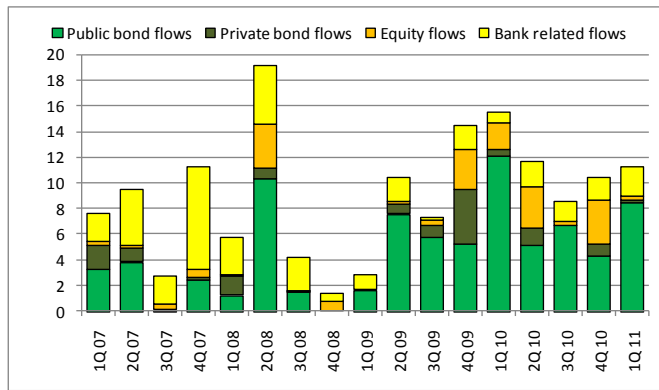
Notes: 5Y CDS, CDS banks, interbank rates spreads - actual levels in bps.

For stocks percentage change since peak 2008 =100

EU10 refers to average values of indicators

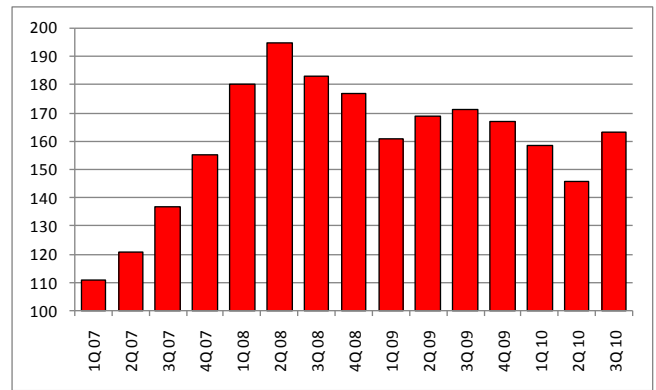
**Capital flows to the EU10 continued to recover.** Gross inflows to EU10 countries amounted to close to USD10 billion in first quarter of 2011, or around 3 percent of GDP, similar to levels of the previous quarters (Figure 17). However, the composition of capital inflows changed. After equity flows increased in the fourth quarter of 2010, they moderated noticeably in the first quarter of 2011. This was in response to concerns about financial stability in the euro area periphery and the economic impact of the political changes in the Middle East as well as the Japanese earthquake and tsunami. In contrast, public bond related capital inflows increased in response to government efforts to cover their 2011 financing needs early in the year. While Poland represented more than one third of all EU10 bond issuance in 2010, Hungary accounted for close to half of all EU10 bond issuance in the first quarter of 2011. In addition, bank's cross-border claims in the EU10 increased in the third quarter of 2010 for the first time after three quarters of decline (Figure 18), and bank related flows continued to improve in the fourth quarter of 2010 and first quarter of 2011.

**Figure 17. Gross capital inflows to EU10 markets, USD billions**



Source: World Bank database

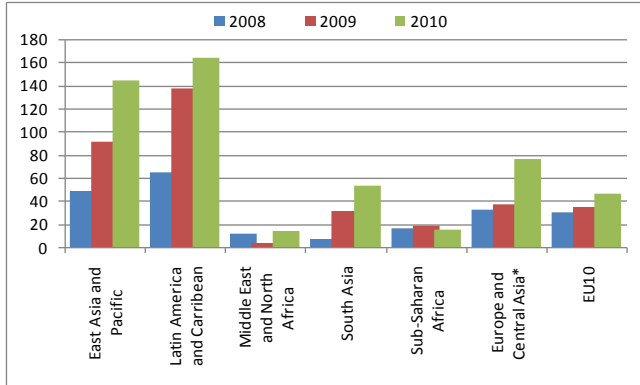
**Figure 18. BIS reporting banks' cross-border claims in EU10 countries, 4Q 2006=100, index**



Source: BIS, World Bank staff calculations

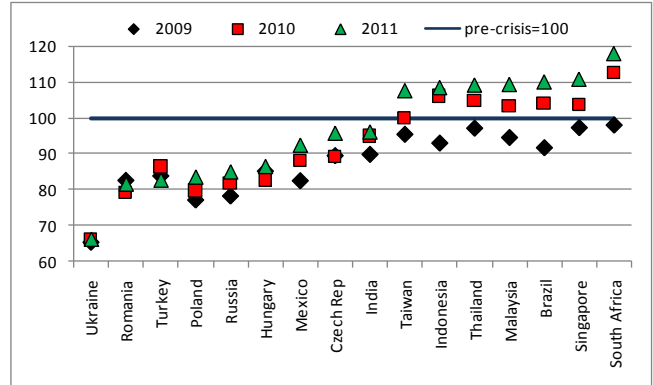
While resurgent capital flows have led to signs of overheating in some emerging economies, there are few such signs in the EU10. The increase in gross capital flows in the EU10 was modest relative to other regions. For example, gross capital flows rose from USD30 billion in 2008 to USD46 billion in 2010 in the EU10, but from USD49 billion to USD144 billion in East Asia and Pacific (Figure 19). As a result, the appreciation of the exchange rate relative to the US Dollar in key EU10 markets was modest over the last two years compared to other emerging markets (Figure 20). Similarly, stock markets remained in March 2011 either close to or below pre-crisis peaks in EU10 countries, reflecting the volatility in equity flows (Figure 21).

**Figure 19. Gross capital flows EU10 versus other external markets**



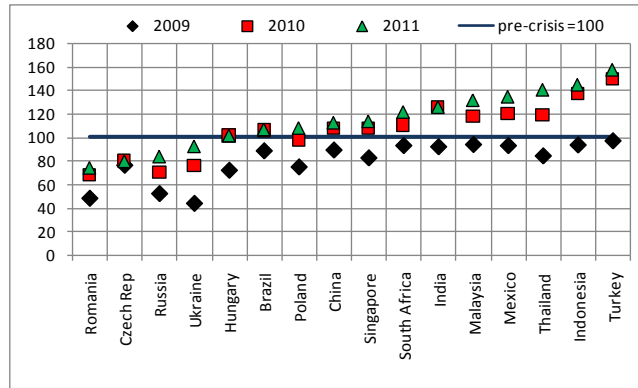
Source: GEM database, World Bank staff calculations

**Figure 20. US Dollar exchange rates EU10 versus other external markets, index, 2008=100**



Source: GEM database, World Bank staff calculations

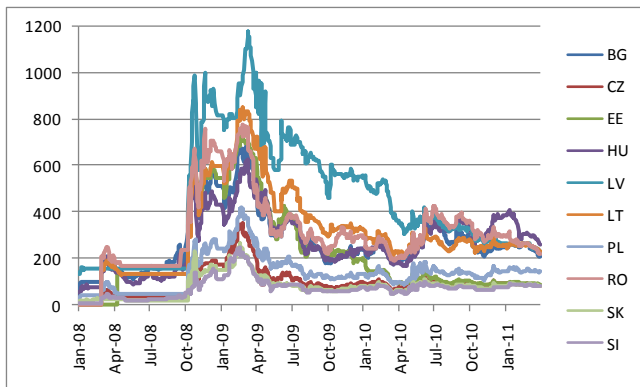
Figure 21. Stock markets in EU10 versus other emerging markets, index, 2008=100



Source: GEM database, World Bank staff calculations

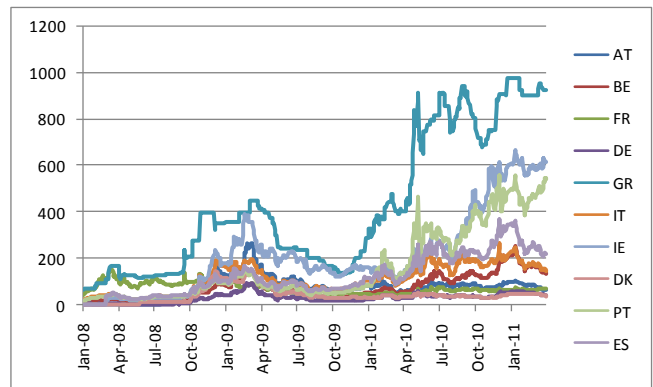
Spreads on sovereign debt and bond yields remained stable. In spite of recurrent concerns about sovereign debt in countries of the euro area periphery, credit default swap (CDS) spreads in the EU10 remained broadly unchanged over the last nine months. This is in stark contrast to some countries in the euro area whose CDS spreads now exceed those of EU10 countries (Figure 22, Figure 23). While the correlations between average sovereign yields of some countries of the euro area periphery are high, the recent concerns about sovereign debt in Portugal did not spread to the EU10 (Figure 24). The limited degree of financial market spill-over suggests that markets discriminate between euro area and non-euro area countries.

Figure 22. 5Y CDS spreads for EU10 countries, basis points



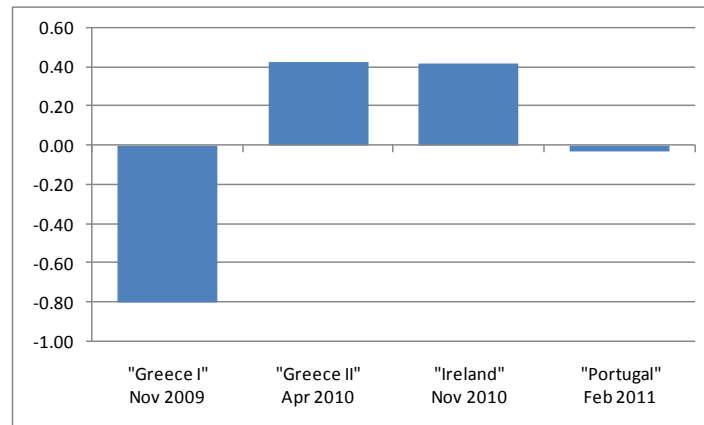
Source: Reuters, World Bank staff calculations

Figure 23. 5Y CDS spreads for selected EU15 countries, basis points



Source: Reuters, World Bank staff calculations

**Figure 24. EU10 government bonds' yields correlations with Greek, Irish and Portuguese yields**

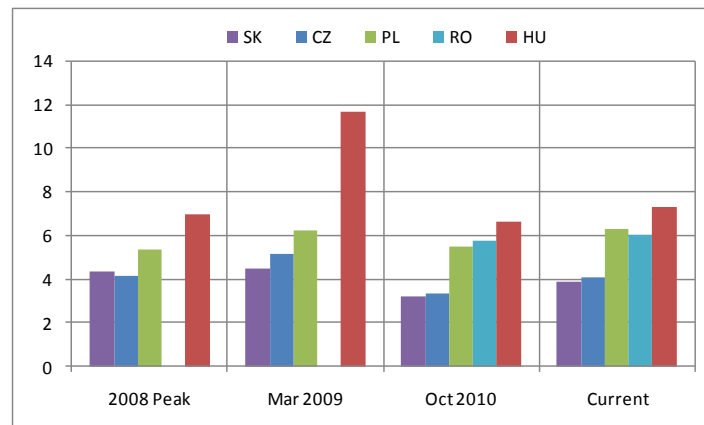


Source: Reuters, Bloomberg, World Bank staff calculations

Notes: 3-month correlations

**Government bond yields in the EU10 increased in line with global trends.** The AAA-rated euro area and US government long-term bonds rose from end of November 2010 to March 2011 due to the positive economic outlook in these regions, rising equity prices and modest increases in long-term inflationary expectations. Similarly, bond yields in secondary market increased in EU10 countries over the last six months, but they continue to remain below the peaks of 2009 (Figure 25).

**Figure 25. EU10 government bond yields**

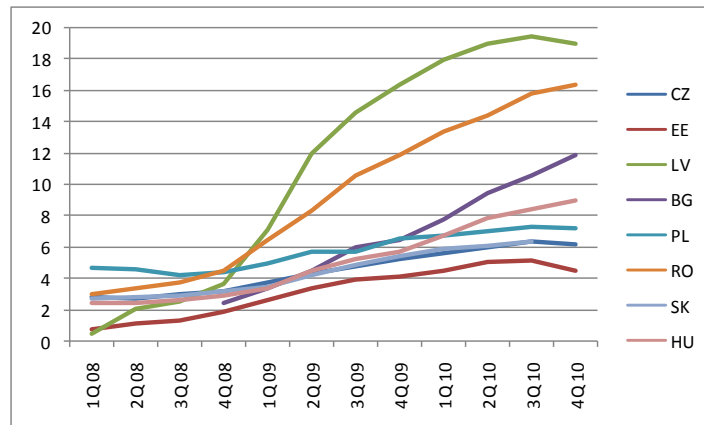


Source: Reuters, Bloomberg, World Bank staff calculations

Note: In case of Bulgaria the average annual yield of primary market on 10 ½-year government bond dropped from 6.37 percent in January 2010 to 6.1 percent in July 2010 and came to 5.49 percent in January 2011.

**Banks' funding pressures persisted.** Spreads of major European banking groups operating in the EU10 diverged somewhat over the last six months, as they face large financing needs. Banking risks are especially high in peripheral euro area countries where financial stress interacts with fiscal pressures and low growth. In EU10 countries, non-performing loans continue to increase in some countries, making banks wary to extend credits (Figure 26).

**Figure 26. Non-performing loans of banks in EU10 countries, percent of loan portfolio**

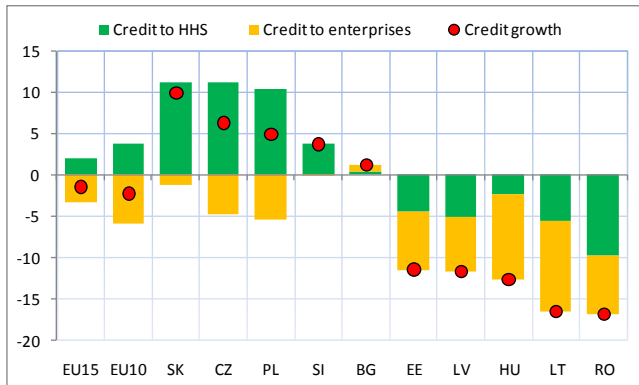


Source: Central Banks, World Bank staff calculations.

Notes: Definition of non-performing loans may differ from one country to the next.

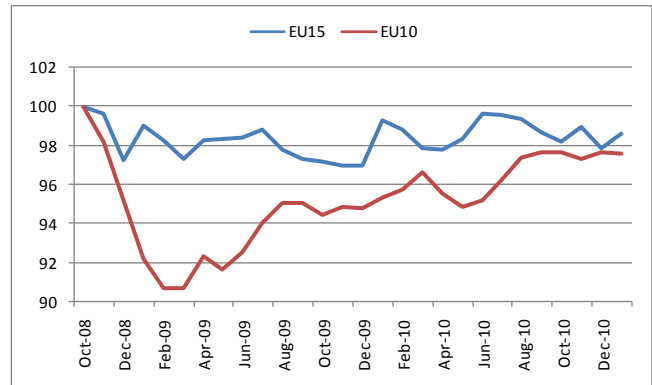
**Credit growth to the private sector remained sluggish.** Growth in total credit was negative from October 2008 to January 2011 in real terms (Figure 27). Credit growth to enterprises was negative in all EU10 countries with the exception of Bulgaria. Credit growth to households performed better, but it remained negative in five EU10 countries, as households continued to deleverage. However, credit levels are set to continue their rebound from the March 2009 trough, especially in countries with solid banking sector fundamentals and strong economic prospects (Figure 28).

**Figure 27. Contribution to real credit growth from Oct 2008 to January 2011**



Source: European Central Bank, World Bank staff calculations

**Figure 28. Real credit growth, index, October 2008=100**



Source: European Central Bank, World Bank staff calculations

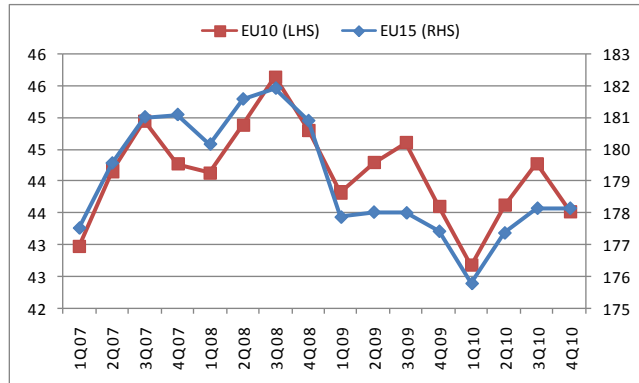
## Jobs

One and a half years after the resumption of output growth, labor markets in the EU 10 continued to be slack. The pace of the recovery remained too subdued to generate enough jobs. After two consecutive quarters of expansion, employment growth turned negative. The number of employed workers declined from 42.4 million in the third quarter to 41.9 million in the fourth quarter (Figure 29). The picture differed across countries. The pick-up in export-led manufacturing supported an expansion of employment in the fourth quarter in Estonia, Lithuania, Slovakia and the Czech Republic. By contrast, weak economic activity, especially in constructions, led to employment losses in other countries, particularly in Bulgaria and Romania.

While job reductions from the third to the fourth quarter were consistent with the seasonal pattern, employment remained below pre-crisis levels. Over the last three years, employment in the EU10 declined by about half a million, or 1.4 percent of the working age population. Over the same period, employment in the EU15 dropped by 1.7 percent, slightly more than in the EU10, in part because the economy in the EU15 rebounded slower from the crisis than in the EU10. As a result, the EU10 managed to reduce the gap in the employment rate relative to the EU15 only by 0.5 percent over the last three years. In the fourth quarter of 2010, 64.7 percent of the working age population was employed in the EU10, compared to 69.7 percent in EU15 (Figure 30).

Among EU10 countries, losses in employment were related to the losses in output, although there important country differences. The job reductions in Bulgaria and Latvia were larger than what would be expected on the basis of the output drop. This reflects the pre-crisis overheating and ongoing structural changes in these economies. By contrast, countries such as Hungary, Romania and Slovenia managed to moderate employment losses relative to the size of the output contraction (Figure 31).

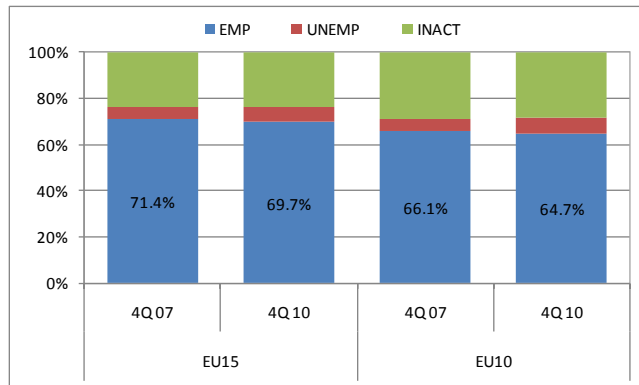
**Figure 29. Employed population in EU10 and EU15 countries, seasonally-adjusted, million**



Source: Eurostat, World Bank staff estimates

Notes: Data on employment are according to national accounts methodology, total employment - domestic concept

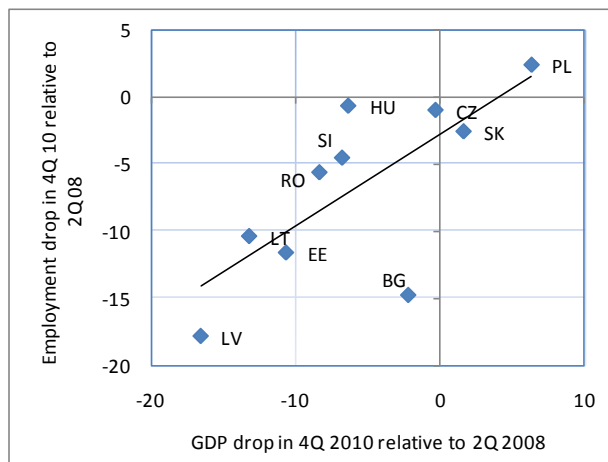
**Figure 30. Working age population structure in the EU10 and EU15**



Source: Eurostat, World Bank staff estimates



**Figure 31. Change in employment vs. change in output 2Q 2008 to 4Q 2010, percent**

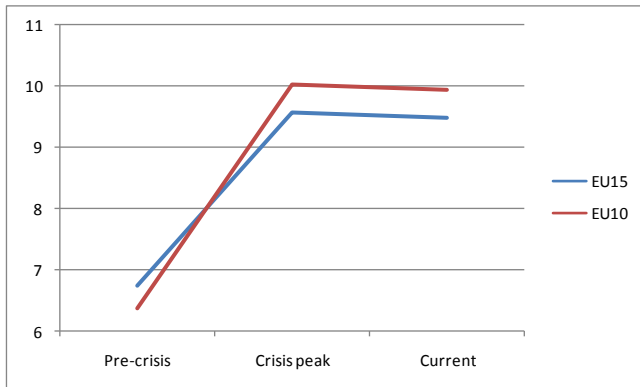


Source: Eurostat, World Bank staff estimates

Notes: Data on employment are according to national accounts methodology, total employment - domestic concept

**The economic recovery still bypassed the unemployed.** The share of the unemployed in the labor force in the EU10 increased by 3.7 percent from the pre-crisis trough to the crisis peak and reached 10.0 percent in February 2010 (Figure 32). In December 2010, the unemployment rate remained at that level. In early 2011, some 3.5 million workers were unemployed across the EU10, some 300,000 workers more than in early 2008. While unemployment increased somewhat less in the EU15, mainly due to the strong performance of the German labor market, it remained at the crisis peak of 9.5 percent in December 2010. Among the EU10 countries, unemployment rates started to decrease from their crisis peaks only in Estonia and Latvia, the two countries with the largest percentage point increases in unemployment during the crisis. In all countries, unemployment rates remain far above their pre-crisis lows (Figure 33).

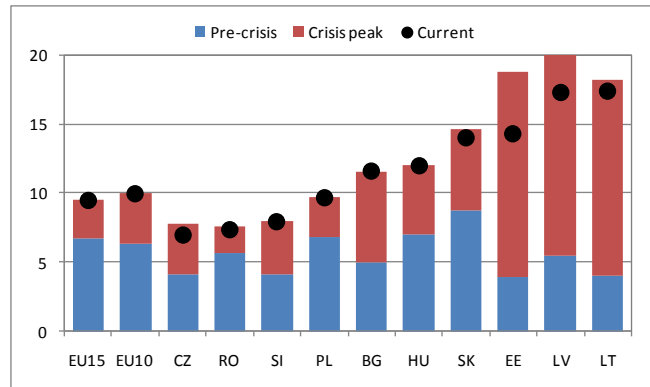
**Figure 32. Unemployment rates in EU10 and EU15, pre-crisis, at the peak of the crisis and currently**



Source: Eurostat, World Bank staff calculations

Notes: Pre-crisis refers to lowest unemployment rate in period 2007-2008, crisis peak refers to highest unemployment rate in period January 2008 to current, current is February 2011

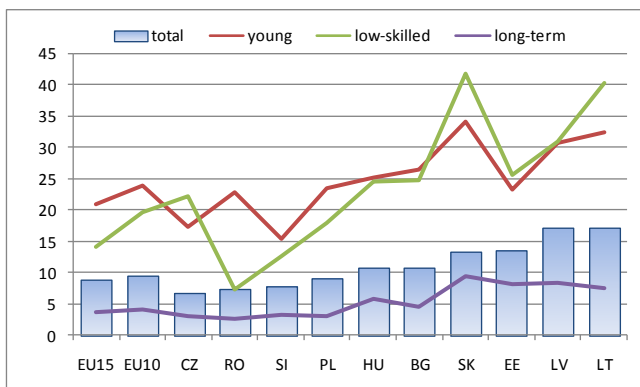
**Figure 33. Unemployment rates in EU10 countries and the EU15, pre-crisis, at the peak of the crisis and currently**



Source: Eurostat, World Bank staff calculations

**Unemployment remained especially high among the young and the unskilled.** In the fourth quarter of 2010, the EU10 unemployment rate for workers aged 20 to 24 was 24 percent, about 1.5 times as high as overall unemployment. Unemployment among low-skilled was 20 percent, about twice as high as overall unemployment. Over the last three years, the crisis increased unemployment among the young especially in Lithuania, Latvia, Slovakia, Estonia and Bulgaria; and among the low-skilled in Lithuania, Latvia, Estonia and Bulgaria. Romania and Slovakia stand out as countries that succeeded in preventing increases in low-skilled unemployment (Figure 34, Figure 35). The country variations reflect factors such the severity of the output contraction, adjustments during the crisis in construction, light manufacturing and other sectors, as well as government labor market policies (see Focus Note Household and Government Responses to the Global Financial Crisis).

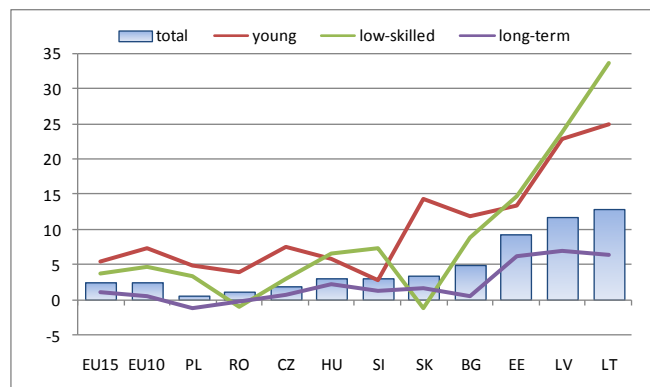
**Figure 34. Unemployment rates in EU10 countries in 4Q 2010**



Source: Eurostat, World Bank staff calculations

Notes: LTU refers to 3Q 2010

**Figure 35. Change in unemployment rates in EU10 countries in 4Q 2010, percentage points, change from 4Q 2007**



Source: Eurostat, World Bank staff calculations

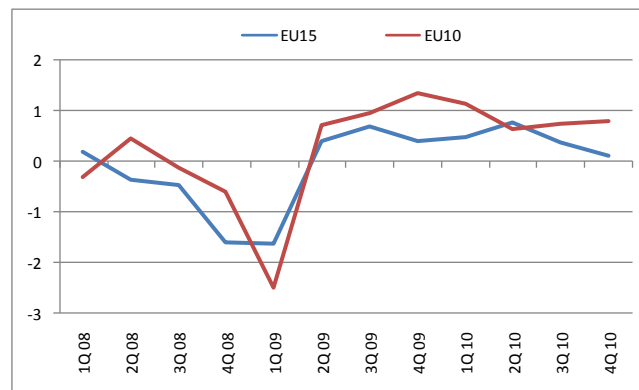
Notes: LTU refers to 3Q 2010

**Persistent weaknesses in labor markets resulted in increases in long-term unemployment.** With little progress in reducing the number of unemployed, and job creation still sluggish,

vacancy ratios continue to be high. The number of unemployed per job vacancy ranged from around 94 in Latvia and 51 in Lithuania to 15 in the Czech Republic. This makes it difficult for unemployed to find jobs. Long-term unemployment continued to rise in the EU10. In the third quarter of 2010, 4 percent of the labor force was out of a job for over 12 months. Only 2.5 percent of the labor force was in long-term unemployment in the third quarter of 2008. Long-term unemployment was highest in Slovakia, Latvia, Estonia and Lithuania, where it exceeded 7 percent of the labor force in the third quarter of 2010.

**In spite of the recovery, enterprises are still accommodating increases in demand through increases in productivity per worker.** During the crisis, firms hoarded labor in the face of steep contractions in demand, especially in the industrial sector. With the recovery, firms are boosting capacity utilization and increasing the number of hours worked per head. Hence, unemployment stays unchanged and labor productivity is improving. This is confirmed by the trend in labor productivity per worker in both the EU10 and EU15. During the crisis, the drop in output turned the growth rate of labor productivity per worker negative, as firms limited the number of lay-offs, in part by reducing hours worked per worker. Once output growth resumed in mid-2009, growth in labor productivity per worker became positive, as employment adjustments again lagged behind output changes (Figure 36).

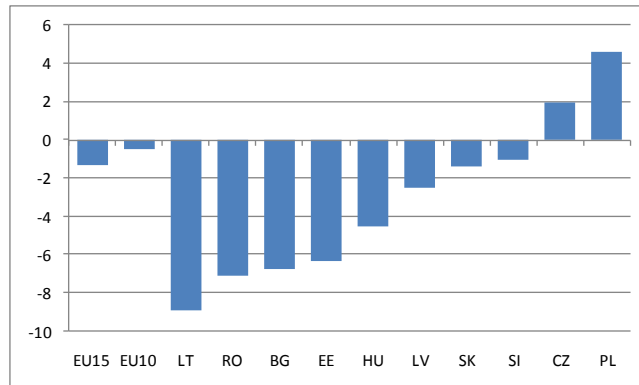
**Figure 36. Real labor productivity per person employed in EU10 and EU15, quarter-to-quarter, seasonally adjusted**



Source: Eurostat, World Bank staff calculations

**Increases in wages lag behind productivity increases, helping to improve competitiveness.** With the exception of the Czech Republic, the growth rate of labor productivity was higher than that of compensation per worker for the fourth or fifth consecutive quarter. Hence, the annual rate of change in real unit labor costs was negative. This should help firms to rebuild their profit margins after the losses in 2009 (Figure 37). Labor productivity growth is expected to decline over the coming quarters, as enterprises exhaust spare capacity and resume the hiring of workers. Labor demand will further increase with the opening of job markets in Austria and Germany to EU8 workers (Box 2).

**Figure 37. Real unit labor cost in selected EU10 countries in 4Q 2010, total economy, annual rate of change, not seasonally adjusted, percent**



Source: Eurostat, World Bank staff calculations

Notes: Data for Poland refer to 3Q 2010

### Box 2. Opening of German and Austrian labor market to EU8\* workers

On May 1, 2011, Austria and Germany will open their labor markets for employees from EU8 countries. Other EU15 countries had opened their labor markets for these employees already in May 2006 or May 2009, while Austria and Germany had made full use of the '2+3+2-year arrangement'. A similar '2+3+2' scheme is in place with respect to workers from Romania and Bulgaria. A similar scheme is in place with respect to workers from Romania and Bulgaria, which means that all restrictions to workers from EU2 countries will end on January 1, 2014.

During 2004 to 2009, some 250,000 workers from EU8 countries migrated annually to EU15 countries, although the number declined during the global financial crisis. The share of EU8 workers migrating to Austria and Germany declined from 60 percent prior to 2004 to 12 percent after 2004.

With the opening of the labor markets, between 100,000 and 140,000 EU8 workers are expected to migrate to Germany each year. Poles will constitute around 45 to 65 per cent of the total. General equilibrium simulations suggest that the increase in EU8 migration would boost Germany's GDP by 2020 by about 1.2 percent, lower wages by 0.4 percent and increase unemployment by 0.2 percent. Economic activity would expand especially in industry and selected services, including hotels and restaurants.

Source: World Bank staff based on *Wirkungen der Zuwanderungen aus den neuen mittel- und osteuropäischen EU-Staaten auf Arbeitsmarkt und Gesamtwirtschaft : Expertise im Auftrag des Gesprächskreises Migration und Integration der Friedrich-Ebert-Stiftung / Timo Baas ; Herbert Brücker - [Electronic ed.] - Bonn, 2010, <http://library.fes.de/pdf-files/wiso/07432.pdf>*

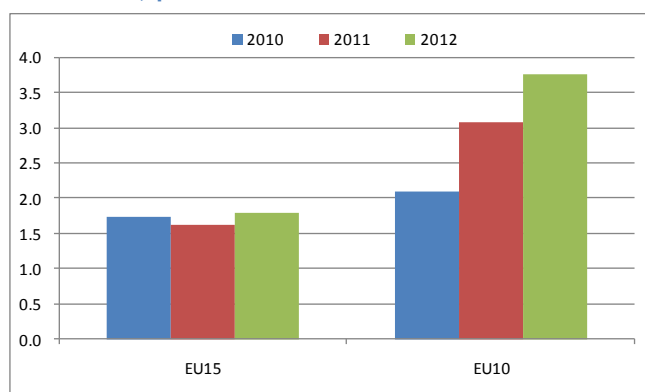
Notes: EU8 refers to countries which joined the EU in May 2004, i.e. Poland, Lithuania, Latvia, Estonia, the Czech Republic, Slovakia, Hungary and Slovenia.

## Prospects

After the rebound from the crisis in 2010, global growth is projected to slow somewhat in 2011. In spite of improving financial markets and additional fiscal support in the US and Japan, growth in advanced economies is likely to remain subdued as strengthening private demand is offset by fiscal consolidation and the end of the inventory cycle. Emerging economies, led by Asia, are set to stay buoyant due to strong domestic demand. Growth in the EU is likely to remain broadly unchanged, as solid world trade and good EU business sentiment are balanced by continued tensions in EU financial markets.

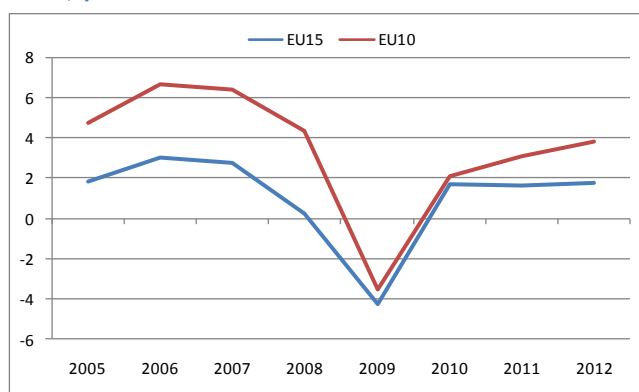
**Growth in the EU10 is set to strengthen** (Figure 38). The pace of the recovery in the EU10 is likely to accelerate once firms raise investment and households step up consumption in response to a better external environment and normalized financial conditions. Close market integration with the EU15, competitive production costs, skilled workers and innovative entrepreneurs are set to lift growth in the EU10 from 2.1 percent in 2010 to 3.1 percent in 2011 and 3.8 percent in 2012. Growth in the EU15 is projected to remain stable around 1.7 percent, which is close to its potential rate. Weaker growth in Germany and fiscal consolidation across the EU15 are offset by stronger growth in other EU15 countries. Hence, the growth differential of the EU10 relative to the EU15 could increase to 2 percentage points in 2012, ensuring that convergence to average EU living standards proceeds (Figure 39).

**Figure 38. Projected growth in the EU10 and EU15, 2010-2012, percent**



Source: World Bank staff

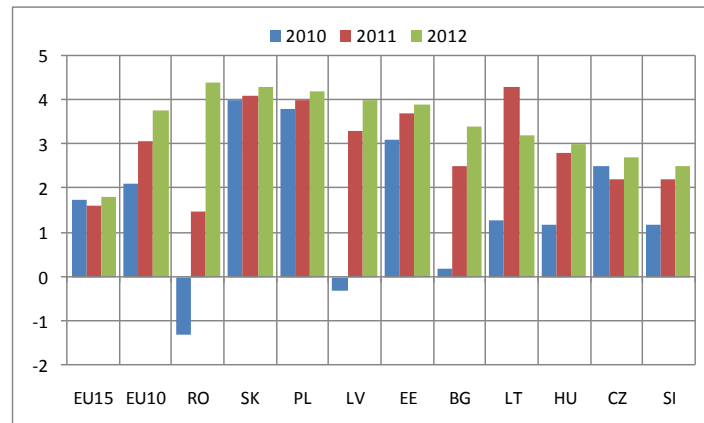
**Figure 39. Growth in the EU10 and EU15, 2005-2012, percent**



Source: World Bank staff

The pace of the recovery differs across the EU10, reflecting, among other factors, the overheating prior to the crisis, trade openness and competitiveness (Figure 40). The performance of Slovakia and Poland is set to remain solid thanks to limited pre-crisis imbalances, strong integration in European production networks, EU funds, and, in the case of Poland, stable consumption. Estonia, Lithuania and Latvia are likely to build on the export-led upswing, and growth could improve to about 4 percent by 2012 as domestic demand continues to recover. Romania and Bulgaria, where the crisis hit later than elsewhere, are set to see the biggest improvements in growth in 2011, aside from Latvia and Lithuania. Growth in Slovenia, the Czech Republic and Hungary could increase to about 2.5 percent to 3 percent by 2012. This is somewhat less than elsewhere in the region, in part because these countries have already converged more to EU income levels.

Figure 40. Projected growth in the EU10 countries, 2010-2012, percent

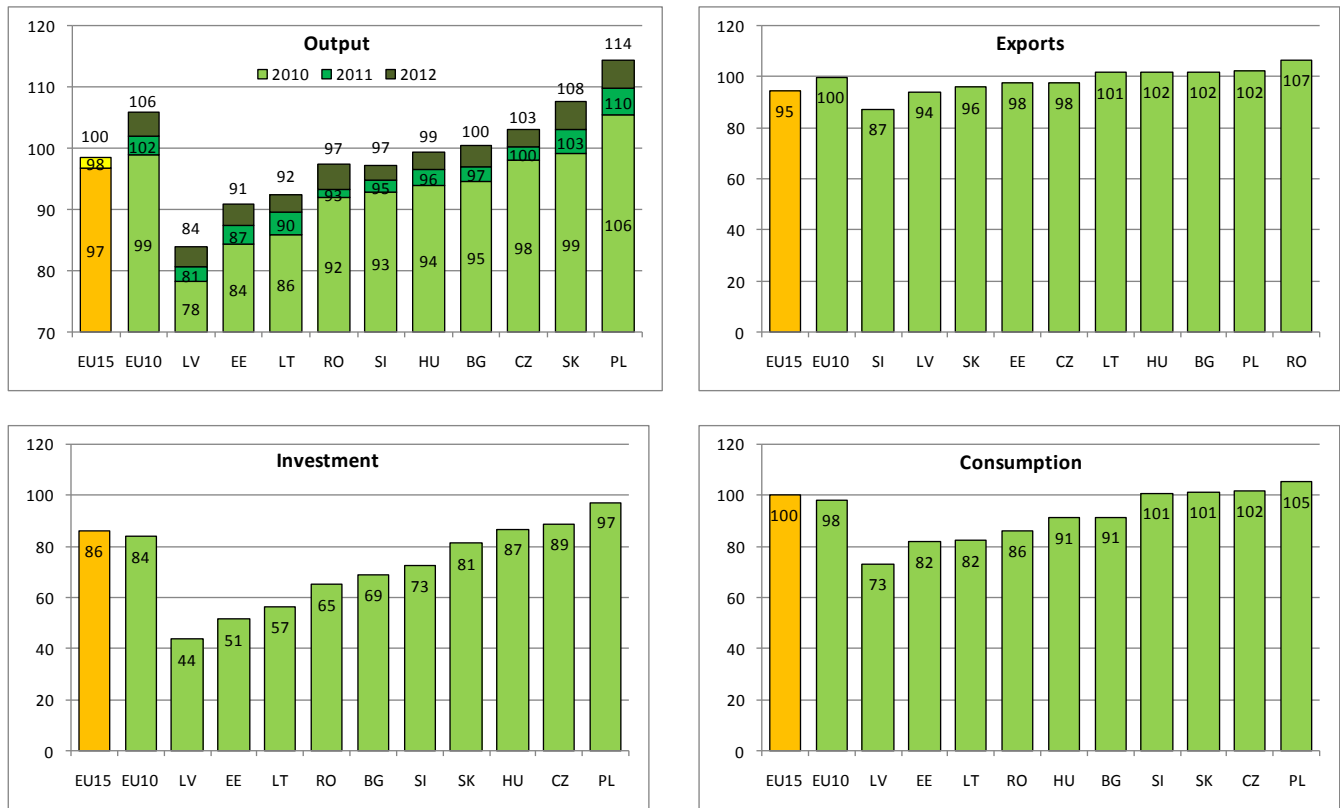


Source: World Bank staff

**While output in the EU10 had returned to the pre-crisis level in early 2011, the recovery is weak.** First, the EU10 took nine quarters to reach the output level of the fourth quarter of 2008, the pre-crisis peak. Second, the growth advantage of the EU10 to the EU15 is likely to remain around 2 percentage points in the coming years compared to 2.5 percentage points during 1993 to 2008. Pre-crisis growth rates partly reflected overheating and are therefore no valid guide for sustainable growth rates post-crisis. In addition, the global financial crisis has harmed the supply potential of the EU10 economies through lower capital flows, restrained investment, possibly higher structural unemployment and lower total factor productivity growth due to credit constraints and higher risk aversion. By contrast, the crisis had less impact on the potential growth of the EU15, where growth was less reliant on capital flows. Aging is set to lower potential growth over the longer run in both the EU10 and EU15 (Figure 41).

**Weak domestic demand is still holding back growth.** By the end of 2010, only exports had recovered to pre-crisis levels, benefiting from the strong rebound in global trade. Exports remained far off the pre-crisis peak only in Slovenia, as the competitiveness of Slovenia's labor-intensive exports has deteriorated. While consumption across the EU10 was also close to pre-crisis levels, it stayed noticeably below pre-crisis levels in Latvia, Estonia, Lithuania, Romania, Hungary and Bulgaria. These countries underwent large adjustments in domestic demand during the crisis, and consumption is held back by a combination of lower household net wealth, higher unemployment, and tight credit. Investment remained far below pre-crisis levels across the EU10. The only exception is Poland, where EU funds and public investment in the run-up of the Euro 2012 football championship bolstered spending on transport and other infrastructure. Private investment remains weak across the EU10 in view of deleveraging, the winding down of large construction projects, and tight international financial conditions.

Figure 41. Recovery in output, exports, gross fixed investment and final consumption from pre-crisis peak to 2010, index, peak = 100



Source: Eurostat, World Bank staff calculations

Notes: Pre-crisis peak refers to the best four quarters moving average within the period 2006-2008. Recovery for output shows also forecasted output levels in 2011 and 2012.

Uncertainty prevails, as euro area sovereign debt markets remain volatile, international prices of energy and food increase, Japan is grappling with the natural disaster, and the Middle East is undergoing political change. The deep market integration of the EU10 implies that the outlook hinges crucially on developments in Europe and elsewhere. On the upside, the policy relaxation measures in the US, the reconstruction efforts in Japan (Box 3), buoyant emerging market growth could lead to a higher-than-expected investment and growth in the EU10. On the downside, very large levels of sovereign financing needs in advanced economies could lead to disruptions in sovereign debt markets, especially if markets are not convinced about the credibility of medium-term fiscal consolidation plans. In addition, investors, wary of possible external default risks in view of high and concentrated cross-border financial exposures, could adjust their portfolios in favor of safe haven currencies. Higher oil prices could also derail the recovery in oil-importing economies, including the EU, although the reduced dependence on oil and increased wage flexibility makes a return of stagflation unlikely. Finally, the simultaneous fiscal tightening in several advanced European countries could moderate growth more than estimated in the next years.

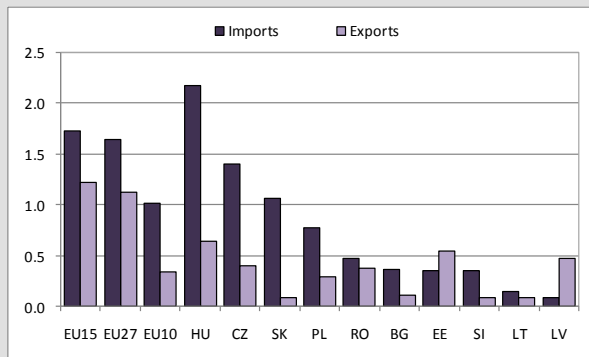
### Box 3. EU10's Contagion Risks from Japan's Earthquake and Tsunami?

On March 11, 2011, the northeastern part of Japan was hit by an earthquake and a tsunami. It left almost half a million people homeless and more than 10,000 people may have lost their lives. However, judging from the experience during past catastrophes, the impact on Japan's GDP is expected to be limited. While economic activity is likely to slow down in the second quarter of 2011 due to power outages and other disruptions, GDP is expected to rebound as early as the second half

of 2011, buoyed by reconstruction efforts. In the coming months, economic activity could slow down in Asian countries with close trade and financial links to Japan. However, the direct impact on the EU10 region is likely to be minor:

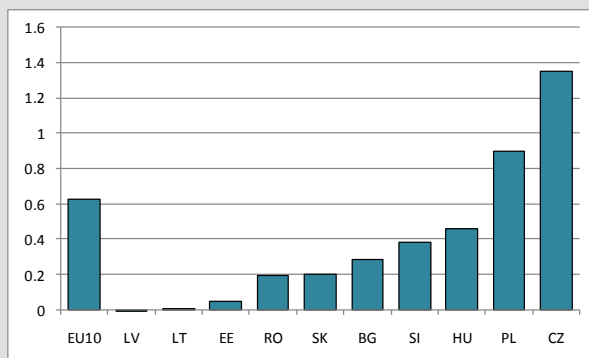
- In 2010, Japan accounted for 1 percent of EU10 imports. Japan's import share was highest in Hungary (2.2 percent), and lowest in Slovenia (0.4 percent).
- In 2010, Japan accounted for 0.3 percent of EU10 exports. Japan's export share was highest in Hungary (0.6 percent), and lowest in Slovenia (0.1 percent).
- At the end of September 2009, foreign claims of Japanese banks amounted to 0.8 percent of all foreign bank claims on ultimate risk basis. The share was highest in Poland (1.6 percent) and lowest in Estonia (0.0 percent).
- In 2009, total direct investment from Japan amounted to 0.8 percent of total foreign direct investment to the EU10. The share was highest in Poland (0.9 percent) and lowest in Latvia (0.0 percent).
- In 2009, Japanese holdings of portfolio debt securities amounted to 5.3 percent of overall portfolio debt securities in the EU10. The share was highest in Poland (9.8 percent) and lowest in Estonia, Latvia and Romania (0.0 percent).

**Figure 42. EU10 trade relations with Japan, exports and imports in 2010, percent of total**



Source: Eurostat, World Bank staff calculations

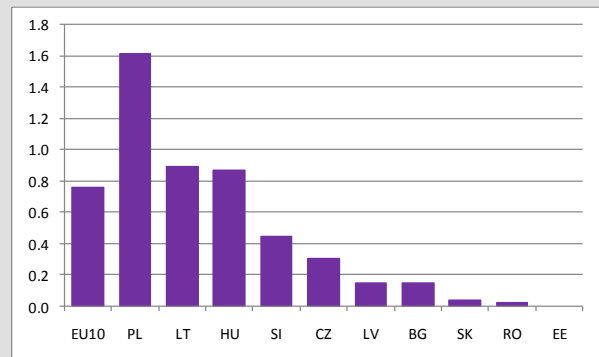
**Figure 44. Japan's FDI in EU10 countries, percent of total FDI in 2009, percent**



Source: IMF, Coordinated Direct Investment Survey (CDIS), World Bank staff calculations

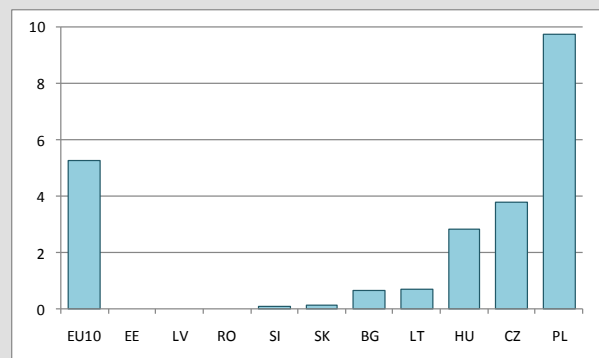
Source: World Bank staff.

**Figure 43. EU10 banking sector links to Japan, share of Japanese banks' claims in total foreign claims, September 2010, percent**



Source: BIS, World Bank staff calculations

**Figure 45. Japan's portfolio investment in EU10 countries, percent of total portfolio investment in 2009, percent**



Source: IMF, Coordinated Portfolio Investment Survey (CPIS), World Bank staff calculations



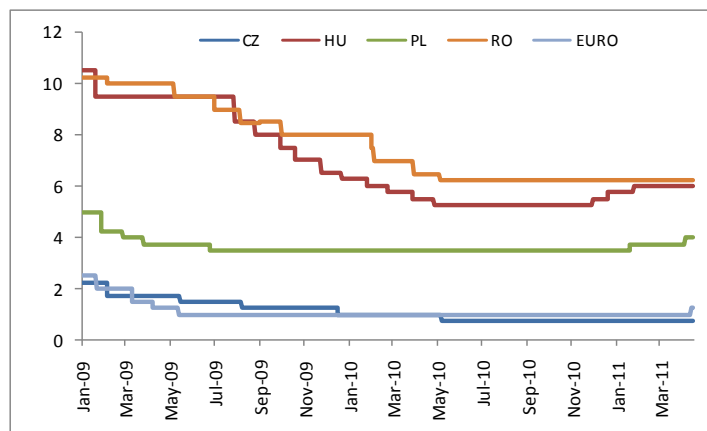
## Policies for Recovery

### Monetary and Financial Policy

Monetary policy is set to remain accommodative for the recovery, although policy rates could increase from low levels at a moderate pace. The recent increases in inflation rates reflect mainly higher food and energy prices. Looking ahead, inflation is likely to pick up further as higher commodity prices and tax changes feed through into consumer prices. In some countries, existing spare capacity, weak labor markets, sluggish credit growth, and stepped-up fiscal consolidation may dampen inflationary pressures. In other countries, further increases in global commodity prices, the pass-through of increases in indirect taxes and administrative prices, and closing output gaps in view of the strengthening recovery could lead to second-round effects and broader inflationary pressures in the coming years. The European Central Bank increased on April 7, 2011 the key policy rate interest rate on the main refinancing operations of the euro system will be increased by 25 basis points to 1.25 percent. This was the first increase since May 2009

(Figure 46). Selected central banks in the EU10 region have also started the tightening cycle of policy rates in response to increases in headline inflation and accelerating economic growth. The Central Bank of Hungary increased since end November 2010 in three steps the policy rate from 5.25 percent to 6.00 percent. The Central Bank of Poland increased its policy rate from 3.50 percent to 4.00 percent in two steps since January 2011.

Figure 46. Key monetary policy interest rates



Source: Central Banks, World Bank staff estimates

**Ensuring stability of the financial sector remains essential for the recovery.** In view of the large foreign ownership of the EU10 banking system, reforms of EU financial markets are central for the EU10 region. Important recent steps include the acceleration of fiscal consolidation in some countries, the stepping up of extraordinary liquidity support and the security markets program of the ECB, the establishment of the temporary European Financial Stability Facility, the setting-up of a permanent European Stability Mechanism starting in 2013 with increased effective lending resources, and the adoption of the new competitiveness pact to strengthen the EU's growth potential and reduce internal imbalances (Box 4). Building on these measures, priorities going forward include additional credible bank stress testing, with follow-up plans for recapitalization and restructuring; strengthening the euro area wide resolution mechanism, and bolstering the resilience and stability of the financial system through macro-prudential regulations, including at the global level.

#### Box 4. EU reforms in response to the crisis

On March 25, 2011, the European Council adopted a package of measures to respond to the crisis, preserve financial stability and lay the ground for smart, sustainable, socially inclusive and job-creating growth.

*o Implementing the European Semester: Europe 2020, fiscal consolidation and structural reform.*

Within the new framework of the European semester, the European Council endorsed the priorities for fiscal consolidation and structural reform. Fiscal policies for 2012 should aim to restore confidence by bringing debt trends back on a sustainable path and ensuring that deficits are brought back below 3 percent of GDP in the timeframe agreed upon by the Council. Fiscal consolidation efforts must be complemented by growth-enhancing structural reforms in line with the Europe 2020 Strategy.

*o Strengthening governance*

The European Council endorsed the package of six legislative proposals on economic governance. It includes a reform of the Stability and Growth Pact aimed at enhancing the surveillance of fiscal policies and applying enforcement measures more consistently and at an earlier stage, new provisions on national fiscal frameworks and a new surveillance of macroeconomic imbalances. The European Council called for work to be taken forward with a view to their adoption in June 2011.

*o Providing a new quality of economic policy coordination: the Euro Plus Pact*

The European Council endorsed the “Euro Plus Pact” as agreed by the euro area governments and joined by Bulgaria, Denmark, Latvia, Lithuania, Poland and Romania. This pact outlines a number of measures to strengthen economic policy coordination, with the objective of improving competitiveness and accelerating convergence.

*o Restoring the health of the banking sector*

The European Banking Authority and relevant authorities are carrying out stress tests. Member states will prepare, ahead of the publication of the results, specific strategies for the restructuring of vulnerable institutions, including private sector solutions (direct financing from the market or asset sales) but also a solid framework in line with State aid rules for the provision of government support in case of need.

*o Strengthening the stability mechanisms of the euro area*

The European Council agreed to set up the permanent European Stability Mechanism with a lending capacity of EUR 500 billion. It called for the rapid launch of national approval procedures with a view to its entry into force on 1 January 2013. In addition, the lending capacity of the European Financial Stability Facility is to be enhanced from EUR 250 billion to EUR 440 billion. The European Council intends to finalize the legal agreements on the ESM and EFSF before the end of June 2011.

*Source: World Bank staff.*

## Fiscal Policy

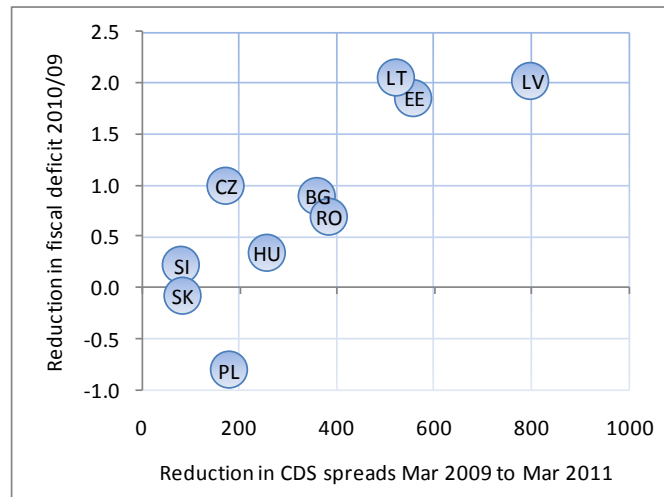
While the global recovery is proceeding, fiscal imbalances in leading economies remain stubbornly high. In advanced G20 economies, the average fiscal deficit fell moderately from close to 9 percent of GDP in 2009 to close to 8 percent of GDP in 2010. As a result, gross public debt exceeded 100 percent of GDP for the first time in the last 60 years for these countries. The US and Japan have adopted new fiscal stimulus measures to support the fledging recovery in 2011, implying that their fiscal deficits are likely to remain in excess of 9 percent of GDP. In the euro area, fiscal deficits remained around 6.5 percent in 2009 and 2010, but countries responded to heightened market scrutiny and elevated sovereign risk with fiscal consolidation measures for 2011.

**EU10 governments have embraced fiscal consolidation for two reasons.** First, prior to the crisis, some countries had already large public sectors. During the crisis, government expenditures increased further, reaching about 41 to 50 percent of GDP in the EU10, the highest level since the early years of transition. In the coming decades, demographic aging puts upward pressure on age-related public spending for pensions and health. Second, the crisis has eroded public debt levels in many EU10 countries. High public debt tends to increase interest rates, harm growth, and undermine the scope of government to respond effectively to the next financial crisis.

**Most EU10 countries reduced fiscal imbalances already in 2010.** Countries with larger fiscal adjustments saw larger reductions in credit default swap spreads, as financial markets' confidence in fiscal positions strengthened (Figure 47).

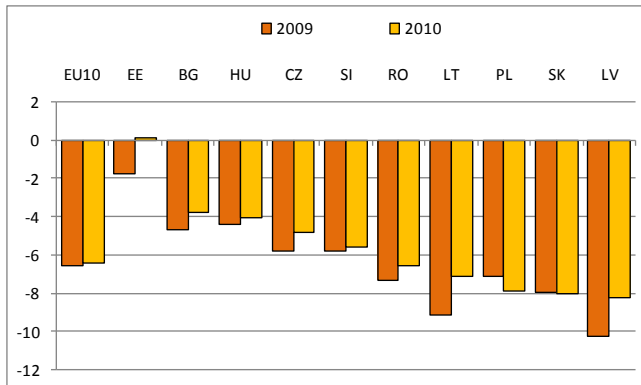
Preliminary data suggests that fiscal deficits decreased in eight EU10 countries, and increased noticeably only in Poland. Poland, which enjoyed a relatively sound fiscal position before the crisis and has not faced debt financing difficulties, increased its budget deficit by close to one percent of GDP to 7.9 percent of GDP in 2010 (Figure 48). The rise in the fiscal deficit was due to weak direct tax collection, in part related to loss carry over provisions, and higher capital investments. In spite of a strong fiscal position and a large output contraction, Estonia frontloaded consolidation efforts to adhere to the Maastricht criteria and ensure euro area entry in early 2011. Fiscal consolidation relied on expenditure cuts especially in Bulgaria, Lithuania, Hungary and Slovakia (Figure 49).

**Figure 47. Reduction in CDS spreads vs. reduction in general government fiscal deficit in 2009/10**



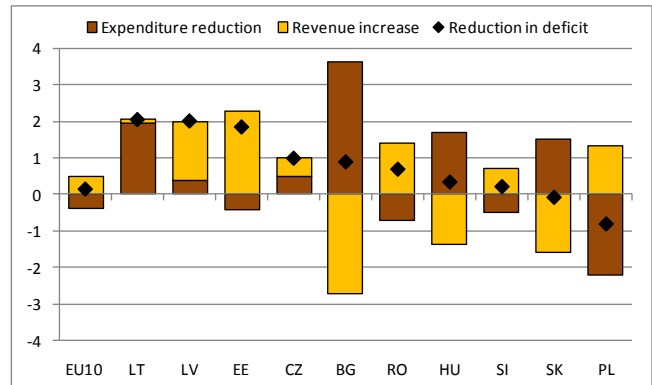
Source: Eurostat, World Bank staff calculations

**Figure 48. General government fiscal deficit in 2009 and 2010, percent of GDP**



Source: World Bank staff calculations

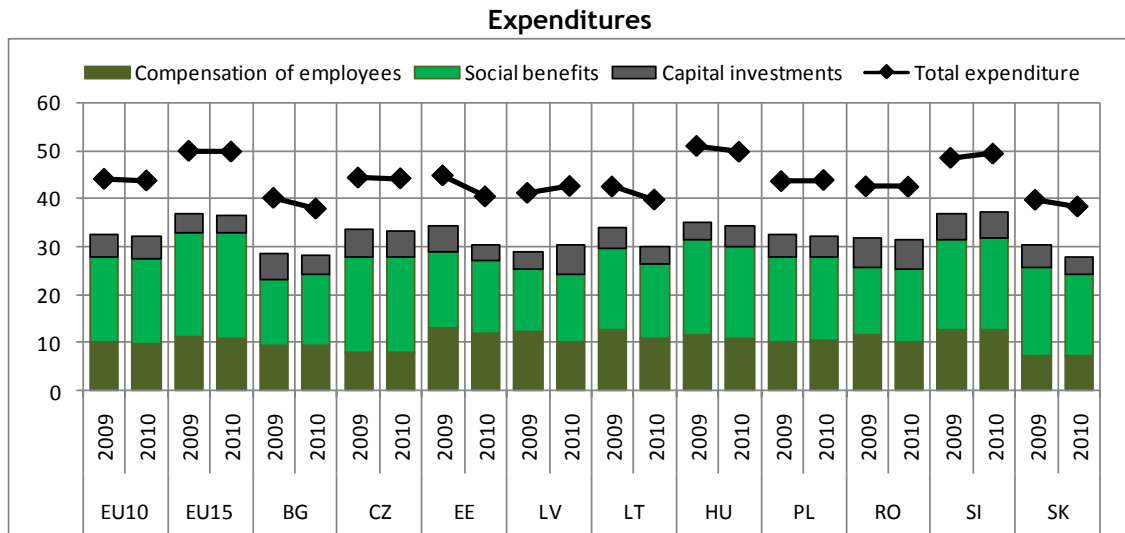
**Figure 49. Decomposition of general government fiscal deficit reduction from 2009 to 2010, percent of GDP**

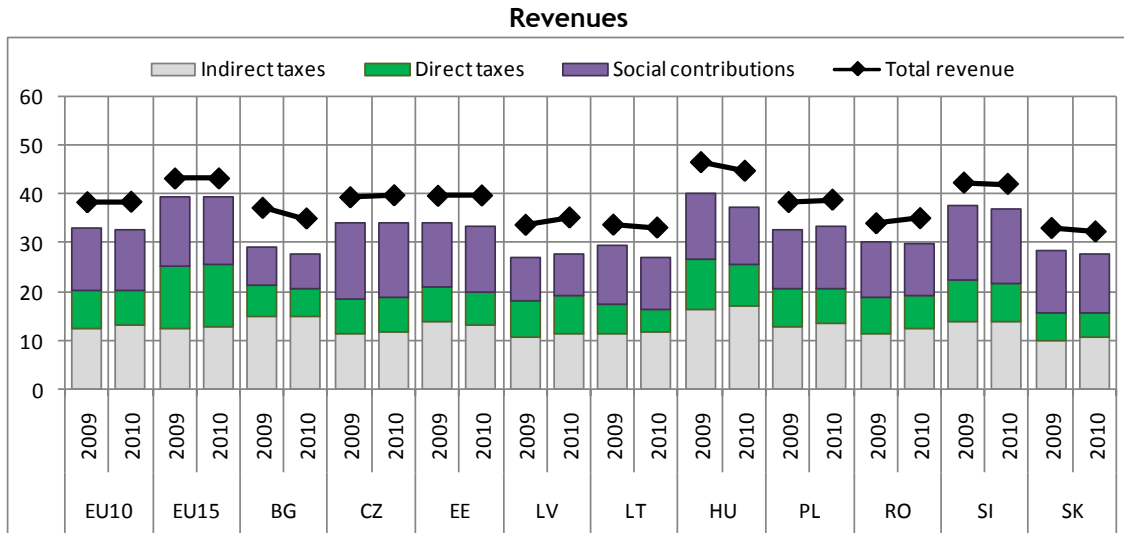


Source: World Bank staff calculations

Fiscal data for the first nine months of 2010 suggest that fiscal measures focused on lowering public wages and capital investments and increasing indirect taxes and other revenues (Figure 50). On the expenditure side, weak labor markets and pressures on household incomes kept social benefit spending elevated. Therefore, governments reduced compensations for public employees, especially in Latvia and Lithuania, and cut back on capital investments, in particular in Estonia. In spite of these efforts, public spending in the EU10 remained about 3 percent of GDP above the 2008 levels. On the revenue side, only some countries were able to improve revenue collection. Some countries redirected pension contributions from the second to the first pillar. These measures reduce the fiscal deficit today at the cost of higher implicit pension liabilities in future. Many countries also stepped up indirect tax collection. Hungary introduced temporary levies on financial institutions and additional taxes on telecommunication, energy and retail chains. In addition, eight countries increased other current revenues, including fees and charges for government services.

**Figure 50. Change in revenues and expenditures by type, 1Q-3Q 2009 vs. 1Q-3Q 2010, percent of GDP**



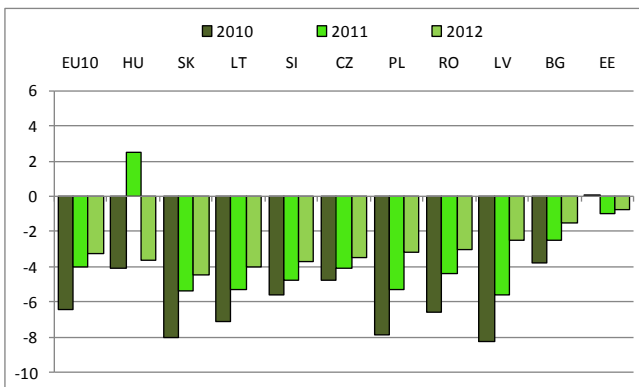


Source: Eurostat, World Bank staff calculations

Note: Bulgaria applied fiscal consolidation measures in the second half of 2010 based on a revised 2010 budget approved in July 2010.

The EU10 countries are targeting ambitious fiscal adjustments in 2011 and 2012. Public finances are set to improve on the basis of fiscal measures and improving cyclical positions. Fiscal deficits are projected to improve from -6.4 percent of GDP in 2010 to -4.0 percent of GDP in 2011 and -3.2 percent of GDP in 2012 (Figure 51). Nine EU10 countries envision sizeable fiscal deficit reductions. The only exception is Estonia, where fiscal deficits are already low and transfers to the second pension pillar resumed in 2011. Hungary's short-term fiscal position is improving in 2011 due to the winding down of the second pension pillar. The bulk of fiscal consolidation up to 2012 is set to come from reductions in public spending (Figure 52).

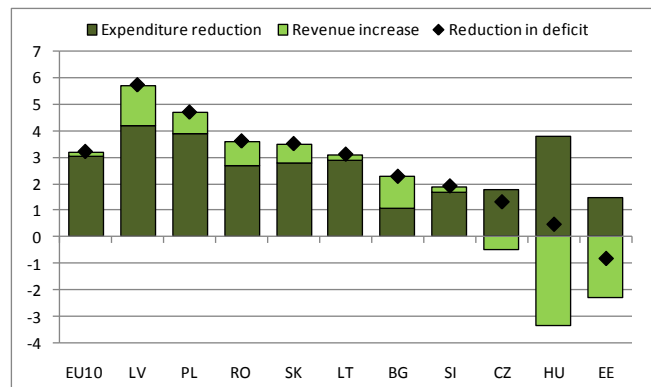
Figure 51. General government fiscal deficit in 2010 to 2012, percent of GDP



Source: World Bank staff calculations

EU10\* is EU10 countries without Hungary

Figure 52. Decomposition of general government fiscal deficit reduction from 2010 to 2012, percent of GDP



Source: World Bank staff calculations

Governments have adopted a number of fiscal measures as part of the 2011 budget laws (Table 2). They include freezing or reducing public sector wages and pension benefits, reducing capital investments and curtailing other discretionary spending. Countries target reductions in social transfers (Czech Republic, Latvia and Romania) or subsidies (Romania, Slovenia and

Slovakia), and reforms to improve the long term financial sustainability of pensions systems (Slovenia, Bulgaria and Romania). Poland introduced an expenditure rule to limit discretionary spending of the state budget to one percent in real terms. Governments bolster revenue collection by increasing indirect taxes, including excises; increased reduced VAT rates (Latvia); raising the standard VAT rate (Latvia, Poland, Slovakia); widening the base (Estonia, Latvia, Poland and Slovak Republic); or increasing green taxes (Romania, Slovenia and Slovak Republic). Some countries have taken measures to widen the base of direct taxes (Poland, Romania and Slovakia). Other countries adopted special levies on financial or insurance institutions (Bulgaria, Hungary and Latvia). Poland is expected to reduce transfers to the second pension pillar from May 2011 onwards. Helped by temporary measures, Hungary introduced a flat-rate personal income tax and Lithuania reduced the income tax rate for self-employed to support growth.

**Table 2. Expenditure and revenue measures in 2011 budgets**

Expenditures									
	Public Sector Consumption		Social Transfers	Pension				Public Sector Investment	Subsidies
	Wage	Employment		Increase in Retirement Age	Changes in Indexation	Pension Freeze	Changes to 2nd pillar		
BG	x	x				x			
EE	x						x		
CZ	x		x					x	
HU	x	x					x	x	
LT	x	x				x			
LV		x	x						x
PL	x		x				x		
RO		x	x	x	x	x			x
SI	x	x	x	x	x	x			
SK	x							x	x

Revenues								
	Direct taxes/SSC		Indirect Taxes			Environ. Taxes	Other taxes	
	Increase in Rate	Widening of Tax Base	Increase in VAT Rate	Increase in Excise	Widening of Tax Base		Levy on Financial Institutions	Crisis Tax
BG				x				
EE				x				
CZ	x							
HU	x						x	x
LT	x			x				
LV	x		x	x	x		x	
PL		x	x		x			
RO		x				x		
SI				x				
SK		x	x	x	x	x		

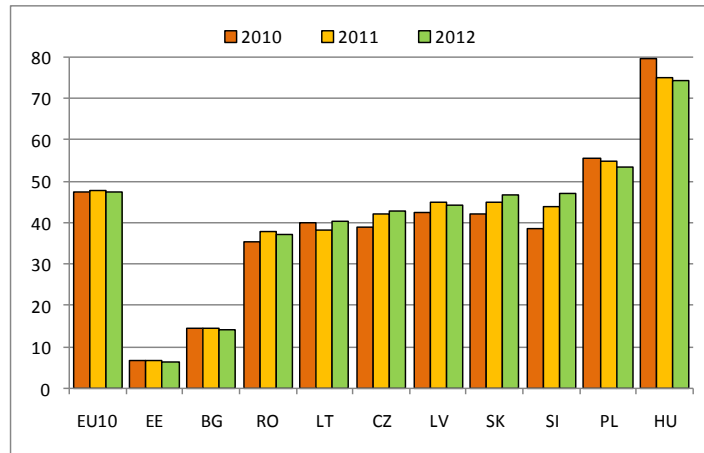
Source: World Bank staff

Note: The table includes new measure introduced with 2011 budgets as well as extensions of measures introduced in 2009 and 2010.

**More fiscal consolidation is needed in many EU10 countries to meet the obligations of the Stability and Growth Pact and reduce public debt levels.** With the exception of Estonia, all EU10 countries are currently subject to EU excessive deficit procedure. Bulgaria and Hungary are on track with reducing their fiscal deficit below 3 percent of GDP in 2011. Latvia, Lithuania, Poland and Romania are obliged to meet this threshold by 2012, and the Czech Republic, Slovakia and Slovenia by 2013. While these countries have already taken significant fiscal consolidation steps, meeting these fiscal deficit targets is likely to require further

measures in forthcoming budgets, especially if the economic recovery turns out to be weaker than anticipated. However, even in case these efforts succeed, public debt burdens in the EU10 countries are likely to stay higher than prior to the crisis, in many cases significantly (Figure 53). Public debt level are set to increase as a percentage of GDP by around 20 percent of more from 2008 to 2012 in Latvia, Lithuania, Slovenia, Romania and Slovakia. Shoring up medium- to long-term fiscal consolidation is therefore likely to remain high on the policy agenda, also to provide a safety margin for public finances to meet future crises.

**Figure 53. General government public debt in 2010 to 2012, percent of GDP**

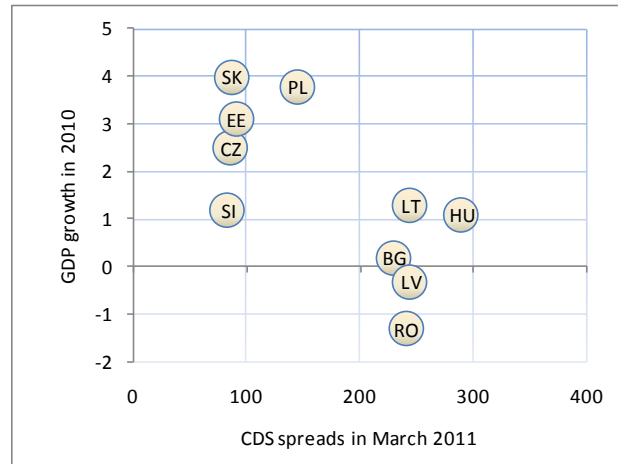


Source: World Bank staff calculations

## Structural Policy

Policies to strengthen the financial and fiscal frameworks require complementary structural measures to promote strong and inclusive growth. The crisis has damaged the productive capacity of the economies for various reasons, including higher cost of capital, lower capital inflows, skill erosion through unemployment, and structural changes such as the downsizing of finance, real estate and construction. This has lowered potential growth across the EU10 region. The EU's Europe 2020 strategy emphasizes smart, sustainable and inclusive growth through structural change. Growth is vital for overcoming the fiscal and financial challenges in the region. Fiscal consolidation is easier in a growing economy, as revenues perform better, social spending pressures diminish, and the public debt-to-GDP ratio tends to trend downward. Also, financial markets take a more benign view of risks in expanding economies (Figure 54). Among the EU10 countries, CDS spreads are lower for high-growth countries than for low-growth countries.

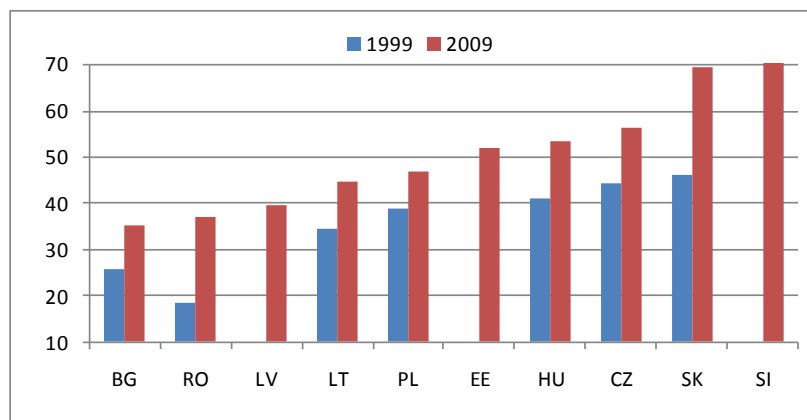
Figure 54. CDS spreads vs. GDP growth 2009/10



Source: Eurostat, World Bank staff calculations

Following on the Europe 2020 strategy, EU member states are preparing their national reform programs with country specific targets for the Europe 2020 strategy (Table 3). These strategies will include lessons from government policies during the crisis, including in the area of employment policy (see Focus Note Household and Government Responses to the Global Financial Crisis). The reform agenda is vast, ranging from absorbing EU and FDI flows, increasing labor force participation, strengthening skills, and improving technology (see Focus Note: Fueling Growth and Competitiveness in the EU10 through Employment, Skills, and Innovation). Such growth-enhancing policies would help to reduce high unemployment, which remains a key policy challenge. They are also vital to raise competitiveness by closing the labor productivity gap with other EU countries (Figure 55).

Figure 55. Labor productivity in 1999 and 2009, GDP in PPS per hour worked, EU15=100



Source: Eurostat, World Bank staff calculations



**Table 3. Selected Europe 2020 Indicators**

	BG	CZ	EE	HU	LT	LV	PL	RO	SI	SK	EU15	EU27
<b>General economic background</b>												
GDP per inhabitant in PPS, 2009, EU27 = 100	41	82	64	65	55	52	61	46	86	73	110	100
<b>Innovation</b>												
R&D spending as percent of GDP in 2009	0.5	1.5	1.4	1.2	0.8	0.5	0.7	0.5	1.9	0.5	2.1	2.0
High-tech exports, share in total exports in 2006	3.3	12.7	8.0	20.3	4.7	4.2	3.1	3.8	4.7	5.8	15.5	16.6
<b>Education</b>												
Graduates in mathematics, science and technology per 1 000 of population aged 20-29 in 2008	9.1	15.0	11.4	6.1	17.8	8.8	14.1	15.2	10.7	15.0	14.3	13.9
Youth education attainment level - Percentage of the population aged 20 to 24 having completed at least upper secondary education in 2009	83.7	91.9	82.3	84	86.9	80.5	91.3	78.3	89.4	93.3	76.1	78.6
Early school-leavers - Percentage of the population aged 18-24 with at most lower secondary education and not in further education or training in 2009	14.7	5.4	13.9	11.2	8.7	13.9	5.3	16.6	5.3	4.9	15.9	14.4
<b>Digital society</b>												
Broadband penetration rate in 2009	11.9	17.8	26.3	17.2	18.2	17.5	12.8	12.3	22.1	14.3	26.4	23.9
<b>Employment and skills</b>												
Employment rate in 2009	62.6	65.4	63.5	55.4	60.1	60.9	59.3	58.6	67.5	60.2	65.9	64.6
Employment rate of older workers in 2009	46.1	46.8	60.4	32.8	51.6	53.2	32.3	42.6	35.6	39.5	47.9	46
Life-long learning - Percentage of the population aged 25-64 participating in education and training over the four weeks prior to the survey in 2009	1.4	6.8	10.5	2.7	4.5	5.3	4.7	1.5	14.6	2.8	10.8	9.3
Long-term unemployment rates in 2009	3	2	3.8	4.2	3.2	4.6	2.5	2.2	1.8	6.5	3	3
<b>Fighting poverty</b>												
At-risk-of-poverty before social transfers in 2009	26.4	17.9	25.9	28.9	29.4	30.3	23.6	29.1	22	17.1	25.2	25.1
At-risk-of-poverty after social transfers in 2009	21.8	8.6	19.7	12.4	20.6	25.7	17.1	22.4	11.3	11	16.1	16.3
Percentage of children below 3 years outside formal childcare in 2009	92	97	75	93	90	85	97	95	69	97	67	72

Source: Eurostat, World Bank staff calculations



## EU10 April 2011

### Summary of “In Focus” Notes

#### **Focus Note # 1 Fueling Growth and Competitiveness through Employment, Skills, and Innovation**

Growth and competitiveness through employment, skills, innovation and technology absorption can help EU10 countries to meet the targets set out in Europe 2020 - A European strategy for smart, sustainable, and inclusive growth. EU10 countries have undertaken important reforms in many areas but are now looking to strengthen their growth agenda as the crisis has harmed potential growth. The Focus Note lays out key reforms in the areas of employment, skills development, innovation and technology so as to accelerate convergence to the EU15 and meet the Europe 2020 targets.

#### **Focus Note # 2 Household and Government Responses to the Global Financial Crisis**

The global financial crisis had a profound impact on labor markets. The focus note presents findings from World Bank monitoring efforts during 2009 and 2010 to track the impacts of the global financial crisis on families and to assess governments' responses to mitigate such impacts. Deteriorating macroeconomic conditions led to deteriorating household welfare, as unemployment increased and as workers who kept their jobs took home smaller paychecks. Government programs helped to cushion the impact on poor households, but payment delays and low coverage reduced the effectiveness. Strengthening automatic stabilizers, adjusting program parameters and starting new programs can help Governments improve crisis responses in the future.



EU10 April 2011

In Focus: Fueling Growth and Competitiveness through Employment, Skills, and Innovation

## Introduction<sup>1</sup>

Growth and competitiveness through employment, skills, and innovation and technology absorption are vital for enabling member countries of the European Union (EU) to meet the targets set out in *Europe 2020 - A European strategy for smart, sustainable, and inclusive growth*. EU10 countries have undertaken important reforms in many areas but are now looking to renew their growth agenda so as to accelerate convergence to the EU15 and meet the Europe 2020 targets (Table 4).

Table 4. Selected Europe 2020 Indicators, 2009

Targets	BG	CZ	EE	HU	LT	LV	PL	RO	SI	SK	EU27
75% of the population aged 20–64 should be employed	68.8	70.9	69.9	60.5	67.2	67.1	64.9	63.5	71.9	66.4	69.1
3% of the EU's GDP should be invested in R&D	0.5	1.5	1.4	1.2	0.8	0.5	0.7	0.5	1.9	0.5	2.0
The share of early school leavers should be under 10%	14.7	5.4	13.9	11.2	8.7	13.9	5.3	16.6	5.3	4.9	14.4
At least 40% of 30–34-year-olds should have completed tertiary education	27.9	17.5	35.9	23.9	40.6	30.1	32.8	16.8	31.6	17.6	32.3
Reducing the number of people at risk of poverty or exclusion by 20 million in the EU	3,511	1,448	312	2,956	985	834	10,454	9,112	339	1,061	113,752

Source: Eurostat, World Bank staff calculations

Note: The remaining target of the Europe 2020 Strategy is the “20/20/20” climate/energy target.

## Macroeconomic Setting

### Key issue:

The fallout from the global financial and economic crisis and volatile financial markets may weaken future growth potential of the EU10 countries, also relative to other high and upper middle-income countries.

To reach the Europe 2020 targets of smart, sustainable, and inclusive growth, the largest economic payoff would likely come from:

- Raising employment rates;
- Raising skill levels; and,
- Increasing technology absorption and fostering innovation.

The fast catching-up of EU10 countries to EU15 income levels was interrupted by the global crisis, which hit the region hard. In 2009, GDP of the EU10 fell by 3.6 percent, slightly less than the EU15 but much more than the rest of the world's economy. Such a strong impact of the crisis on the region is attributed to different factors, among which the unprecedented current account imbalances experienced before the crisis in some EU10 countries, rapid expansion in credit, asset bubbles in non tradable sectors, large reliance of external inflows of capital, and often loose fiscal policy. While the recovery started in early 2010, it remains fragile and uneven. However, the pace of economic recovery

<sup>1</sup> This Focus Note is based on the World Bank technical note “Europe 2020 – The Employment, Skills and Innovation Agenda” from March 2011.

is slower than in other parts of the world economy, especially relative to other high and upper middle-income countries such as Korea, Brazil, Chile or Malaysia. Private investment in the EU10 is held back by increased credit spreads, decreased capital inflows, low capacity utilization and large uncertainty about future macroeconomic developments.

**A new set of reforms can enable the EU10 to enhance growth prospects and achieve targets under the Europe 2020 Strategy.** The reform agenda is extensive and includes strengthening fiscal sustainability, increasing labor force participation, improving education and skills, and enhancing technology absorption and innovation. There also remains an important agenda to cut red tape and reduce regulatory costs for doing business, which according to the most recent World Bank Doing Business 2011 report are, despite the ongoing improvements, still higher than in many advanced economies. The crisis has reemphasized the importance of these reforms. In order to reach the Europe 2020 targets the largest economic payoff would likely come from (a) increasing employment rates in the EU10 region to the 75 percent EU target, (b) enhancing human skills, and (c) increasing technology absorption and fostering innovation.

## Raising Employment

### Key issue:

- Low employment rates in EU10 countries, particularly among older and less-educated workers, women, and minority groups such as Roma

### Selected Policy Directions:

- Enhance the productivity and employability of older workers
- Evaluate the age of retirement and worker disincentives resulting from pre-retirement benefits
- Evaluate the eligibility conditions for the receipt of disability pensions
- Evaluate the Employee-Employer Tax Wedge
- Encourage higher female labor force participation and evaluate pro-natalist and others policies in this context
- Promote labor market opportunities of poor and vulnerable groups, including Roma, Europe's largest minority group
- Evaluate whether labor market opportunities can be enhanced through active labor market programs

**EU10 countries have low employment rates.** Despite improvements driven by economic expansion and structural reforms, the median employment rate for the region stood at 67 percent in 2009, lagging behind the EU15 median at 71 percent and below the 75 percent target of the EU 2020 Strategy. Employment rates in Hungary and Romania, which only slightly exceeded 60 percent, were one of the lowest in the EU-27. Employment rates exceeded the EU15 average only in the Czech Republic and Slovenia.

**Low employment rates in EU10 countries translate into lower output and incomes.** Model-based estimates suggest that raising employment to the Lisbon target of 70 percent employment rate for 15-64 year olds, roughly comparable with the current EU2020 target of 75 percent for 20-64 year olds, could increase the level of GDP in 2025 in selected EU10 countries by 15.6 percent, 11.0 percent and 5.5 percent for Poland, Romania and the Czech Republic, respectively. In the case of Poland, this would translate into additional growth of around 0.9 percentage points a year until 2025; for the Czech Republic a higher employment rate could boost growth by around 0.4 percentage points a year (Table 5).

**Table 5. Result of achieving employment target of 70 percent on GDP levels in selected EU10 countries by 2025**

GDP	Cumulated effect	Annual effect
PL	15.6	0.9
CZ	5.5	0.4
RO	11.0	0.6
EU27	6.3	0.4

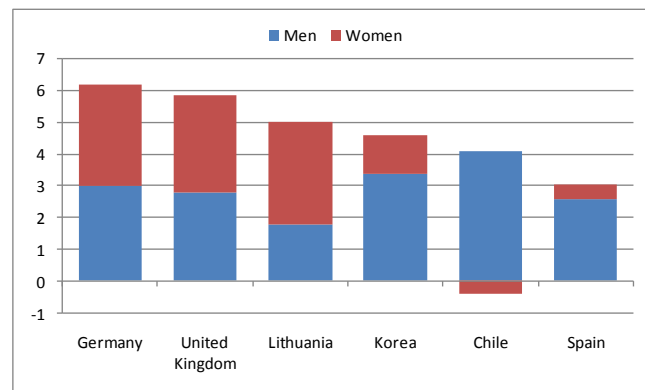
Source: Lejour, Verweij, and ter Weel 2008.

Notes: Relative changes from the baseline

The main potential for increasing labor force participation is among older workers and women. Reducing inactivity among older workers, especially women, would have the biggest impact on the growth. If older workers in Poland were as active as they are in Germany, then the Polish GDP would be up to 6 percent higher (Figure 56). A higher employment rate is also critical given population aging and the growing life expectancy. The ratio of the population 65 and older to the number of people aged 16-64 will double in Poland in the next 25 years from about 30 percent to 60 percent.

The governments in the EU10 region are aware of the high costs of inactivity among older workers and of the fact that it is largely due to the design of the social security system. There is still room to promote longer working lives through further adjusting selected social security benefits so that they do not keep workers from being active in the labor market. Also, an equalization of the retirement age for both men and women—and a gradual future adjustment in line with changing life expectancy—would be important policy tools to counter the effect of the demographic decline in EU10’s labor force.

**Figure 56. Increase in Poland’s GDP if inactivity among older workers in Poland were reduced to the level of selected countries, percent of 2008 GDP**



Source: Eurostat, World Bank staff calculations

## Skills

### Key issues:

- Low skill levels hamper growth, innovation, and social inclusion.

### Selected Policy Directions

- Expand early childhood development programs to universal coverage
- Build a strong skills foundation for all through ambitious approaches to schooling
- Strengthen access to and efficiency of tertiary education through higher education financing reform and data collection as a basis for system steering
- Establish and strengthen lifelong learning systems

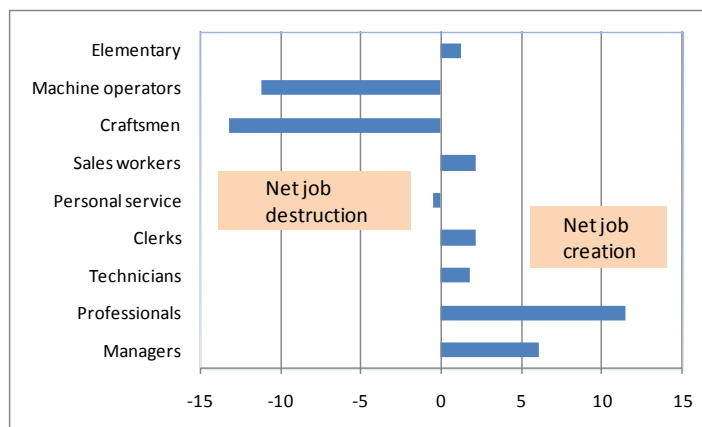
Skills will continue to be an important driver of individual success, social cohesion and economic growth. While education systems used to focus on knowledge as a commodity to be acquired through repetition and rote learning, with an emphasis on early tracking and dead ends of the education systems, the technological revolutions of the past decades have shown that this approach to the

transmission of knowledge is not going to prepare students and societies for future challenges. Students will need to be highly proficient in accessing, assessing, organizing, consolidating, and communicating knowledge, and this demands a different skills set than previously.

**The labor market sends a strong message on the types of skills needed and on those that are becoming obsolete.** The 2010 EC Expert Group report on “New Skills for New Jobs: Action Now” identifies four priorities for action: (a) investing in skills requires the right incentives for individuals and employers; (b) the worlds of education, training, and work need to be brought together; (c) the right mix of skills needs to be developed (job-related as well as transferable); and (d) future skills needs have to be better anticipated.

In Poland, surveys indicate that employers see inadequate workforce skills as one of the main constraints to the activity of their firms, with innovative firms tending to be more affected by skill shortages than traditional firms. Job reallocation and the associated change in the occupational structure of employment have given rise to a skills mismatch in Poland, with a surplus of blue collar workers and a shortage of highly skilled white collar workers, especially professionals (Figure 57). Employers highlight the need for enhanced generic (“soft”) skills, job attitudes, and behavioral skills, such as responsibility, reliability, motivation, commitment, communication skills, and the ability to work in a team.

Figure 57. Newly created jobs vs. old jobs in 2009



Source: Central Statistical Office, World Bank staff calculations

**Skills acquired through formal education can become obsolete if not sufficiently updated.** EU Member States strive to strengthen the quality of education provided and to ensure equitable learning as part of the formal education system. In addition, Member States will benefit from recognizing prior learning (including non-formal and informal learning) and provide second chances to those who could not take advantage of their education the first time around. Box 5 describes how Finland and Ireland created successful lifelong learning systems. Particular attention needs to be devoted to what could be called the “learning poor” since, for a variety of reasons, those who would profit most from further learning and up-skilling do not sufficiently access it.

#### Box 5. Finland and Ireland as European Good Practice Examples for Lifelong Learning

In Finland, 23.1 percent of the working-age population participates in lifelong learning annually (the system is also open to pensioners). In the state budget, about 13 percent of the Ministry of Education’s expenses go to adult education, but the majority of training is financed by employers (Tahvainen 2006).

In Ireland, participation is somewhat lower, at 7.5 percent, and the policy focus is directed at labor market outcomes (EIS 2008). Access to lifelong learning and competence acquisition is designed to be **simple, cost-effective, and adapted to individual needs.**

Finland lowered the threshold to adult education and training by means of individual study programs (MoE-FIN 1999; Tahvainen 2006). Persons already active in the workforce are given opportunities to study toward competence-based degrees. Duration of courses is kept reasonable to prevent the length of study from becoming an obstacle. Unemployment benefits are tied to training. The most difficult challenge is reaching the poorly educated and those at the biggest risk of unemployment and social exclusion, which receive particular attention (TF-IRL 2002).

**The supporting institutions are also developed.** The system of public libraries in both Finland and Ireland provides valuable support to learners (TF-IRL 2002). **A variety of governance and financing**

**mechanisms are used.** Training is often planned, implemented, purchased, and financed together by the employer and the Labor Administration (Tahvainen 2006). The Labor Administration usually finances no more than 50 percent of the purchasing costs of the training, which is implemented by authorized education institutions. The use of study vouchers has been piloted as a useful mechanism for training that is not initiated and financed by the employer.

*Source: Adapted from World Bank 2009: Croatia's Convergence Report: Reaching and Sustaining Higher Rates of Economic Growth. In two volumes, vol. 2: Full report. World Bank, Washington, DC.*

## Enhancing Technology Absorption and Innovation

### Key issue:

- Inefficient R&D spending slows economic growth in EU10 countries

### Selected Policy Directions:

- Redesign public R&D funding systems to emphasize applied research and collaboration with industry
- Reform state-owned research institutes, including through commercialization and employee-led privatization, to better align their outputs with the needs of industry
- Strengthen the public institutional framework for R&D and innovation
- Increase financing for start-up and innovative companies

**Innovation and technology absorption are critical to support growth in the new post-crisis environment.** Given the likely decline in the potential growth rate in EU10 countries in the medium term, mostly due to lower private investment and increasingly negative demographic trends, returning to pre-crisis GDP growth rates and reducing the permanent loss in income resulting from the crisis will require faster productivity growth driven by innovation and technology absorption.

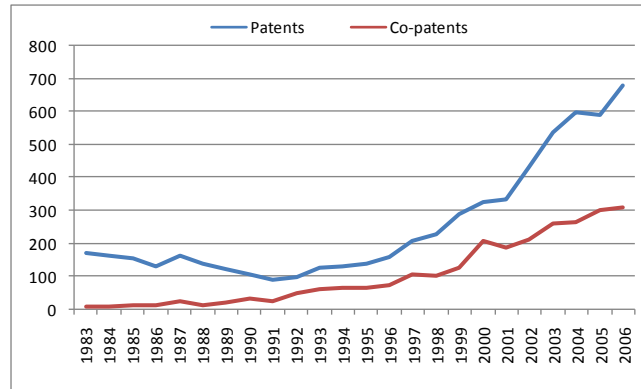
**Growth in EU10 in recent decades has been based on capital accumulation.** In the longer term, however, growth is dependent on technological change in addition to factor accumulation. Growth will be mainly driven by diffusion and absorption of technologies that are new to the firm or new to the country but not new to the world.

**But technology absorption is not automatic.** It requires a favourable investment climate, an educated workforce, and some research and development (R&D) on the part of absorbing firms. High quality of human capital and strong skills are particularly critical for technology absorption.

**EU10 countries spend little on R&D, and there is scope for significant efficiency gains.** All EU10 countries are classified as low spenders with poor results in terms of the value and efficiency of public spending on R&D based on the classical proxies for R&D output, such as patents and publications. Other rankings, such as the European Innovation Scoreboard or the Global Competitiveness Report, provide similarly low scores for innovation performance in EU10 countries. In addition, private R&D spending in EU10 countries, which tends to be more efficient than public spending, represents only 30 percent of the total spending. In developed countries this proportion is reversed, with private spending representing more than two-thirds of the total.

**A promising option for EU10 countries lies with promoting international collaboration through provision of specific financial incentives for co-patents.** (Figure 58) The share of co-patenting compared to indigenous patenting is rising in the EU10, but not as fast as in European comparators, let alone in countries that are global leaders. Co-patents play a role in promoting higher-quality knowledge spillovers due to the more competitive, thoroughly reviewed, and cited nature of international co-patents.

**Figure 58. Number of patents and co-patens applications in EU10 countries, 1983-2006**



Source: Eurostat, World Bank staff calculations

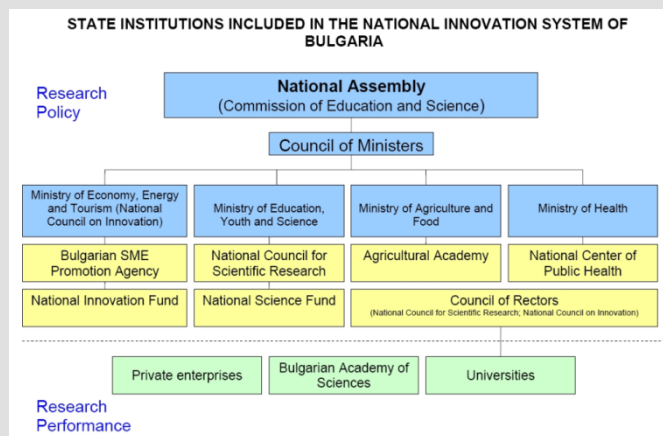
Completing the restructuring of research and development institutes (RDIs) presents an equally important avenue to spur innovative activities in the country. RDIs have diversified their competitive R&D income portfolio, through increased revenues from private firms, to a greater extent than other research sector entities. However, they are still heavily reliant on budgetary funds. In addition, in many EU10 countries, public policies on R&D and innovation are designed and implemented by a variety of institutions, leading to overlapping objectives, strategic incoherence, and poor utilization of public resources (Box 5).

**Box 6. Institutional Framework for R&D and Innovation in Bulgaria**

Public policy on R&D and innovation in Bulgaria is designed and implemented by different institutions. The Ministry of Education, Youth and Science and the Ministry of Economy, Energy and Tourism lead major reforms and programs. At the same time, the Council of Ministers serves as a forum for coordination between ministries, and where R&D and innovation initiatives can be debated and agreed before submission to Parliament. As in many countries, this fragmentation of responsibilities has made it difficult to develop an integrated national STI strategy, and it has resulted in problems such as running programs with overlapping objectives, limited coherence and lack of rationalization of resources. Improving the articulation of the institutional framework would help Bulgaria to fully exploit the opportunities provided by EU funds that support competitiveness and human resource development.

The Ministry of Economy, Energy and Tourism and the Ministry of Education, Youth and Science are the government bodies that play the dominant roles in developing Bulgaria’s national research, innovation, and technology strategy and policy.

Several other entities are involved but with a more narrow scope. The Ministry of Economy, Energy and Tourism (MoEET) is responsible for the formulation of innovation policy and strategy in the business sector. The National Council for Innovation is a consultative body to the MoEET and includes representatives from the business sector, academia, the scientific community, and nongovernmental organizations.





The Bulgarian SME Promotion Agency (BSMEPA), which reports to the MoEET, prepared and now implements the measures of the National Innovation Strategy, including the administration of the National Innovation Fund established in 2005.

The Ministry of Education, Youth and Science (MEYS) is responsible for national research policy. The National Council for Scientific Research is the coordinating body for research policy and is comprised of representatives from ministries and scientific organizations. The National Council for Scientific Research participates in the preparation of and approves the National Strategy for Research and Development, and defines funding priorities for the National Science Fund, established by the MEYS in 1990. A number of other ministries also play a role in innovation policy.

*Source: World Bank (2010): "Enhancing Bulgaria's Competitiveness and Export Performance through Technology Absorption and Innovation." Goddard, Gabriel, and others. World Bank, Washington, DC. Mimeo, unpublished, graph comes from ERAWATCH*

## Main Findings and Recommendations

Raising employment, improving skills, and enhancing technology absorption and innovation could help offset the projected decline in potential growth and put EU10 countries back on track for even higher growth rates. Achieving these goals requires policy actions in the following three areas:

### ***Raising employment:***

- Raise economic activity among older workers (and older female workers, in particular), through reform of social security benefits and development of flexible forms of employment, particularly of part-time employment, increasing skills, and raising the retirement age

### ***Closing the skills gap and reforming education:***

- Make the Bachelor's degree an important part of the future lifelong learning system.
- Develop a learning outcomes approach for all levels of learning, with more emphasis placed on generic skills as a basis for labor mobility.
- Broaden the mission of tertiary education institutions and make them more efficient through performance-based financing.

### ***Refocusing technology absorption and innovation:***

- Channel public funding to support co-inventions in addition to domestic inventions, to promote international collaboration and knowledge spillovers.
- Reform the RDI financing system to strengthen applied research and links with the needs of small and medium enterprises and industry.



EU10 April 2011

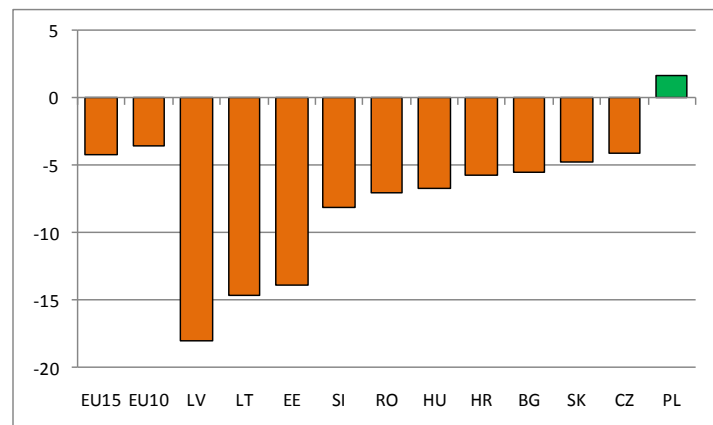
In Focus: Household and Government Responses to the Global Financial Crisis

## Introduction<sup>2</sup>

The global financial crisis had a profound impact on labor markets. This focus note presents findings from World Bank monitoring efforts during 2009 and 2010 to track the impacts of the global financial crisis on families and to assess governments' responses to mitigate such impacts. While other transmission channels through financial markets (reduced access to credit, eroding savings, and sinking asset values), product markets (declining growth and production, and relative price changes) and government services (lower education, health and social protection services) are also important, this analysis focuses on labor markets as perhaps the most salient transmission channel. It also discusses how policy responses to future crises can be improved. The focus note draws on information from crisis response surveys, conducted in Bulgaria (February and March 2010),<sup>3</sup> Latvia (January to March 2010); and Romania (July 2009), and administrative sources from EU10 and Croatia (EU10+1).

The recession during the global financial crisis was particularly stark in the EU10+1. The crisis led to a contraction of 0.6 percent in global GDP, the first output reduction since World War II. The EU10+1 region contracted more than other regions. Estonia, Latvia and Lithuania were among the hardest hit countries in the world with GDP declining by between 14 and 18 percent (Figure 59). The large impact reflects the large dependence of EU10+1 growth on global capital and trade flows. During the boom years, a domestic demand boom fueled by large capital inflows, while exports expanded along with global trade. The sharp compression of domestic demand, along with the drop in capital inflows and global trade, led to a stark reduction in GDP in 2009.

Figure 59. Real GDP growth in EU10 countries in 2009



Source: Eurostat, World Bank staff calculations

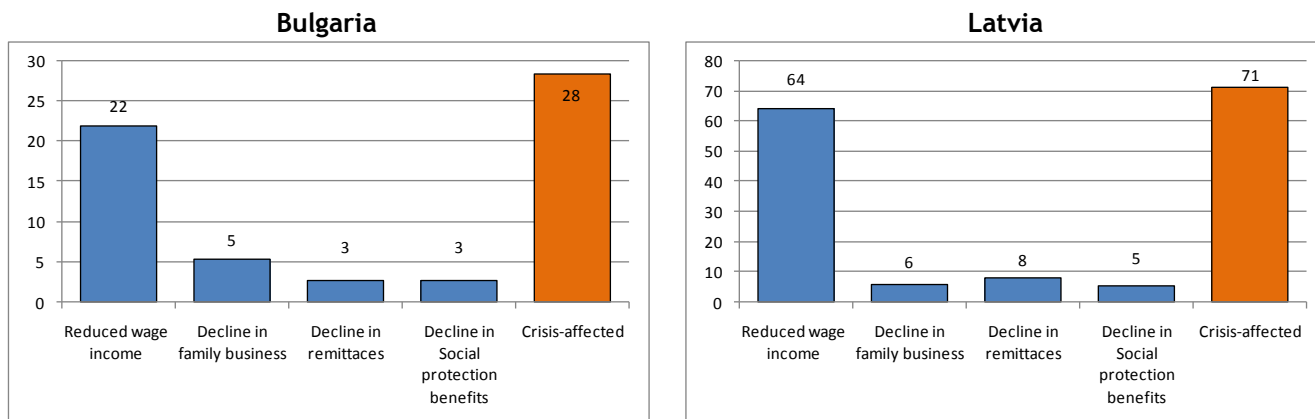
## Labor Market Impacts

The economic recession worsened labor market outcomes. Households in Bulgaria and Latvia reported in the crisis response surveys that the labor market deterioration was the main transmission channel of the crisis to families (Figure 60). Firms laid off workers, halted hiring, and reduced their wage bill. Businesses adjusted their wage costs in different ways, depending on firing costs, government policies, labor union strength, and perceptions about the length and depth of the crisis. They included lowering wages, reducing hours of work, shifting workers from permanent to temporary status, or putting workers on administrative leave.

<sup>2</sup> This note was prepared by Mohamed Ihsan Ajwad and Laurie Joshua (consultant). The note is based on World Bank (2011), which analyzed the household and government responses to the 2009 crisis in Eastern Europe and Central Asia.

<sup>3</sup> The crisis had its heaviest impacts in Bulgaria throughout 2009. Two surveys, that were carried out later, show that the respondents saw signs of improvement in 2010.

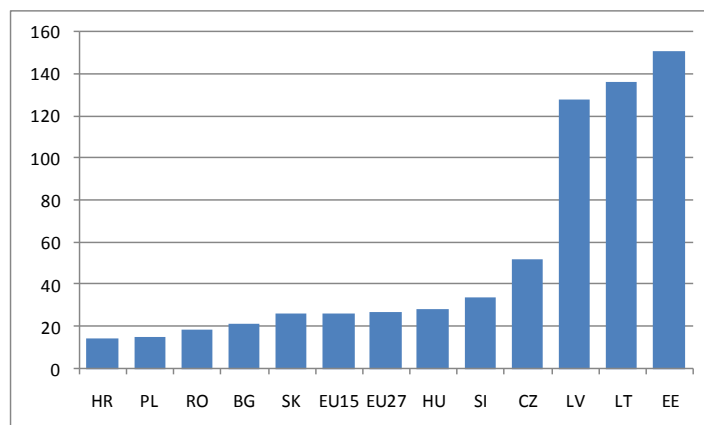
Figure 60. Crisis response survey - percent of households reporting a shock to household income in 2009 relative to 2008



Sources: World Bank (2011)

Unemployment rates rose in all EU10+1 countries between 2008 and 2009. The increase was largest in Estonia, the Czech Republic, Latvia, and Lithuania (Figure 61). The share of men among registered job seekers increased, likely because the hardest hit sectors of the economy were typically the male dominated construction, retail, and manufacturing sectors.

Figure 61. Increase in unemployment rates in 2009, percent change



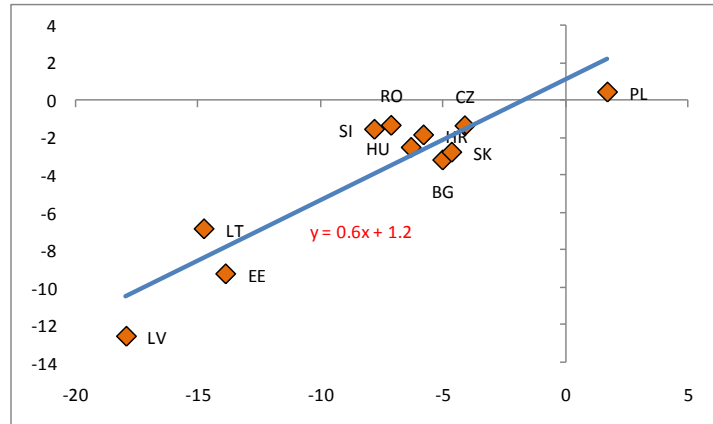
Source: Kuddo (2010), based on labor force surveys.

Unemployment increases would have been even higher without wage adjustments. Workers who kept their jobs often were faced with smaller paychecks. According to the crisis response surveys, six times as many workers took home smaller paychecks than lost their jobs in Bulgaria; and three times as many workers in Romania.

The job market worsened especially for the youth. Unemployment among 20 to 24 year-olds reached record highs. The ratio of youth unemployment to overall unemployment rate increased in most countries between 2007 and 2009, and especially in the Czech Republic and Slovakia. Across the EU10+1, youth unemployment rates are more than 150 percent higher than overall unemployment rates. Job losses were concentrated among the youth, as they often have flexible labor contracts and have less company-specific human capital. As a result, they become the first ones to be fired during economic downturns. At the same time, the flexibility ensures also that the youth are the first workers to be rehired during the current recovery (Koettl et al 2011).

Across EU10+1, a 1 percentage point decrease in GDP growth was associated with a 0.6 percentage point decrease in employment (Figure 62). However, there was wide variation in the employment impact of a given GDP contraction depending on labor regulations, wage rate flexibility, hours of work changes, and other factors that led to either extensive or intensive labor market adjustments. Relatively low worker firing costs in Estonia and Latvia led to a higher employment contraction during the downturn, although they might also facilitate a faster job recovery during the upturn. Lithuania and Estonia had similar rates of GDP contraction in 2009, but the employment contraction in Estonia was much larger than the employment contraction in Lithuania. One reason for the differential employment contraction was that in Lithuania, wages adjusted more than in Estonia, leading firms to control their wage bill without firing as many workers.

Figure 62. The employment growth to GDP growth relationship varied across countries, 2008-2009



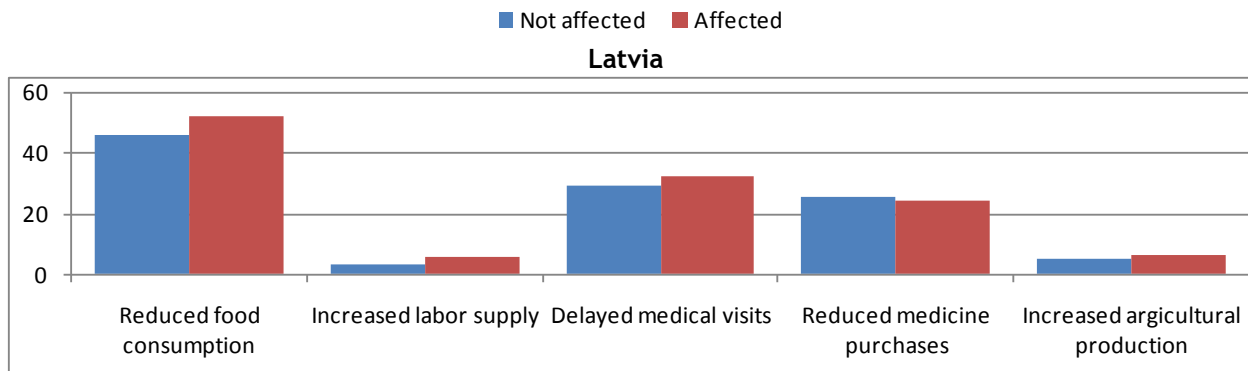
Sources: World Bank (2011) based on IMF World Economic Outlook Database, October 2010, and ILO LABORSTA Database.

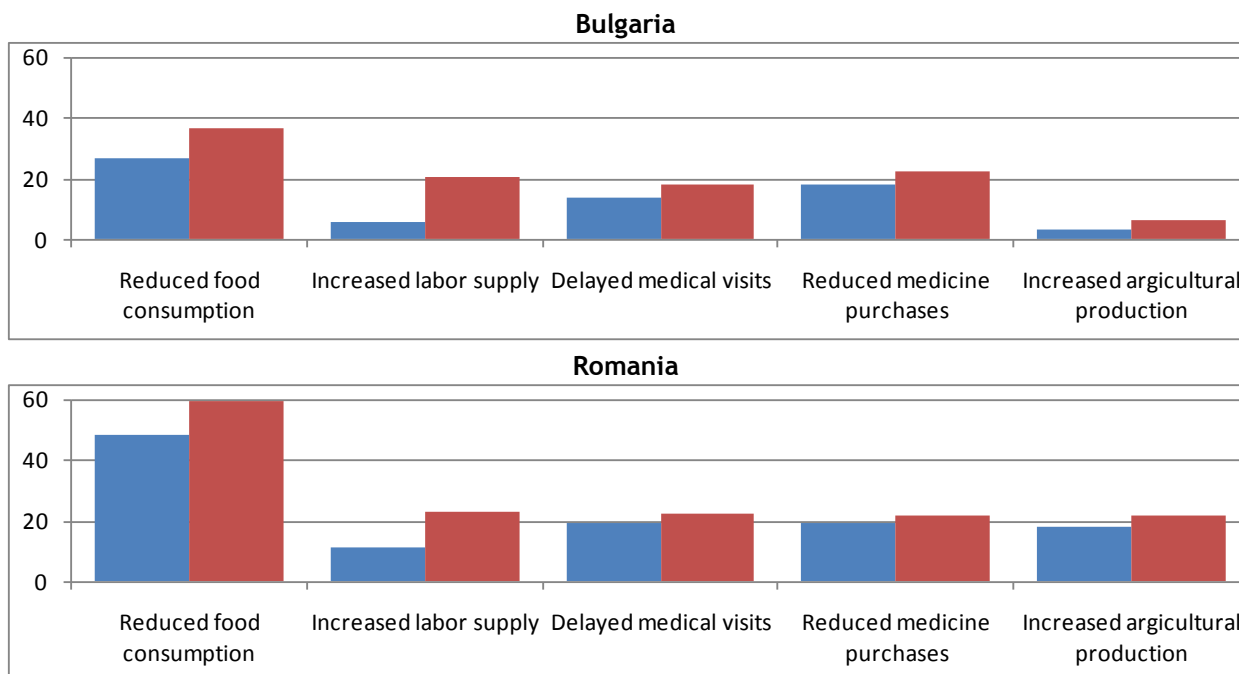
Even as the recovery strengthens, there is likely to be a lag before unemployment starts to drop. Employment usually lags output because firms wait to see if a recovery is permanent before committing to hiring new people. In Slovenia, unemployment rates only started to fall one year after GDP had started to recover, while in the Czech Republic and Hungary unemployment started to decrease only 3 quarters after GDP growth had turned positive.

### Household Responses

Faced with job losses and smaller paychecks, households sought to generate additional incomes and lower expenditures. Households affected by the crisis increased labor supply, but with varying success; increased their levels of indebtedness in the absence of savings; reduced expenditures on food - with some households reducing both the quality and quantity of food consumed; and reduced health care expenditures exposing themselves to higher risks of illness and disabilities (Figure 63).

Figure 63. Crisis response survey - ways of coping with the crisis, percent of households





Source: Azam (2010)

Fortunately, most families continued to send their children to school, even though they reduced education-related expenditures on transportation, basic supplies and tutoring. The surveys in Bulgaria and Romania found that the crisis did not lead to many households placing education attainment at direct risk. Children in crisis-affected households were not withdrawn from schools. Children were also not moved from private schools to public schools more than prior to the crisis. School enrolment was high due to low schools fees or free schooling, and the widespread absence of child labor.

### Social Policy Responses to Protect Households

Most EU10+1 countries implemented or scaled up policies and programs to protect human welfare and long-term human capital. Governments would like to prevent lasting impacts of the jobs crisis. Past crises have shown that long term unemployment or inactivity tend to persist long after recovery has set in (EU 2010). The loss of family income caused by unemployment deeply affects all those who depend on it. Young people still in schools or seeking to enter the labor market may also be affected by the drop in their parents' income.

Policy responses varied in scale and emphasis. Government stepped up spending on household and labor market measures. The increase in 2009 ranged from less than 0.5 percent of GDP in Hungary, Lithuania and Bulgaria, to around 0.7 percent in Slovakia and Slovenia, and to 1.2 percent in the Czech Republic and to 1.8 percent in Poland (EC 2009b). Countries also placed different emphasis on support for households versus labour market measures. The extent to which countries were able to undertake these measures depended on existing instruments to respond and their overall fiscal space. Governments deployed four main tools to varying extents (Table 6):

- Labor market measures to address deteriorating labor market conditions. Programs included those to support the currently employed, facilitate job creation, provide income support, enhance employability, and improve job matching.
- Social assistance programs to protect poor households from falling below minimum welfare levels.
- Pension policies adapted to respond to the crisis.

- Measures were enacted to maintain human capital to ensure access to education, promote health care utilization, and uphold sustainability of Health Insurance Funds (HIFs) while protecting the poor.

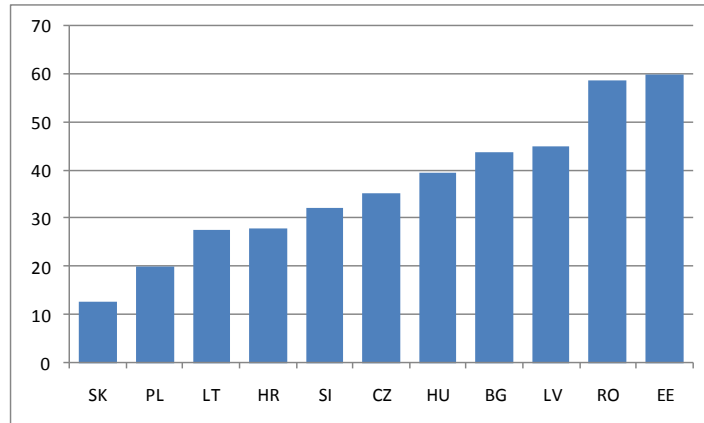
**Table 6. Governments responses to mitigate the social impacts of the crises**

Measures	Mechanisms	Applications	Country applications
Labor market	Support to currently employed	*Wage subsidies, social security tax reductions for currently employed	SK, SI, PL, BG, CZ
		*Shorter working schedules	HU, PL, SI
	Facilitation of job creation	*Start-up support or business tax reduction	BG, EE, PL, SI
		*Wage subsidies (for new entrants) / social security tax reductions	BG, SK, EE, LT, HR
		*Apprenticeships	LT, SI, CZ
	Income Support	*Unemployment benefits (extension of duration, increase in amounts)	All countries
		*Public works	LT, BG, HR, HU
		*Training for pay linked to conditional cash transfer	SI
	Enhancing employability	*Retraining	BG, PL, CZ
	Improving job matching	*Training	All countries
		*Job search	All countries
		*job fairs, job brokerage	All countries
		*Mobility allowances	SI, BG
*New beginning programs		LT, SI	
Social Assistance	Launch, or adjustment of parameter, of last resort social assistance programs	*Guaranteed Minimum Income (GIM) schemes	RO, HU, BG, LV
		*Categorical benefits	CZ, PL, RO
		*Tax thresholds for families, children etc	LV, HU, RO, PL, SI
Social Insurance	Parameter adjustments to minimum pensions	*Parameters adjusted to disability, sickness, maternal survivor benefits	PL, HU, RO, LT
Education	Ensure access to education	*Protect vulnerable students	BG, PL
		*Redirect funds to programs that target the poor	BG, SI
		*Exempt poor students from out of pocket expenses	BG, SI
		*Expansion of pre-school	PL, HU, RO, LT
Health Care	Maintain health care utilization	*Increase health care coverage	LV, PL
		*Redirect resources to services valuable to poor people	LV, BG, LT, SI
		*Exempt out of pocket expenses	LV, LT
	Protect Health Insurance	*Protect core health spending for primary care and prescription drugs	CZ, BG, SI

Source: EU (2009c), Joshua (2010), World Bank (2011)

**Unemployment insurance helped to mitigate the impact of the crisis.** Unemployment insurance was among the first benefits to reach families affected by the crisis though job losses. Unemployment insurance schemes, established before the crises, are likely to have prevented large increases in poverty. For example, simulations for Latvia show that the unemployment insurance benefit system lowered the poverty increase by 3 percentage points (Ajwad, Haimovich, and Azam 2010). However, the coverage of unemployment insurance was low in a number of countries (Figure 64), as many people were ineligible for unemployment benefits.

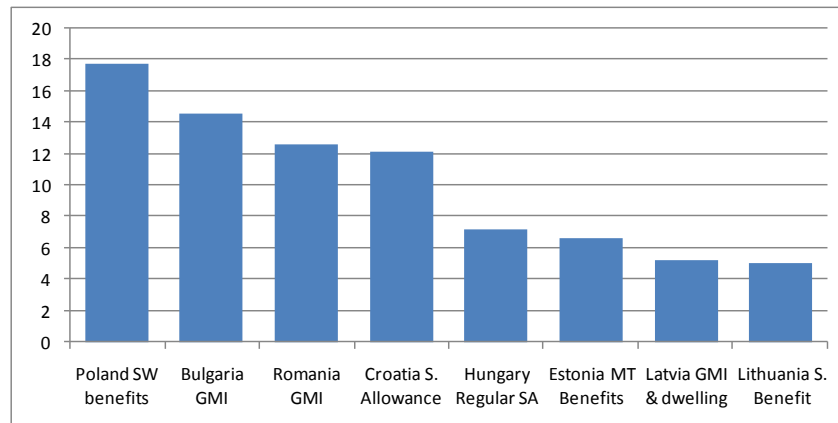
**Figure 64. Percentage of registered unemployed who are receiving unemployment insurance benefits, December 2009**



Source: Kuddo (2010), based on labor force surveys.

**Last resort social assistance schemes also played a significant role for households whose incomes fell below the poverty line.** Such programs are often well targeted to poor people in the EU10+1 region by global standards, but they make up only a small share of overall non-contributory social assistance spending and cover a small share of the population (Figure 65).

**Figure 65. Last Resort Social Assistance coverage of the poorest quintile**



Source: Kuddo (2010), based on labor force surveys.

**Some countries used minimum pensions as a crisis response.** Although at a high cost, the broad coverage of pension schemes can make them more effective as the last-resort source of income during an economic contraction than other safety net programs. In Romania, for example, the increase in pensions could well explain the small decline in poverty between 2008 and 2009 despite the 7 percent

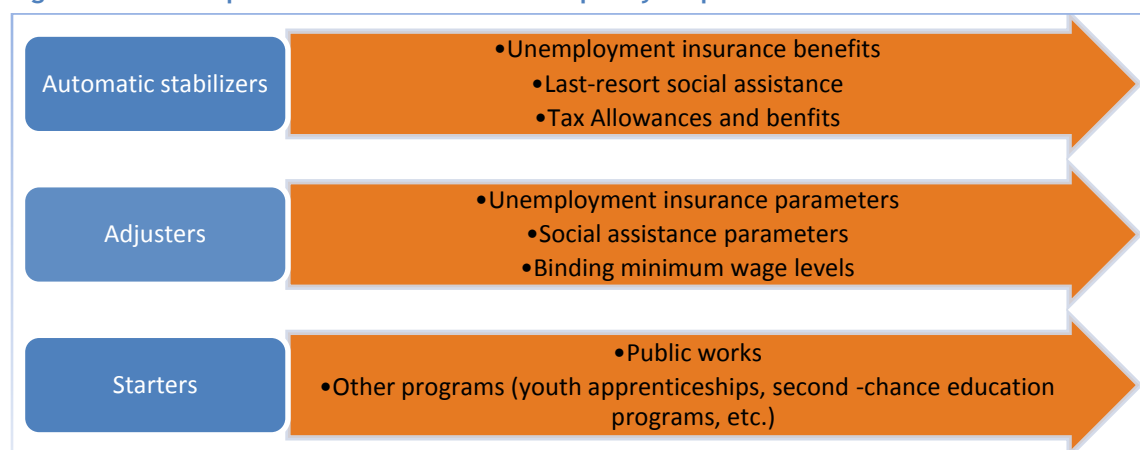
GDP contraction. The increase in pensions, however, also contributed to a steep deterioration in the country's fiscal balance.

During the crisis, a number of countries made use of European Social Funds (ESF) to enhance support to the unemployed, to combat rising unemployment and promote social inclusion of vulnerable groups.<sup>4</sup> Many countries focused their ESF interventions on maintaining the employability of the unemployed and helping them finding a new job as quickly as possible (Poland and Slovakia). Some measures supported by ESF funding also sought to keep people in employment, albeit often with shorter working hours, and preparing for economic recovery by investing in skills and qualifications (Czech Republic and Slovakia)<sup>5</sup>. Some countries also helped the most vulnerable who faced structural barriers in accessing the labor market (Romania) and some simplified ESF implementation arrangements to better respond to the crisis (Latvia and Poland).<sup>6</sup>

## Improving Responses to Future Crises

Effective crisis responses need to be fiscally responsible measures that are timely, targeted, and temporary. Timely measures inject money into the economy quickly to provide income support to families affected by the crisis. Targeted measures provide income support to people who are most affected by a downturn and hence would support at least a minimum welfare basket of goods and services for both the existing and “new” poor. Finally, temporary measures reduce or expire as the economy improves, and should not increase budget deficits in the long run. There are three pillars to an effective Social Policy crisis response: (i) automatic stabilizers, (ii) adjusters, and (iii) starters (Figure 66).

Figure 66. Three pillars to an effective social policy response to crises



Source: World Bank (2011).

<sup>4</sup> See European Commission (2009). The ESF accounts for almost 10 per cent of the €120 billion annual European Union budget. In addition, The *European Globalisation Adjustment Fund* (EGF), with up to €500 million per year, provided one-off, time-limited individual support to help workers who suffered redundancies. The EGF was modified in 2009 to respond more flexibly to the requirements of redundant workers. Modifications included the addition of the crisis itself as a qualifying condition; the increase in the intervention rate from 50 percent to 65 percent for applications introduced before the end of 2011.

<sup>5</sup> In the Czech Republic, an ESF co-financed budget of EUR 125 million was allocated to schemes subsidizing the wages and training costs of employees whose companies were forced to reduce their working hours. Two short-term working schemes ‘*Train yourself!*’ and ‘*Training is a chance*’, enabled companies to obtain reimbursement of training costs and salaries for their employees for the time they spent on training.

<sup>6</sup> In Latvia, priorities set in the ESF Operational Program (OP) were revised substantially in response to the challenges faced by Latvia due to the financial and economic crisis. This involved re-allocating EUR22 million to employment measures, and EUR16 million to social measures, including a local employment emergency program, short-term working combined with training, and retraining of teachers in the context of education reform



## Automatic stabilizers

**Automatic stabilizers generally perform well in EU10+1 countries by global standards.** The programs are designed to be temporary in that they expire after several months of benefit receipt. Unemployment insurance responded well to the crisis and was often the first benefit that families affected by the crisis received. However, unemployment insurance only reaches a minority of those who are unemployed. The coverage of unemployment insurance would have to increase to make it a broad based automatic stabilizer. For last resort social assistance, many countries can benefit from improving the agility of the targeting mechanism, upgrading safety net benefit administration by phasing in automated processes, and placing the burden of financing more on central rather than local governments.

## Adjusters

**Some judicious policy adjustments during a crisis could improve the crisis response.** Three sets of parameters are identified in this note. First, unemployment insurance benefit amounts (Estonia), duration of payout (Latvia, Poland and Romania), and eligibility rules (Latvia) can be altered when moral hazard risks are reduced during the downturn. Second, last resort social assistance program performance can be improved and guidelines can be altered to increase coverage (Bulgaria, Latvia, Romania and Slovakia), benefit amounts can be increased (Bulgaria, Latvia, Romania and Poland), and the financing burden can be altered to acknowledge local government fiscal positions (Latvia and Romania). In addition, countries could have relaxed activation conditions so that deserving people do not lose benefits or become trapped in a cycle of poverty at a time when jobs are scarce. Third, minimum wage rates can be adjusted downward to reduce layoffs among low-wage workers and to ensure that new entrants to the labor force (youth) have a fair chance at securing employment, while weighing tax revenue implications and the stimulus value of the lower minimum wage.

## Starters

**When existing safety nets cannot respond to the emerging vulnerable population, even when program parameters are adjusted, new programs could be started to reach uncovered people and protect household welfare.** For example, public works can be an effective countercyclical labor market program during covariate shocks, such as economic crises or natural disasters. Several EU10 countries, including Latvia, Czech Republic, and Slovakia, implemented public works programs to carry out maintenance and create community assets while reducing the swelling ranks of unemployed people by providing a minimum safety net.

**During crises, as information emerges about uncovered vulnerable groups, social programs could be launched to protect incomes and help households to avoid making decisions that would hurt long-term human capital accumulation.** The range of programs can vary considerably depending on the safety net and labor programs available in the country. These programs include youth apprenticeship programs, second-chance education programs, and mobility allowances. However, to minimize delays and to ensure effective program design, these programs also need to be planned ahead of time.

**Social policy responses require fiscal discipline, planning, and data.** In designing social policy responses, the implications for the budget position across the cycle are important to consider. Increasing the countercyclical social policy response can result in sharp government spending expansions during deep recessions, particularly when unemployment increases are large.

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