

FOCUS ON EUROPEAN ECONOMIC INTEGRATION

The Focus on European Economic Integration (FEEI) is a channel for communicating the OeNB's ongoing research on Central, Eastern and Southeastern European (CESEE) countries, thus reflecting a strategic regional research priority of the OeNB. Contributions to the quarterly FEEI include peer reviewed studies dealing primarily with macrofinancial and monetary integration as well as economic country analyses and cross-regional comparisons.

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Recent Economic Developments

Developments in Selected CESEE Countries:

After the Drought – Tentative Economic Stabilization in the CESEE Region^{1,2,3,4}

1 Introduction

After suffering an economic slump in early 2009, the Central, Eastern and South-eastern European (CESEE) region entered a period of stabilization in the second half of the year as external demand recovered and the inventory cycle started to turn. Despite remaining in negative territory throughout most of the region, annual GDP growth rates have been improving markedly since the second and third quarters of 2009. The most severe downturn in economic activity since the early stages of transition therefore seems to have come to an end.

Annual average growth in the region under review improved from –7.7% in the second quarter of 2009 to –1.2% in the fourth quarter. Hence, the recovery was more pronounced than in the euro area. Although the regional aggregate was strongly influenced by the positive readings in Russia and Turkey, the two biggest economies of the region, the trend of improving economic dynamics was broadly based and encompassed all countries except Bulgaria. Poland and Turkey posted positive annual growth in the final quarter of 2009; in the latter country, however, this is partly the result of the weak base of a year earlier.

Moderate improvement in economic dynamics since the third quarter of 2009 ...

Table 1

Real Gross Domestic Product

	2008	2009	Q3 08	Q4 08	Q1 09	Q2 09	Q3 09	Q4 09
Annual change in % (not seasonally adjusted)								
Slovakia	6.2	-4.7	6.8	1.6	-5.7	-5.5	-4.9	-2.6
Slovenia	3.5	-7.8	3.6	-0.8	-8.2	-9.2	-8.3	-5.5
Bulgaria	6.0	-5.0	6.8	3.5	-3.5	-4.9	-5.4	-5.9
Czech Republic	2.5	-4.2	3.4	-0.1	-3.9	-5.2	-5.0	-2.8
Hungary	0.6	-6.3	1.4	-2.5	-6.7	-7.5	-7.1	-4.0
Poland	5.0	1.7	5.5	2.6	0.9	1.2	1.2	3.3
Romania	7.3	-7.1	9.4	3.1	-6.2	-8.7	-7.1	-6.5
CESEE-7 average	4.5	-2.8	5.2	1.5	-2.5	-3.2	-3.0	-0.8
Croatia	2.4	-5.8	1.6	0.2	-6.7	-6.3	-5.7	-4.5
Turkey	0.7	-4.7	0.9	-7.0	-14.5	-7.7	-2.9	6.0
Russia	5.6	-7.8	6.6	0.0	-9.4	-10.8	-7.7	-3.8
Euro area	0.6	-4.1	0.7	-1.8	-5.2	-5.5	-3.8	-1.7

Source: Eurostat, national statistical offices.

¹ Compiled by Josef Schreiner with input from Stephan Barisitz, Markus Eller, Jarko Fidrmuc, Sándor Gardó, Mathias Lahnsteiner, Thomas Reiningger, Tomáš Slačik, Zoltan Walko and Julia Würz.

² Cutoff date: March 31, 2010 (April 22 for fiscal data). This report primarily focuses on data releases and developments from October 2009 up to the cutoff date, while selectively recalling earlier developments wherever necessary to put recent developments into perspective.

³ This report covers Bulgaria, the Czech Republic, Hungary, Poland, Romania, Slovakia and Slovenia as well as Croatia, Turkey and Russia. In terms of GDP at PPP, the region's economic output breaks down as follows: Bulgaria 2%, the Czech Republic 5%, Hungary 4%, Poland 13%, Romania 6%, Slovakia 2%, Slovenia 1%, Croatia 2%, Turkey 19% and Russia 46%.

⁴ For statistical information on selected economic indicators for CESEE countries not covered in this section (Albania, Bosnia and Herzegovina, FYR Macedonia, Serbia, Montenegro and Ukraine), see the Statistical Annex in this issue.

...driven mainly by an uptick in external demand...

The favorable momentum becomes more visible when looking at quarterly changes of seasonally adjusted GDP figures: According to these data, Slovakia, Slovenia, the Czech Republic, Poland, Turkey and Russia reported positive growth in the fourth quarter. No comparable data are available for Bulgaria and Croatia.

The economic cycle changed course mainly because global economic and financial conditions improved, which fostered external demand. World trade expanded again as of May 2009, and quarter-on-quarter growth in the euro area (the major trading partner of the region) turned positive in the third quarter. These improvements in the international environment are clearly visible in the development of GDP components throughout the region, where positive growth impulses originated mainly from the external sector. While in the early stages of the crisis, the external sector propped up growth primarily because imports shrank more strongly than exports, the export performance clearly improved in the second half of 2009 and positive growth rates were reported for many countries in the fourth quarter, among them the Czech Republic, Hungary, Bulgaria, Romania and Russia. At the same time, import demand also increased somewhat, in part driven by stronger exports due to the comparatively high import content of exports in CESEE, but generally remained depressed, as domestic (especially investment) demand stayed weak.

...and a turn in the inventory cycle

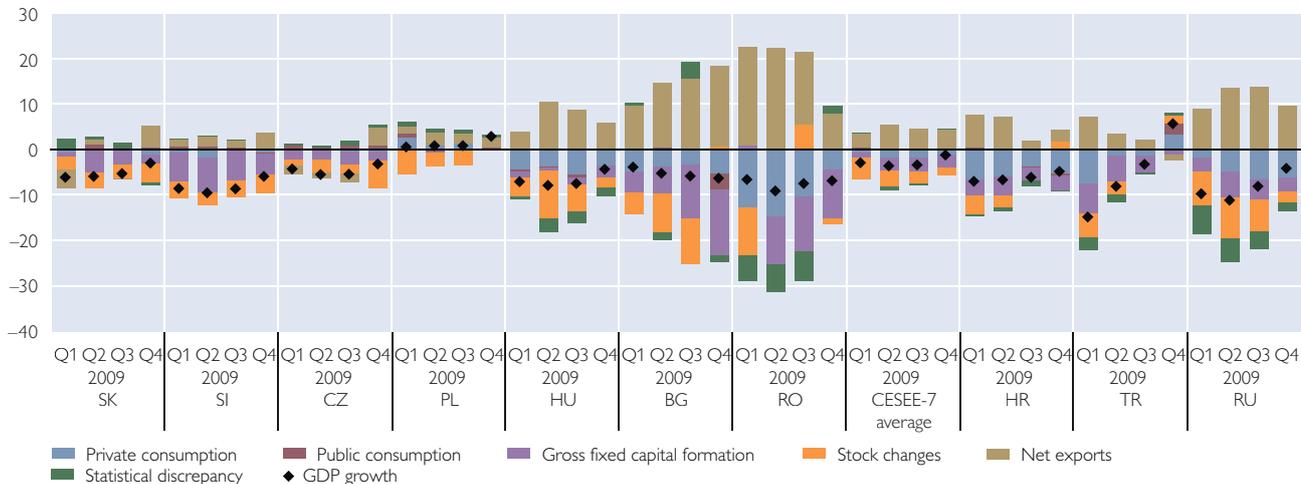
Some countries also display signs of a turn of the inventory cycle. After dampening GDP in early 2009, stock changes contributed positively to growth in Bulgaria, Croatia and Turkey. In Poland, Hungary and Russia, the negative growth contribution of the component decreased considerably. Again, this trend becomes more apparent when looking at quarterly changes in seasonally adjusted data: In the fourth quarter of 2009, stock changes supported growth in the Czech Republic, Poland, Hungary and Russia.

The other GDP components generally continued to act as a drag on growth. This is especially true for gross fixed capital formation, which weighed substan-

Chart 1

GDP Developments

Percentage points, GDP growth in %



Source: Eurostat, national statistical offices.

tially on economic dynamics in most countries due to low levels of capacity utilization, still generally weak demand and partly harder access to finance. Private consumption made a negative contribution in Hungary, Bulgaria, Romania and Russia as a result of deteriorating labor market conditions, decelerating and partly negative wage growth as well as rising debt burdens and necessary balance sheet repairs. Substantially positive growth contributions could be observed only in Turkey.

Activity indicators improved strongly. Especially industrial production has recovered from its lows in early 2009, when its annual declines were in the double digits throughout the region. The recovery gained speed in mid-2009, and by the end of the year industrial output was expanding again, in some cases strongly, on an annual basis in half of the countries under observation (Turkey, Poland, Slovakia, Romania and Russia). These industrial dynamics were fueled by the pickup in international demand and by companies' efforts to refill their empty stocks.

Industrial sector performs especially well

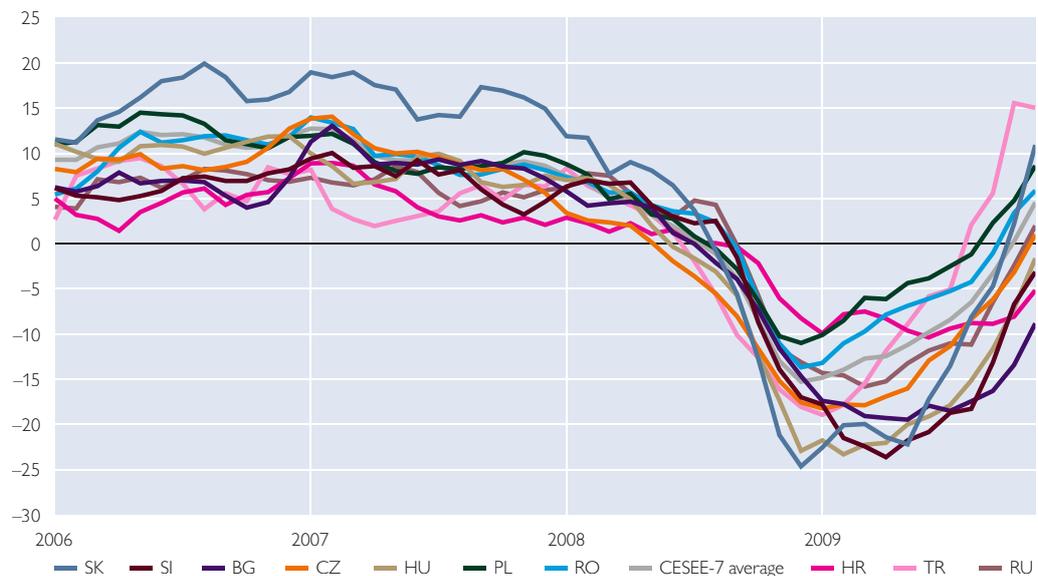
Other activity indicators, especially retail sales and construction output, developed less favorably, however. The contraction continued in both segments in the majority of countries in late 2009. Especially construction output remained depressed, in particular in Bulgaria, Romania, Slovenia and Slovakia, where double-digit decreases were measured for December 2009. Thus, the recovery of the industrial sector, which had been hit by the crisis at an early stage and especially hard, seems to be progressing faster than that of other sectors. The marked improvement of the Economic Sentiment Indicator since spring 2009 was also driven to a substantial extent by industry.

The stabilization of the economic dynamics observed in the second half of 2009 therefore relies heavily on the highly export-oriented manufacturing sector. Unless domestic demand picks up, growth in the region will not become self-supporting.

Chart 2

Industrial Production

Year-on-year changes, three-month moving averages



Source: Eurostat, wiiv.

Gradually improving economic outlook for CESEE; regional differences remain

The future development of economic dynamics abroad, especially in the euro area, the region's most important trading partner, will be crucial for the further recovery. Euro area growth itself, however, hinges strongly on temporary factors, particularly on monetary and fiscal policy stimuli, but also on the inventory cycle. The effects of these factors will fade out in the course of the year. According to recent forecasts, growth in the euro area is going to be sluggish in 2010 and 2011 and substantially lower than in emerging markets, but also lower than, for instance, in the U.S.A. The emerging markets are set to drive worldwide economic dynamics in the coming years and to bring growth of world output back close to pre-crisis levels in 2010.

According to recent forecasts for CESEE,⁵ growth is expected to come in at around 2.5% on average this year, somewhat above euro area growth, but substantially below world output and growth in other emerging market regions. Dynamics in CESEE are strongly driven by Turkey and Russia, the largest countries in the sample, which are also projected to grow most strongly. Both are forecast to expand by around 4%, because their export structures are less concentrated on European markets and the brightening outlook for raw material prices will foster growth in Russia. Croatia and possibly Hungary will be the only countries in the sample to experience a further modest decline in economic activity in 2010. 2011 will see a modest increase in growth to 3.5% on average, with growth rates ranging between 2% and 4% in the individual countries.

The economic expansion is not expected to return to pre-crisis levels even in the medium run. According to IMF forecasts for the period from 2012 to 2014, the region's economy will expand by around 4% after having grown by around 6.5% in the boom years before the crisis. Nevertheless, income levels will continue to catch up to the euro area average. After temporarily dipping into negative territory in 2009, the region's growth differential vis-à-vis the euro area will increase to between 2 and 2.5 percentage points from 2011 onward.

Decline in external imbalances continues in the second half of 2009...

The economic downturn and the associated reduction in domestic demand led to a marked improvement of CESEE countries' external accounts. Combined current and capital account deficits decreased throughout CESEE and in some countries (e.g. in the Czech Republic and Hungary) even turned into a surplus in 2009. Only Russia registered a lower surplus in its combined current and capital account mainly because oil prices fell.

Generally, the improvement was driven primarily by a better goods and services balance, mirroring net exports in the national accounts. With the exception of Russia, imports generally declined more strongly than exports on the back of weak domestic demand as well as exchange rate movements, which put somewhat of a damper on import dynamics in countries with flexible exchange rate regimes. In some countries, above all the Czech Republic, Slovakia, Slovenia and Hungary, outflows of investment income also declined in line with corporate profits. Current transfers remained roughly unchanged throughout the region.

Developments in the second half of 2009 broadly continued the trends lined out above. Current account balances improved in all countries vis-à-vis the corresponding quarters of 2008, mainly driven by trade in goods and services.⁶

⁵ For a detailed OeNB forecast for selected CESEE countries, see box 2.

⁶ The external accounts of Croatia, Bulgaria (and to a lesser extent Turkey) showed a seasonal pattern with high surpluses in the third quarter attributable to the concentration of tourism revenues during the summer months.

Chart 3

Current and Capital Account of the Balance of Payments

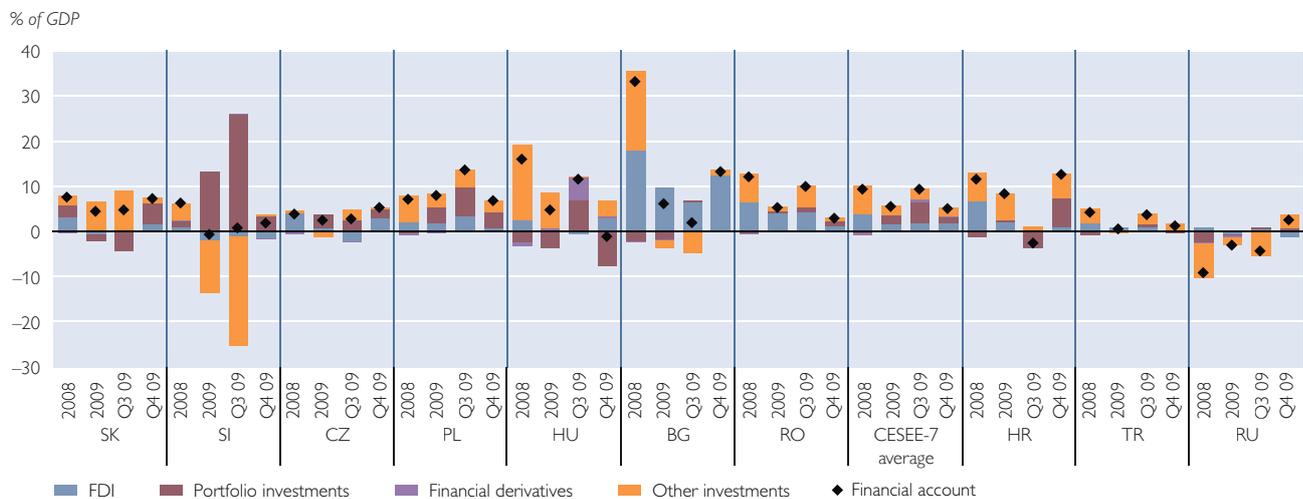


Source: National central banks.

In parallel to the reduction of current account deficits, surpluses in the financial account also decreased substantially in 2009; Slovenia even recorded a deficit. One cause for this was the decline in FDI inflows driven by both reductions in equity capital and reinvested earnings and by other capital. In Slovakia, Hungary and Slovenia, net FDI balances even turned slightly negative in 2009. Reductions in other investment turned out to have a strong impact as well, most probably

Chart 4

Financial Account of the Balance of Payments



Source: National central banks.

as a result of banking sector outflows, as evidenced for example by changes in the exchange rate-adjusted external positions of BIS reporting banks during the first three quarters of 2009 (BIS data for the fourth quarter are not available yet). The Czech Republic, Slovenia, Bulgaria, Turkey and Russia recorded outflows from other investment in 2009. Portfolio investment developed unevenly, with especially Slovakia and Hungary reporting more substantial net outflows than in 2008.

As to the quarterly dynamics, i.e. the change from the third to the fourth quarter, net FDI inflows as well as other investments again increased in half of the countries under observation, while the decreases in the other countries were mostly moderate. No clear trends could be observed in portfolio investments.

...while external debt ratios increase throughout the region

Gross external debt augmented strongly in 2009 owing to buoyant debt-creating flows and debt dynamics that were unfavorable especially because GDP shrank throughout most of the region. Gross external debt-to-GDP ratios increased by between 2.6 percentage points in Bulgaria and as much as 23.3 percentage points in Hungary and ranged from 37% in Russia to nearly 140% in Hungary. In many CESEE countries, a growing share of the external debt is created by the public sector, with governments tapping the external market for new borrowing and refinancing. However, the share of public external debt in overall external debt remains low for instance in Bulgaria and Russia.

Ongoing adjustment of the labor market raises unemployment ...

The general economic slump also impacted the labor market. Unemployment rates increased throughout the region within a range of 1 to 3 percentage points from 2008 to 2009 (broadly in line with euro area developments) and in January 2010, stood between 6.2% (Slovenia) and 14.1% (Slovakia). This trend will continue in 2010, when – according to recent projections – unemployment will increase further (especially in the countries which did not experience a sharp deterioration in 2009). Latest data also show that the most vulnerable groups on the labor market were more strongly affected than the average. Youth unemployment rates soared to levels of up to 30% in Slovakia and on average lie more than 13 percentage points above the total unemployment rate.

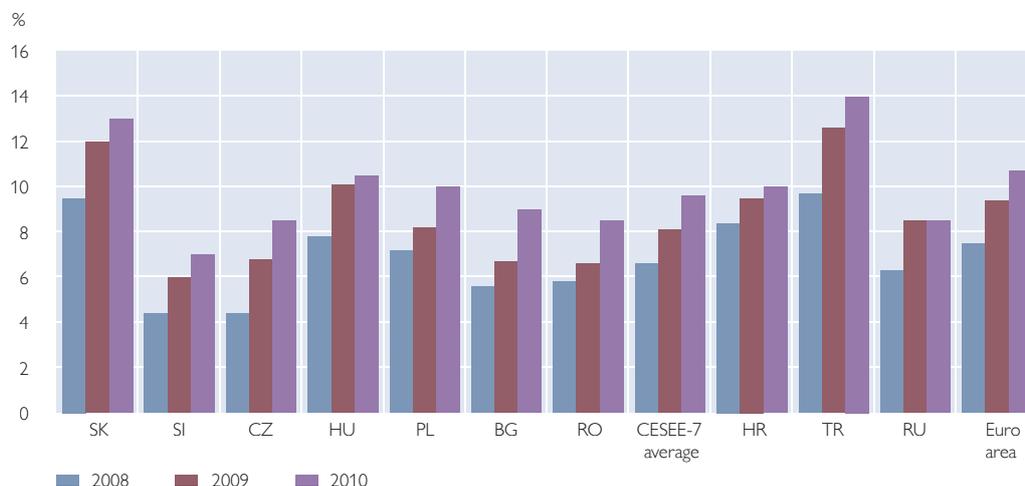
Employment data also herald the changing trends on CESEE labor markets. Employment growth has been negative in all countries but Poland since early 2009 and employment rates have been decreasing hand in hand. The deterioration so far, however, was less pronounced than was to be expected given the decline in economic activity. Just like in the euro area, there is evidence that part of the adjustment was carried out by reducing the hours worked whereas employment decreased only comparatively little (however, comparable data are only available for five of the ten countries). Companies tried to keep their labor force employed and therefore expanded flexible and/or short working schemes. This strategy may well be related to companies having experienced shortages (especially of skilled labor) in the boom years preceding the crisis. The aggregate figures, however, mask important differences between sectors: In all countries, employment declined most strongly in manufacturing, the sector most affected by the economic downturn. Job losses were almost exclusively concentrated there in the Czech Republic, Romania and Slovakia (to a somewhat lesser extent, this also applies to Poland).

... dampens wage increases ...

Adverse labor market developments had a clear impact on wages. Nominal wage growth in the whole economy decelerated markedly. However, it remained in positive territory in most countries in the region in the fourth quarter, except in

Chart 5

Unemployment Rates



Source: Eurostat; forecasts: wiw.

Slovenia and Hungary. The same is true for real wages, as declining inflation did not cut into salaries to a substantial extent. The only exception in this respect was Romania, where above-average price rises pushed real wage growth into the red.

Wage developments in industry resembled the pattern for the whole economy, with wage growth decelerating strongly in the course of 2009 but generally remaining in positive territory. Only in Croatia did nominal wages decrease in an annual comparison in the final quarter of 2009. At the same time, labor

... and, together with improving productivity, boosts competitiveness

Table 2

Development of Unit Labor Costs in Industry

	Nominal wages in industry				Unit labor costs in industry (in local currency)				Exchange rate of the local currency against the euro (year-on-year change in the period average)				Unit labor costs in industry (in EUR)			
	2008	2009	Q3 09	Q4 09	2008	2009	Q3 09	Q4 09	2008	2009	Q3 09	Q4 09	2008	2009	Q3 09	Q4 09
<i>Annual change in %</i>																
Slovakia	7.6	2.7	1.6	4.7	6.5	1.5	-3.7	-16.0	8.0	3.8	9.7	4.2	15.0	5.4	5.7	-12.5
Slovenia	7.8	1.4	1.0	3.5	4.9	9.7	9.8	-2.8	0.0	0.0	0.0	0.0	4.9	9.7	9.8	-2.8
Bulgaria	21.4	11.4	9.6	11.2	20.0	21.9	20.9	13.9	0.0	0.0	0.0	0.0	20.0	21.9	20.9	13.9
Czech Republic	8.1	4.0	5.5	7.1	11.4	6.4	5.2	-3.7	11.2	-5.7	-5.8	-2.2	23.9	0.3	-0.9	-5.7
Hungary	6.3	4.6	5.7	5.1	6.4	12.0	11.0	-0.6	-0.2	-10.3	-13.0	-2.7	6.2	0.5	-3.4	-3.3
Poland	8.8	4.9	4.4	5.1	7.4	2.5	-1.0	-6.4	7.6	-18.8	-21.1	-9.7	15.6	-16.8	-21.9	-15.5
Romania	21.3	11.2	10.0	9.5	14.1	0.4	-3.5	-13.4	-9.4	-13.1	-15.4	-10.5	3.4	-12.7	-18.3	-22.6
Croatia	7.2	-0.9	-0.6	-3.6	3.8	-0.8	-1.8	-6.4	1.6	-1.6	-1.9	-1.4	5.5	-2.3	-3.7	-7.7
Turkey	10.7	8.5	7.9	9.5	11.6	4.0	3.0	-11.5	-6.3	-11.8	-15.1	-7.9	4.5	-8.3	-12.5	-18.6
Russia	25.0	3.2	0.7	5.2	21.5	5.0	1.1	-2.6	-3.9	-17.4	-18.5	-17.3	16.8	-13.3	-17.6	-19.4
Memo item: Euro area	3.0	0.4	0.4	0.5	4.1	9.6	8.3	1.6	0.0	0.0	0.0	0.0	4.1	9.6	8.3	1.6

Source: Eurostat, national statistical offices, wiw, ECB.

productivity recovered from its trough in late 2008 to early 2009 as industrial output recovered and labor inputs adjusted to the changing economic reality. Productivity growth in the final quarter of 2009 was positive in most countries, in some cases strongly positive. Productivity advances overcompensated wage increases in Slovenia, the Czech Republic, Poland, Slovakia, Romania, Croatia, Russia and Turkey, resulting in a decline in unit labor costs (ULCs). ULCs remained more or less stable in Hungary and increased substantially in Bulgaria.

While industrial ULC growth in the euro area increased throughout the review period given falling productivity and roughly constant wages, a majority of the CESEE countries in this sample reported declining ULCs (measured in euro). ULC decreases, in euro terms, were most pronounced in Poland, Turkey and Romania, i.e. in countries with flexible exchange rates, but also in Russia. In Slovenia and Slovakia, ULCs also sank, while in Bulgaria they increased more strongly than in the euro area.

The generally more favorable development of ULCs in CESEE than in the euro area implies that the price competitiveness of most CESEE countries has improved vis-à-vis the euro area in the review period. Slovakia and Slovenia, the two euro area members covered in this report, also increased their price competitiveness within the monetary union somewhat. Only Bulgaria suffered deteriorating price competitiveness in the observation period.

Pressures on the competitive position in the offing

Looking forward, CESEE economies with flexible exchange rate regimes may, however, not be in a position to fully sustain recent gains in price competitiveness. In fact, in a number of these countries slowly appreciating exchange rates during the second half of 2009 and in early 2010 have already reversed some of the gains, especially of the Polish zloty and the Russian ruble. These currencies appreciated by 15% and 11%, respectively, against the euro since mid-2009; the Turkish lira gained 5%. The other currencies of the region stayed broadly stable vis-à-vis the

Chart 6

Exchange Rate Developments against the Euro



euro. Apart from the Czech koruna, which recently came close to pre-Lehman trading levels, no currency could fully reverse the losses experienced after the intensification of the financial crisis in fall 2008. Moreover, ULC developments in the first quarter of 2010 will be adversely affected by a base effect related to the strong depreciation in early 2009.

In line with general economic conditions, credit dynamics in the private sector remained weak and even decelerated further in most of the countries under observation. However, the most recent monthly data show some signs of stabilization in annual growth rates (adjusted for exchange rate changes): Credit expansion remained broadly stable in the Czech Republic and Hungary in December and January. Some improvement was even observed, e.g. in Slovakia, Romania (although growth rates in this country are still negative) and above all in Turkey, where consumption and GDP also expanded strongly in late 2009.

Credit dynamics were dampened but have recently appeared to be rebounding

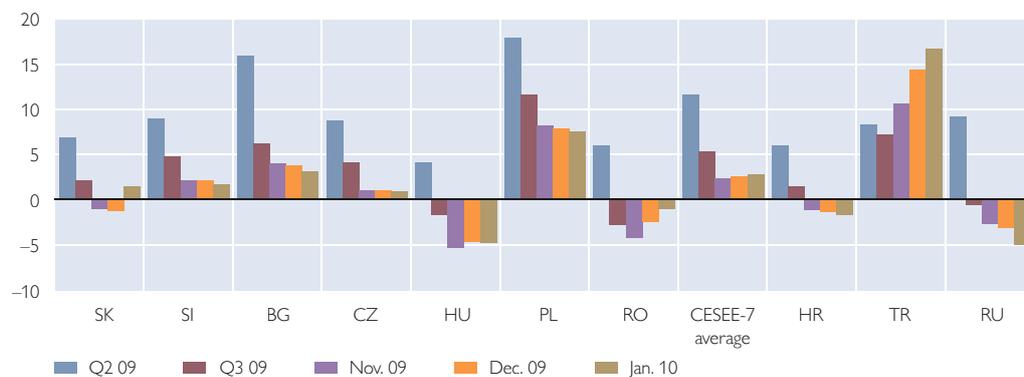
While the deceleration in credit dynamics in the early stages of the crisis was primarily driven by the growth of credit to corporations, this picture has become increasingly blurred in recent months. In January 2010, the annual growth of credit to corporations still stood at lower levels than the growth of credit to households in most countries (exceptions are Romania, Croatia and Russia). However, it decelerated less strongly, in some cases much less strongly, than credit to the household sector in more than half of the region compared to the first three quarters of 2009. This easing can be interpreted as further evidence for the above-mentioned relaxation of economic strains in the industrial sector: Production is on an upward path again, thereby fostering credit demand.

Bank lending surveys conducted in Poland and Hungary indicate that banks generally stopped tightening lending policies in late 2009 and early 2010. However, some differences among credit segments were visible: Standards for housing loans were eased in both countries, and the availability of corporate loans was increased in Poland but tightened marginally further in Hungary. In both countries, however, mostly nonprice standards for consumer credits were tightened somewhat, although less than in previous quarters. The deterioration in the quality of loan portfolios and reduced creditworthiness of clients were quoted as the major reason for tightening.

Chart 7

Growth of Credit to the Private Sector

Year-on-year growth in %, adjusted for exchange rate changes

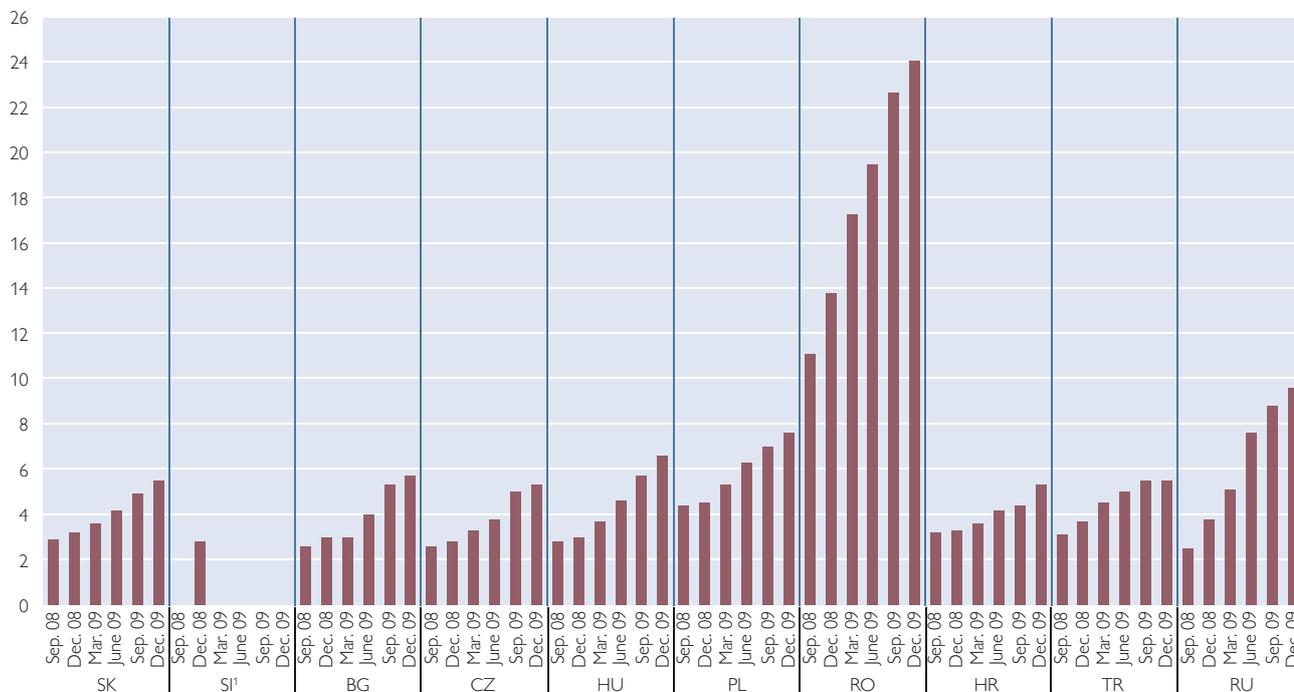


Source: National central banks.

Note: Turkey: nonadjusted rate.

Nonperforming Loans

% of total credit



Source: National central banks.

¹ Slovenia publishes nonperforming loan details only at an annual frequency.

Generally dampened price dynamics gain some speed at the turn of the year

The fact that the economic downturn started to take its toll on borrowers' ability to repay their loans can be clearly seen in nonperforming loan (NPL) figures: The share of nonperforming loans in total loans has started to pick up in all CESEE countries covered in this report since the second half of 2008. This development was particularly pronounced in Romania, where the NPL ratio increased to almost 25% in the last quarter of 2009, but also in Russia.⁷ In some countries such as Turkey, however, the deterioration seems to have lost some speed in recent months.

Price pressure decreased in most CESEE countries, with annual inflation coming down from 10.5% on average in 2008 to 7.8% in 2009. This development was attributable mainly to the economic slump and the accompanying negative output gap, which is also clearly visible in core inflation rates: Core inflation declined just as strongly as headline inflation. However, there are clear differences in the inflation performance of the individual countries. Price pressure decreased much less in Hungary, Poland, Romania and Russia than in the rest of the region, on the one hand because of increases in administered prices and indirect taxes. On the other hand, exchange rate effects from the depreciation in early 2009 may well have played a role. Fixed rate and euro area countries generally showed a some-

⁷ It should be noted that NPL figures cannot be compared across countries because classification regulations differ substantially.

Table 3

Consumer Price Index (HICP)

	2008	2009	Sep. 09	Oct. 09	Nov. 09	Dec. 09	Jan. 10	Feb. 10
	Annual change in %							
Slovakia	3.9	0.9	0.0	-0.1	0.0	0.0	-0.2	-0.2
Slovenia	5.6	0.9	0.0	0.2	1.8	2.1	1.8	1.6
Bulgaria	12.0	2.5	0.2	0.3	0.9	1.6	1.8	1.7
Czech Republic	6.3	0.6	-0.3	-0.6	0.2	0.5	0.4	0.4
Hungary	6.0	4.0	4.8	4.2	5.2	5.4	6.2	5.6
Poland	4.2	4.0	4.0	3.8	3.8	3.8	3.9	3.4
Romania	7.9	5.6	4.9	4.3	4.6	4.7	5.2	4.5
CESEE-7 average	5.8	3.3	3.7	2.6	3.0	3.2	3.3	3.0
Croatia ¹	6.1	2.4	1.0	1.3	1.8	1.9	1.1	0.7
Turkey	10.4	6.3	5.3	5.1	5.5	6.5	8.2	10.1
Russia ¹	14.1	11.8	10.8	9.8	9.2	8.9	8.1	7.2
Euro area	3.3	0.3	-0.3	-0.1	0.5	0.9	1.0	0.9

Source: Eurostat, national statistical offices, wiiw.

¹ CPI.

what more pronounced decline of inflation between 2008 and 2009, and price increases also stood at lower levels in recent months.

Despite remaining at comparatively low levels, inflation has increased somewhat in most CESEE countries in recent months. This is due primarily to the energy component of the HICP, given rising energy prices and positive base effects. In addition, unprocessed food prices played an important role in Turkey. Nevertheless, core inflation remained stable or decreased somewhat further also in recent months.

Most central banks in the region reacted to declining price pressure and medium-term inflation risks but also to decreasing risk premiums in the course of the stabilization of financial markets by lowering their policy rates by between 125 basis points in the Czech Republic and 850 basis points in Turkey in 2009.⁸ Monetary easing continued in early 2010 in Hungary (-75 basis points), Romania (-150 basis points) and Russia (-50 basis points).

While some governments in the region reacted to the crisis with (moderate) initial fiscal impulses, as the year 2009 went on, most of them switched to consolidation measures, especially expenditure cuts in the public sector, to counteract adverse budget dynamics. This became necessary because initial fiscal targets for 2009 were often based on growth assumptions that slipped grossly out of reach as the crisis hit the real economy fully. The upward revisions of budget deficit targets in the course of the year were thus often substantial and amounted to around 5% of GDP in Slovenia and Slovakia (despite some consolidation measures) and to more than 10% of GDP in Russia.

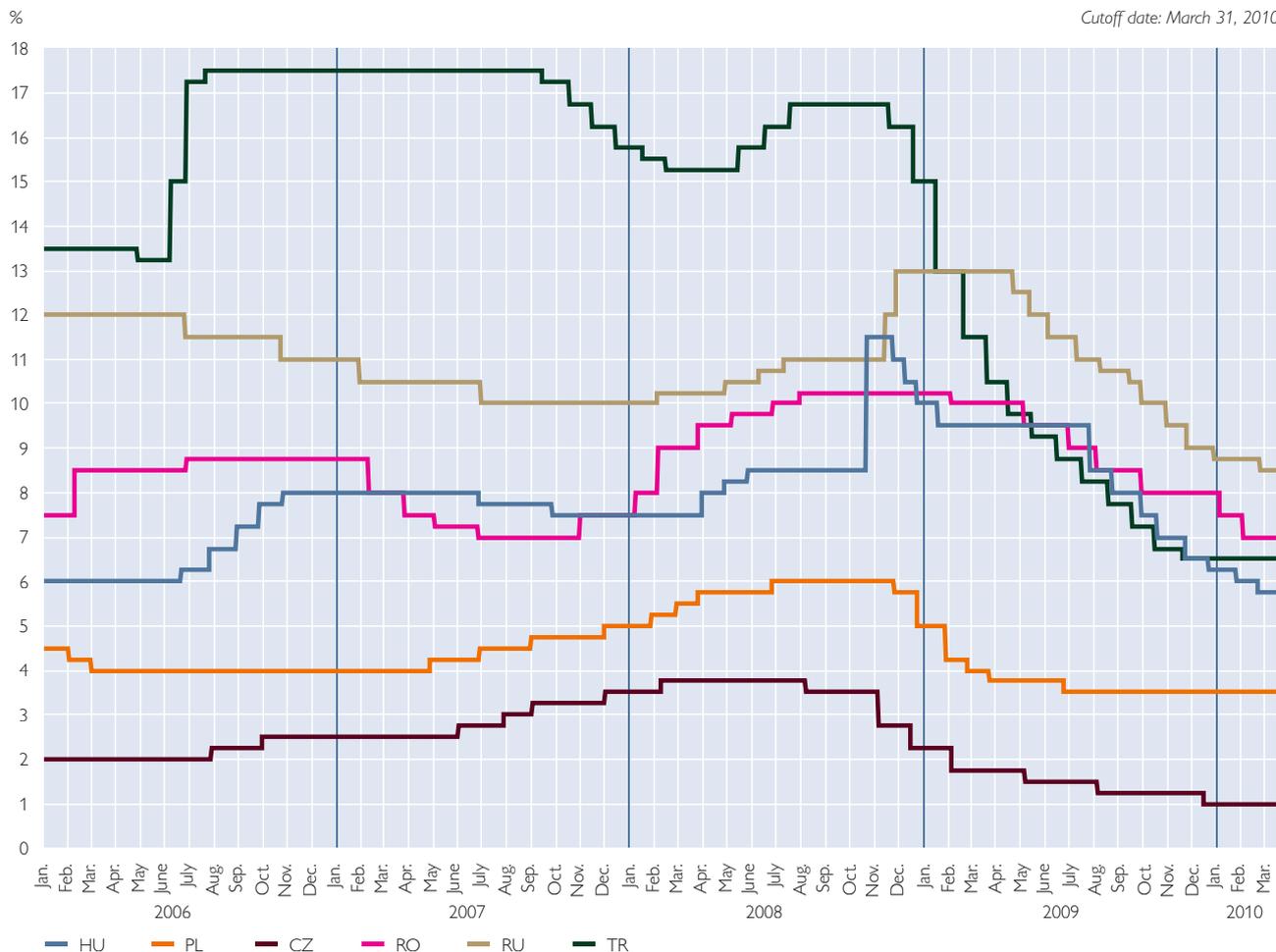
All in all, deteriorating public finances in CESEE are mainly the outcome of diminishing budget revenues and increasing expenditures due to automatic stabilizers, both as a result of the recession. Fiscal balances worsened in a range of

**Fiscal deficits
continue to rise**

⁸ The ECB policy rates apply to Slovakia and Slovenia. Bulgaria has no policy rate because it operates a currency board.

Policy Rate Developments in CESEE

Cutoff date: March 31, 2010



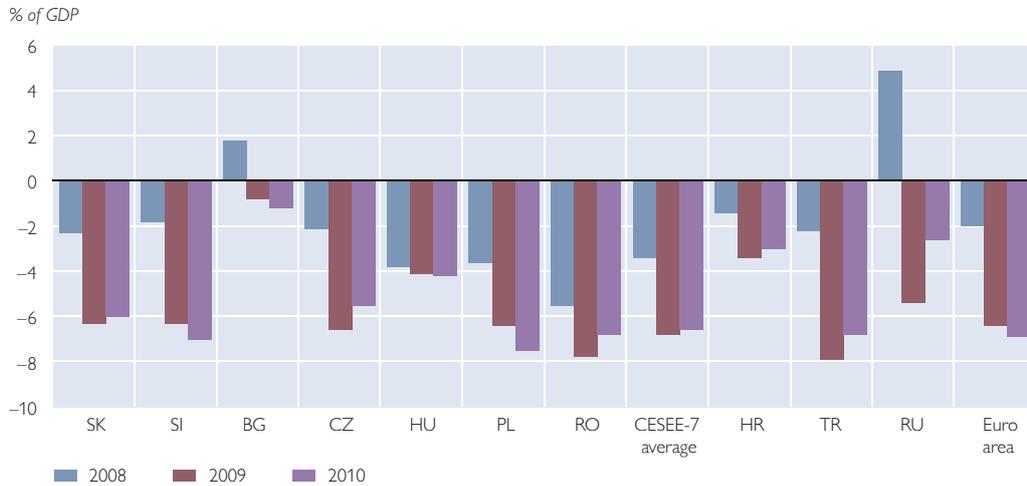
Source: National central banks.

between 0.2 percentage points in Hungary and 10.3 percentage points in Russia in 2009 when compared to 2008 and generally stood well above the 3% of GDP threshold enshrined in the Maastricht Treaty. Consequently, all EU Member States under observation in this report are now subject to an excessive deficit procedure (EDP) except Bulgaria, where an EDP will presumably be opened in the course of 2010. Hungary has been in the EDP since 2004, and EDPs were opened for Romania and for Poland in July 2009 and for the Czech Republic, Slovenia and Slovakia in December 2009. Deadlines for the correction of the excessive deficit range from 2011 for Hungary to 2013 for the Czech Republic, Slovenia and Slovakia. Gross public debt levels also increased throughout CESEE. However, only Hungary fails to meet the 60% of GDP threshold, while the other countries still meet the target with a substantial margin.

The European Commission's autumn 2009 projections for 2010 assume a marked improvement in the government deficit only in Russia. Some minor reductions are also forecast for Slovakia, the Czech Republic, Romania, Croatia and Turkey. In the other countries, public finances are set to deteriorate further

Chart 10

Development of General Government Deficits



Source: Eurostat, European Commission.

in 2010. Apart from Bulgaria and possibly Croatia, all CESEE countries will miss the benchmark of 3% of GDP also this year. Forecasts for 2010 are generally somewhat more pessimistic than fiscal plans of the individual countries as published in their updated Convergence Programmes. This is especially true for Bulgaria and Poland.

The accession negotiations with the EU candidate countries Croatia and Turkey proceeded further in the review period. Croatia opened six new chapters and closed five in its accession negotiations with the EU in October after talks were unblocked in the wake of a rapprochement between Croatia and Slovenia over a bilateral border dispute. A final agreement in this dispute is now under preparation. Negotiations are now ongoing in 30 out of 35 chapters, 17 have already been closed provisionally.

EU accession negotiations continue

Turkey and the EU have opened eleven negotiation chapters, whereas only one chapter has been closed provisionally. As Turkey does not as yet meet all of its statutory obligations – specifically with regard to the extension of the existing customs union with the EU to Cyprus – the opening of chapters on these matters has been delayed. Moreover, the EU will not close any other chapter provisionally unless Turkey has met all of its statutory obligations.

Financial Market Developments in CESEE: Decline in Global Risk Appetite Weighs on Sound Performance

The rebound on CESEE financial markets that started in early 2009 (see box 1 in Focus on European Economic Integration Q2/09 and Q4/09) continued over the review period (end-September 2009 to end-March 2009). However, the recovery from the market corrections triggered by the collapse of Lehman Brothers has been uneven. Moreover, the decline in the global risk appetite caused by concerns over the fiscal situation in Greece has had a negative impact on worldwide financial markets in recent months and has dampened the overall sound performance that CESEE displayed on average over the review period. Segments of some countries' financial markets have recovered to pre-Lehman levels.

Among the countries hit hardest by the financial market upheaval following the collapse of Lehman Brothers, Russia and Turkey recovered particularly fast, with Russian financial markets outperforming all others in recent months. As illustrated by credit default swap (CDS) and eurobond spreads, the relative risk perception has changed in favor of these countries, as early as in late 2008 with regard to Turkey. In addition, equity indices rebounded, most strongly so in Russia and Turkey. Hungary's performance was also above average in many financial market segments. Countries that were affected relatively little, i.e. Slovakia, the Czech Republic and Poland, also performed well during the recovery period, but have not been able to fully reverse the losses in all financial market segments yet. Over the review period, different financial market segments showed the following broad tendencies: Driven to a considerable extent by further monetary easing in CESEE countries, money market rate spreads against the euro area declined across the region except in Poland, where the policy rate was kept unchanged. Local currency government bond spreads narrowed or remained stable, except in Turkey, where several local factors caused spreads to widen. Following months of significant spread contractions on CDS and eurobond markets for CESEE sovereigns, the downward trend was interrupted, but resumed more recently. Most CESEE stock indices recorded further gains, while exchange rates either remained broadly stable or continued to strengthen against the euro.

Three-month money market spreads against the euro area declined further over the review period in all CESEE countries except Poland, where the spread stayed almost unchanged. Divergent policy rate developments in CESEE countries compared to the euro area explain part of this development. While the ECB's main refinancing rate was kept at 1%, all CESEE national central banks with the exception of the National Bank of Poland continued to lower their key policy rates.¹ In Croatia, the three-month money market spread declined by 740 basis points as kuna liquidity increased mainly due to central bank measures (i.e. foreign currency purchases in the final quarter of 2009, lowering of reserve requirements in February 2010). In Russia and Romania, where spreads against the euro area declined by more than 350 basis points, the three-month money market rate fell below the policy rates in March 2010, reflecting market expectations of additional policy rate cuts and ample liquidity conditions in the interbank market, and, in Russia, also due to foreign currency purchases by the central bank. In the Czech Republic, the spread tightening was more in line with policy rate cuts, while in Hungary and in Turkey, spreads declined less than would have been indicated by policy rate developments. At end-March 2009, three-month money market spreads against the euro area stood below pre-Lehman levels in Turkey, Romania and Croatia.

Local currency government bond spreads declined in most CESEE countries. In an environment of declining policy rates and continued disinflation, Russia's local currency bonds performed best, with spreads tightening by more than 400 basis points. By contrast, Turkey's local currency government bond spread started to increase in mid-October 2009 after having declined by more than 1,600 basis points from end-October 2008. A constitutional court

¹ Policy rates were cut by 200 basis points in Hungary, 175 basis points in Russia, 150 basis points in Romania, 75 basis points in Turkey and 25 basis points in the Czech Republic.

ruling in favor of a withholding tax on security transactions for foreigners,² uncertainty about a possible IMF support package (that ultimately was not agreed), political tensions as well as rising inflation and market expectations that monetary tightening was in the offing contributed to the spread widening. In Slovakia and the Czech Republic, spreads stayed almost unchanged. Local Turkish and Polish currency bond spreads as well as more recently Hungarian spreads already came back to levels seen before the collapse of Lehman Brothers. A comparison among emerging market regions reveals that CESEE performed best on average during the observation period. The JPM government bond index spread for emerging Europe declined by 60 basis points, while the corresponding spreads for Asia, Latin America and the Middle East/Africa stayed broadly unchanged or decreased only slightly.

Across the CESEE region, eurobond spreads continued to decline over the review period, albeit at a lower pace than in the months before. The positive performance in CESEE was accompanied by rating or rating outlook improvements in some countries. However, the downtrend of eurobond spreads was interrupted by a period of rising spreads from mid-January until end-February/early March 2010. Against the backdrop of uncertainty about global economic prospects and fiscal developments in Greece, investor confidence declined and volatility on global financial markets increased during this period. As a consequence, benchmark bond yields went down, while the appetite for risky assets subsided. Throughout the entire review period, euro-denominated eurobond spread contractions ranged from 30 to 45 basis points in Poland, Bulgaria, Croatia and Turkey to about 70 basis points in Romania and Hungary. The CESEE region's performance (JPM Euro Emerging Markets Bond Index Europe Index, -60 basis points) was broadly in line with developments in other emerging market regions. Russia's dollar-denominated eurobond spread tightened by almost 140 basis points and clearly outperformed the emerging markets' average (JPM EMBI Global Index, -80 basis points). At end-March 2010, the eurobond spreads of all countries except Russia and Turkey stood slightly above the levels seen before the collapse of Lehman Brothers.

The CDS market developed somewhat differently than the eurobond market. After seven months of significant tightening, CDS spreads on CESEE sovereign issues trended upward (or in a few cases sideward) from October 2009 until mid-February 2010 and then resumed their downward movement. In Romania, the spread widening in October 2009 was most pronounced, as the disbursements of funds from the IMF and the EU under the multilateral support program were delayed amid political uncertainties. In the meantime, the political situation has normalized, the support package has come back on track, and CDS spreads on Romania have retreated notably again. By end-March 2010, CDS spreads in most of the countries had fallen somewhat below or approximately to the same level as at end-September 2009. Only in Russia (-75 basis points) did CDS spreads decline more noticeably. After CDS on Russia had been traded with the highest spread within our country sample during the peak crisis period, Russian CDS spreads ended the review period just above those in Slovakia, the Czech Republic and Poland. At end-March 2010, the CDS spreads of all countries fell below 200 basis points. The CDS spreads of about half the countries have thus returned to pre-Lehman territory, whereas the CDS spreads of the other half were still being traded with a (small) margin above the levels before the collapse of Lehman.

The performance of CESEE stock indices diverged considerably over the review period. The recovery that had started in February 2009 continued almost uninterrupted only in Romania (+35%) and with some setbacks in Russia, Turkey, Poland and Hungary (+10% to +20%). After Turkey's and Hungary's equity indices had surpassed pre-Lehman levels already in summer 2009, Russia, Poland and Romania also exceeded this benchmark in recent months. Over the review period, equity price indices stayed relatively unchanged in the Czech Republic and Croatia, while the Slovak and Bulgarian equity indices even lost some ground. The weak

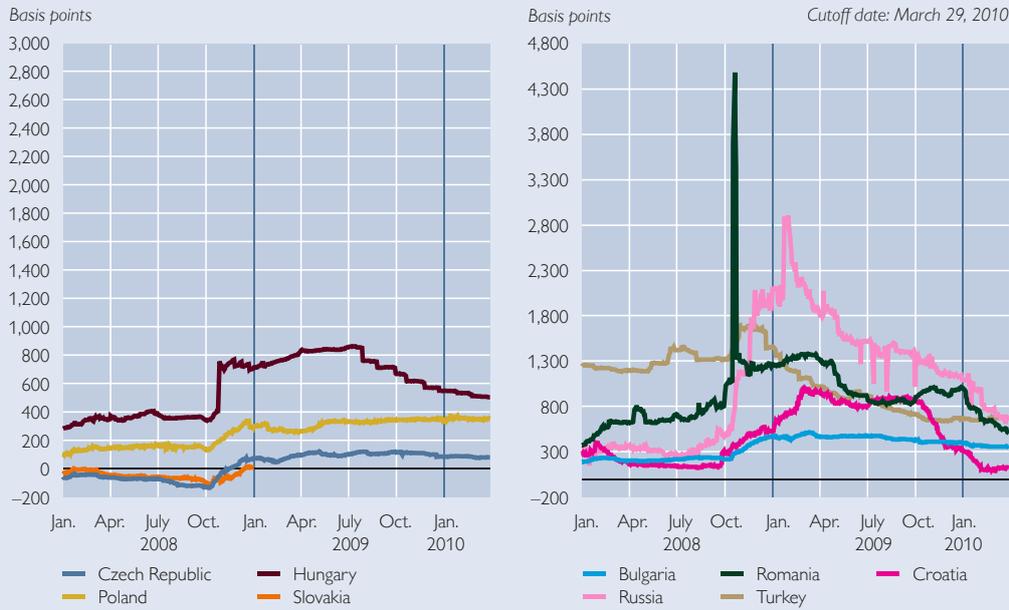
² On October 16, 2009, the Constitutional Court ordered the equalization of tax rates for domestic and international investors on investments such as bonds, shares and mutual funds after the government had abolished the tax for foreigners in 2006. By end-March 2010, the issue was still unresolved.

performance during January and February 2010 in almost all countries was in line with global trends and has to be seen in the context of increasing risk aversion related to concerns about the fiscal situation in Greece. Over the review period, emerging Europe, as represented by the MSCI EMEE Index (covering the Czech Republic, Hungary, Poland and Russia), performed somewhat better than the emerging market average (MSCI EM index) and mature stock markets (S&P 500, EURO STOXX).

CESEE currencies either stayed broadly stable or continued to strengthen against the euro over the review period. Other emerging markets' exchange rates also generally tended to strengthen against the major currencies. In CESEE, appreciation tendencies were most pronounced in Poland and Russia, where the currencies appreciated by almost 10% against the euro. The ruble's strengthening is related inter alia to EUR/USD movements (the euro depreciated by 8% against the U.S. dollar over the review period), as it is tied to a currency basket consisting of 55% U.S. dollars and 45% euro. As appreciation pressures on the ruble intensified, the central bank made repeated and sizeable foreign currency purchases to prevent the ruble from strengthening too fast, and made several moves to adjust the ruble's corridor against its basket. All CESEE currencies except for the Czech koruna were still being traded far below the levels seen before the collapse of Lehman Brothers.

Chart 1

Three-Month Money Market Rate Spreads against the Euro Area

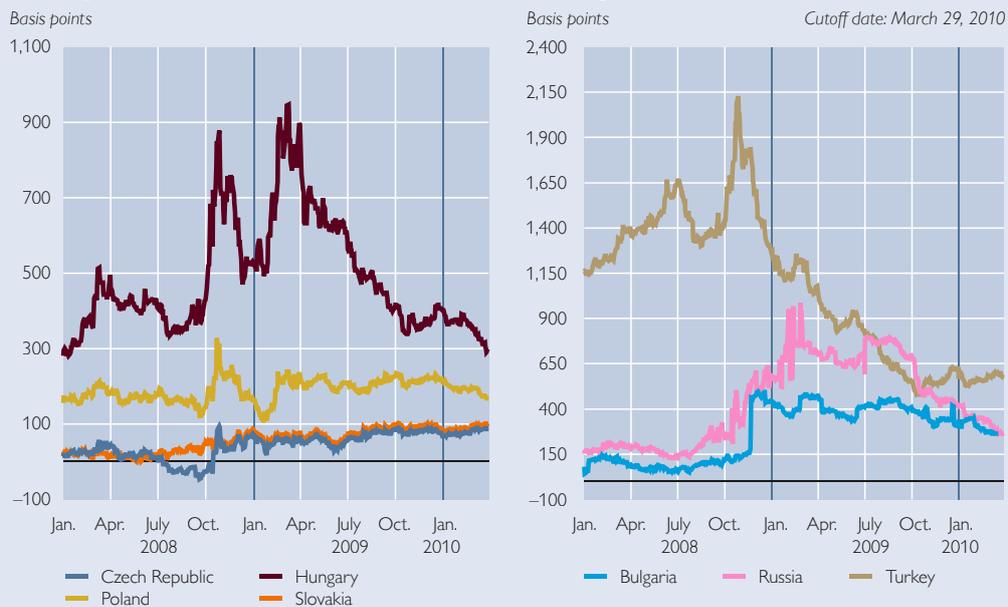


Source: Bloomberg, Thomson Reuters, OeNB.

Chart 2

Local Currency Government Bond Yield Spreads against the Euro Area

Country subindices of JPM EM-GBI, Eurostat data for Bulgaria



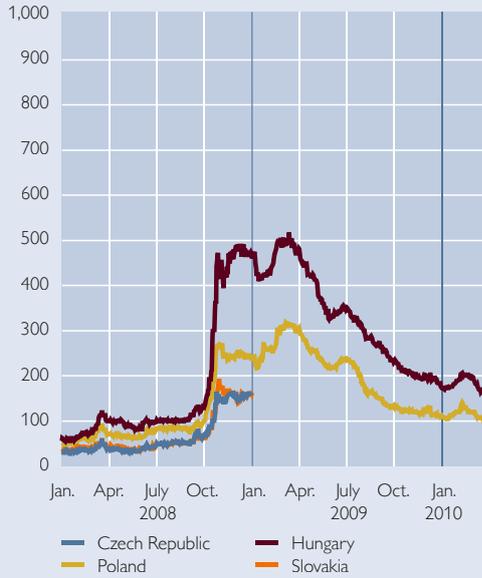
Source: Bloomberg, Thomson Reuters, Eurostat, OeNB.

Chart 3

Eurobond Yield Spreads

JPM Euro-EMBI global index, JPM EMBI global index for Russia

Basis points



Basis points

Cutoff date: March 29, 2010



Source: Bloomberg, Thomson Reuters, OeNB.

Chart 4

Sovereign Five-Year Credit Default Swap Spreads

Basis points



Basis points

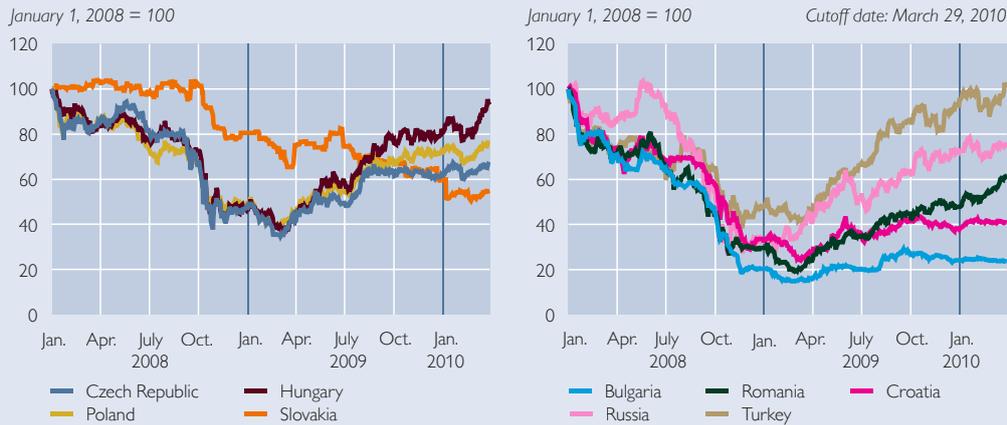
Cutoff date: March 29, 2010



Source: Thomson Reuters, OeNB.

Chart 5

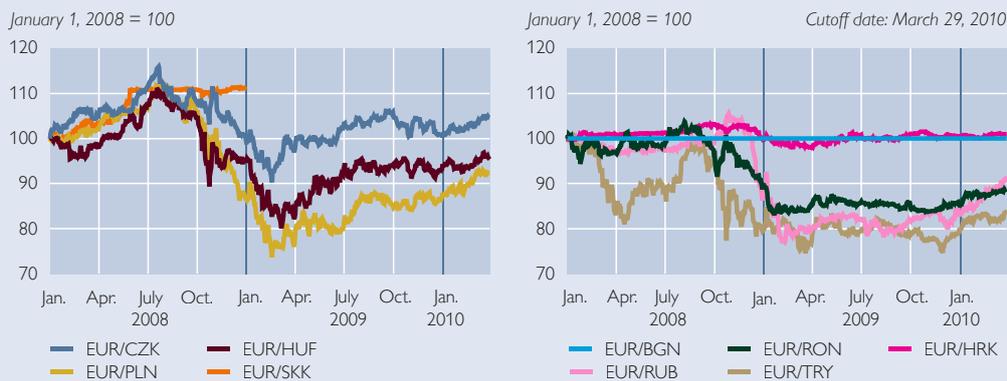
Stock Market Developments



Source: Thomson Reuters, OeNB.

Chart 6

Exchange Rate Developments



Source: Thomson Reuters, OeNB.

Note: An increase in value means a nominal appreciation.

2 Slovakia: Strong Public Expenditures Support Growth

Public consumption mitigates output decline

Output continued to decline during the third and fourth quarters of 2009, albeit at a slower pace than before. The downturn was mainly driven by investment, which posted substantially negative growth contributions. Public consumption, in contrast, turned around in the fourth quarter of 2009, possibly reflecting an increase in public expenditures ahead of parliamentary elections in June 2010. Correspondingly, domestic credit expanded again at double-digit rates, largely driven by credit to the public sector. While still negative, private consumption nevertheless improved during 2009.

Positive growth contribution of net exports

The continued slide in exports was largely balanced out by slumping imports. In the final quarter of 2009, net exports therefore not only entered positive territory for the first time in two years, but even posted strong growth. The trade balance also turned positive, while the current account deficit declined to below 2% of GDP in the third quarter of 2009, which is mainly traceable to a negative income balance in the second half of 2009. Net foreign direct investment was negative in the second quarter of 2009 and improved only slightly in the third quarter.

Labor market tensions

The labor market reacted to the output contraction only with some delay. Unemployment increased by more than 5 percentage points to 13.9% between the last quarter of 2008 and the final quarter of 2009, with most of the rise attributable to the second half of 2009. At the same time, labor market participation declined to less than 60% of the labor force. Labor market developments continued to deteriorate in the last quarter of 2009. Correspondingly, nominal wages in industry increased only moderately by 4.7%, while labor productivity soared by 22.7% and unit labor costs dropped by 16% in the fourth quarter of 2009.

Zero inflation in the last quarter of 2009

HICP inflation decelerated from 1.0% in the second quarter to 0.0% in the fourth quarter of 2009, leading to an annual average of only 0.9% for 2009. Core inflation was negative but close to zero, showing that the dampening effect on prices of the economic downturn continued. Notwithstanding low average inflation rates, different product groups showed quite divergent price dynamics. Foodstuff, clothing, and transport, for instance, were characterized by price declines, while prices for alcoholic beverages and various services increased by more than 5% on average in 2009. Producer prices fell by no less than 6.5% in 2009, with energy prices having fallen, but mainly because of price declines that were triggered by competitive pressure from neighboring CESEE countries (especially the Czech Republic and Hungary) that experienced exchange rate depreciations.

Significant budget deficit revisions

The budget deficit originally envisaged for 2009 was 1.7% of GDP (based on an ultimately largely unrealistic GDP growth assumption of 6.5%). The actual 2009 budget deficit eventually ran to 6.8%. In September 2009, the Slovak government presented a draft budget for 2010, which sets a deficit ceiling of 5.5% of GDP and assumes GDP growth to reach 1.9% in 2010. The latter figure was revised upward to 2.8% in February 2010. Initially, the 2010 deficit target had been 2.9% of GDP (according to the stability program published in April 2009).

Table 4

Main Economic Indicators: Slovakia

	2007	2008	2009	Q3 08	Q4 08	Q1 09	Q2 09	Q3 09	Q4 09
<i>Year-on-year change of the period total in %</i>									
GDP at constant prices	10.6	6.2	-4.7	6.8	1.6	-5.7	-5.5	-4.9	-2.6
Private consumption	6.9	6.0	-0.7	6.0	4.5	-0.9	0.4	-0.3	-1.9
Public consumption	0.1	5.3	2.8	6.1	4.0	1.3	6.9	-0.2	2.9
Gross fixed capital formation	9.1	1.8	-10.5	0.6	-7.1	-3.9	-17.7	-11.4	-7.3
Exports of goods and services	14.3	3.2	-16.5	2.9	-7.6	-25.2	-20.3	-15.0	-5.2
Imports of goods and services	9.2	3.1	-17.6	3.6	-7.8	-22.3	-22.2	-15.6	-10.3
<i>Contribution to GDP growth in percentage points</i>									
Domestic demand	6.6	5.9	-6.1	7.2	0.9	-4.0	-7.1	-6.3	-6.7
Net exports of goods and services	4.7	0.2	0.5	-0.5	0.2	-4.0	1.0	-0.1	4.7
Exports of goods and services	13.6	3.1	-15.8	2.7	-7.6	-26.5	-20.2	-13.3	-4.7
Imports of goods and services	8.9	2.9	-16.3	3.2	-7.9	-22.4	-21.2	-13.2	-9.4
<i>Year-on-year change of the period average in %</i>									
Labor productivity in industry (real)	14.4	1.7	1.6	2.6	-10.6	-13.9	-6.9	5.9	22.7
Average gross earnings in industry (nominal)	6.4	7.6	2.7	9.1	4.2	3.0	1.5	1.6	4.7
Unit labor costs in industry (nominal)	-6.9	6.5	1.5	6.3	18.4	20.9	9.2	-3.7	-16.0
Producer price index (PPI) in industry	-1.4	2.5	-6.6	3.2	-0.1	-5.1	-7.5	-8.1	-5.8
Consumer price index (here: HICP)	1.9	3.9	0.9	4.5	3.9	2.3	1.1	0.4	0.0
EUR per 1 SKK, + = SKK appreciation	10.2	8.0	3.8	10.8	10.1	..	..	..	..
<i>Period average levels</i>									
Unemployment rate (ILO definition, %, 15–64 years)	11.2	9.6	12.1	8.9	8.7	10.4	11.3	12.6	13.9
Employment rate (%, 15–64 years)	60.7	62.3	60.2	63.1	62.9	61.0	60.4	60.1	59.2
Key interest rate per annum (%)	4.4	4.0	..	4.3	3.4	..	..	..	..
SKK per 1 EUR	33.8	31.3	..	30.3	30.3	..	..	..	..
<i>Nominal year-on-year change in the period-end stock in %</i>									
Broad money (including foreign currency deposits)	13.0	4.8	3.2	6.4	4.8	9.8	6.4	3.0	3.2
<i>Contributions to the year-on-year change of broad money in percentage points</i>									
Net foreign assets of the banking system	0.7	-8.0	-1.4	-8.5	-8.0	-11.9	-5.5	-1.8	-1.4
Domestic credit of the banking system	13.6	12.5	23.0	15.1	12.5	27.8	28.0	26.2	23.0
<i>of which: claims on the private sector</i>	15.1	11.2	6.0	14.9	11.2	11.8	9.6	7.6	6.0
<i>claims on households</i>	6.9	7.0	3.5	7.7	7.0	6.4	5.3	4.3	3.5
<i>claims on enterprises</i>	8.1	4.2	2.4	7.2	4.2	5.4	4.3	3.2	2.4
<i>claims on the public sector (net)</i>	-1.5	1.3	17.0	0.2	1.3	16.0	18.4	18.6	17.0
Other assets (net) of the banking system	-1.3	0.3	-18.4	-0.2	0.3	-6.1	-16.1	-21.4	-18.4
<i>% of GDP, ESA 95</i>									
General government revenues	32.5	32.5	34.0	..	..	..	..	..	..
General government expenditures	34.4	34.8	40.8	..	..	..	..	..	..
General government balance	-1.9	-2.3	-6.8	..	..	..	..	..	..
Primary balance	-0.5	-1.1	-5.3	..	..	..	..	..	..
Gross public debt	29.3	27.7	35.7	..	..	..	..	..	..
<i>Year-on-year change of the period total (based on EUR) in %</i>									
Merchandise exports	27.0	13.4	-16.8	19.1	-2.2	-21.2	-25.3	-18.2	-1.6
Merchandise imports	21.5	13.4	-20.5	20.1	-1.9	-19.6	-29.1	-23.6	-8.9
<i>% of GDP (based on EUR), period total</i>									
Trade balance	-1.2	-1.1	1.9	-0.6	-2.8	-0.3	1.6	3.5	2.5
Services balance	0.7	-0.7	-2.0	-0.7	-1.0	-2.7	-1.6	-1.7	-1.9
Income balance (factor services balance)	-4.3	-3.5	-2.0	-3.3	-2.3	-0.5	-1.3	-3.0	-3.0
Current transfers	-0.6	-1.3	-1.1	-1.1	-1.6	-0.4	-1.0	-0.7	-2.1
Current account balance	-5.4	-6.6	-3.2	-5.6	-7.7	-3.9	-2.4	-1.9	-4.6
Capital account balance	0.6	1.2	0.7	0.5	1.1	1.7	0.9	0.0	0.4
Foreign direct investment (net)	3.9	3.4	-0.5	3.8	7.1	1.2	-5.6	0.2	1.9
<i>% of GDP (rolling four-quarter GDP, based on EUR), end of period</i>									
Gross external debt	54.8	58.2	71.6	58.9	58.2	61.8	69.5	73.3	71.6
Gross official reserves (excluding gold) ¹	22.3	19.5	0.8	19.4	19.5	0.3	0.1	0.8	0.8
<i>Months of imports of goods and services</i>									
Gross official reserves (excluding gold) ¹	3.1	2.8	0.1	2.7	2.8	0.0	0.0	0.1	0.1
<i>EUR million, period total</i>									
GDP at current prices	54,940	64,899	63,332	17,481	16,889	14,656	15,587	16,568	16,522

Source: Bloomberg, European Commission, Eurostat, national statistical offices, national central banks, wiiw, OeNB.

¹ Given Slovakia's adoption of the euro, the concept of the calculation of international reserves has changed as of the beginning of 2009. In particular, reserves no longer include foreign assets in euro and claims on euro area residents.

3 Slovenia: Weak Domestic Demand Keeps Inflation Low

Smaller contraction of GDP in the second half of 2009

The contraction of economic output moderated somewhat in the second half of 2009, with GDP falling by 5.5% in the fourth quarter. The largest negative contribution in the fourth quarter came from investments, as capacity utilization rates stagnated at historic lows, corporate borrowing from both domestic and foreign banks came to a standstill and industrial confidence continued to languish. On top of weak investments, destocking shaved 4 percentage points off the GDP growth rate in the fourth quarter. Domestic consumption roughly stagnated in the second half of the year in year-on-year terms, as the decline in the real net wage sum (on the back of declining employment, slowing nominal wage growth and higher inflation) seems to have been mitigated mainly by a cautious recovery of household credit growth. The contribution of net real exports increased in the second half of the year as imports declined more than exports.

External imbalances continue to decline

The favorable development of net real exports was also reflected in the combined current and capital account, which posted a small deficit of around 1.5% of GDP in the second half of 2009. In addition, the current account benefited from the ongoing improvement in the terms of trade and the smaller deficit on the income balance partly due to lower interest payments on external debt and lower FDI-related income outflows. Portfolio capital inflows soared in the third quarter owing to bond issues by the government and by commercial banks (backed by state guarantees). The other investment balance posted minor inflows in the fourth quarter, following sharp outflows in the preceding quarters. The country's external debt rose to around 115% of GDP at end-2009, with the increase since mid-2009 (104% of GDP) roughly equally split between the government and the private sector (primarily banks).

Inflation rises on the back of energy and other regulated prices

Following a period of roughly zero HICP inflation between May and October 2009, inflation accelerated to 2.1% in December before falling back to 1.6% by February 2010. The acceleration was caused by a sharp increase in energy prices (partly as a result of a low base) and hikes in administered prices following the transfer of responsibility for setting municipal services prices to local communities in August 2009. By contrast, core inflation continued to decelerate gradually from 1.2% in October 2009 to 0% in February 2010. Suppressed domestic demand continued to contain inflation, and ULC growth at the macroeconomic level also decelerated substantially in the course of 2009, reaching 3.7% in the fourth quarter of 2009.

Budget deficit unchanged in 2010 but is to be brought below 3% of GDP by 2013

In November 2009, the Council of the European Union decided that an excessive budget deficit existed in Slovenia and called on the authorities to bring the deficit below 3% of GDP by 2013. In accordance with this recommendation, the government in its 2009 stability program update envisaged a reduction in the general government budget deficit from 5.5% of GDP in 2009 to 1.6% in 2013. The bulk of the deficit reduction is planned for 2011 and 2013. The deficit is targeted to remain unchanged in 2010, as the fiscal stimulus measures introduced in 2008 and 2009 are to be phased out gradually by end-2010 and as planned savings allow only for a slowing of expenditure growth. From 2011 onward, fiscal consolidation will rely on the reduction of expenditures by withdrawing the fiscal stimuli, increasing the efficiency of public administration and streamlining public services and transfers, including reforms of pension and health care systems.

Table 5

Main Economic Indicators: Slovenia

	2007	2008	2009	Q3 08	Q4 08	Q1 09	Q2 09	Q3 09	Q4 09
<i>Year-on-year change of the period total in %</i>									
GDP at constant prices	6.8	3.5	-7.8	3.6	-0.8	-8.2	-9.2	-8.3	-5.5
Private consumption	6.7	2.0	-1.4	-0.4	1.3	-1.1	-3.2	-0.4	-0.9
Public consumption	0.7	6.2	3.0	5.9	7.2	4.7	4.9	4.3	-1.4
Gross fixed capital formation	11.7	7.7	-21.6	5.6	-3.2	-22.2	-25.4	-21.9	-16.5
Exports of goods and services	13.7	2.9	-15.6	3.3	-6.1	-19.7	-21.5	-16.3	-3.6
Imports of goods and services	16.3	2.9	-17.9	2.3	-6.9	-21.1	-23.7	-17.7	-8.5
<i>Contribution to GDP growth in percentage points</i>									
Domestic demand	8.7	3.6	-10.1	3.0	-1.8	-9.8	-11.4	-9.7	-9.4
Net exports of goods and services	-2.0	-0.1	2.2	0.7	1.0	1.5	2.1	1.4	3.9
Exports of goods and services	9.5	2.1	-11.5	2.5	-4.5	-14.9	-16.3	-12.0	-2.5
Imports of goods and services	11.5	2.2	-13.7	1.8	-5.5	-16.4	-18.4	-13.4	-6.4
<i>Year-on-year change of the period average in %</i>									
Labor productivity in industry (real)	6.4	3.1	-7.8	3.9	-5.4	-12.3	-16.0	-8.0	6.6
Average gross earnings in industry (nominal)	6.9	7.8	1.4	9.5	4.0	0.7	0.3	1.0	3.5
Unit labor costs in industry (nominal)	0.4	4.9	9.7	5.3	10.0	14.8	19.5	9.8	-2.8
Producer price index (PPI) in industry	4.4	3.9	-1.4	5.1	3.2	1.1	-1.6	-3.1	-2.0
Consumer price index (here: HICP)	3.8	5.5	0.9	6.2	3.1	1.7	0.6	-0.2	1.4
EUR per 1 SIT, + = SIT appreciation	..	..	..	..	..	..	..	..	..
<i>Period average levels</i>									
Unemployment rate (ILO definition, %, 15–64 years)	5.0	4.5	6.0	4.2	4.3	5.4	5.7	6.3	6.6
Employment rate (%, 15–64 years)	67.8	68.6	67.5	70.1	68.8	66.7	67.6	68.3	67.5
Key interest rate per annum (%)	..	..	..	..	..	..	..	..	..
SIT per 1 EUR	..	..	..	..	..	..	..	..	..
<i>Nominal year-on-year change in the period-end stock in %</i>									
Broad money (including foreign currency deposits)	26.0	6.9	1.7	8.4	6.9	8.0	5.7	2.8	1.7
<i>Contributions to the year-on-year change of broad money in percentage points</i>									
Net foreign assets of the banking system	-23.1	-11.9	6.6	-14.0	-11.9	-10.7	-1.0	6.2	6.6
Domestic credit of the banking system	35.1	20.8	2.1	23.5	20.8	21.5	10.7	3.1	2.1
of which: claims on the private sector	42.6	22.7	4.7	29.2	22.7	18.0	10.1	6.6	4.7
claims on households	9.0	5.0	2.7	6.3	5.0	3.6	2.6	2.5	2.7
claims on enterprises	33.6	17.7	2.0	22.8	17.7	14.3	7.5	4.2	2.0
claims on the public sector (net)	-7.5	-1.8	-2.6	-5.6	-1.8	3.6	0.7	-3.5	-2.6
Other assets (net) of the banking system	14.0	-2.0	-7.0	-1.1	-2.0	-2.9	-4.1	-6.5	-7.0
<i>% of GDP, ESA 95</i>									
General government revenues	42.4	42.6	44.4	..	..	..	..	..	..
General government expenditures	42.4	44.3	49.9	..	..	..	..	..	..
General government balance	0.0	-1.7	-5.5	..	..	..	..	..	..
Primary balance	1.3	-0.6	-4.1	..	..	..	..	..	..
Gross public debt	23.3	22.6	35.9	..	..	..	..	..	..
<i>Year-on-year change of the period total (based on EUR) in %</i>									
Merchandise exports	16.3	1.3	-19.2	2.3	-9.6	-22.5	-23.9	-21.4	-7.6
Merchandise imports	18.1	5.7	-25.9	8.7	-7.1	-26.6	-32.0	-28.0	-15.8
<i>% of GDP (based on EUR), period total</i>									
Trade balance	-4.8	-7.1	-1.8	-7.8	-8.1	-1.8	-0.2	-2.3	-2.8
Services balance	3.0	4.3	2.9	5.0	3.4	2.8	3.4	3.3	2.2
Income balance (factor services balance)	-2.3	-2.8	-1.9	-4.1	-2.6	-2.6	-1.7	-1.7	-1.4
Current transfers	-0.7	-0.6	-0.3	0.2	-0.7	-1.7	0.1	-0.5	1.0
Current account balance	-4.8	-6.2	-1.0	-6.6	-8.0	-3.2	1.6	-1.3	-1.1
Capital account balance	-0.2	-0.1	0.0	-0.1	-0.3	-0.1	0.5	0.0	-0.5
Foreign direct investment (net)	-0.6	1.0	-1.9	1.3	3.1	-1.7	-3.5	-1.0	-1.5
<i>% of GDP (rolling four-quarter GDP, based on EUR), end of period</i>									
Gross external debt	100.6	105.7	115.0	108.8	105.7	102.1	104.3	113.9	115.0
Gross official reserves (excluding gold) ¹	1.9	1.7	1.9	1.7	1.7	1.4	1.3	1.9	1.9
<i>Months of imports of goods and services</i>									
Gross official reserves (excluding gold) ¹	0.3	0.3	0.4	0.3	0.3	0.3	0.2	0.4	0.4
<i>EUR million, period total</i>									
GDP at current prices	34,568	37,135	34,894	9,656	9,195	8,287	8,928	8,921	8,758

Source: Bloomberg, European Commission, Eurostat, national statistical offices, national central banks, wiw, OeNB.

¹ Given Slovenia's adoption of the euro, the concept of the calculation of international reserves has changed as of the beginning of 2007. In particular, reserves no longer include foreign assets in euro and claims on euro area residents.

4 Bulgaria: Recession Deepens due to Lag Effects in Private Agents' Adjustment and Public Sector Austerity

A further slump in domestic demand deepens the recession in the second half of 2009

The output contraction accelerated on a year-on-year basis in the second half of 2009, leading to an average annual real GDP decline of 5%. The strong negative growth contribution of domestic demand deteriorated further in the second half of 2009, as private households were apparently affected by the crisis with a certain lag and as public consumption declined sharply in the fourth quarter of 2009.

The overall unemployment rate steadily increased to nearly 9% in February 2010. According to the 2009 fall wave of the OeNB Euro Survey, the share of Bulgarians responding that the crisis had affected their job perspectives had risen substantially, and households increasingly perceived that the crisis had affected their financial situation. This is also mirrored by macro figures: Real domestic private sector credit growth decelerated further, while the share of nonperforming loans in total loans was 1.5 times higher at the end of 2009 than in mid-2009.

On the positive side: exports recover, macroeconomic imbalances are corrected further, deterioration of external competitiveness slows down

In the fourth quarter of 2009, exports returned to a mildly positive growth path as the recovery of principal export partners gained ground (about 65% of Bulgarian exports are intra-EU flows). This not only strengthened the positive growth contribution of net exports, but also the combined current and capital account, whose deficit – for the first time since 2004 – fell below 10% by year-end.

Prices moderated markedly amid the downturn (in 2009, consumer price inflation was nearly six times lower than in 2008, and producer prices even decreased). However, annual HICP inflation recently picked up somewhat to reach 1.7% in February 2010 because of a renewed increase in energy prices and excise duties on alcohol and tobacco.

Bulgaria's external competitiveness has so far not improved but it is deteriorating much more slowly now than it did until the first half of 2009. The appreciation of the real effective exchange rate came to a halt in 2009, and recently there has even been a mild depreciation of about 2% year on year. While labor productivity showed a clear trend reversal toward positive growth, wage pressure seems to have remained high, as industrial wages are still growing at an annual rate of around 10%. Thus, despite a marked deceleration to 2007 levels, annual ULC growth in industry is still the highest in the region covered in this report.

Despite significant fiscal consolidation measures since July 2009, the general government deficit remains high in 2009, delaying application for ERM II entry

Starting from a balanced budget target in July 2009, the newly elected government implemented significant consolidation measures in the second half of 2009 (of more than 2% of GDP). Due to a stronger-than-expected erosion of tax bases, the Bulgarian parliament nevertheless had to amend the budget law in December 2009, providing for a general government deficit of 1.9% of GDP in 2009. In April 2010, the Bulgarian government unexpectedly revised the deficit ratio upward to as much as 3.9% (and the 2008 surplus ratio downward from 1.8% to between 1.5% and 1.6%), as new budget data revealed a host of unfunded liabilities related to procurement deals that had mainly been concluded in 2008 and early 2009. As a consequence, Bulgaria will not apply for ERM II membership in 2010, also setting back the target year for euro adoption (formerly 2013). Having given up its aim to balance the budget in 2010, the government nevertheless announced that it will strive to keep the deficit below 3% of GDP.

Table 6

Main Economic Indicators: Bulgaria

	2007	2008	2009	Q3 08	Q4 08	Q1 09	Q2 09	Q3 09	Q4 09
<i>Year-on-year change of the period total in %</i>									
GDP at constant prices	6.2	6.0	-5.0	6.8	3.5	-3.5	-4.9	-5.4	-5.9
Private consumption	5.3	4.8	-6.3	6.4	1.5	-6.3	-5.6	-5.2	-7.9
Public consumption	3.1	0.1	-5.5	0.4	1.2	-0.4	4.1	1.0	-18.8
Gross fixed capital formation	21.7	20.3	-26.9	22.3	15.8	-14.1	-16.3	-36.5	-35.4
Exports of goods and services	5.2	2.9	-9.8	3.8	-6.0	-17.4	-15.8	-6.7	0.8
Imports of goods and services	9.9	4.9	-22.3	4.2	-3.2	-21.1	-24.3	-23.4	-20.0
<i>Contribution to GDP growth in percentage points</i>									
Domestic demand	11.2	7.2	-19.3	4.0	4.3	-13.5	-16.7	-23.6	-21.8
Net exports of goods and services	-5.6	-2.8	14.7	-1.1	-0.5	9.9	14.3	15.7	17.7
Exports of goods and services	3.4	1.9	-6.2	2.6	-3.5	-11.8	-10.7	-4.5	0.4
Imports of goods and services	9.1	4.6	-20.9	3.7	-3.0	-21.8	-25.0	-20.2	-17.3
<i>Year-on-year change of the period average in %</i>									
Labor productivity in industry (real)	7.8	1.2	-8.5	4.7	-5.7	-11.4	-11.1	-9.3	-2.4
Average gross earnings in industry (nominal)	19.7	21.4	11.4	21.5	16.7	12.7	12.0	9.6	11.2
Unit labor costs in industry (nominal)	10.9	20.0	21.9	16.0	23.7	27.1	26.0	20.9	13.9
Producer price index (PPI) in industry	7.6	11.1	-6.3	12.7	4.6	-3.4	-6.9	-10.2	-4.9
Consumer price index (here: HICP)	7.6	12.0	2.5	12.5	9.0	5.1	3.1	0.8	0.9
EUR per 1 BGN, + = BGN appreciation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Period average levels</i>									
Unemployment rate (ILO definition, %, 15–64 years)	7.0	5.7	6.9	5.2	5.1	6.4	6.4	6.7	8.0
Employment rate (%, 15–64 years)	61.7	64.0	62.6	65.0	64.3	62.6	63.3	63.1	61.2
Key interest rate per annum (%) ¹	..	..	..	..	..	..	..	..	..
BGN per 1 EUR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
<i>Nominal year-on-year change in the period-end stock in %</i>									
Broad money (including foreign currency deposits)	31.2	8.8	4.3	19.5	8.8	6.3	3.6	1.6	4.3
<i>Contributions to the year-on-year change of broad money in percentage points</i>									
Net foreign assets of the banking system	1.5	-12.3	1.7	-4.3	-12.3	-10.5	-7.1	-9.3	1.7
Domestic credit of the banking system	38.7	26.3	6.8	31.1	26.3	23.1	16.1	15.0	6.8
<i>of which: claims on the private sector</i>	45.3	28.4	4.1	40.4	28.4	23.0	11.6	5.6	4.1
<i>claims on households</i>	14.8	10.3	2.3	14.0	10.3	8.6	4.8	2.8	2.3
<i>claims on enterprises</i>	30.5	18.1	1.8	26.4	18.1	14.4	6.8	2.8	1.8
<i>claims on the public sector (net)</i>	-6.7	-2.1	2.7	-9.3	-2.1	0.1	4.5	9.4	2.7
Other assets (net) of the banking system	-9.0	-5.1	-4.1	-7.4	-5.1	-6.3	-5.4	-4.1	-4.1
<i>% of GDP, ESA 95</i>									
General government revenues	41.5	39.1	36.9	..	..	..	..	..	..
General government expenditures	41.6	37.3	40.8	..	..	..	..	..	..
General government balance	0.1	1.8	-3.9	..	..	..	..	..	..
Primary balance	1.1	2.6	-3.1	..	..	..	..	..	..
Gross public debt	18.2	14.1	14.8	..	..	..	..	..	..
<i>Year-on-year change of the period total (based on EUR) in %</i>									
Merchandise exports	12.6	12.5	-22.5	15.8	-10.4	-26.6	-33.1	-26.4	0.2
Merchandise imports	18.2	14.6	-33.2	14.8	-5.8	-29.5	-39.3	-36.6	-26.1
<i>% of GDP (based on EUR), period total</i>									
Trade balance	-25.1	-25.2	-12.1	-21.1	-24.5	-16.0	-15.0	-9.2	-9.4
Services balance	2.6	3.9	4.6	12.8	-0.2	0.0	3.1	12.8	1.2
Income balance (factor services balance)	-3.9	-5.2	-4.7	-4.7	-5.5	-7.0	-6.5	-3.6	-2.2
Current transfers	1.2	2.4	2.7	1.6	0.4	3.0	3.8	2.1	2.2
Current account balance	-25.2	-24.0	-9.4	-11.4	-29.7	-20.1	-14.6	2.1	-8.1
Capital account balance	-2.1	0.8	1.4	0.4	0.4	2.6	1.5	0.8	1.1
Foreign direct investment (net)	28.7	18.2	9.8	19.7	16.0	12.7	8.0	6.5	12.5
<i>% of GDP (rolling four-quarter GDP, based on EUR), end of period</i>									
Gross external debt	100.4	108.7	111.3	110.4	108.7	107.2	107.2	107.8	111.3
Gross official reserves (excluding gold)	38.8	35.0	35.3	42.4	35.0	31.8	31.9	33.6	35.3
<i>Months of imports of goods and services</i>									
Gross official reserves (excluding gold)	5.4	5.1	7.5	5.9	5.1	5.0	5.7	6.6	7.5
<i>EUR million, period total</i>									
GDP at current prices	28,899	34,118	33,877	9,515	9,557	7,138	8,345	9,232	9,161

Source: Bloomberg, European Commission, Eurostat, national statistical offices, national central banks, wiw, OeNB.

¹ Not available in a currency board regime.

5 Czech Republic: Light at the End of the (Economic) Tunnel

The country seems to have passed the economic trough

Although the economy is not out of the woods yet, it seems to have passed the trough. GDP still kept on shrinking on a year-on-year basis in the last two quarters of 2009 (by -5.0% and -2.8% , respectively), bringing the annual average growth rate to -4.2% . However, in quarter-on-quarter terms, economic activity started to expand again in the third (0.6%) and in the final quarter (0.7%) of 2009 after three consecutive quarters of negative GDP growth. All components but public consumption acted as a drag on output in 2009. Gross fixed capital formation and particularly the reduction in inventories proved to be a damper on growth. While the contribution of net exports to GDP dynamics improved substantially over the course of the year and even turned strongly positive in the last quarter, private consumption followed exactly the opposite trend, given slower wage increases and rising unemployment.

The labor market continues to deteriorate

The economic decline continued to feed through to the labor market and was reflected in major indicators, such as a decreasing employment rate, a reduced number of vacancies and occupied jobs and, naturally, rising unemployment. The jobless rate came to 7.3% at end-2009, up by some 3 percentage points on the rate in the summer of 2008. ULCs in industry declined in the fourth quarter of 2009, with productivity growth outpacing wage increases as industrial dynamics recovered somewhat from their trough in early 2009.

Currency appreciation weakens ...

As from spring 2009, the Czech koruna continued to appreciate vis-à-vis the euro up to September 2009 and has weakened slightly since then. Although the appreciation counteracted the strong recovery of the trade balance somewhat (on the back of weaker import demand), the current account deficit was still substantially lower at the end of 2009 than a year earlier (-1.1% of GDP, compared with -3.1%). Some two-thirds of this shortfall was covered by reviving FDI inflows.

... and inflation starts to increase somewhat again

After inflation had even dropped below zero in October 2009, the long-run downward trend – attributable particularly to slower growth of regulated prices and the anti-inflationary effect of low domestic demand – petered out, with price index increases edging up gradually from the fourth quarter of 2009. The recent rise was mainly brought about by a pronounced upturn in fuel prices. Yet, despite the upswing, inflation is still hovering well below the lower boundary of the tolerance band around the Czech National Bank's (CNB's) new inflation target ($2\% \pm 1$ percentage point) effective from 2010. Against this backdrop, the CNB cut the key interest rate once more in December 2009, bringing it to 1.00% .

Fiscal policy focus shifts from stimulus to consolidation

On the fiscal side, the policy focus has shifted from stimulus to consolidation. In light of the unexpected depth of the recession, the general government deficit came to 5.9% of GDP in 2009, missing the parliament-approved target by around 5 percentage points. The government subsequently pushed a fiscal consolidation package through parliament, which is weighted toward the revenue side, particularly indirect taxes. This package is meant to limit the budget deficit in 2010 to 5.3% of GDP. While the revenue-raising measures of the package are of indefinite duration, spending cuts are limited to 2010. The future path of consolidation will to a large extent depend on the outcome of the upcoming election.

Table 7

Main Economic Indicators: Czech Republic

	2007	2008	2009	Q3 08	Q4 08	Q1 09	Q2 09	Q3 09	Q4 09
<i>Year-on-year change of the period total in %</i>									
GDP at constant prices	6.1	2.5	-4.2	3.4	-0.1	-3.9	-5.2	-5.0	-2.8
Private consumption	5.0	3.6	-0.2	3.8	2.3	0.9	0.0	-0.6	-0.9
Public consumption	0.7	1.0	4.4	3.1	-0.3	3.4	3.4	5.5	5.1
Gross fixed capital formation	10.8	-1.5	-8.3	-1.0	-4.1	-8.1	-7.7	-10.4	-7.0
Exports of goods and services	15.0	6.0	-10.2	7.7	-9.8	-18.5	-16.1	-7.7	3.0
Imports of goods and services	14.3	4.7	-10.2	4.3	-6.5	-17.5	-15.7	-6.1	-1.2
<i>Contribution to GDP growth in percentage points</i>									
Domestic demand	5.4	1.1	-4.5	0.3	3.2	-2.2	-4.3	-4.2	-7.3
Net exports of goods and services	0.7	1.4	-0.2	3.4	-3.5	-1.9	-1.2	-1.9	4.0
Exports of goods and services	14.1	6.1	-10.7	7.6	-10.6	-20.8	-17.5	-7.9	2.9
Imports of goods and services	13.3	4.7	-10.5	4.2	-7.0	-18.9	-16.3	-6.0	-1.2
<i>Year-on-year change of the period average in %</i>									
Labor productivity in industry (real)	8.2	-2.8	-2.4	0.4	-11.3	-12.1	-7.6	0.3	11.2
Average gross earnings in industry (nominal)	7.1	8.1	4.0	7.0	5.5	1.2	2.0	5.5	7.1
Unit labor costs in industry (nominal)	-1.0	11.4	6.4	6.6	19.0	15.2	10.4	5.2	-3.7
Producer price index (PPI) in industry	2.6	0.4	-1.5	0.0	0.7	1.9	-1.1	-3.7	-3.1
Consumer price index (here: HICP)	3.0	6.3	0.6	6.5	4.4	1.5	1.0	-0.1	0.0
EUR per 1 CZK, + = CZK appreciation	2.1	11.2	-5.7	15.9	5.7	-7.5	-7.0	-5.8	-2.2
<i>Period average levels</i>									
Unemployment rate (ILO definition, %, 15–64 years)	5.4	4.4	6.7	4.3	4.4	5.8	6.4	7.4	7.3
Employment rate (%15–64 years)	66.1	66.6	65.4	66.7	66.8	65.6	65.4	65.2	65.3
Key interest rate per annum (%)	2.9	3.5	1.5	3.6	3.0	2.0	1.6	1.3	1.2
CZK per 1 EUR	27.8	25.0	26.5	24.1	25.4	27.6	26.7	25.6	25.9
<i>Nominal year-on-year change in the period-end stock in %</i>									
Broad money (including foreign currency deposits)	16.1	13.6	0.2	13.2	13.6	12.3	9.1	3.2	0.2
<i>Contributions to the year-on-year change of broad money in percentage points</i>									
Net foreign assets of the banking system	-0.1	0.2	1.1	0.1	0.2	4.1	2.6	-0.7	1.1
Domestic credit of the banking system	15.3	11.0	4.6	9.7	11.0	8.9	9.3	6.6	4.6
<i>of which: claims on the private sector</i>	18.2	10.6	0.3	14.7	10.6	9.0	5.2	2.0	0.3
<i>claims on households</i>	9.1	6.5	3.8	8.0	6.5	6.2	5.4	4.6	3.8
<i>claims on enterprises</i>	9.2	4.1	-3.5	6.6	4.1	2.7	-0.3	-2.5	-3.5
<i>claims on the public sector (net)</i>	-2.9	0.4	4.3	-5.0	0.4	-0.1	4.1	4.6	4.3
Other assets (net) of the banking system	0.9	2.4	-5.4	3.4	2.4	-0.7	-2.7	-2.7	-5.4
<i>% of GDP, ESA 95</i>									
General government revenues	41.8	40.2	40.3	..	..	..	..	..	..
General government expenditures	42.5	42.9	46.2	..	..	..	..	..	..
General government balance	-0.7	-2.7	-5.9	..	..	..	..	..	..
Primary balance	0.4	-1.6	-4.6	..	..	..	..	..	..
Gross public debt	29.0	30.0	35.4	..	..	..	..	..	..
<i>Year-on-year change of the period total (based on EUR) in %</i>									
Merchandise exports	18.2	10.4	-18.3	14.8	-9.1	-24.9	-24.8	-17.6	-3.8
Merchandise imports	16.0	11.1	-21.9	13.5	-4.0	-26.0	-27.9	-20.9	-12.2
<i>% of GDP (based on EUR), period total</i>									
Trade balance	3.4	2.8	5.0	2.9	-0.7	4.8	5.7	4.9	4.6
Services balance	1.4	2.2	0.7	2.1	1.9	1.7	1.0	0.3	0.0
Income balance (factor services balance)	-7.2	-7.8	-6.4	-7.4	-6.7	-4.1	-10.0	-6.6	-4.7
Current transfers	-0.8	-0.3	-0.4	-0.8	-0.7	0.5	-0.1	-1.2	-0.7
Current account balance	-3.2	-3.1	-1.1	-3.2	-6.2	2.9	-3.3	-2.6	-0.8
Capital account balance	0.6	0.8	1.1	0.2	1.0	1.8	0.5	0.6	1.7
Foreign direct investment (net)	5.1	4.1	0.7	4.4	3.6	1.7	0.0	-2.0	3.2
<i>% of GDP (rolling four-quarter GDP, based on EUR), end of period</i>									
Gross external debt	40.5	40.3	43.7	44.4	40.3	39.1	41.3	42.0	43.7
Gross official reserves (excluding gold)	18.4	17.8	20.8	17.3	17.8	18.9	19.0	20.0	20.8
<i>Months of imports of goods and services</i>									
Gross official reserves (excluding gold)	2.9	3.0	3.9	2.8	3.0	3.3	3.4	3.7	3.9
<i>EUR million, period total</i>									
GDP at current prices	127,423	147,939	137,316	38,814	37,131	31,651	34,404	35,519	35,742

Source: Bloomberg, European Commission, Eurostat, national statistical offices, national central banks, wiw, OeNB.

6 Hungary: Recession Eases, Vulnerabilities Decrease

Recessionary trends ease in the second half of 2009

The decline in GDP moderated during the second half of 2009, with the economy contracting by 4% year on year in the fourth quarter. Private consumption continued to be depressed by the steep decline in the net aggregate real wage, while household credit growth ground to a halt in year-on-year terms by end-2009 and social transfers tightened. Public consumption posted modest growth in the fourth quarter, but this was due to the very weak base a year earlier. The decrease in investments deepened in the second half of the year, given low levels of capacity utilization, weak demand conditions, the faster year-on-year contraction of the stock of credit to the corporate sector and the tightening of the housing subsidy scheme from mid-2009. Net exports made a strong positive contribution in the second half, with export growth turning positive and the decline in imports having moderated sharply by the fourth quarter.

External vulnerabilities have decreased

Hungary's combined current and capital account posted a surplus of around 2.7% of GDP in the second half of 2009. The bulk of the improvement compared to the second half of 2008 (−6.8%) came from the goods and services balance, but the deficit in the income balance also was smaller mainly because dividend payments were lower. Foreign parent banks maintained their exposure to their subsidiaries, while the government was able to finance its deficit and rollover needs from the capital markets and has not drawn further funds from the IMF and the EU since September 2009. The exchange rate of the forint versus the euro was relatively stable at around 265 to 275, and the country's risk premiums as measured by CDS spreads decreased over the past few months. The improvement in the country's risk assessment and external vulnerability – along with the favorable inflation outlook – allowed the Hungarian central bank (MNB) to continue cutting interest rates in small steps by a combined 200 basis points between end-September 2009 and end-February 2010.

Inflation to diminish in the second half of 2010

Following a temporary slowdown in September and October (to 4.2%), inflation accelerated to 5.6% in February 2010 on the back of higher energy and food prices, additional increases in VAT and excise taxes and weight changes in the HICP basket at the beginning of 2010. By contrast, core inflation was stable at 5.0% to 5.3% between July 2009 and February 2010. In its latest inflation report, the MNB expected inflation to peak at 6% to 6.5% in the first quarter of 2010 and to fall rapidly in the second half of 2010 (to 3.2% to 3.3%) and further to around 2% in 2011 (below the MNB's target of 3%). Apart from the base effect of indirect tax hikes, the negative output gap and weak domestic consumption are expected to be the major disinflationary factors.

Hungary achieves 2009 budget deficit target, future surrounded by uncertainty

In February 2010, the Council of the European Union stated that Hungary had so far taken effective action to bring the budget deficit below 3% of GDP by 2011. In its convergence program update of January 2010, the government pledged to reduce the budget deficit from 4.0% of GDP in 2009 to 2.8% in 2011 and further to 2.5% in 2012. The deficit is envisaged to decline by only 0.1% of GDP in 2010, as savings measures will be counterbalanced by revenue losses due to weak economic growth and Constitutional Court decisions adversely affecting tax receipts. In 2011 to 2012, the decline in the deficit will rely on larger reductions of expenditures than of revenues. However, the budgetary outlook is uncertain, in particular given the change in government following parliamentary elections in April 2010.

Table 8

Main Economic Indicators: Hungary

	2007	2008	2009	Q3 08	Q4 08	Q1 09	Q2 09	Q3 09	Q4 09
<i>Year-on-year change of the period total in %</i>									
GDP at constant prices	1.0	0.6	-6.3	1.4	-2.5	-6.7	-7.5	-7.1	-4.0
Private consumption	0.4	-0.5	-7.5	0.3	-4.2	-7.2	-6.7	-9.7	-6.3
Public consumption	-7.4	-0.8	-1.1	3.7	-7.1	-2.0	-0.5	-3.1	1.0
Gross fixed capital formation	1.6	0.4	-6.5	1.6	0.4	-7.0	-3.4	-6.8	-8.1
Exports of goods and services	16.2	5.6	-9.1	4.2	-6.2	-17.8	-13.9	-6.9	3.1
Imports of goods and services	13.3	5.7	-15.4	4.4	-6.1	-21.5	-22.6	-14.6	-2.0
<i>Contribution to GDP growth in percentage points</i>									
Domestic demand	-1.2	0.7	-11.5	1.5	-2.4	-10.0	-15.0	-13.2	-7.8
Net exports of goods and services	3.1	0.0	7.4	-0.1	-0.3	4.1	10.6	8.8	5.9
Exports of goods and services	16.7	6.6	-11.3	4.9	-7.4	-24.5	-17.7	-8.4	3.6
Imports of goods and services	13.6	6.6	-18.7	5.0	-7.0	-28.5	-28.2	-17.2	-2.3
<i>Year-on-year change of the period average in %</i>									
Labor productivity in industry (real)	9.4	0.2	-6.5	-1.6	-9.4	-14.9	-11.0	-4.5	4.7
Average gross earnings in industry (nominal)	8.3	6.3	4.6	6.6	4.7	3.9	3.6	5.7	5.1
Unit labor costs in industry (nominal)	-1.0	6.4	12.0	8.6	16.7	22.7	16.5	11.0	-0.6
Producer price index (PPI) in industry	0.4	4.6	4.6	3.3	6.1	7.6	6.3	4.1	0.4
Consumer price index (here: HICP)	7.9	6.0	4.0	6.3	4.2	2.7	3.6	4.9	4.9
EUR per 1 HUF, + = HUF appreciation	5.1	-0.2	-10.3	6.6	-4.0	-11.8	-13.3	-13.0	-2.7
<i>Period average levels</i>									
Unemployment rate (ILO definition, %, 15–64 years)	7.4	7.9	10.1	7.8	8.0	9.7	9.6	10.4	10.5
Employment rate (%, 15–64 years)	57.3	56.7	55.4	57.3	56.7	55.1	55.6	55.5	55.5
Key interest rate per annum (%)	7.8	8.7	8.6	8.5	10.5	9.6	9.5	8.5	6.8
HUF per 1 EUR	251.3	251.7	280.5	236.1	263.5	294.1	285.9	271.3	270.9
<i>Nominal year-on-year change in the period-end stock in %</i>									
Broad money (including foreign currency deposits)	11.0	8.8	3.4	8.5	8.8	8.6	11.9	7.5	3.4
<i>Contributions to the year-on-year change of broad money in percentage points</i>									
Net foreign assets of the banking system	-6.8	-3.8	13.3	-4.7	-3.8	4.9	7.7	15.1	13.3
Domestic credit of the banking system	21.3	18.2	-4.1	18.1	18.2	14.0	13.7	0.8	-4.1
<i>of which: claims on the private sector</i>	19.3	20.4	-4.7	17.7	20.4	24.0	15.2	5.3	-4.7
<i>claims on households</i>	9.1	12.7	0.8	9.8	12.7	14.0	10.1	6.4	0.8
<i>claims on enterprises</i>	10.2	7.6	-5.5	7.9	7.6	10.0	5.1	-1.1	-5.5
<i>claims on the public sector (net)</i>	1.9	-2.1	0.5	0.5	-2.1	-10.0	-1.5	-4.5	0.5
Other assets (net) of the banking system	-3.4	-5.6	-5.8	-4.9	-5.6	-10.2	-9.6	-8.4	-5.8
<i>% of GDP, ESA 95</i>									
General government revenues	44.8	45.4	45.8	..	..	..	..	..	..
General government expenditures	49.8	49.2	49.8	..	..	..	..	..	..
General government balance	-5.0	-3.8	-4.0	..	..	..	..	..	..
Primary balance	-0.9	0.4	0.7	..	..	..	..	..	..
Gross public debt	65.9	72.9	78.3	..	..	..	..	..	..
<i>Year-on-year change of the period total (based on EUR) in %</i>									
Merchandise exports	16.8	6.7	-19.2	6.8	-8.6	-27.0	-25.7	-18.8	-3.5
Merchandise imports	12.5	7.1	-24.8	9.5	-7.3	-28.9	-31.4	-26.0	-11.5
<i>% of GDP (based on EUR), period total</i>									
Trade balance	0.2	-0.1	4.3	-1.5	-0.3	3.0	5.2	4.1	4.8
Services balance	1.0	0.9	1.6	1.9	0.1	0.5	1.6	2.8	1.2
Income balance (factor services balance)	-7.3	-7.3	-6.0	-8.1	-7.7	-6.4	-6.7	-6.0	-5.2
Current transfers	-0.5	-0.6	0.3	-0.3	-0.9	-1.0	0.6	0.6	0.9
Current account balance	-6.5	-7.1	0.2	-8.0	-8.8	-3.8	0.7	1.5	1.7
Capital account balance	0.7	1.0	1.4	0.5	2.7	1.5	1.8	1.4	0.8
Foreign direct investment (net)	1.3	2.6	-0.2	0.6	5.2	1.9	-5.8	-0.5	3.1
<i>% of GDP (rolling four-quarter GDP, based on EUR), end of period</i>									
Gross external debt	97.8	116.4	139.6	112.4	116.4	126.1	133.3	139.9	139.6
Gross official reserves (excluding gold)	16.2	22.7	32.8	16.4	22.7	27.3	27.5	32.5	32.8
<i>Months of imports of goods and services</i>									
Gross official reserves (excluding gold)	2.5	3.4	5.5	2.4	3.4	4.2	4.3	5.3	5.5
<i>EUR million, period total</i>									
GDP at current prices	101,093	105,606	93,319	27,946	27,041	20,220	22,516	24,084	26,499

Source: Bloomberg, European Commission, Eurostat, national statistical offices, national central banks, wiw, OeNB.

7 Poland: Ongoing Reemergence of Export-Driven Growth

Social transfer payments and public fixed investment support growth in 2009

Poland posted an annual GDP growth rate of 1.7% in 2009. GDP growth accelerated during 2009 to come to 3.3% year on year and 1.2% quarter on quarter in the fourth quarter. Among the final demand components, private consumption posted the largest (albeit declining) growth contribution in 2009. Gross fixed investment remained stagnant, as public infrastructure projects offset the sharp fall in private sector fixed investment. However, substantial destocking of inventories slashed GDP growth by 2.7 percentage points in 2009. Exports started to grow in quarter-on-quarter terms in the third quarter, but were still lower than in the fourth quarter of the previous year. In 2009, imports fell more strongly than exports, so that net exports made a positive growth contribution. Even though imports also started to grow again on a quarter-on-quarter basis in the third quarter, the contribution of net exports to both annual and quarterly growth in the fourth quarter was still positive. Private consumption benefited from large increases in social transfer payments, from real wage growth of close to 1% and from declining but positive annual employment growth up to the third quarter of 2009 because companies retained labor during the crisis. Nevertheless, the unemployment rate rose to 8.2% in the third quarter of 2009 as a result of a further rise in the activity rate. Moreover, consumer loans continued to rise at double-digit annual rates up to the fourth quarter of 2009, when the rate slowed. For 2010, monthly indicators point to a continued improvement in manufacturing, while construction output and retail sales have so far been weaker than expected.

Disinflation due to zloty's renewed appreciation, ULC decline and low demand pressure

Annual inflation decreased to 4.0% (HICP) and 2.6% (CPI) in March 2010, after peaking at 4.5% (HICP) in July and 4.0% (CPI) in April 2009, respectively. In parallel, core inflation fell to 2.0% in March. Disinflation was the result of currency reappreciation – the zloty gained 16% against the euro from February 2009 after depreciating by 30% in the six previous months – a continuous drop in nominal ULCs in manufacturing of around 7% year on year in the fourth quarter of 2009, and low demand pressure. Taking these factors into account, the Polish Monetary Policy Council (MPC) found at the end of March 2010 that “the probabilities of inflation running below or above the inflation target (i.e. 2.5% for the CPI) in the medium term are balanced.” Accordingly, the MPC has kept the key policy rate at 3.5% since end-June 2009, having lowered it from 6% from October 2008 to June 2009, and has maintained required reserve rates at 3% since mid-2009.

Convergence program update backloads fiscal consolidation to 2011 and 2012

Poland's ESA 95 budget deficit in 2009 reached 7.1% of GDP,⁹ after 3.6% of GDP in 2008,¹⁰ in response to which the Ecofin had issued an EDP recommendation in July 2009 that required a correction by 2012 by ensuring an average annual fiscal correction of at least 1.25 percentage points of GDP from 2010 onward. In 2009, the deficit rose as a result of a fall in revenues (by 2 percentage points of GDP) and a rise in expenditures (by about 1 percentage point) that mainly reflected higher social transfer payments. The convergence program update of February 2010 envisages a deficit of 6.9% of GDP in 2010 (assuming a 2009 deficit of 7.1%). It further envisages that the 2.2 percentage point increase in revenues will be nearly matched by the expansion of expenditures (mainly due to public fixed investment). The program envisages tackling the bulk of fiscal consolidation in 2011 (bringing the deficit to 5.9% of GDP) and above all in 2012 (bringing the deficit to 2.9%). Government gross debt is expected to peak at 56.3% at end-2011.

⁹ Includes net fiscal costs of 3.2% of GDP for the pension reform.

¹⁰ Includes net fiscal costs of 2.9% of GDP for the pension reform.

Table 9

Main Economic Indicators: Poland

	2007	2008	2009	Q3 08	Q4 08	Q1 09	Q2 09	Q3 09	Q4 09
<i>Year-on-year change of the period total in %</i>									
GDP at constant prices	6.8	5.0	1.7	5.5	2.6	0.9	1.2	1.2	3.3
Private consumption	4.9	5.9	2.3	5.2	6.3	4.0	1.7	2.4	0.9
Public consumption	3.7	7.5	1.2	7.4	12.4	5.6	-1.6	0.4	0.6
Gross fixed capital formation	17.2	8.2	-0.3	5.0	4.2	-0.4	-1.5	-0.6	0.7
Exports of goods and services	9.1	7.0	-10.7	9.2	-2.8	-15.2	-15.4	-11.3	-0.6
Imports of goods and services	13.5	8.1	-14.2	8.9	-1.6	-16.9	-19.8	-14.7	-5.3
<i>Contribution to GDP growth in percentage points</i>									
Domestic demand	9.2	5.7	-1.2	5.8	2.7	-1.6	-2.4	-1.8	0.8
Net exports of goods and services	-2.1	-0.8	2.1	-0.4	-0.4	1.5	2.9	2.2	1.9
Exports of goods and services	3.5	2.8	-4.3	3.7	-1.0	-6.3	-6.4	-4.7	-0.2
Imports of goods and services	5.5	3.6	-6.4	4.0	-0.7	-7.8	-9.4	-6.9	-2.1
<i>Year-on-year change of the period average in %</i>									
Labor productivity in industry (real)	5.9	1.5	2.5	1.3	-4.7	-6.1	-1.0	5.4	11.9
Average gross earnings in industry (nominal)	8.7	8.8	4.9	9.1	6.5	5.9	4.2	4.4	5.1
Unit labor costs in industry (nominal)	2.6	7.4	2.5	8.1	11.9	13.4	5.2	-1.0	-6.4
Producer price index (PPI) in industry	2.1	2.4	3.9	2.0	2.9	5.8	4.8	2.7	2.4
Consumer price index (here: HICP)	2.6	4.2	4.0	4.4	3.6	3.6	4.3	4.3	3.8
EUR per 1 PLN, + = PLN appreciation	3.0	7.6	-18.8	14.5	-3.1	-20.6	-23.5	-21.1	-9.7
<i>Period average levels</i>									
Unemployment rate (ILO definition, %, 15-64 years)	9.7	7.2	8.3	6.7	6.8	8.4	8.0	8.2	8.6
Employment rate (%, 15-64 years)	57.0	59.2	59.4	60.0	60.0	58.9	59.3	59.9	59.4
Key interest rate per annum (%)	4.4	5.7	3.8	6.0	5.8	4.4	3.7	3.5	3.5
PLN per 1 EUR	3.8	3.5	4.3	3.3	3.8	4.5	4.5	4.2	4.2
<i>Nominal year-on-year change in the period-end stock in %</i>									
Broad money (including foreign currency deposits)	13.4	18.6	8.1	17.3	18.6	17.5	14.4	9.6	8.1
<i>Contributions to the year-on-year change of broad money in percentage points</i>									
Net foreign assets of the banking system	-9.0	-13.6	3.1	-10.6	-13.6	-9.3	-6.3	-1.9	3.1
Domestic credit of the banking system	20.0	39.2	9.3	28.9	39.2	38.7	30.9	18.0	9.3
of which: claims on the private sector	22.5	30.1	6.6	23.6	30.1	29.7	23.1	16.2	6.6
claims on households	14.6	20.8	6.8	15.4	20.8	21.1	17.7	13.7	6.8
claims on enterprises	7.9	9.3	-0.2	8.2	9.3	8.6	5.4	2.5	-0.2
claims on the public sector (net)	-2.5	9.1	2.7	5.3	9.1	9.0	7.8	1.8	2.7
Other assets (net) of the banking system	2.4	-6.9	-4.3	-0.9	-6.9	-11.9	-10.2	-6.5	-4.3
<i>% of GDP, ESA 95</i>									
General government revenues	40.3	39.6	37.4	..	..	..	..	..	..
General government expenditures	42.2	43.3	44.5	..	..	..	..	..	..
General government balance	-1.9	-3.7	-7.1	..	..	..	..	..	..
Primary balance	0.4	-1.5	-4.5	..	..	..	..	..	..
Gross public debt	45.0	47.2	51.0	..	..	..	..	..	..
<i>Year-on-year change of the period total (based on EUR) in %</i>									
Merchandise exports	13.3	14.2	-17.1	20.5	-6.2	-22.2	-23.8	-20.1	0.1
Merchandise imports	19.5	17.2	-25.4	23.9	-2.4	-28.2	-32.2	-27.8	-12.1
<i>% of GDP (based on EUR), period total</i>									
Trade balance	-4.0	-4.9	-1.0	-4.7	-5.4	-1.1	-0.7	-1.0	-1.3
Services balance	1.1	1.0	1.1	0.7	1.5	1.2	1.2	0.9	1.2
Income balance (factor services balance)	-3.8	-2.6	-3.2	-2.3	-2.2	-2.3	-4.3	-3.0	-3.4
Current transfers	2.0	1.5	1.5	2.1	0.9	2.2	2.3	1.6	0.4
Current account balance	-4.7	-5.0	-1.6	-4.2	-5.2	0.0	-1.5	-1.5	-3.1
Capital account balance	1.1	1.1	1.6	0.4	0.5	2.7	1.4	0.6	2.0
Foreign direct investment (net)	4.2	2.2	2.0	0.9	2.1	1.9	1.8	3.5	0.9
<i>% of GDP (rolling four-quarter GDP, based on EUR), end of period</i>									
Gross external debt	51.0	47.7	62.4	51.6	47.7	48.7	52.9	59.9	62.4
Gross official reserves (excluding gold)	13.7	11.6	17.0	13.7	11.6	12.6	13.7	16.2	17.0
<i>Months of imports of goods and services</i>									
Gross official reserves (excluding gold)	3.8	3.2	5.2	3.7	3.2	3.5	4.0	4.9	5.2
<i>EUR million, period total</i>									
GDP at current prices	311,669	362,440	310,705	95,087	92,827	69,822	73,284	78,969	88,630

Source: Bloomberg, European Commission, Eurostat, national statistical offices, national central banks, wiw, OeNB.

8 Romania: Waiting for Recovery, Multilateral Support Program Back on Track

Economy still in recession, unemployment on the rise

After having stabilized in quarter-on-quarter terms in the third quarter of 2009, GDP fell again in the final quarter (–1.5% in quarter-on-quarter terms), bringing the drop in full-year GDP to 7.1%. In the second half of 2009, net exports continued to deliver a strongly positive growth contribution, while domestic demand was still on the decline. In the fourth quarter of 2009, the fall in gross fixed capital formation even accelerated in year-on-year terms, whereas the decline in private consumption decelerated. Annual export growth turned positive in the fourth quarter, but the positive growth contribution of net exports diminished markedly, as imports fell less than in the first three quarters of 2009. In addition to the negative GDP dynamics, the unemployment rate increased further to 7.8% in the fourth quarter of 2009 compared to 6.1% a year earlier.

Reduction of the current account deficit goes on

The current account deficit continued to contract sharply in the second half of 2009, bringing the current account deficit for the whole year down to 4.4% of GDP from 11.6% in 2008. The external adjustment was largely driven by collapsing domestic demand reflected in a sharp decline in imports. The Romanian leu, which did not recover its losses in 2009 following depreciation by 35% against the euro in 2008, helped reduce imports and had a positive impact on ULC developments in industry. Also supported by productivity gains, industry ULCs declined by 22% in euro terms in the fourth quarter. In spite of a notable drop in the fourth quarter of 2009, net FDI inflows almost fully covered the current account gap over the year 2009.

End-2009 inflation above target, but inflation outlook allowed for further rate cuts

From November 2009 until January 2010, inflation edged up slightly, partly because excise taxes for tobacco were raised, before decreasing again in February. Hence, the downward trend of inflation, which was supported by a negative output gap, was interrupted. At end-2009, CPI inflation stood at 4.7% and thus above the central bank's target band of 3.5% \pm 1 percentage point. The National Bank of Romania (NBR) expects the negative output gap to persist and inflation to fall to 3.5% at end-2010. Given the inflation outlook, the NBR cut its key policy rate in January, February and March, by 50 basis points each time, to 6.5%.

Adoption of budget in January puts multilateral support program back on track

Against the background of political developments (in particular the collapse of the coalition), the IMF, the EU and the World Bank decided to postpone the completion of the review under the multilateral support program originally scheduled for November 2009. A new government under the former Prime Minister Boc was established in December 2009 following the reelection of President Bănescu. In January 2010, parliament adopted a budget for 2010, which envisages a deficit of 6.4% of GDP and which comprises fiscal consolidation measures of 2.5% of GDP, mostly on the expenditure side (including a reduction of public wages and a pension freeze). The adoption of the budget was an important step toward a positive assessment of Romania's performance under the support program. The successful completion of the review enabled disbursements of EUR 2.45 billion by the IMF (in February 2010) and EUR 1 billion by the EU (in March 2010). The NBR's foreign exchange reserves increased to EUR 32 billion in March 2010, up by almost 30% from a temporary low recorded in April 2009.

Table 10

Main Economic Indicators: Romania

	2007	2008	2009	Q3 08	Q4 08	Q1 09	Q2 09	Q3 09	Q4 09
<i>Year-on-year change of the period total in %</i>									
GDP at constant prices	6.3	7.3	-7.1	9.4	3.1	-6.2	-8.7	-7.1	-6.5
Private consumption	11.8	9.5	-10.6	16.5	-3.9	-12.1	-14.6	-11.1	-5.3
Public consumption	-0.3	7.2	0.7	36.9	-3.0	3.0	1.0	-0.4	-0.1
Gross fixed capital formation	30.3	16.1	-25.3	20.7	0.9	2.7	-29.7	-27.6	-31.4
Exports of goods and services	7.8	7.7	-5.2	11.8	-8.3	-9.6	-10.4	-3.7	3.9
Imports of goods and services	27.9	7.0	-21.3	10.1	-16.7	-24.8	-26.2	-20.7	-11.4
<i>Contribution to GDP growth in percentage points</i>									
Domestic demand	18.3	13.3	-19.4	21.9	-3.4	-22.2	-24.6	-16.6	-16.3
Net exports of goods and services	-16.7	-2.6	16.1	-3.7	9.3	21.6	22.0	16.0	8.2
Exports of goods and services	3.5	3.5	-2.4	4.9	-3.2	-5.9	-5.3	-1.6	1.3
Imports of goods and services	20.2	6.1	-18.4	8.5	-12.5	-27.5	-27.3	-17.6	-6.9
<i>Year-on-year change of the period average in %</i>									
Labor productivity in industry (real)	15.3	6.8	11.0	8.8	-1.3	-2.7	7.7	14.2	24.9
Average gross earnings in industry (nominal)	21.4	21.3	11.2	23.3	18.9	16.3	9.7	10.0	9.5
Unit labor costs in industry (nominal)	5.3	14.1	0.4	13.7	21.6	20.3	2.0	-3.5	-13.4
Producer price index (PPI) in industry	7.5	15.4	1.9	19.2	11.4	5.7	1.4	-1.4	2.0
Consumer price index (here: HICP)	4.9	7.9	5.6	8.2	6.9	6.8	6.1	5.0	4.5
EUR per 1 RON, + = RON appreciation	5.6	-9.4	-13.1	-9.5	-9.5	-13.6	-13.0	-15.4	-10.5
<i>Period average levels</i>									
Unemployment rate (ILO definition, %, 15–64 years)	6.7	6.1	7.2	5.7	6.1	7.2	6.6	7.2	7.8
Employment rate (%, 15–64 years)	58.8	59.1	58.6	60.5	58.3	57.4	59.2	60.4	57.4
Key interest rate per annum (%)	7.5	9.7	9.1	10.2	10.3	10.1	9.7	8.7	8.0
RON per 1 EUR	3.3	3.7	4.2	3.6	3.8	4.3	4.2	4.2	4.3
<i>Nominal year-on-year change in the period-end stock in %</i>									
Broad money (including foreign currency deposits)	33.7	17.5	9.0	31.1	17.5	15.4	11.7	10.7	9.0
<i>Contributions to the year-on-year change of broad money in percentage points</i>									
Net foreign assets of the banking system	-8.4	-10.7	5.0	-12.9	-10.7	-7.4	-4.6	3.7	5.0
Domestic credit of the banking system	55.9	41.5	12.6	58.9	41.5	38.7	29.5	16.8	12.6
<i>of which: claims on the private sector</i>	51.2	33.7	1.2	51.5	33.7	25.0	12.2	2.9	1.2
<i>claims on households</i>	29.1	18.7	0.6	28.1	18.7	14.2	7.8	2.1	0.6
<i>claims on enterprises</i>	22.1	15.0	0.6	23.4	15.0	10.8	4.4	0.8	0.6
<i>claims on the public sector (net)</i>	4.7	7.8	11.4	7.4	7.8	13.7	17.3	13.9	11.4
Other assets (net) of the banking system	-13.8	-13.3	-8.7	-14.8	-13.3	-15.9	-13.3	-9.8	-8.7
<i>% of GDP, ESA 95</i>									
General government revenues	33.5	32.1	32.1	..	..	..	..	..	..
General government expenditures	36.0	37.5	40.4	..	..	..	..	..	..
General government balance	-2.5	-5.4	-8.3	..	..	..	..	..	..
Primary balance	-1.8	-4.7	-6.8	..	..	..	..	..	..
Gross public debt	12.6	13.3	23.7	..	..	..	..	..	..
<i>Year-on-year change of the period total (based on EUR) in %</i>									
Merchandise exports	14.8	14.1	-13.9	19.9	-1.6	-19.1	-21.1	-14.4	0.3
Merchandise imports	26.5	11.5	-32.3	20.4	-8.9	-34.0	-37.6	-34.5	-21.9
<i>% of GDP (based on EUR), period total</i>									
Trade balance	-14.3	-13.7	-5.8	-13.3	-10.6	-6.8	-6.5	-5.4	-5.0
Services balance	0.4	0.5	-0.2	0.0	0.7	-0.3	-0.1	-0.2	-0.3
Income balance (factor services balance)	-3.3	-2.6	-1.8	-2.1	-0.6	-2.3	-2.5	-1.4	-1.4
Current transfers	3.9	4.3	3.5	5.2	3.2	5.4	3.4	3.8	2.3
Current account balance	-13.4	-11.6	-4.4	-10.1	-7.3	-4.0	-5.7	-3.3	-4.5
Capital account balance	0.7	0.4	0.5	0.1	0.6	0.0	0.2	0.7	0.8
Foreign direct investment (net)	5.7	6.7	4.1	5.9	5.6	8.0	4.4	4.3	1.3
<i>% of GDP (rolling four-quarter GDP, based on EUR), end of period</i>									
Gross external debt	47.0	51.8	67.9	51.5	51.8	51.2	56.1	63.7	67.9
Gross official reserves (excluding gold)	20.3	18.8	24.4	19.0	18.8	18.4	20.1	23.1	24.4
<i>Months of imports of goods and services</i>									
Gross official reserves (excluding gold)	5.6	5.2	7.9	5.0	5.2	5.3	6.2	7.4	7.9
<i>EUR million, period total</i>									
GDP at current prices	124,624	139,578	115,855	39,838	42,404	22,636	26,708	30,828	35,683

Source: Bloomberg, European Commission, Eurostat, national statistical offices, national central banks, wiw, OeNB.

9 Croatia: Macrofinancial Stabilization with Some Remaining Vulnerabilities

Recession eases, but labor market conditions deteriorate

Having bottomed out in the first half of the year, the Croatian economy saw a mild pickup in economic dynamics in the latter part of 2009, bringing GDP growth to -5.8% in 2009. Yet, the growth pattern has hardly changed. In light of low consumer and business confidence, tight financing conditions, fiscal adjustments and worsening labor market conditions, private consumption and investment activity continued to decline, but with restocking posting increases, the negative contribution of domestic demand to growth became less pronounced. At the same time, the closing gap between import and export growth caused the positive contribution of net exports to growth to decrease.

The crisis reached the labor market with some time lag in the second half of 2009, when employment decreased by some 4% and the unemployment rate climbed to 16.7% (national methodology) by end-2009. This trend accelerated further in early-2010, as reflected by the rise in unemployment to a four-year high of 18.3% in February 2010.

Partially reduced external vulnerabilities

Croatia's external imbalances narrowed somewhat in 2009. The current account deficit fell to 5.3% of GDP (2008: 9.2%) on a strongly improving trade balance, but this went in tandem with significantly lower net FDI inflows of some 2% of GDP in 2009. At the same time, Croatia's gross foreign debt increased further and reached some 98% of GDP in 2009 (2008: 85%). Reasons for this increase – apart from the fall in GDP – were a revival of the corporate sector's foreign borrowing in the latter part of 2009 and two government eurobond issues in 2009. At the same time, reserve accumulation resumed, and by end-2009, foreign exchange reserves had surpassed pre-Lehman levels.

Improved global sentiment underpins financial market stabilization

Driven by the improvement in global investor sentiment, the rise in foreign currency inflows on eurobond issues, the revival of foreign borrowing by corporations, and seasonal factors (tourism), the kuna strengthened from the second quarter of 2009. In the last quarter of 2009, the Croatian National Bank (CNB) even intervened on the foreign exchange market on three occasions to prevent a more marked appreciation. Given the stabilization and recovery of global financial markets, the CNB did not resort to monetary policy action in the second half of 2009, but in the absence of inflationary pressures in early February 2010, it reduced mandatory reserve requirements from 14% to 13%.

Deteriorating public finances coupled with sizeable financing needs

Despite a series of budget revisions (including expenditure cuts and revenue-boosting measures), the severity of the economic downturn caused the consolidated general government budget deficit (ESA 95 methodology) to climb to 3.4% of GDP in 2009 (2008: -1.4%). To finance the deficit and refinance maturing public debt, the government tapped international markets with a USD 1.5 billion (some EUR 1 billion) eurobond again in November 2009, and it plans to make two other bond issues on domestic markets (totaling some EUR 830 million) in spring 2010. Public debt levels grew strongly in 2009, but remained still below 40% of GDP.

According to Croatia's 2009 Pre-Accession Economic Programme, the 2010 budget is based on economic growth and inflation projections of 0.5% and 2.7%, respectively, and envisages a general government deficit of 3.3% of GDP, which is expected to fall gradually to 2.3% of GDP by 2012, mainly driven by fiscal consolidation on the expenditure side. To spur domestic demand and economic recovery, the government also decided to partly abolish the crisis tax (introduced in August 2009) as of July 1, 2010.

Table 11

Main Economic Indicators: Croatia

	2007	2008	2009	Q3 08	Q4 08	Q1 09	Q2 09	Q3 09	Q4 09
<i>Year-on-year change of the period total in %</i>									
GDP at constant prices	5.5	2.4	-5.8	1.6	0.2	-6.7	-6.3	-5.7	-4.5
Private consumption	6.1	0.8	-8.4	0.4	-3.2	-9.9	-9.4	-6.8	-7.4
Public consumption	3.4	2.0	0.2	1.3	2.8	3.9	1.2	-0.6	-3.4
Gross fixed capital formation	6.5	8.2	-11.8	6.6	3.5	-12.4	-12.7	-10.5	-11.3
Exports of goods and services	4.3	1.7	-16.2	1.6	-2.5	-14.2	-19.8	-17.6	-11.2
Imports of goods and services	6.5	3.6	-20.7	6.5	-7.1	-20.9	-24.7	-23.5	-12.4
<i>Contribution to GDP growth in percentage points</i>									
Domestic demand	7.1	3.5	-9.8	3.9	-2.7	-13.1	-12.4	-7.0	-6.6
Net exports of goods and services	-1.7	-1.3	4.7	-2.5	3.3	7.1	7.0	2.2	2.5
Exports of goods and services	2.0	0.8	-7.3	1.0	-1.0	-4.9	-8.4	-10.9	-4.4
Imports of goods and services	3.7	2.1	-12.0	3.5	-4.3	-12.0	-15.4	-13.1	-6.9
<i>Year-on-year change of the period average in %</i>									
Labor productivity in industry (real)	4.5	3.2	0.1	2.5	1.6	-3.5	-0.4	1.1	2.9
Average gross earnings in industry (nominal)	5.5	7.2	-0.9	7.1	6.9	0.4	0.4	-0.6	-3.6
Unit labor costs in industry (nominal)	0.9	3.8	-0.8	4.7	5.4	4.5	0.8	-1.8	-6.4
Producer price index (PPI) in industry	3.4	8.5	-0.4	11.1	6.7	1.2	-0.6	-2.3	0.1
Consumer price index (here: CPI)	2.9	6.1	2.4	7.4	4.5	3.8	2.9	1.2	1.7
EUR per 1 HRK, + = HRK appreciation	-0.2	1.6	-1.6	1.8	2.1	-1.7	-1.4	-1.9	-1.4
<i>Period average levels</i>									
Unemployment rate (ILO definition, %, 15–64 years)	9.8	8.6	9.3	7.1	9.0	9.7	9.1	8.9	9.6
Employment rate (%, 15–64 years)	57.2	57.8	56.6	59.7	57.8	56.5	56.5	57.1	56.4
Key interest rate per annum (%)	3.6	5.3	6.0	4.9	6.8	6.0	6.0	6.0	6.0
HRK per 1 EUR	7.3	7.2	7.3	7.2	7.2	7.4	7.4	7.3	7.3
<i>Nominal year-on-year change in the period-end stock in %</i>									
Broad money (including foreign currency deposits)	18.3	4.3	-0.9	14.7	4.3	3.3	1.1	-1.2	-0.9
<i>Contributions to the year-on-year change of broad money in percentage points</i>									
Net foreign assets of the banking system	12.0	-3.6	1.5	5.0	-3.6	-8.0	-7.1	-6.8	1.5
Domestic credit of the banking system	14.1	13.2	-0.5	9.0	13.2	15.7	11.2	8.7	-0.5
<i>of which: claims on the private sector</i>	14.9	10.3	-0.6	11.3	10.3	9.4	5.0	1.9	-0.6
<i>claims on households</i>	9.4	6.3	-1.6	6.1	6.3	4.6	1.7	0.4	-1.6
<i>claims on enterprises</i>	5.5	4.0	1.0	5.2	4.0	4.8	3.3	1.5	1.0
<i>claims on the public sector (net)</i>	-0.8	2.9	0.1	-2.3	2.9	6.3	6.2	6.7	0.1
Other assets (net) of the banking system	-7.8	-5.4	-1.8	0.8	-5.4	-4.4	-3.0	-3.1	-1.8
<i>% of GDP, ESA 95</i>									
General government revenues	40.3	39.4	38.8	..	..	..	..	..	..
General government expenditures	42.8	40.8	42.2	..	..	..	..	..	..
General government balance	-2.5	-1.4	-3.4	..	..	..	..	..	..
Primary balance	-0.7	0.1	-2.3	..	..	..	..	..	..
Gross public debt	33.1	33.5	38.8	..	..	..	..	..	..
<i>Year-on-year change of the period total (based on EUR) in %</i>									
Merchandise exports	8.6	6.8	-21.6	15.7	-4.5	-13.4	-23.7	-30.9	-16.5
Merchandise imports	10.8	10.7	-26.8	15.8	-2.0	-23.6	-30.1	-31.1	-21.2
<i>% of GDP (based on EUR), period total</i>									
Trade balance	-22.0	-22.8	-16.3	-20.6	-21.2	-16.5	-17.5	-15.0	-16.3
Services balance	14.6	14.7	12.5	35.3	4.1	1.3	12.2	30.6	3.5
Income balance (factor services balance)	-2.6	-3.3	-3.7	-2.0	-1.7	-4.3	-4.8	-2.9	-2.7
Current transfers	2.4	2.2	2.3	2.1	2.4	2.0	2.6	2.0	2.6
Current account balance	-7.6	-9.2	-5.2	14.7	-16.4	-17.6	-7.5	14.7	-12.9
Capital account balance	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.3
Foreign direct investment (net)	8.1	6.8	2.1	2.3	8.2	4.0	4.1	-0.3	1.0
<i>% of GDP (rolling four-quarter GDP, based on EUR), end of period</i>									
Gross external debt	78.7	85.1	98.3	77.9	85.1	85.7	89.8	93.7	98.3
Gross official reserves (excluding gold)	21.7	19.3	22.9	21.1	19.3	18.9	19.5	20.4	22.9
<i>Months of imports of goods and services</i>									
Gross official reserves (excluding gold)	5.2	4.6	7.0	4.9	4.6	4.7	5.2	5.9	7.0
<i>EUR million, period total</i>									
GDP at current prices	42,831	47,372	45,380	13,012	11,533	10,506	11,510	12,204	11,160

Source: Bloomberg, European Commission, Eurostat, national statistical offices, national central banks, wiw, OeNB.

10 Turkey: Robust Recovery of the Private Sector

Sound recovery based on consumption and public investment

The decline in real GDP decelerated in the third quarter of 2009 while the fourth quarter data came as a surprise, with an increase of 6% year on year, bringing the annual decline to 4.7% in 2009. The final quarter brought about a reversal of growth drivers, with consumption and public investments posting a sizeable positive contribution, not least due to the comprehensive economic support package implemented since the end of 2008 at an estimated cost of 3.4% of GDP for 2009. Private investment remained weak, as a result of historically low FDI inflows (FDI fell by 60% year on year in 2009) and low capacity utilization. Industrial production picked up steadily, showing an annual increase in October for the first time since the beginning of the crisis and reaching its pre-crisis level in November.

External imbalances declined in 2009, but net exports have turned negative again more recently

The current account deficit more than halved in 2009 even though imports surged far more than exports did in the final quarter. The reasons were to be found in the high import content of exports, the pronounced dependence on energy imports, and strong consumer demand. The contribution of net exports thus turned negative again in the fourth quarter of 2009, despite recent improvements in competitiveness. Labor productivity increased sharply in the fourth quarter of 2009, unit labor costs fell and the lira depreciated to 2.2 TRY/EUR.

Inflation reached a 40-year low of 5.1% year on year in October 2009

Year-end inflation came in at 6.3%, below the target of 7.5% for 2009. Inflation rose again in the final quarter of 2009 due to the unexpected surge in unprocessed food prices and other temporary factors (base effects and recent tax hikes). In the first quarter of 2010, inflation continued to rise to 9.3%, challenging the loose monetary stance of the Central Bank of the Republic of Turkey with its inflation target of 6.5% for 2010 and resulting in negative real interest rates from February 2010. The central bank ended its easing cycle in November 2009 with a rate cut of 25 basis points to 6.5%. Since then, it has kept the policy rate on hold. The cumulative interest rate cuts between November 2008 and November 2009 totaled 1,025 basis points. An important factor underlying the pronounced recovery is the healthy Turkish banking sector, which is characterized by high profitability, a capital adequacy ratio of 20.1% in February 2010, and a recent fall in nonperforming loans by 0.4% (December 2009 to February 2010). The growth of credit to the nonbank private sector increased again in the last quarter of 2009 and came to 14.4% year on year, following the moderate 7.2% expansion in the third quarter of 2009.

IMF negotiations end without a deal

Talks with the IMF over a new standby agreement were ended in mid-March without a deal. Given the stable recovery, the current strength in tax revenue and recent credit rating upgrades by Fitch, Moody's and S&P, the Turkish authorities saw no need for a new Stand-By Arrangement. The 2010 to 2012 medium-term program of the government should ensure fiscal discipline even without an IMF anchor, although recent political uncertainty could lead to early elections, introducing some risk of increased preelection spending. The general government budget rose to 5.5% of GDP in 2009, and public debt increased as well. The government's deficit targets for 2010 and 2011 are 4.7% and 3.5% of GDP, respectively.

Table 12

Main Economic Indicators: Turkey

	2007	2008	2009	Q3 08	Q4 08	Q1 09	Q2 09	Q3 09	Q4 09
<i>Year-on-year change of the period total in %</i>									
GDP at constant prices	4.7	0.7	-4.7	0.9	-7.0	-14.5	-7.7	-2.9	6.0
Private consumption	5.5	-0.3	-2.3	-0.4	-6.7	-10.1	-1.8	-1.9	4.7
Public consumption	6.5	1.7	7.8	2.6	2.8	5.1	0.5	5.2	17.9
Gross fixed capital formation	3.1	-6.2	-19.2	-8.7	-18.7	-27.6	-24.4	-18.5	-4.7
Exports of goods and services	7.3	2.7	-5.4	3.8	-8.2	-11.3	-11.0	-5.4	6.4
Imports of goods and services	10.7	-4.1	-14.4	-3.8	-24.9	-30.9	-20.6	-11.7	10.5
<i>Contribution to GDP growth in percentage points</i>									
Domestic demand	5.8	-1.2	-6.5	-1.3	-11.5	-18.8	-9.7	-4.4	6.7
Net exports of goods and services	-1.3	1.9	2.8	2.0	5.8	6.9	3.6	1.9	-1.1
Exports of goods and services	1.7	0.6	-1.3	0.9	-2.0	-2.7	-2.6	-1.3	1.5
Imports of goods and services	3.0	-1.2	-4.1	-1.1	-7.8	-9.6	-6.2	-3.2	2.7
<i>Year-on-year change of the period average in %</i>									
Labor productivity in industry (real)	0.5	-0.4	4.4	0.0	-9.2	-9.6	0.2	4.8	23.7
Average gross earnings in industry (nominal)	10.4	10.7	8.5	10.8	9.1	7.1	9.2	7.9	9.5
Unit labor costs in industry (nominal)	9.6	11.6	4.0	10.9	20.2	18.5	9.1	3.0	-11.5
Producer price index (PPI) in industry	6.0	13.0	1.0	16.2	13.3	7.8	-1.8	-2.2	1.0
Consumer price index (here: HICP)	8.8	10.4	6.3	11.7	10.9	8.4	5.7	5.3	5.7
EUR per 1 TRY, + = TRY appreciation	1.1	-6.3	-11.8	-2.9	-14.9	-16.3	-7.9	-15.1	-7.9
<i>Period average levels</i>									
Unemployment rate (ILO definition, %, 15–64 years)	8.7	9.6	12.9	8.9	11.1	14.5	12.5	12.4	12.0
Employment rate (%, 15–64 years)	45.8	45.9	44.2	47.7	45.2	41.4	44.7	45.9	44.9
Key interest rate per annum (%)	17.2	16.0	9.2	16.7	16.4	12.6	9.6	8.0	6.7
TRY per 1 EUR	1.8	1.9	2.2	1.8	2.0	2.2	2.1	2.1	2.2
<i>Nominal year-on-year change in the period-end stock in %</i>									
Broad money (including foreign currency deposits)	15.3	24.7	13.0	20.5	24.7	19.0	18.2	16.5	13.0
<i>Contributions to the year-on-year change of broad money in percentage points</i>									
Net foreign assets of the banking system	3.0	6.4	-1.2	-0.2	6.4	7.1	5.8	5.1	-1.2
Domestic credit of the banking system	20.5	19.7	21.5	23.7	19.7	15.5	17.4	18.3	21.5
<i>of which: claims on the private sector</i>	18.2	15.3	9.9	23.0	15.3	8.1	5.1	5.4	9.9
<i>claims on households</i>	6.7	6.2	2.7	9.1	6.2	3.6	2.6	1.3	2.7
<i>claims on enterprises</i>	11.5	9.1	7.1	13.8	9.1	4.6	2.5	4.1	7.1
<i>claims on the public sector (net)</i>	2.3	4.3	11.6	0.7	4.3	7.3	12.3	12.9	11.6
Other assets (net) of the banking system	-8.3	-1.4	-7.2	-2.9	-1.4	-3.6	-5.0	-6.9	-7.2
<i>% of GDP, ESA 95</i>									
General government revenues	19.6	21.6	22.5	..	..	..	..	..	..
General government expenditures	20.6	23.9	28.0	..	..	..	..	..	..
General government balance	-1.0	-2.2	-5.5	..	..	..	..	..	..
Primary balance	4.4	3.1	0.1	..	..	..	..	..	..
Gross public debt	39.4	39.5	45.5	..	..	..	..	..	..
<i>Year-on-year change of the period total (based on EUR) in %</i>									
Merchandise exports	12.9	13.8	-17.7	24.5	-3.7	-14.7	-23.1	-26.6	-4.5
Merchandise imports	10.3	11.2	-26.7	19.7	-11.7	-33.5	-32.5	-30.2	-7.4
<i>% of GDP (based on EUR), period total</i>									
Trade balance	-7.2	-7.1	-3.9	-7.4	-5.2	-1.0	-4.6	-5.4	-4.3
Services balance	2.1	2.4	2.6	4.3	2.3	0.8	2.2	5.0	1.9
Income balance (factor services balance)	-1.1	-1.1	-1.3	-0.8	-1.2	-1.7	-1.5	-1.0	-0.9
Current transfers	0.3	0.3	0.4	0.3	0.3	0.4	0.3	0.3	0.5
Current account balance	-5.8	-5.5	-2.2	-3.6	-3.8	-1.5	-3.6	-1.1	-2.8
Capital account balance	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Foreign direct investment (net)	3.1	2.1	1.0	1.6	2.6	1.7	1.0	1.0	0.4
<i>% of GDP (rolling four-quarter GDP, based on EUR), end of period</i>									
Gross external debt	38.4	40.0	42.7	39.8	40.0	42.0	41.2	42.3	42.7
Gross official reserves (excluding gold)	10.5	10.2	11.1	10.6	10.2	10.6	10.1	11.0	11.1
<i>Months of imports of goods and services</i>									
Gross official reserves (excluding gold)	4.6	4.3	5.5	4.4	4.3	4.6	4.6	5.3	5.5
<i>EUR million, period total</i>									
GDP at current prices	472,996	499,704	441,173	144,066	114,962	97,006	107,345	122,528	114,294

Source: Bloomberg, European Commission, Eurostat, national statistical offices, national central banks, wiw, OeNB.

11 Russia: Fledgling Economic Recovery, Record-Low Inflation

Incipient recovery strengthens in the final quarter of 2009

In 2009, Russia experienced its sharpest economic contraction in one and a half decades: GDP dropped by 7.8% against 2008. The driving forces of the contraction were plummeting gross fixed capital formation (–15.9%) and inventory adjustment. However, measured on a month-to-month basis, a modest recovery had already been perceptible since February 2009. This tendency strengthened in the final quarter of the year, supported by the rebound of the oil price and the reversal of capital outflows. In January 2010, the output index for key economic activities (agriculture, mining, manufacturing, energy, construction, transportation and trade) rose 3.8% (year on year). The recovery is largely borne by net exports, as imports are contracting sharply, and to a lesser degree by government consumption. In contrast, bank credit remains relatively subdued, and the share of nonperforming loans has not yet stopped rising. Unemployment remains at a high level (February 2010: 8.6%).

Financial stabilization and steady nominal reappreciation of the ruble

Because the average oil price was lower in 2009 than in 2008 and because of the global recession, Russia's combined current and capital account surplus declined to 2.9% of GDP in 2009 from 6.2% in 2008. While Russia's gross external debt slightly declined in absolute terms in 2009, the debt-to-GDP ratio rose by 7 percentage points to 37%, owing to the country's deep slump and the depreciation of the ruble's average annual exchange rate. The recovery of the oil price contributed to the slight expansion of Russia's foreign currency reserves (including gold), which reached EUR 306 billion at end-2009 (EUR 332 billion at end-March 2010) and thus bounced back to 35% of GDP. Given inflation differentials and steady nominal reappreciation since February 2009 (the trough of the financial crisis), the ruble's real effective exchange rate (REER) appreciated by over 12% in the twelve months to end-March 2010, which brings it back to roughly where it was before the devaluation of early 2009.

Downward inflation trend permits further monetary easing to support growth

Price inflation has continued its downward trend in recent months. CPI inflation (year on year) declined to 6.5% at end-March 2010, the lowest level in 12 years, because of the waning of devaluation effects followed by some impact of the reappreciation of the ruble, weaker wage growth in industry, feeble internal demand and the persisting sizeable output gap. Lower inflation has opened a window of opportunity for the Central Bank of Russia (CBR) to support economic recovery, fight the credit crunch, and curb speculative upward pressure on the ruble by lowering the refinancing rate in 12 steps by a total of 475 basis points since April 2009 to 8.25% at end-March 2010.

A relatively strong fiscal stimulus in 2009

The authorities served a relatively strong fiscal stimulus in 2009, which the Finance Ministry assesses at around 3% of GDP. The federal budget deficit reached 5.4% of GDP (the 2008 surplus had come to 4.1%). According to government estimates, the fiscal stimulus dampened GDP contraction by about 2 percentage points in 2009. The deficit was largely financed by the Reserve Fund,¹¹ which shrank by more than half over 2009 and came to EUR 39.2 billion at end-March 2010. In contrast, the National Wealth Fund¹² still held at around record level (end-March: EUR 66.5 billion). The federal budget of 2010 (based on rather conservative oil price assumptions) foresees a deficit of 6.8% of GDP.

¹¹ The Reserve Fund, which functions as a budgetary stabilization fund and accumulates budget revenues from oil and gas, is capped at 10% of GDP.

¹² The National Wealth Fund is earmarked to support the state pension system.

Table 13

Main Economic Indicators: Russia

	2007	2008	2009	Q3 08	Q4 08	Q1 09	Q2 09	Q3 09	Q4 09
<i>Year-on-year change of the period total in %</i>									
GDP at constant prices	8.1	5.6	-7.8	6.6	0.0	-9.4	-10.8	-7.7	-3.8
Private consumption	13.6	10.6	-7.7	11.1	6.1	-2.6	-7.4	-10.7	-9.3
Public consumption	3.4	2.9	2.0	3.0	2.9	1.7	2.0	1.7	2.6
Gross fixed capital formation	21.1	10.7	-15.9	12.8	-1.1	-16.2	-22.1	-17.6	-9.5
Exports of goods and services	6.3	0.2	-4.2	2.1	-8.7	-14.9	-9.2	-2.5	8.2
Imports of goods and services	26.5	14.9	-29.8	21.8	0.9	-34.3	-38.7	-33.4	-14.4
<i>Contribution to GDP growth in percentage points</i>									
Domestic demand	13.4	9.9	-15.1	11.9	3.6	-11.9	-19.3	-17.7	-11.2
Net exports of goods and services	-6.7	-5.8	11.4	-7.6	-3.8	8.8	13.5	13.8	9.3
Exports of goods and services	2.3	0.1	-1.4	0.7	-3.4	-5.5	-3.1	-0.8	3.0
Imports of goods and services	9.0	5.9	-12.8	8.3	0.4	-14.3	-16.6	-14.5	-6.3
<i>Year-on-year change of the period average in %</i>									
Labor productivity in industry (real)	4.6	3.1	-1.5	5.4	-3.7	-7.0	-6.7	-0.4	7.8
Average gross earnings in industry (nominal)	26.0	25.0	3.2	27.0	18.2	5.0	2.2	0.7	5.2
Unit labor costs in industry (nominal)	20.4	21.5	5.0	20.5	23.1	13.1	9.5	1.1	-2.6
Producer price index (PPI) in industry	14.0	21.8	-6.6	30.2	4.9	-8.3	-10.1	-13.1	5.0
Consumer price index (here: CPI)	9.1	14.1	11.8	14.9	13.8	13.9	12.6	11.5	9.3
EUR per 1 RUB, + = RUB appreciation	-2.6	-3.9	-17.4	-4.0	-0.9	-18.2	-15.7	-18.5	-17.3
<i>Period average levels</i>									
Unemployment rate (ILO definition, %, 15–64 years)	6.2	6.4	8.4	5.9	7.1	9.1	8.6	7.8	8.1
Employment rate (%, 15–64 years)	..	..	..	..	..	..	..	..	..
Key interest rate per annum (%)	10.3	10.9	11.4	11.0	11.9	13.0	12.2	10.9	9.4
RUB per 1 EUR	35.0	36.4	44.1	36.5	36.0	44.4	43.8	44.8	43.6
<i>Nominal year-on-year change in the period-end stock in %</i>									
Broad money (including foreign currency deposits)	44.2	14.6	16.4	26.5	14.6	9.3	7.1	9.1	16.4
<i>Contributions to the year-on-year change of broad money in percentage points</i>									
Net foreign assets of the banking system	29.9	15.6	10.3	25.6	15.6	15.7	11.1	5.9	10.3
Domestic credit of the banking system	24.9	15.8	16.1	14.5	15.8	12.5	14.5	19.3	16.1
<i>of which: claims on the private sector</i>	42.6	33.5	2.1	39.1	33.5	28.8	16.3	9.5	2.1
<i>claims on households</i>	11.6	7.6	-2.8	11.5	7.6	4.7	0.5	-2.8	-2.8
<i>claims on enterprises</i>	31.0	26.0	177.1	27.6	26.0	24.1	15.8	12.3	177.1
<i>claims on the public sector (net)</i>	-17.7	-17.7	14.0	-24.5	-17.7	-16.2	-1.8	9.8	14.0
Other assets (net) of the banking system	-10.6	-16.8	-10.0	-13.6	-16.8	-18.9	-18.6	-16.1	-10.0
<i>% of GDP, ESA 95</i>									
General government revenues	40.2	38.8	35.5	..	..	..	..	..	..
General government expenditures	34.2	33.9	40.9	..	..	..	..	..	..
General government balance	6.0	4.9	-5.4	..	..	..	..	..	..
Primary balance	..	..	..	..	..	..	..	..	..
Gross public debt	7.2	5.7	8.1	..	..	..	..	..	..
<i>Year-on-year change of the period total (based on EUR) in %</i>									
Merchandise exports	6.7	24.2	-32.4	39.5	-1.6	-40.2	-38.4	-36.6	-13.1
Merchandise imports	24.6	22.7	-31.3	29.7	15.7	-26.5	-33.3	-37.7	-26.6
<i>% of GDP (based on EUR), period total</i>									
Trade balance	10.0	10.6	9.0	11.3	6.3	7.6	8.4	10.0	9.5
Services balance	-1.4	-1.5	-1.6	-1.8	-1.3	-1.6	-1.4	-1.9	-1.5
Income balance (factor services balance)	-2.4	-2.9	-3.2	-3.2	-2.4	-2.0	-4.4	-3.1	-3.4
Current transfers	-0.3	-0.2	-0.2	-0.2	-0.3	-0.1	-0.1	-0.3	-0.2
Current account balance	6.0	6.1	3.9	6.2	2.2	3.9	2.5	4.7	4.4
Capital account balance	-0.7	0.0	-0.9	0.0	0.0	0.1	0.1	-3.6	0.0
Foreign direct investment (net)	0.7	1.1	-0.6	1.2	0.7	-1.7	-0.5	0.7	-1.1
<i>% of GDP (rolling four-quarter GDP, based on EUR), end of period</i>									
Gross external debt	34.1	30.3	37.0	34.4	30.3	31.0	32.6	34.9	37.0
Gross official reserves (excluding gold)	33.4	26.1	32.7	34.0	26.1	25.6	27.6	28.9	32.7
<i>Months of imports of goods and services</i>									
Gross official reserves (excluding gold)	18.6	14.2	19.2	18.9	14.2	13.9	15.2	16.3	19.2
<i>EUR million, period total</i>									
GDP at current prices	948,306	1,137,448	885,423	317,667	296,632	189,075	211,970	234,583	249,795

Source: Bloomberg, national statistical offices, national central banks, wiw, OeNB.

OeNB-BOFIT Outlook for CESEE Countries: Domestic Demand Remains Weak in Most of the Region, Gradual Recovery Mainly Driven by Net Exports¹

2009 brought a severe recession to the CESEE-8² region, with GDP contracting by 3.5% on average (compared with -4% in the euro area). Without Poland's positive growth rate of 1.7%, CESEE-8 growth would have been considerably worse, as Romania shrank by 7.1%, Hungary by 6.3%, Bulgaria by 5% and the Czech Republic by 4.2%, and GDP in the Baltic states dropped by between 14% (Estonia) and 18% (Latvia).

According to the OeNB projections, 2010 will bring a moderate expansion of output for the CESEE-8 on average (1.3%), with highly diverse developments at the country level. Poland will once again outperform the region. In the Czech Republic and Romania, growth will amount to around 1%, while it is set to stagnate in Bulgaria and Hungary. In contrast to this year's highly heterogeneous developments, 2011 will bring a more balanced recovery for the CESEE-8 of 3.0%. The region's growth

performance will nonetheless remain below pre-crisis levels in the near and medium term.

Domestic growth drivers will not play a meaningful role in 2010 except in Poland. The moderate GDP expansion of 1.3% in the CESEE-8 region as a whole will be based on positive net exports (mainly due to protracted weak import demand) and restocking.

Investment is expected to remain low given substantial capacity underutilization, weak domestic demand prospects and fiscal constraints in many countries. Growth in investment is further hampered by tight financing conditions. In particular, investment in Bulgaria is expected to shrink further, and we expect no change in the Czech Republic and Hungary and only weak growth in Romania. While still remaining at low levels in a historical perspective, Poland will show relatively stronger investment growth partly due to large-scale public and EU cofunded projects. Private consumption will continue to fall in all countries, with the exception of Poland. The deterioration in labor markets, falling real wages in some countries and an elevated debt burden of households in several CESEE countries will all remain dampening factors for private consumption. Furthermore, as fiscal consolidation continues and thus deters a rebound in private consumption, domestic demand will continue to be weak.

Given the bleak outlook for domestic demand, we expect only moderate import growth for 2010. Based on this sluggish development in imports, net exports will remain the only growth driver in 2010 (just as in 2009). Poland is the only country in the region which – in light of

Table 1

CESEE-8 GDP Outcomes 2009 and Projections for 2010 and 2011

	Eurostat		OeNB	
	2009	2010	2010	2011
	Year-on-year growth in %			
CESEE-8	-3.5	1.3	1.3	3.0
Bulgaria	-5.0	0.3	0.3	2.9
Czech Republic	-4.2	1.3	1.3	2.6
Hungary	-6.3	-0.2	-0.2	2.5
Poland	1.7	3.0	3.0	3.4
Romania	-7.1	0.8	0.8	3.1

Source: OeNB March 2010 forecast, Eurostat.

¹ The OeNB and the Bank of Finland Institute for Economies in Transition (BOFIT) compile semiannual forecasts of economic developments in selected CESEE countries (Bulgaria, the Czech Republic, Hungary, Poland, Romania, Russia and Croatia), with the OeNB being in charge of the projections for the EU Member States as well as Croatia and BOFIT of the forecast for Russia. The cutoff date for all projections in this box was March 22, 2010 (Croatia: March 26, 2010). The forecasts are based on a broad range of information, including country-specific time series models for Bulgaria, the Czech Republic, Hungary, Poland and Croatia. The forecast for Romania draws on information from various sources and expert judgment (given that the time series are as yet too short for conducting model calculations). The Baltic states are not covered in detail in our projections, but they are nevertheless included in the CESEE-8 aggregate, based on the most recent IMF projections for these three countries. The projections for Russia were prepared by the BoF/BOFIT and are based on an SVAR model. The projections rest on preliminary global growth projections and technical assumptions about euro area import growth, oil prices and USD/EUR exchange rates, which are prepared by the ECB for the Eurosystem in the context of broad macroeconomic projection exercises. Imports of the euro area are expected to recover gradually throughout the projection period. The oil price is assumed to increase slightly above the 2009 level. The USD/EUR exchange rate is assumed to remain stable somewhat below the 2009 level.

² Bulgaria, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland and Romania.

its more favorable import growth prospects – continues to exhibit a negative contribution of net exports.

The contribution of domestic demand to GDP growth is expected to turn positive in 2011. Moreover, improving external demand will bolster exports, which in turn will have a stimulating impact on investment. We also expect private consumption to rise, yet from low levels. Both factors will contribute to higher import dynamics, with imports growing even more strongly than exports. Hence, the growth contribution of net exports should decline to around zero in the region. The individual countries, however, will not be equally affected by this development: While external demand will continue to deliver a slightly positive growth impulse in the Czech Republic and Hungary, it will dampen dynamics somewhat in the rest of the region. Private consumption will therefore return as the main driver of a still relatively moderate overall growth performance in 2011.

These forecasts are subject to considerable risks, related strongly to the developments in Western Europe. External demand and external financing conditions could be affected negatively if the gradual recovery of the world economy and the euro area assumed in our baseline fails to materialize (risk of a double dip). On the other hand, a stronger recovery than the expected moderate rebound in Western Europe would imply an upward risk to our projections. Uncertainty also prevails with respect to changes in investor confidence (i.e. the development of global risk aversion, in particular vis-à-vis emerging economies). We assume that no further deterioration will take place in 2010 and that confidence will improve somewhat toward 2011. Investor risk perceptions could also remain below their pre-crisis levels, with negative implications for the long-term catching-up process. Moreover, we expect that negative impacts from fiscal consolidation measures on domestic demand will mainly materialize in 2010. In particular our projections for 2011 are hence subject to downward risks arising from weaker-than-expected private consumption as a result of a prolonged real economy impact of the crisis. Overall, risks are more balanced than they were at the time of the last projection exercise in September 2009.

BOFIT-OeNB Forecast for Russia: Bouncing Back from Deep Contraction

In 2010, the assumed calming of the international economic situation and developments in raw material prices will brighten the outlook for income and demand on the part of consumers and companies. Annual growth figures will also get a boost from last year's extremely low basis level. Russian households are on average not heavily in debt, which bodes well for a quick and robust recovery of consumption over the next two years. With the gradual normalization of financial markets and the recovery of banking activity, companies are expected to modestly raise the level of capital formation. Stock adjustments should largely have run their course, so that the inventory effect on aggregate output is likely to turn positive in the course of 2010.

Russia's export growth (in real terms) is bound to turn positive again this year, but after that, capacity constraints of energy extraction and insufficient new investment are likely to considerably slow down growth rates. Following their incisive slump, imports are set to turn strongly upward in 2010, largely driven by consumer demand. Import demand has gained strength from a modest appreciation of the ruble, whose real exchange rate has firmed to roughly where it was before the devaluation in late 2008/early 2009. Imports are thus projected to grow considerably faster than exports, which will put the growth contribution of foreign trade back in negative territory in 2011 and will contribute to trimming overall GDP expansion.

The expected improvement of world trade will lead to higher consumption of raw materials and energy and thus to increasing demand for and rising prices of oil and other Russian staples. However, weaker-than-expected price developments in raw materials would be immediately reflected in Russia's consumption demand and economic growth. Another risk factor relates to the fragility of international financial markets: A renewed

financial disturbance and new sizeable capital outflows could swiftly affect Russian corporations' financing possibilities and markedly delay startups of investment projects. In a similar manner, larger-than-expected state borrowing could upset the balance and push companies out of range for bank loans.

Table 2

Russia GDP Outcome 2009 and Projections for 2010 and 2011

	Rosstat		BOFIT-OeNB	
	2009	2010	2010	2011
	Year-on-year growth in %			
Russia	-7.9	5.5	5.5	5.0

Source: BOFIT-OeNB March 2010 forecast, Rosstat.

OeNB Projections for Croatia: Economic Stagnation in 2010, Growth Impetus in 2011 Arising from Prospective EU Entry

In 2010, Croatia's economy is about to stagnate, which implies a still rather bleak economic outlook. In light of still low consumer and business confidence, continued tight credit conditions, limited fiscal leeway and deteriorating labor market conditions, private consumption and investment activity are expected to remain relatively depressed. Yet, the ongoing tendency to restock might cause domestic demand to contract less strongly than in 2009. Imports are expected to continue decreasing more strongly than exports based on sluggish domestic demand. Hence, we expect net exports to again contribute positively to economic growth in 2010.

For 2011, we expect the economy to grow by 1.8% and to return to the growth pattern observed before the crisis, with a positive contribution of domestic demand and a negative contribution of net exports. Similar to previous experience with accession countries, we expect investment activity to pick up on the back of prospective EU entry (in addition to a positive impetus from renewed lending activity). Under the assumption of a successful closure of negotiations in 2010, EU accession in 2012 could be within reach, which, due to some frontloading of imports, could result in an increasingly negative contribution of net exports.

Table 3

Croatia GDP Outcome 2009 and Projections for 2010 and 2011

	Eurostat		OeNB	
	2009	2010	2010	2011
	Year-on-year growth in %			
Croatia	-5.8	-0.1	-0.1	1.8

Source: OeNB March 2010 forecast, Eurostat.

Studies

Private Sector Credit in CESEE: Long-Run Relationships and Short-Run Dynamics

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This paper provides an analysis of the long- and short-run determinants of domestic bank lending to the private sector in eleven Central, Eastern and Southeastern European (CESEE) countries. We identify regime shifts for the observation period of 1997 to 2009, and the resulting subperiods are characterized by a different impact of the credit growth determinants. Estimating a credit demand equation as the long-term relation, we find – for most countries – a cointegration relationship with economic activity. We then examine the short-run dynamics by applying both a linear and a nonlinear (Markov-switching) error correction model. While there is a significant correlation between credit growth and supply factors, namely bank deposits and banks' equity, its impact differs across the subperiods. Identified regime switches in the short-run relation are driven primarily by differences in the credit supply factors rather than by the adjustment toward the credit equilibrium as the error correction coefficients show only slight cross-regime differences. In terms of regime switching, we distinguish between two groups of countries: those with one dominant regime, which is only briefly interrupted by a second one, and those with two equally pronounced regimes. In the latter group, a marked switch occurred just before or when the global crisis hit the CESEE region in the latter part of 2008. This regime shift is associated with a decreased correlation between deposit and credit growth.

JEL classification: C3, E4, E5

Keywords: Bank lending to the private sector, transition economies, credit dynamics, Markov-switching error correction model

1 Introduction

Analyzing credit growth in Central, Eastern, and Southeastern Europe (CESEE) has become very popular in the past few years, especially during the period of rapid credit expansion that was observed in most countries of this region before they were hit by the global crisis in the latter part of 2008. In this paper, we add to this literature by studying the long-run (demand-side) and short-run (supply-side) determinants of domestic private sector credit developments in eleven CESEE countries (CESEE-11³) from January 1997 to April 2009.

Based on the notion that lending evolves in the long run in line with macroeconomic fundamentals (behavioral definition of equilibrium credit levels; for a respective literature overview, see section 2), we test for a cointegration relation between credit levels and demand-side macroeconomic determinants. To examine the short-run credit dynamics, we apply both a linear and a nonlinear error correction model.

We contribute to, and go beyond, the existing literature by (1) conducting our analysis not only for total domestic private sector credit, but in several cases also separately for lending to firms and to households to get more information on how

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³ The ten CESEE countries that joined the EU in 2004 and 2007, respectively, and Croatia. In the following, CEE-5 refers to the Czech Republic, Hungary, Poland, Slovakia and Slovenia, SEE-3 to Bulgaria, Croatia and Romania and "Baltic countries" to Estonia, Latvia and Lithuania.

credit dynamics are determined depending on different target groups, (2) including in the error correction equation new supply-side explanatory variables that are expected to be directly linked to credit dynamics in the short run, and (3) examining whether short-run determinants show a nonlinear behavior over time (i.e. whether their impact differs across particular subperiods). To capture these nonlinearities, which can be interpreted as frictions in the adjustment of credit toward its equilibrium, we apply a Markov-switching error correction model (MS-ECM).

The MS-ECM relies on the idea that there is a cointegration relation, albeit not during each specific subperiod (or “regime” in the diction of this methodology). This approach reveals subperiod-specific particularities in the examined relationships. For instance, it is of interest whether we can separate episodes with adjustment toward the credit equilibrium (stable regime) from episodes where a departure of credit from the underlying macroeconomic fundamentals is not corrected (unstable regime). Moreover, regime switches that separate such subperiods are endogenously identified from the sample data for each country. A particular regime switch can obviously be expected for the current global crisis that resulted in sharply decelerating credit growth rates in the countries under review (see chart 1 in section 4).

The paper is structured as follows: Section 2 gives an overview of related research. Section 3 introduces our methodological setting with a special focus on the Markov-switching error correction model. Section 4 provides descriptive statistics for the evolution and structure of credit markets in the CESEE-11 as from 1996. The estimation results are described in section 5, and section 6 is a summary. Basic data issues and a description of the variables are covered in the annex.

2 Literature Overview

In this section, we distinguish three strands of related literature: we refer to (1) the existing evidence for the (predominantly long-run) drivers of credit development, (2) the evidence for “excessive” credit growth in terms of a deviation of credit from its equilibrium in CESEE countries and (3) related applications of the Markov-switching methodology.

2.1 Findings on Long-Run Determinants of Credit Development

Real GDP as well as the short- and long-run real interest rates are commonly used as explanatory variables for estimating the long-run determinants of credit developments (see e.g. Calza, Gartner and Sousa, 2003, or Brzoza-Brzezina, 2005). Alternative specifications may include PPP-based GDP per capita instead of real GDP, other interest rates, such as the nominal lending interest rate, or additional variables like government credit, inflation, house prices and financial sector liberalization (as e.g. in Backé, Égert and Zumer, 2006). The latter variables incorporate both the demand for and the supply of credit. Demand for credit in CESEE countries has been driven by the expectation of increased income and growth. Supply of credit, on the other hand, has grown due to the entry of foreign banks and their funding support to CESEE subsidiaries. In addition, new banking products became more broadly available (with households emerging as a new market segment in the mid- to late 1990s), which went hand in hand with higher competition. Most of the previous research shows, however, that in the long run bank

lending is mainly driven by demand (see Bernanke and Blinder, 1988; Fase, 1995; Calza, Gartner and Sousa, 2003; Frömmel and Schmidt, 2006).

Using the cointegration methodology for data from the euro area, Calza, Gartner and Sousa (2003) find that, in the long run, real loans are positively related to real GDP and negatively related to real short- and long-term interest rates. Backé, Égert and Zumer (2006) apply a dynamic panel cointegration framework and find that from 1996 to 2004, the private credit-to-GDP ratio was associated positively with GDP per capita (yet not always significant for the CEE-5 and the Baltic countries) and financial market liberalization. The findings for the nominal lending rate (negative sign in the CEE-5 and the Baltic countries; positive sign in the SEE-3), for PPI inflation (negative sign in the SEE-3; inconclusive for the CEE-5 and the Baltics), and for government credit (negative sign for the CEE-5 and the Baltics; inconclusive for the SEE-3) are rather mixed. Kraft (2007) examines the determinants of bank lending to households (the ratio of household loans to GDP being the dependent variable) in a panel of 23 transition countries, and shows that GDP per capita has a strong positive influence, whereas CPI inflation inhibits household lending and has a negative sign.

2.2 Findings on Deviations of Credit from Its Equilibrium in CESEE

Although there is no general measure of “excessive” credit growth, the literature tends to define a credit boom as a period of significant deviation of the observed credit level from its long-run equilibrium that is in turn determined by the macroeconomic fundamentals as discussed in the previous subsection. The most recent related investigation is that of Zumer, Égert and Backé (2009), who applied an out-of-sample approach and estimated the cointegration equation (similar to equation (1) below) for a panel of 14 small OECD benchmark countries. They used the estimated coefficients (country-specific intercepts and panel-wide slope coefficients) together with realized values for the fundamentals from the CESEE countries to calculate fitted values for the credit-to-GDP ratio in CESEE: $\hat{Y}_{CESEE} = \hat{\kappa}_{i,OECD} + \beta'_{OECD} X_{CESEE}$. This fit defines the equilibrium credit levels. Evidence for overshooting credit levels is given if there is a clear indication that observed credit-to-GDP ratios deviated from the fitted equilibrium levels, i.e. $Y_{CESEE} - \hat{Y}_{CESEE} > 0, \forall \hat{\kappa}_{i,OECD}$. Applying this conception, they found that in the first quarter of 2009, domestic private sector credit levels were rather high in Estonia, Latvia, Bulgaria, and Croatia given the underlying fundamentals (to a somewhat lesser extent also in Lithuania and Hungary), which indicates that private sector credit had possibly grown beyond the equilibrium path in these countries.

Earlier papers came to similar conclusions, though the country-specific assessments and the methodological approaches differed. Boissay, Calvo-Gonzalez and Koźluk (2005) estimated the elasticity of credit with regard to three main macroeconomic determinants: GDP growth, the interest rate, and the gap between the observed and the equilibrium credit-to-GDP ratio. From these elasticities they derived estimates of expected credit growth and considered credit growth to be excessive if the observed values were significantly higher than the expected ones. Accordingly, they found evidence for excessive credit growth in Bulgaria, Latvia and – to a lesser extent – in Lithuania, Estonia, Hungary and Croatia. Kiss, Nagy and Vonnák (2006) define a credit boom as follows: Either (1) the observed credit growth exceeds the one implied by the long-run equilibrium relationship on the

basis of macroeconomic fundamentals, or (2) the observed credit growth rate is higher than the speed of adjustment to the credit equilibrium in the error correction model (i.e. $\Delta \log(c_t) > \hat{b}_1$ when referring to equation (2) below). They detected excessive credit growth only for Estonia and Latvia.

Policy challenges of and responses to lending booms were widely discussed in Kraft and Jankov (2004) for Croatia, in Duenwald, Gueorguiev and Schaechter (2005) for Bulgaria, Romania and Ukraine, or in Backé, Égert and Walko (2007) for the whole European emerging market region. Hilbers, Ötoker-Robe and Pazarbasioglu (2007) elaborated how prudential and supervisory policies could be used in strengthening the resistance of the financial system to adverse consequences of rapid credit expansion in CESEE.

2.3 Related Markov-Switching Applications

For first applications of switching error correction models, one can go back to Hall, Psaradakis and Sola (1997), who use them to identify periods in which real house prices differ from what is implied by economic fundamentals in the U.K. Markov-switching models have only recently been used in the analysis of bank lending. For instance, Frömmel and Schmidt (2006) look for overshooting bank lending (related to stock market bubbles) in countries of the euro area. Kaufmann and Valderrama (2008) use a Markov-switching VAR model to investigate differences between bank lending in Germany and the U.K. Their model is not based on error correction, however.

Frömmel and Karagyozova (2008), whose method is closest to our analysis, examine the relation between bank lending and asset prices in Bulgaria, using a Markov-switching error correction model to control for regime changes. They find a positive relationship between real estate prices and banks' lending to households. Moreover, they find evidence for the existence of regime switches linked to administrative measures for curbing credit expansion. In line with their methodology, they take a different view on the stability of credit growth: They no longer look at "excessive" growth in terms of the distance to equilibrium, but instead examine the adjustment process toward equilibrium levels (i.e. the error correction coefficients). A regime is then interpreted as unstable if cointegration between credit growth and its determinants is not given for particular subperiods, which does not necessarily coincide with the error exceeding a particular threshold.

Regime switches in credit equations are usually interpreted as a deviation from equilibrium (e.g. Psaradakis, Sola and Spagnolo, 2004). Their model does not require the deviation to be of any sign, however. It may thus model both lending restrictions, such as a credit crunch, and lending booms. Furthermore, the use of the MS-ECM model for credit equations can be derived from theoretical models, based on the interaction between banks and borrowers. This interaction has been analyzed in theoretical studies, e.g. in Kiyotaki and Moore (1997) or in Chen (2001), where the borrower's net worth serves as collateral for lending. This net worth is highly affected by the value of the borrower's assets and expectations about their future evolution. Consequently, if the price of assets rises (falls), the borrower's capacity for lending will rise (fall), too. Other models that explicitly lead to switches between different equilibria in the credit market are presented by Scheinkman and Weiss (1986) or Azariadis and Smith (1998). The latter is based on constraints in borrowing and asymmetric information and leads to transitions

between a Walrasian regime and a regime of credit rationing with slowing economic activity, falling interest rates and binding credit constraints. Linking theoretical models and empirical studies of credit markets, this model thus serves as a theoretical foundation for using the MS-ECM.

3 The Empirical Model

In the analysis of credit volume, it has become common to apply the cointegration approach (see the previous section), since the credit volume itself and most of its determinants empirically turn out to be integrated of order one. However, while in econometric analysis it is often assumed that the adjustment of the credit volume toward its equilibrium is linear, this need not necessarily be the case in reality. First, there may be periods during which unusual events cause credit markets to be temporarily in a disequilibrium. Second, determinants of credit growth may be subject to shifts, i.e. the impact of economic variables may change over time. Accordingly, the Markov-switching error correction model applied in this paper allows the coefficients to switch between different regimes.

Psaradakis, Sola and Spagnolo (2004) suggest proceeding in two steps: checking the long-term, equilibrium-defining relation for cointegration and then investigating the short-term dynamics for Markov-switching. As a result, one may find a stable long-term equation, but more complex dynamics in the short run. In our setting, we follow this two-step procedure and use a credit demand equation as the long-term relation, which is common in the empirical literature (Pazarbasioglu, 1997; Ghosh and Ghosh, 1999; Barajas and Steiner, 2002; Calza, Gartner and Sousa, 2003):

$$\log(c_t) = a_0 + \underbrace{a_1}_{(+)} \log(IP_t) + \underbrace{a_2}_{(-)} LR_t + \underbrace{a_3}_{(-)} \pi_t^{CPI} + \varepsilon_t, \quad (1)$$

where the dependent variable is the logarithm of the real (CPI-deflated) domestic private credit stock c_t (in the empirical analysis we differentiate between total domestic private sector credits, firm credits, and household credits), a_0 is a constant, IP_t represents real industrial production (proxy of economic activity, as we work with monthly data), LR_t denotes the (nominal) lending rate, and π_t^{CPI} is the CPI-based inflation rate (year-on-year changes). For details on the data, see section 4 and the annex.

The signs below the coefficients indicate the theoretically predicted sign. Higher economic activity is expected to increase the demand for loans and thus credit volumes should expand ($a_1 > 0$). A higher lending rate, in turn, is expected to reduce the demand for credit, as debt servicing costs increase ($a_2 < 0$). The expected negative correlation of inflation and credit demand ($a_3 > 0$) may be attributed to two reasons (in line with Kiss, Nagy and Vonnák, 2006): First, once inflation has exceeded a certain threshold, it is associated with greater inflation volatility that can significantly hinder the functioning of financial markets through increased uncertainty. Second, if nominal rates are high, and even if the real interest rate is low, private agents can primarily get loans with shorter duration, which, in turn, limits the maximum lending volume.

If the variables from equation (1) are cointegrated, one may model the short-run dynamics as an error correction equation:

$$\Delta \log(c_t) = b_0 + b_1 \varepsilon_{t-1} + b_2 \Delta Z_t + b_3 \Delta \log(c_{t-1}) + u_t, \quad (2)$$

with $\Delta \log(c_t)$ the real credit growth rate (month-on-month changes), ε_{t-1} the error term from the long-run equation (1), b_1 the error correction coefficient governing the speed of adjustment to the long-term equation, and Z_t a set of possible explanatory variables. We also include a lagged dependent variable to account for potential inertia in the credit dynamics.⁴

In the vector Z_t of short-term determinants, we include four groups of variables. First, banks' domestic liabilities (equity and deposits) account for the source of funds available for lending within the country. As soon as more funds are available, more loans can be extended, and thus we expect a positive sign for this variable. Second, the banks' net external position (external assets minus external liabilities) covers additional supply of loans by acquiring funds from abroad (positive correlation with credit growth). Yet, this position also comprises net foreign assets as a substitute for lending to domestic customers (negative relation; thus the concrete sign of this variable is ambiguous ex ante). Third, we include the interest spread between lending and deposit rates to account for the effects of banking competition on credit growth. Signaling profitability, a considerable positive spread acts as an incentive for new banks to enter the market. Lending can be expected to accelerate owing to such new entrants. At the same time, competition among banks increases, which results in a narrowing spread. At that point, the question arises whether – at the lower end of the spread – banks still increase lending in pursuit of market share or rather scale back lending (in which case a positive sign can be expected for this variable). Fourth, we include variables taking external exposure and credit risk into account (industrial production in the euro area as well as exchange rate volatility of the local currency vis-à-vis the euro, as the share of euro-denominated loans is relatively high in a number of CESEE countries).

While equation (2) is based on the assumption that the adjustment process to the equilibrium is regime-invariant, we drop this assumption in the MS-ECM framework and let the coefficients switch according to unobservable states. Thus, there is no single error correction equation and, in the case of a first-order Markov process with two states,⁵ equation (2) evolves to:

$$\Delta \log(c_t) = b_{01} + b_{11}\varepsilon_{t-1} + b_{21}^k \Delta Z_t + b_{31} \Delta \log(c_{t-1}) + u_t, \text{ if } s_t = 1, \quad (3a)$$

$$\Delta \log(c_t) = b_{02} + b_{12}\varepsilon_{t-1} + b_{22}^k \Delta Z_t + b_{32} \Delta \log(c_{t-1}) + u_t, \text{ if } s_t = 2, \quad (3b)$$

where the short-term equation is conditional on the unobservable regime variable s_t . The coefficients b_{k,s_t} , where $k=1,2,3$ (i.e. three different groups of explanatory variables) and $s_t=1,2$ (i.e. two different states), may now take different values conditional on s_t . The regime variable follows a two-regime Markov chain process and is characterized by the following transition probabilities p_{ij} for moving from regime i to regime j

⁴ Note that we do not include lagged differences of the explanatory variables of equation (1) as we presume their impact to be mainly a long-run demand-side one. Moreover, residual graphs do not really hint at missing lagged variables. Since we already have a highly nonlinear model with short sample periods, we prefer not increasing the number of variables to be able to execute the quasi-maximum likelihood estimation in the MS-ECM.

⁵ The MS-ECM could also be extended to a model with more than two regimes. However, the model then becomes highly nonlinear, which causes problems for the estimation (in our case quasi-maximum likelihood). Furthermore, models with more than two regimes do not necessarily perform much better (see Gallo and Rossi, 2006). Note further that the setting of the model includes the existence of one single switch, i.e. an absorbing state, as a special case. Thus, the model is a very flexible one in terms of the possible cases included.

$$\begin{aligned} p_{11} &= P(s_t = 1 | s_{t-1} = 1), \quad p_{12} = 1 - p_{11} = P(s_t = 2 | s_{t-1} = 1), \\ p_{22} &= P(s_t = 2 | s_{t-1} = 2), \quad p_{21} = 1 - p_{22} = P(s_t = 1 | s_{t-1} = 2). \end{aligned} \quad (4)$$

Thus our model extends the standard (linear) error correction model by allowing the parameters in the error correction equation to depend on the stochastic outcome (s_t) of the unobserved Markov process. The main advantages of this approach are the ability to capture different kinds of adjustment processes including temporary nonstationarity, periods of differing short-term variables, and the estimation of the regime switches from the sample data. Consequently, it is not necessary to make a priori assumptions about the exact occurrence of regime changes.

To assess the stability of the adjustment toward equilibrium and respective regime-specific deviations, we need the following characterizations: a stable (or corrective) regime i is given by $b_{ii} < 0$ (a significantly negative error correction coefficient), as in this case any departure of credit from the underlying macroeconomic fundamentals is corrected by a change in credit growth. In turn, an unstable (or noncorrective) regime is defined by $b_{ii} \geq 0$, whereby $b_{ii} > 0$ marks an explosive deviation and $b_{ii} = 0$ indicates a very sluggish or constant and persistent deviation from the credit equilibrium in the case of temporary over- or undershooting of credit levels. As Psaradakis, Sola and Spagnolo (2004) pointed out, it is no contradiction that one finds cointegration in the long run (indicated by $b_1 < 0$ in equation (2)), whereas locally the connection between the variables may get temporarily lost as if cointegration had been “switched off” and there was no disequilibrium adjustment in particular regimes. However, the model is flexible enough to cover situations where the variables in both regimes are cointegrated, where both regimes have different adjustment speeds, or where additional short-run determinants show a regime-dependent impact (even if the adjustment speed does not change at all).

The MS-ECM is estimated by quasi-maximum likelihood, based on Kim and Nelson (1999). From the estimation procedure we directly receive the ex ante probabilities $P(s_t = i | \Phi_{t-1})$ and the filter probabilities $P(s_t = i | \Phi_t)$. These are the probabilities of being in a particular regime at time t based on all the information available up to time $t-1$ or up to time t , respectively, i.e. $F_t = \{c_1, \dots, c_p; Z_1, \dots, Z_p\}$ for the variables from equation (3). For an ex post analysis, however, it is more appropriate to rely on the smoothed probability $P(s_t = i | \Phi_T)$, where Φ_T is the set of all the information available up to time T , i.e. for the whole sample period with $\Phi_T = \{c_1, \dots, c_p; Z_1, \dots, Z_p\}$. The smoothed probability requires an additional filter algorithm for the estimation procedure. Alternative algorithms have been proposed in the literature; we use the one by Kim (1994), which is easy to implement and commonly used in the literature. For a detailed description of the smoothing algorithm, see Kim and Nelson (1999).

One could also think of using alternative empirical approaches to model credit growth, e.g. by letting the long-term equation change instead of the adjustment process or by introducing a time trend into the long-term equation that captures the deepening of the financial market. The first approach could be justified by financial sector reforms that resulted in new equilibria, which could also be captured by including dummy variables (see our robustness checks in section 5.3). In contrast, a time trend would represent a more gradual evolution of the financial

sector. However, the residuals of equation (1) do not give any reason to include a time trend in the model.

4 Descriptive Statistics: Evolvement of Credit Stocks and Credit Growth

This section describes our basic variable of interest – the evolvement and composition of credit stocks and credit growth in the CESEE-11 since 1996 (which we compare with the euro area). Basic data issues and a description of other variables are covered in the annex (see table A1).

Chart 1 depicts, for each country, domestic private sector credit stocks (dark blue area) and cross-border credit stocks (orange area) as a percentage of GDP. Whenever disaggregate information was available, be it for the whole observation period or for particular subperiods, we distinguished domestic private credit by households (red area) and by firms (light blue area). Moreover, we also show the year-on-year real growth rate of domestic private credit (black line).

After some disruptions due to country-specific crises in the 1990s, most CESEE-11 countries experienced a strong and smooth expansion of private sector loans until late 2007/early 2008. Nevertheless, as a result of the global economic crisis, credit growth rates decelerated sharply; in the Baltic countries, the year-on-year change of domestic private credit turned even negative in real terms in the first quarter of 2009.

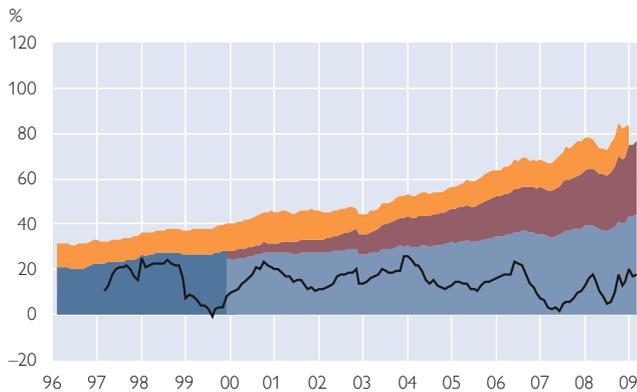
In terms of the evolvement of domestic private sector credit over time, we can distinguish three groups of countries. First, the Czech Republic and Slovakia already disposed of considerably high credit stocks in the mid-1990s (around 60% of GDP). However, credit stocks shrank remarkably as a consequence of bank restructuring in the late 1990s and early 2000s. As a case in point, Slovakia recorded real average change of –20% in 2001 and the Czech Republic –28% in 2002. Credit stocks have still not reached the degree of financial intermediation observed earlier (the high values registered in the Czech Republic and Slovakia in the mid- and late 1990s have to be interpreted with caution as they were “inflated” by a comparatively high share of nonperforming loans; see Eller and Haiss, 2003). Second, Poland and Hungary were characterized by real credit growth rates of more than 20% already in the late 1990s but have experienced a comparatively moderate and steady expansion of credit since then. Third, Slovenia, Bulgaria, Romania, and especially the Baltic countries went through a brisk increase of credit stocks as a percentage of GDP starting with 2000–2003. From January 2003 until December 2007, the average (year-on-year) real credit growth rate was 19% in Slovenia, 28% in Estonia, 35% in Bulgaria, 38% in Romania, 40% in Latvia, and 44% in Lithuania.

Croatia is a special case, where the expansion of domestic credit was comparable with Hungary or the Czech Republic (at least since 2003), but at the same time the share of cross-border credits increased strongly and reached more than 40% of GDP in December 2008. In the CESEE-11, this is by far the highest share of cross-border credits, followed by 30% in Bulgaria, and around 22% in Estonia and Latvia.

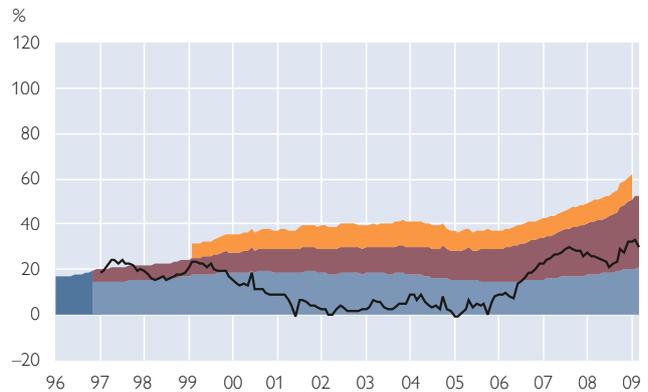
Given these different patterns of financial development, we expect that also the dates for the regime shifts in the MS-ECM will differ across countries (see chart 2). Generally speaking, a regime shift can be expected when the country

Stock and Growth Rates of Domestic Private Sector Credit Compared with Cross-Border Credit (1996–2009)

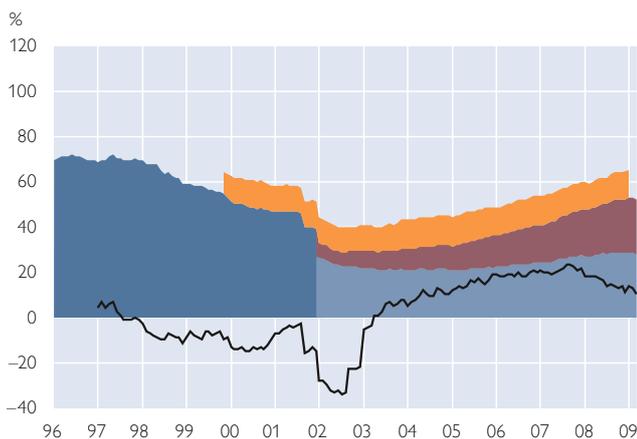
Hungary



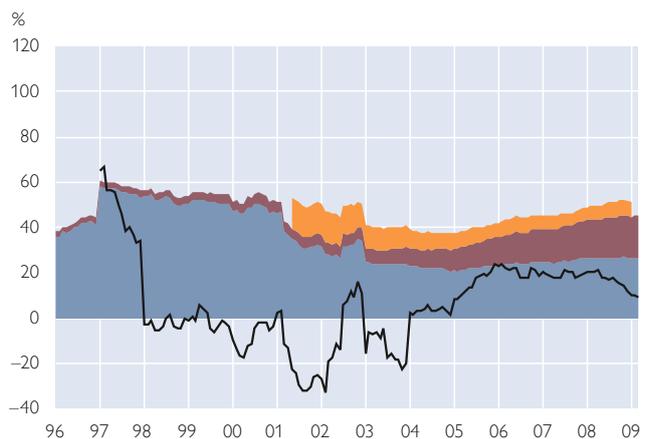
Poland



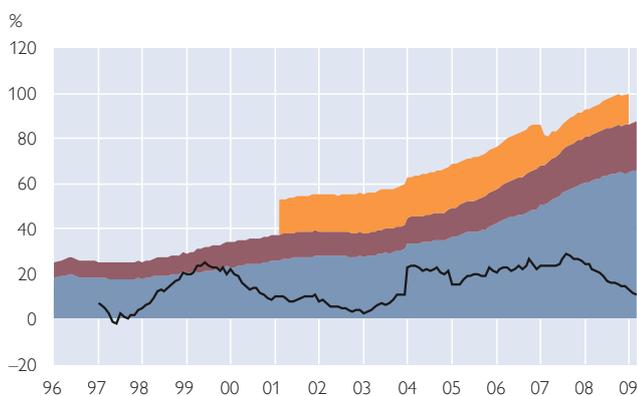
Czech Republic



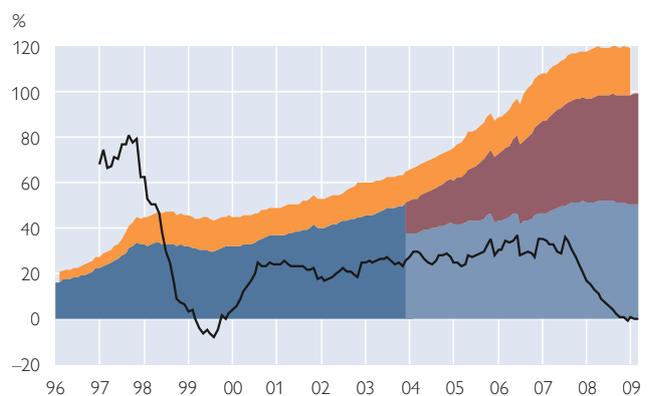
Slovakia



Slovenia



Estonia



■ Cross-border credit (end of period, % of GDP) ■ Domestic private credit to households (end of period, % of GDP)
■ Domestic private credit to firms (end of period, % of GDP) ■ Total domestic private credit (end of period, % of GDP)
— Growth of domestic private credit (year on year, CPI-deflated)

Source: Authors' calculations based on the IMF (1996), NCBs (1997–2003) and the ECB (2004 onward).

Note: End-of-month credit stocks are presented as shares of nominal GDP (in local currency), whereby a rolling 12-month GDP, which was previously linearly interpolated from quarterly to monthly frequency, is used. The (real) growth rate of domestic private credit is calculated as the year-on-year percentage change, deflated by the CPI-based inflation rate. Cross-border credits are approximated by external debt of the nonbank private sector, excluding intercompany loans and trade credits (liabilities). They were only available on a quarterly basis (not available at all for the euro area) and thus we interpolated the end-of-quarter stocks linearly to monthly frequency (this type of interpolation should be straightforward as credit stocks evolve quite moderately over time). For further details, see table A1.

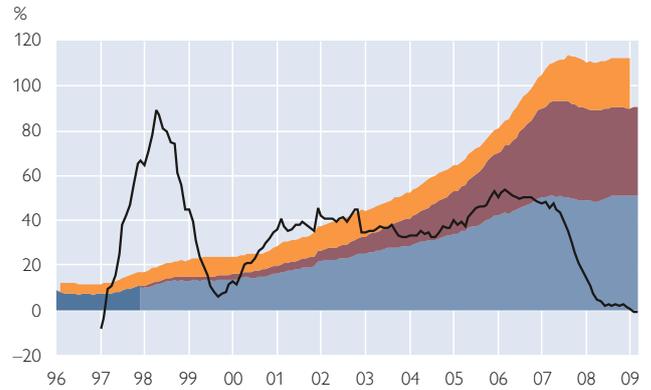
Chart 1 continued

Stock and Growth Rates of Domestic Private Sector Credit Compared with Cross-Border Credit (1996–2009)

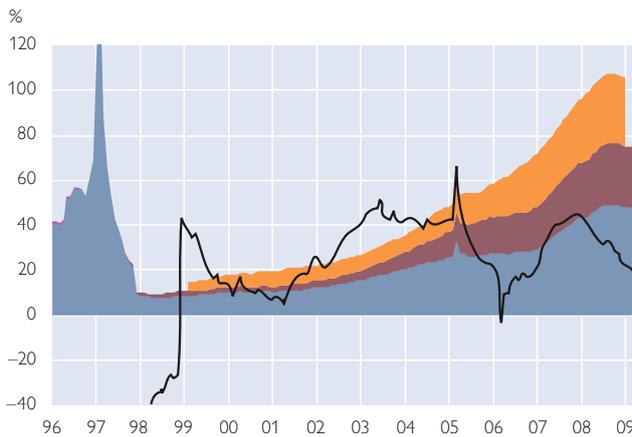
Lithuania



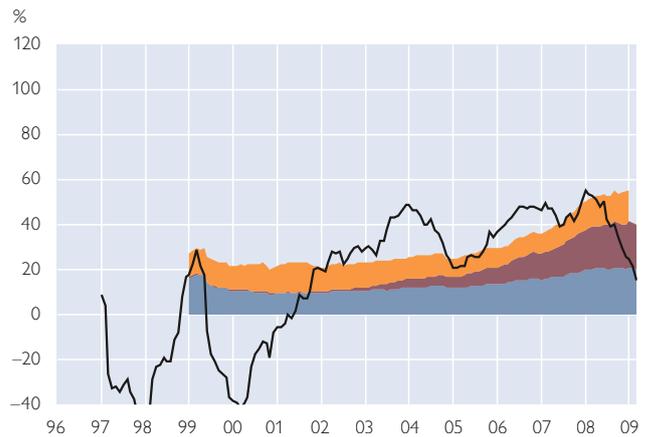
Latvia



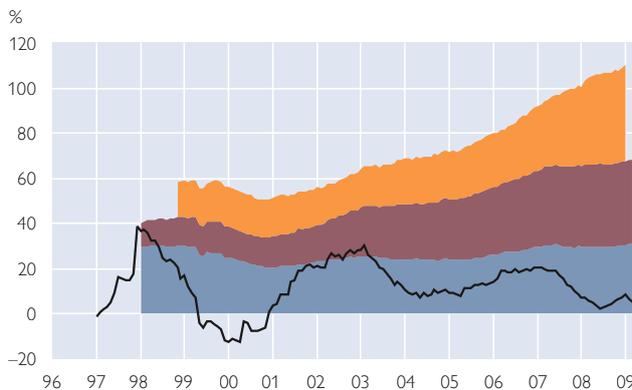
Bulgaria



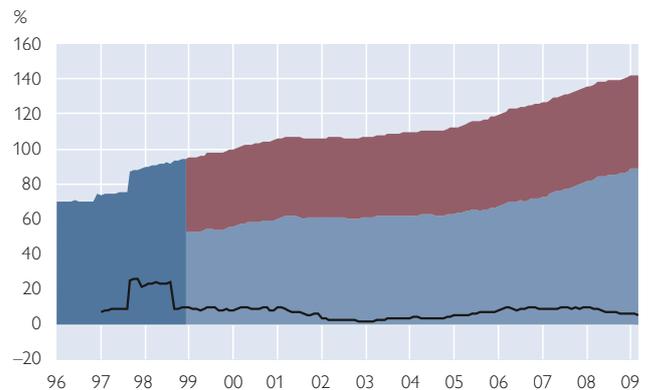
Romania



Croatia



Euro area



■ Cross-border credit (end of period, % of GDP) ■ Domestic private credit to households (end of period, % of GDP)
■ Domestic private credit to firms (end of period, % of GDP) ■ Total domestic private credit (end of period, % of GDP)
— Growth of domestic private credit (year on year, CPI-deflated)

Source: Authors' calculations based on the IMF (1996), NCBs (1997–2003) and the ECB (2004 onward).

Note: End-of-month credit stocks are presented as shares of nominal GDP (in local currency), whereby a rolling 12-month GDP, which was previously linearly interpolated from quarterly to monthly frequency, is used. The (real) growth rate of domestic private credit is calculated as the year-on-year percentage change, deflated by the CPI-based inflation rate. Cross-border credits are approximated by external debt of the nonbank private sector, excluding intercompany loans and trade credits (liabilities). They were only available on a quarterly basis (not available at all for the euro area) and thus we interpolated the end-of-quarter stocks linearly to monthly frequency (this type of interpolation should be straightforward as credit stocks evolve quite moderately over time). For further details, see table A1.

under examination experienced pronounced changes in the pattern of credit growth (e.g. in the Czech Republic and Slovakia in 2001–2002 or in the Baltic countries after mid-2007) or in the shape of GDP growth (e.g. in some of the CESEE-11 countries in the wake of the 1998 Russian financial crisis or during the most recent crisis situation).

Besides the overall expansion of domestic private sector credit, the share of household credit increased considerably over time in all the CESEE-11 countries (especially in the Baltic countries and Croatia). The bulk of new lending is attributable to housing loans, which already account for more than 50% of total household loans (see Walko, 2008).

Even though the degree of financial intermediation has been on the rise over the last decade, there is still a considerable catching-up potential vis-à-vis the euro area. The latter's share of domestic private sector credit in GDP lies just above 140% (see the last panel of chart 1). Only Estonia⁶ has reached a respective share of nearly 100%, while on the other end, Romania (40%) and Slovakia (45%) clearly lag behind.

A final aspect that we want to address here is the currency decomposition of domestic private sector credits. In line with deepening integration of the CESEE-11 into European financial markets, the massive entry of foreign banks⁷ and the prospects of joining the euro area in the foreseeable future, the share of foreign currency loans in total domestic private sector loans has risen steadily in most of the countries. Nevertheless, there is still a great deal of cross-country heterogeneity in the region. In August 2008 (i.e. just before these shares were distorted in a few countries due to crisis-related depreciations of the local currencies), we can distinguish three groups of countries (based on data from national central banks and the ECB): Estonia and Latvia with a very high foreign currency loan share of about 85%; Romania, Bulgaria, Hungary, Croatia and Lithuania with a medium share ranging between 55% and 63%; and finally, countries with relatively small shares: Poland (26%), Slovakia (19%; this share fell to nearly 1% after the introduction of the euro in January 2009), the Czech Republic (9%) and Slovenia (7%; before euro adoption in January 2007, the share was 64% and had risen substantially in the period immediately before euro adoption). In most of these countries, the euro accounts for a clear majority of total foreign currency loans to the non-bank private sector. Notable exceptions are Hungary and Poland, where the Swiss franc predominates foreign currency loans to households.

5 Results and Interpretation

5.1 Long-Run Evolution of Credit Aggregates: Cointegration Relation

To identify the long-run determinants of the credit volume, we estimate equation (1) from section 3; the results are presented in table 1. Since unit root tests on the

⁶ However, if we also include cross-border credits, the share of total private sector credit lies clearly above 100% of GDP not only in Estonia, but also in Latvia, Bulgaria and Croatia (in Slovenia at 100%).

⁷ According to the EBRD structural change indicators (see EBRD, 2009), the share of banks with foreign ownership exceeding 50% at year-end in total bank sector assets amounted to a CESEE-11 average of 81% in 2008. The individual CESEE-11 figures range from 31% (Slovenia) to 99% (Slovakia).

data indicate the presence of unit roots in levels (see table A2),⁸ we can test for cointegration. The statistics for Johansen's cointegration test show evidence for at least one cointegration relation between credit volume, industrial production, interest rates and inflation rates in all cases but Slovakia, and partly also Hungary and Croatia.^{9,10}

All countries show a positive and robust correlation of industrial production and credit volume. The comparatively large coefficients, with the impact being much stronger for household credits than for firm credits, highlight an economically meaningful relationship between credit levels and economic activity in the CESEE-11. As in Kiss, Nagy and Vonnák (2006) or Backé, Égert and Zumer (2006), inflation mostly shows the expected negative correlation with lending. This is particularly the case for Estonia, the SEE-3 and most of the CEE-5. In contrast, the lending rate does not show the expected negative sign in most of the countries. The counterintuitively positive and in some cases even significant sign, however, corroborates existing empirical evidence (Backé, Égert and Zumer, 2006, for Southeastern European transition and non-European emerging market economies; Fair, 2004; for some countries also Boissay, Calvo-Gonzalez and Koźluk, 2005). A possible reason for the positive correlation between credit and interest rates could also be reverse causality: While higher interest rates are expected to decrease the demand for credit, there could also be a reversed impact, namely that a stronger demand for credit by the private sector creates more incentives for banks to increase lending rates in order to maximize their profits. If the causality really ran in the opposite direction, we would have the problem – as some of our regressors are endogenous – that ordinary least squares (OLS) estimation would deliver biased and inconsistent estimates.

We are also aware of another potential source of bias in equation (1): Backé, Égert and Zumer (2006) emphasize that the estimates in the long-run equation could be upward biased because of initial undershooting in the case of transition countries (i.e. these countries started with lower credit-to-GDP ratios than countries with the same level of development given their repressed financial system under communism). Backé, Égert and Zumer (2006) thus use the estimated long-run coefficients for nontransition benchmark economies and realized values for the transition countries to properly fit equilibrium credit-to-GDP levels (out-of-sample approach).

We did not explicitly test for endogeneity of the regressors, but there are some reasons not to go more deeply into the mentioned sources of biased coefficients in

⁸ A unit root in levels is clearly the case for the credit aggregates and industrial production, while the results point to a certain degree of stationarity of the lending and the inflation rate. This is, however, in line with existing empirical evidence (Crespo Cuaresma et al., 2009) and with the expectation that the price level is integrated of order one. In our cointegration analysis, we include all variables, because – although it is less common to use stationary and nonstationary data in the same analysis – Johansen and Juselius (1992) recommend this approach if the fit can be improved.

⁹ This may be due to the well-known lack of power of the Johansen test in small samples, but also to strong deviations from the equilibrium at the beginning (initial undershooting) and at the end (the global economic crisis 2008–2009) in our sample. Furthermore, the inclusion of country-specific dummies for economic crises and extraordinary data outliers improve the cointegration evidence. The results are not presented here, but available on request.

¹⁰ If the trace- and the maximum eigenvalue-based assessment of the number of cointegration relations differ from each other, we rely on the trace-based assessment as Monte Carlo simulations by Lütkepohl, Saikkonen and Trenkler (2001) show that the power performance of the trace test is superior in small samples.

Table 1

Cointegration Relation

Country	Dependent variable: $\log(c_t)$						Selected (5% level) number of cointegrating relations	
	c_t	$\log(IP_t)$	LR_t	π_t^{CPI}	Adj. R^2	Sample	Trace	Max-Eig
CEE-5								
Czech Republic	Total	0.753*** (0.000)	0.063*** (0.000)	0.022 (0.146)	0.48	1997M01– 2009M04	4	1
	Firms	1.227*** (0.000)	0.204*** (0.000)	-0.006 (0.567)	0.68	2002M01– 2009M04	1	1
	Households	2.807*** (0.000)	-0.049 (0.702)	0.013 (0.592)	0.75	2002M01– 2009M04	3	1
Hungary	Total	2.146*** (0.000)	0.062*** (0.001)	-0.044*** (0.002)	0.94	1997M01– 2009M04	0	0
	Firms	1.415*** (0.000)	0.035*** (0.007)	-0.042*** (0.000)	0.92	2000M01– 2009M04	0	0
	Households	4.186*** (0.000)	0.111*** (0.000)	-0.147*** (0.000)	0.93	2000M01– 2009M04	1	1
Poland	Total	1.643*** (0.000)	0.019*** (0.000)	-0.028*** (0.000)	0.87	1997M01– 2009M04	2	2
	Firms	0.774*** (0.000)	0.020*** (0.000)	-0.031*** (0.000)	0.65	1997M01– 2009M04	2	1
	Households	2.511*** (0.000)	0.017*** (0.006)	-0.031*** (0.000)	0.93	1997M01– 2009M04	2	1
Slovakia	Total	1.198*** (0.000)	0.058*** (0.000)	-0.006 (0.382)	0.52	1997M01– 2008M11	0	0
	Firms	0.428 (0.129)	0.058*** (0.000)	-0.006 (0.473)	0.68	1997M01– 2008M11	0	0
	Households	3.581*** (0.000)	0.003 (0.753)	0.006 (0.398)	0.95	1997M01– 2008M11	0	0
Slovenia	Total	2.195*** (0.000)	-0.058*** (0.000)	0.008 (0.573)	0.88	1997M01– 2009M04	1	1
	Firms	2.378*** (0.000)	-0.057*** (0.000)	0.004 (0.794)	0.89	1997M01– 2009M04	2	1
	Households	1.755*** (0.000)	-0.058*** (0.000)	0.019 (0.178)	0.87	1997M01– 2009M04	1	1
Baltic countries								
Estonia	Total	2.791*** (0.000)	0.051** (0.033)	-0.014 (0.484)	0.92	1998M01– 2009M04	2	2
	Firms	1.440*** (0.000)	0.119*** (0.000)	-0.018* (0.097)	0.87	2004M01– 2009M04	1	0
	Households	4.008*** (0.000)	0.302*** (0.000)	-0.073** (0.015)	0.84	2004M01– 2009M04	4	1
Latvia	Total	6.150*** (0.000)	0.012 (0.741)	-0.008 (0.818)	0.78	1997M01– 2009M04	1	0
	Firms	3.849*** (0.000)	0.010 (0.711)	0.037*** (0.006)	0.84	1998M01– 2009M04	1	0
	Households	7.049*** (0.000)	0.002 (0.974)	0.065*** (0.009)	0.84	1998M01– 2009M04	3	3
Lithuania	Total	3.741*** (0.000)	0.036 (0.189)	0.027 (0.242)	0.92	1998M01– 2009M04	2	1
	Firms	3.043*** (0.000)	0.023 (0.295)	0.019 (0.330)	0.92	1998M01– 2009M04	2	1
	Households	6.018*** (0.000)	0.062 (0.179)	0.036 (0.333)	0.91	1998M01– 2009M04	2	2

Source: Authors' estimations.

Note: Coefficients are estimated with OLS. The p-values in parentheses (for the null hypothesis of a coefficient being equal to zero) are based on Newey-West heteroskedasticity and autocorrelation consistent standard errors. The asterisks *, **, *** indicate significance at the 10%, 5% and 1% level, respectively. All regressions contain a constant (not reported). Trace (Max-Eig) indicates the cointegration test assessment based on the trace statistic (the maximum eigenvalue statistic). We refer to a specification where we do not allow for a deterministic trend in the data, but include an intercept in the cointegration equation (in line with the specification in equation (1)). Significance stems from critical values based on MacKinnon, Haug and Michelis (1999).

Table 1 continued

Cointegration Relation

Country	Dependent variable: $\log(c_t)$						Selected (5% level) number of cointegrating relations	
	c_t	$\log(IP_t)$	LR_t	π_t^{CPI}	Adj. R^2	Sample	Trace	Max-Eig
SEE-3								
Bulgaria	Total	3.109*** (0.000)	-0.033 (0.251)	-0.003*** (0.000)	0.89	1997M12– 2009M04	1	1
	Firms	2.681*** (0.000)	-0.031 (0.233)	-0.002*** (0.000)	0.87	1997M12– 2009M04	1	0
	Households	4.193*** (0.000)	-0.046 (0.201)	-0.005*** (0.000)	0.91	1997M12– 2009M04	1	1
Romania	Total	4.039*** (0.000)	-0.004 (0.447)	-0.002 (0.174)	0.72	1997M01– 2009M04	3	3
	Firms	2.333*** (0.000)	-0.0009 (0.807)	-0.006*** (0.000)	0.71	1997M01– 2009M04	4	4
	Households	7.024*** (0.000)	-0.020** (0.026)	-0.012*** (0.000)	0.85	1997M01– 2009M04	3	3
Croatia	Total	3.578*** (0.000)	-0.022 (0.143)	-0.286*** (0.000)	0.95	1997M01– 2009M03	1	0
	Firms	2.606*** (0.000)	-0.003 (0.817)	-0.276*** (0.000)	0.94	1997M01– 2009M03	0	0
	Households	4.725*** (0.000)	-0.069*** (0.004)	-0.305*** (0.000)	0.94	1997M01– 2009M03	1	0

Source: Authors' estimations.

Note: Coefficients are estimated with OLS. The p-values in parentheses (for the null hypothesis of a coefficient being equal to zero) are based on Newey-West heteroskedasticity and autocorrelation consistent standard errors. The asterisks *, **, *** indicate significance at the 10%, 5% and 1% level, respectively. All regressions contain a constant (not reported). Trace (Max-Eig) indicates the cointegration test assessment based on the trace statistic (the maximum eigenvalue statistic). We refer to a specification where we do not allow for a deterministic trend in the data, but include an intercept in the cointegration equation (in line with the specification in equation (1)). Significance stems from critical values based on MacKinnon, Haug and Michelis (1999).

our analysis: First, the coefficients – particularly for industrial production – are large enough such that even after bias correction there should still be a non-negligible positive correlation with credit. Second, as the cointegrating vector is super-consistently estimated by OLS, conventional residual-based cointegration tests constructed under the assumption of linear adjustment toward equilibrium will still be valid and can be expected to be able to detect the presence of an equilibrium relationship (see Psaradakis, Sola and Spagnolo, 2004) – the basic prerequisite for our subsequent error correction analysis. Third and finally, also the out-of-sample approach used by Backé, Égert and Zumer (2006) has some challenges, such as the necessity that there is long-run parameter homogeneity between benchmark and transition countries and a stable structural relationship in the benchmark countries over time.

5.2 Short-Run Determinants of Credit Developments: Error Correction Model

In this subsection, we focus on the determinants of short-run private sector credit dynamics, arguing that changes in supply-side variables are directly correlated with credit growth. We do this by estimating the error correction equations (2) and (3a), (3b) for the linear and nonlinear case, respectively.

5.2.1 Evidence from the Linear Error Correction Model

The estimation results for the linear error correction model (i.e. for the whole sample period without subperiod-specific differences that are elaborated in section 5.2.2) are given in table 2. The error correction coefficient is in most of the cases significantly negative, which confirms the finding of cointegration between the variables of equation (1) and indicates that in most countries there is an adjustment toward the credit equilibrium in the long run. However, there are also a few countries with an error correction term that is not statistically different from zero (such as the Czech Republic, Slovakia, Lithuania, and Croatia). In these countries there is thus either a very sluggish disequilibrium adjustment (that can be explained with frictions and transaction costs in the credit market; see Calza, Manrique and Sousa (2006) for respective euro area evidence) or a constant and persistent deviation from the credit equilibrium.

We find that bank deposit and equity growth explains a major part of the variation in credit growth rates. Romania is the only exception, showing a significantly negative relation between the growth rate of aggregate and corporate credit and equity growth. However, in the case of Romania this seems to be offset by a much more pronounced positive relation with the changes in deposits. The latter finding is also corroborated by the other countries, where the coefficient for deposit growth is in the majority of cases large and highly significant (e.g. in Poland a 1% increase of bank deposit growth is associated with an increase of total domestic private sector credit growth by 0.67%).

In contrast, changes in the net external position provide – in line with its theoretical inconclusiveness discussed before – only low explanatory power (i.e. very small coefficients), although there is mostly a negative relation (less pronounced in the CEE-5, but more so in the Baltic countries and the SEE-3). The remaining variables (interest spread, exchange rate volatility, output in the euro area and lagged credit volume) do not show a clear pattern. For the Baltic countries there seems to be weak evidence for a positive correlation with industrial production in the euro area. A positive relation with lagged credit growth can be unambiguously detected only for some credit aggregates in the Czech Republic, Hungary, the Baltic countries and Romania.

Table 2

Linear Error Correction Model

Dependent variable: $\Delta \log(c_t)$

Country	c_t	ε_{t-1}	$\Delta \log$ (equity)	$\Delta \log$ (depos)	$\Delta \log$ (extpos)	Δ (spread)	er_vola	$\Delta \log$ (IP_EA)	$\Delta \log(c_{t-1})$	Adj. R ²	Sample
CEE-5											
Czech Republic	Total	-0.011 (0.243)	0.514*** (0.000)	-0.007 (0.966)	0.0004*** (0.002)	0.024* (0.065)	0.024 (0.347)	-0.087 (0.468)	0.177** (0.030)	0.39	1997M02–2009M03
	Firms	-0.017 (0.203)	0.509*** (0.002)	0.113 (0.577)	0.033 (0.132)	0.005 (0.069)	-0.025 (0.376)	-0.113 (0.163)	0.345*** (0.008)	0.32	2002M03–2009M03
	Households	0.005 (0.231)	0.166*** (0.003)	0.181* (0.070)	-0.005 (0.687)	0.017* (0.060)	-0.083*** (0.000)	0.057 (0.168)	-0.144 (0.225)	0.39	2002M03–2009M03
Hungary	Total	-0.002 (0.865)	-0.022 (0.617)	0.103 (0.495)	-0.029 (0.191)	-0.001 (0.762)	0.055*** (0.007)	0.103 (0.213)	0.149 (0.201)	0.09	1997M02–2009M03
	Firms	-0.036** (0.022)	0.187** (0.042)	0.322** (0.015)	-0.025 (0.286)	0.005 (0.316)	0.04 (0.100)	0.069 (0.481)	0.226*** (0.005)	0.16	2000M03–2009M03
	Households	-0.012 (0.286)	0.127 (0.251)	0.280** (0.015)	-0.025 (0.287)	0.001 (0.702)	0.049** (0.010)	0.027 (0.796)	0.25 (0.294)	0.14	2000M03–2009M04
Poland	Total	-0.012* (0.099)	0.049 (0.440)	0.676*** (0.000)	-0.0003 (0.113)	0.001 (0.635)	0.024** (0.031)	-0.087 (0.399)	0.036 (0.688)	0.41	1997M02–2009M03
	Firms	-0.016** (0.015)	0.202*** (0.000)	0.226*** (0.002)	-0.0003 (0.134)	0.005* (0.087)	0.007 (0.211)	-0.195*** (0.006)	0.273*** (0.000)	0.31	1997M02–2009M03
	Households	-0.013 (0.183)	-0.149 (0.315)	1.178*** (0.000)	-0.0003 (0.594)	-0.002 (0.616)	0.042** (0.010)	0.079 (0.639)	-0.167** (0.041)	0.45	1997M02–2009M03
Slovakia	Total	-0.027 (0.183)	-0.137 (0.584)	0.174 (0.395)	-0.0007 (0.357)	0.002 (0.306)		0.009 (0.966)	0.016 (0.794)	0.00	1997M02–2008M11
	Firms	-0.036 (0.134)	-0.165 (0.572)	0.137 (0.546)	-0.0005 (0.512)	0.002 (0.308)		0.011 (0.961)	0.002 (0.975)	0.00	1997M02–2008M11
	Households	0.005 (0.373)	0.013 (0.516)	0.257** (0.021)	-0.007 (0.479)	0.001 (0.107)		0.02 (0.738)	0.229* (0.069)	0.13	1997M02–2008M11
Slovenia	Total	-0.014** (0.019)	0.049 (0.756)	0.043 (0.711)	0.001 (0.161)	-0.005** (0.024)		-0.030 (0.703)	0.176* (0.064)	0.09	1997M02–2009M03
	Firms	-0.012** (0.026)	0.06 (0.708)	-0.034 (0.765)	0.001* (0.073)	0.005** (0.025)		-0.069 (0.464)	0.017 (0.882)	0.03	1997M02–2009M03
	Households	-0.028** (0.025)	-0.005 (0.973)	0.143 (0.356)	0.001 (0.155)	-0.002 (0.407)		0.016 (0.881)	0.146 (0.155)	0.05	1997M02–2009M03
Baltic countries											
Estonia	Total	-0.016** (0.026)	0.089*** (0.001)	0.132** (0.035)	-0.0003** (0.024)	0.000 (0.909)		0.238*** (0.001)	0.21 (0.112)	0.20	1998M02–2009M03
	Firms	-0.081* (0.094)	0.227** (0.031)	0.199 (0.151)	-0.001*** (0.000)	0.010* (0.061)		0.553*** (0.000)	-0.089 (0.325)	0.13	2004M03–2009M03
	Households	-0.0007 (0.894)	0.133** (0.010)	0.235*** (0.001)	-0.0007*** (0.000)	0.001 (0.538)		0.141 (0.117)	0.676*** (0.000)	0.79	2004M03–2009M03
Latvia	Total	-0.013*** (0.000)	-0.003 (0.401)	0.459*** (0.000)	-0.001* (0.050)	-0.0004 (0.372)		-0.094 (0.219)	0.167 (0.119)	0.48	1997M02–2009M03
	Firms	-0.017*** (0.000)	-0.004 (0.151)	0.406*** (0.000)	-0.001 (0.123)	-0.0009 (0.170)		-0.129 (0.122)	0.16 (0.217)	0.30	1998M03–2009M03
	Households	-0.006** (0.022)	-0.008 (0.247)	0.439*** (0.000)	-0.0002 (0.837)	-0.0005 (0.583)		0.158* (0.088)	0.392*** (0.002)	0.51	1998M03–2009M03
Lithuania	Total	-0.007 (0.347)	0.219*** (0.007)	0.405*** (0.000)	-0.001* (0.065)	-0.0001 (0.944)		0.168* (0.086)	0.287*** (0.001)	0.33	1998M02–2009M03
	Firms	-0.016 (0.162)	0.235** (0.013)	0.453*** (0.000)	-0.002** (0.010)	-0.0001 (0.965)		0.157 (0.132)	0.148 (0.104)	0.25	1998M02–2009M03
	Households	-0.012 (0.114)	0.141 (0.181)	0.121 (0.463)	0.001 (0.749)	-0.003 (0.572)		0.391** (0.030)	0.433*** (0.000)	0.23	1998M02–2009M03

Source: Authors' estimations.

Note: Coefficients are estimated with OLS. The p-values in parentheses (for the null hypothesis of a coefficient being equal to zero) are based on Newey-West heteroskedasticity and autocorrelation consistent standard errors. The asterisks *, **, *** indicate significance at the 10%, 5% and 1% level, respectively. All regressions contain a constant (not reported).

Table 2 continued

Linear Error Correction Model

Dependent variable: $\Delta \log(c_t)$

Country	c_t	ε_{t-1}	$\Delta \log$ (equity)	$\Delta \log$ (depos)	$\Delta \log$ (expos)	Δ (spread)	er_vola	$\Delta \log$ (IP_EA)	$\Delta \log(c_{t-1})$	Adj. R ²	Sample
SEE-3											
Bulgaria	Total	-0.016** (0.015)	-0.032 (0.389)	0.796*** (0.000)	-0.0009* (0.075)	-0.0006 (0.654)		-0.028 (0.84)	-0.053** (0.015)	0.52	1998M01– 2009M03
	Firms	-0.008 (0.306)	-0.061 (0.161)	0.964*** (0.000)	-0.001* (0.072)	-0.001 (0.515)		-0.033 (0.832)	-0.054* (0.050)	0.49	1998M01– 2009M03
	Households	-0.015** (0.022)	0.197*** (0.000)	0.229 (0.120)	-0.003 (0.345)	0.001 (0.154)		0.028 (0.806)	0.552*** (0.000)	0.72	1998M01– 2009M03
Romania	Total	-0.018** (0.017)	-0.071*** (0.004)	0.752*** (0.000)	-0.001*** (0.001)	-0.004** (0.046)	0.095** (0.017)	-0.035 (0.800)	0.373*** (0.000)	0.52	1997M06– 2009M03
	Firms	-0.038 (0.112)	-0.093*** (0.006)	0.151 (0.819)	-0.001 (0.434)	-0.001 (0.740)	0.06 (0.242)	-0.172 (0.371)	-0.093 (0.345)	0.00	1997M06– 2009M03
	Households	-0.014*** (0.000)	0.01 (0.542)	0.372*** (0.009)	-0.0005 (0.452)	0.001 (0.610)	0.023 (0.486)	0.025 (0.889)	0.636*** (0.000)	0.56	1997M06– 2009M03
Croatia	Total	-0.0005 (0.952)	0.392*** (0.000)	0.609*** (0.000)	-0.0002 (0.408)	-0.0007 (0.266)	-0.021 (0.934)	-0.062 (0.462)	0.002 (0.640)	0.99	1997M03– 2009M03
	Firms	-0.0004 (0.968)	0.460*** (0.000)	0.546*** (0.000)	-0.0003 (0.247)	-0.0007 (0.449)	-0.076 (0.756)	-0.073 (0.476)	0.003 (0.516)	0.99	1997M03– 2009M03
	Households	-0.009 (0.417)	0.257** (0.039)	0.737*** (0.000)	-0.0003 (0.398)	-0.001 (0.206)	0.024 (0.919)	0.002 (0.977)	0.004 (0.616)	0.99	1997M03– 2009M03

Source: Authors' estimations.

Note: Coefficients are estimated with OLS. The p-values in parentheses (for the null hypothesis of a coefficient being equal to zero) are based on Newey-West heteroskedasticity and autocorrelation consistent standard errors. The asterisks *, **, *** indicate significance at the 10%, 5% and 1% level, respectively. All regressions contain a constant (not reported).

5.2.2 Evidence from the Markov-Switching Error Correction Model

Let us now turn to the Markov-switching error correction model that relaxes the assumption of a time-invariant short-run relation.¹¹ The series for firm and household credits are shorter for some countries (the Czech Republic, Hungary and Estonia), which poses challenges to the estimation of the highly nonlinear MS-ECM and leads to less pronounced regime switches in these cases. Therefore, and for the sake of brevity, we do not present MS-ECM results for the disaggregate series (available from the authors on request). The MS-ECM results for total domestic private sector credit are presented in table 3.

The overall picture that equity and deposit growth are the most important explanatory variables of total domestic private sector credit growth is confirmed for all countries. However, their impact differs significantly across the two identified regimes in most of the countries (see the Wald tests in table A3), which suggests that the main short-run determinants of credit growth do not have the same (i.e. linear) impact over the whole sample period.

There are only slight differences between the error correction coefficients of the respective regimes, which points to a broadly regime-independent adjustment process. Table A3 shows that the error correction terms differ significantly across

¹¹ We do not formally test for Markov-switching, i.e. $k=1$ versus $k=2$. The reason is that testing in a Markov-switching framework is highly nontrivial and requires a grid search over all combinations of the transition probabilities, and the critical values from the literature (see Garcia, 1998) do not apply to our particular model. However, looking at the clear results of the Wald tests (see table A3), which are often used as a heuristic approach (see e.g. Dewachter, 2001), we feel sufficiently confident about the existence of regime switches in our sample.

the two regimes in Romania, Lithuania and Slovakia only. In Romania, both adjustment coefficients are negative, but there is a faster disequilibrium adjustment in regime 1. In Lithuania, the regime switches are broadly correlated with ups and downs of the business cycle (see table 4 and a broader discussion below). During downturns, credit corrects toward the equilibrium, which is not the case during booms.¹² In Slovakia, regime 1 (early 2001, late 2002 and early 2003) coincides with the aforementioned period of bank restructuring and shows a correction of credit toward its equilibrium, while the long-lasting regime 2 can be classified as a noncorrecting one¹³ (in line with the overall lack of finding a cointegration relation for this country). This evidence for Slovakia and Lithuania highlights that, for the direct linkage between policy measures and the correction of over- or undershooting credit levels, the type of policy measure (in the case of Slovakia bank restructuring) as well as the business cycle position of a country are important.

The existence of only slight differences in the error correction coefficients together with the fact that in most of the countries there is at least one Z_t variable that has a significantly different impact across the two regimes (in most cases banks' equity or deposits, see again table A3) indicates that the switches are driven primarily by the short-run supply factors rather than by the adjustment process itself.

¹² One might wonder why we were not able to find a similar behavior in the other two Baltic countries. First, the Wald tests in table A3 do not indicate a significant cross-regime difference of adjustment coefficients in Estonia and Latvia (where regime shifts are apparently driven by the short-run supply factors). Second, compared with Lithuania, credit growth rates in Latvia and Estonia were clearly higher (reaching about 80% year on year in real terms; Lithuania: only about 30%, see chart 1) before the spillover of the Russian financial crisis in the late 1990s. This might change the impact of determinants in the regimes coinciding with economic boom periods.

¹³ A closer inspection of the residuals of the long-term equation reveals that there was not really a need for correction in Slovakia, as the actual credit level only rarely departed from the level fitted on the basis of the underlying macroeconomic fundamentals.

Table 3

Markov-Switching Error Correction Model

Dependent variable: $\Delta \log(c_t)$, with c_t representing total domestic private sector credit

Country	Regime	ε_{t-1}	$\Delta \log$ (equity)	$\Delta \log$ (depos)	$\Delta \log$ (extpos)	Δ (spread)	er_vola	$\Delta \log$ (IP_EA)	$\Delta \log(c_{t-1})$	Trans- formed proba- bility	Sample
CEE-5											
Czech Republic	Regime 1	0.013 (0.279)	0.381** (0.015)	0.279 (0.175)	0.010 (0.368)	0.009 (0.373)	-0.075 (0.141)	-0.018 (0.392)	0.120 (0.332)	0.993	1997M02– 2009M03
	Regime 2	0.018 (0.119)	0.468*** (0.000)	-0.083 (0.305)	0.000 (0.278)	0.020** (0.016)	0.259 (0.132)	-0.213 (0.211)	-0.077 (0.215)	0.993	
Hungary	Regime 1	0.012 (0.324)	0.648*** (0.004)	-0.827** (0.048)	0.028** (0.034)	0.012 (0.148)	0.123*** (0.000)	0.474** (0.011)	-0.284** (0.017)	0.743	1997M02– 2009M03
	Regime 2	0.012 (0.178)	-0.074** (0.010)	0.129* (0.069)	-0.068*** (0.000)	-0.002 (0.327)	0.034** (0.031)	-0.007 (0.398)	0.440*** (0.000)	0.945	
Poland	Regime 1	-0.010 (0.283)	0.094 (0.250)	0.822*** (0.000)	-0.008 (0.146)	0.000 (0.397)	0.021 (0.342)	0.203* (0.060)	-0.026 (0.371)	0.950	1997M02– 2009M03
	Regime 2	-0.018 (0.107)	-0.017 (0.395)	0.168 (0.159)	0.000 (0.267)	-0.001 (0.395)	0.019 (0.117)	-0.301*** (0.002)	-0.260 (0.220)	0.942	
Slovakia	Regime 1	-0.272*** (0.000)	-1.325*** (0.000)	-0.667 (0.179)	0.043*** (0.005)	0.082*** (0.000)		-0.533 (0.256)	-0.318** (0.013)	0.769	1999M01– 2008M11
	Regime 2	-0.014 (0.206)	0.166*** (0.000)	0.355*** (0.002)	-0.001 (0.331)	0.003* (0.061)		0.172 (0.201)	0.280*** (0.000)	0.976	
Slovenia	Regime 1	-0.135* (0.075)	-0.571*** (0.000)	0.248 (0.306)	-0.046 (0.246)	-0.072*** (0.002)		0.540 (0.146)	-0.008 (0.398)	0.766	1997M12– 2008M11
	Regime 2	-0.014** (0.028)	0.227*** (0.000)	0.154** (0.012)	0.002 (0.125)	-0.004* (0.057)		0.069 (0.188)	0.184** (0.022)	0.982	
Baltic countries											
Estonia	Regime 1	-0.020 (0.164)	0.154** (0.020)	0.024 (0.373)	0.000 (0.169)	0.000 (0.363)		0.206* (0.076)	-0.129 (0.144)	0.983	1998M02– 2009M03
	Regime 2	0.002 (0.387)	0.117** (0.015)	0.209** (0.039)	0.000 (0.397)	0.001 (0.193)		0.107 (0.316)	0.419 (0.120)	0.983	
Latvia	Regime 1	-0.010 (0.111)	-0.003 (0.376)	0.320** (0.011)	0.001 (0.366)	0.000 (0.398)		0.094 (0.309)	0.379*** (0.006)	0.949	1997M02– 2009M03
	Regime 2	-0.014*** (0.001)	-0.005 (0.380)	0.416*** (0.002)	-0.002 (0.121)	0.000 (0.388)		-0.308* (0.063)	-0.064 (0.342)	0.958	
Lithuania	Regime 1	-0.040*** (0.001)	-0.077 (0.367)	0.113 (0.307)	0.000 (0.391)	0.000 (0.398)		0.082 (0.363)	-0.033 (0.395)	0.902	1998M02– 2009M03
	Regime 2	0.004 (0.351)	0.308*** (0.000)	0.377*** (0.001)	-0.001 (0.334)	-0.005 (0.164)		-0.085 (0.364)	0.190** (0.043)	0.950	
SEE-3											
Bulgaria	Regime 1	-0.038** (0.016)	-0.089* (0.051)	0.403*** (0.000)	0.000 (0.270)	-0.001 (0.353)		0.373** (0.050)	0.117 (0.120)	0.912	1998M01– 2009M03
	Regime 2	-0.022*** (0.001)	-0.027 (0.288)	1.125*** (0.000)	0.000 (0.396)	0.001 (0.239)		-0.088 (0.299)	-0.081*** (0.000)	0.927	
Romania	Regime 1	-0.086*** (0.000)	-0.109*** (0.000)	-0.895*** (0.005)	0.050 (0.167)	-0.010*** (0.000)	1.356*** (0.000)	0.942 (0.216)	-0.066 (0.296)	0.674	1997M06– 2009M03
	Regime 2	-0.006* (0.099)	-0.018 (0.259)	0.515*** (0.000)	-0.001** (0.050)	-0.001 (0.330)	0.047** (0.025)	0.104 (0.234)	0.355*** (0.000)	0.969	
Croatia	Regime 1	-0.001 (0.392)	0.289*** (0.000)	0.715*** (0.000)	0.000 (0.217)	0.000 (0.395)	0.105 (0.366)	0.026 (0.382)	0.003 (0.315)	0.963	1997M03– 2009M03
	Regime 2	0.029 (0.226)	0.549*** (0.000)	0.043 (0.371)	0.047*** (0.000)	-0.007*** (0.005)	3.915*** (0.000)	-1.297*** (0.000)	0.026 (0.322)	0.636	

Source: Authors' estimations.

Note: Coefficients are estimated with quasi-maximum likelihood. p-values for the null hypothesis of a coefficient being equal to zero are in parentheses. The asterisks *, **, *** indicate significance at the 10%, 5% and 1% level, respectively. The transformed probability represents the transition probability p_{ii} for staying in regime i if the country is already there. All regressions contain a constant (not reported).

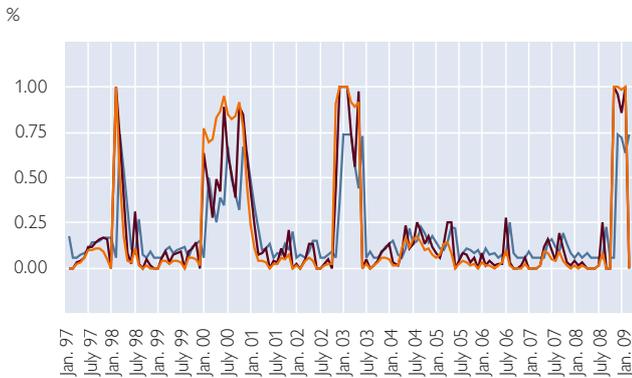
From the MS-ECM estimation we directly get the regime-switching probabilities. Chart 2 shows, for each country, the probability of being in regime 1 ($prob=1$) or regime 2 ($prob=0$) at time t . In terms of regime-switching behavior, we can divide the countries into two groups: While the first group shows clear and long-lasting regime switches (Poland, the Czech Republic, the Baltic countries and Bulgaria), the second group mainly stays in one regime with only short switches (Croatia, Romania and Slovenia, to a lesser extent Hungary and Slovakia). This is also reflected in the transition probabilities p_{ii} for staying in regime i if the country is already there (last column in table 3). While mostly exceeding 90%, the probabilities are generally low for the second group of countries in one of the regimes, with Croatia accounting for the minimum value of 64% in regime 2.

For the first group of countries with long swings in the error correction equation, i.e. p_{ii} is above 90% for both regimes, we find at least one regime for which bank equity and/or deposits show a very pronounced positive relation with credit growth. However, the dates of observed regime switches vary from country to country and show no common pattern. This means that the switches are likely to be due to country-specific rather than global determinants. Nevertheless, just before and during the current global crisis, all countries in this group except for the Czech Republic show a regime switch. This shift, which occurs between early 2007 (Poland) and late 2008 (Lithuania), invariably shows a weakened relation between credit growth on the one hand and bank equity or deposit growth on the other hand. The coefficient thus becomes insignificant or the coefficient remains significantly positive, but gets smaller. The only exception is Bulgaria, which shows a positive credit-deposit relation in both regimes and moves toward the larger coefficient. For Estonia, we observe the same behavior found in the other countries of the first group for equity, but not for deposits.

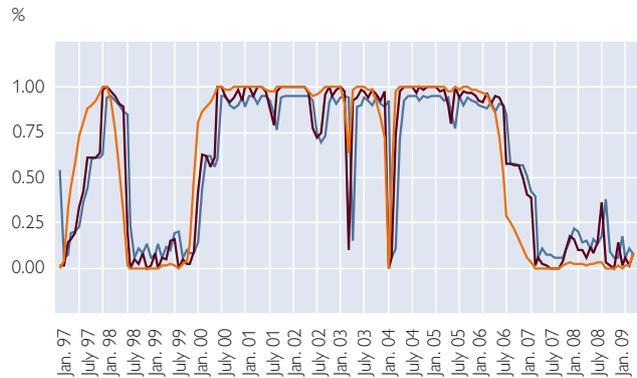
Most countries with only short-lived regime swings (Croatia, Romania, Slovakia and Slovenia) have one characteristic in common: The regime in which they stay most of the time shows a textbook-like positive relation with deposits, whereas the short-lived regime is characterized by significant impacts of the external position with both a negative and a positive sign depending on the country under review. One may thus argue that the short-run dynamics of these countries were from time to time affected by external determinants.

Regime Switching Probabilities from the MS-ECM for Real Domestic Private Sector Credit Growth

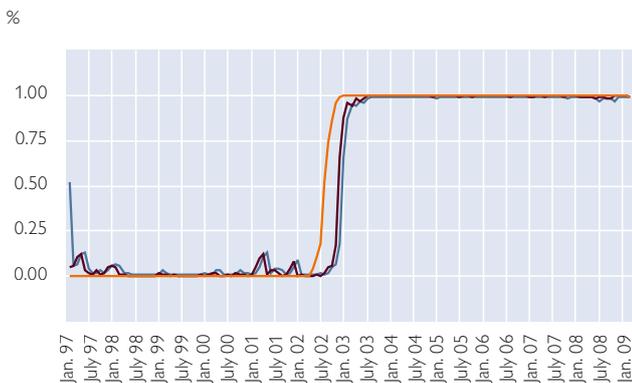
Hungary



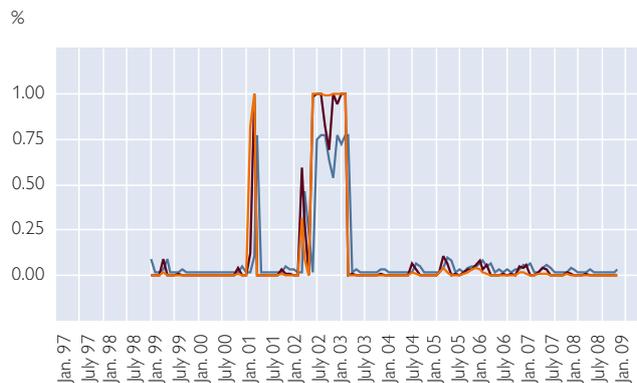
Poland



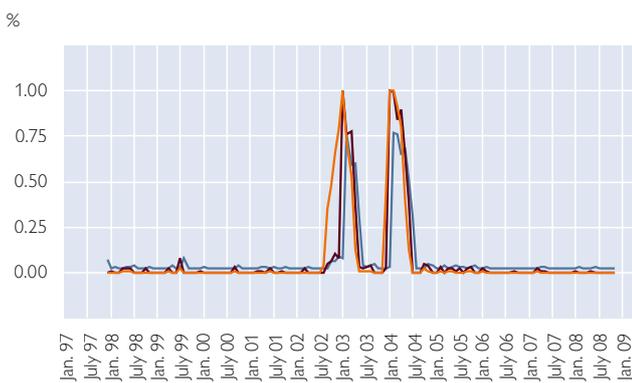
Czech Republic



Slovakia



Slovenia



Estonia



— Ex ante probabilities — Filter probabilities — Smoothed probabilities

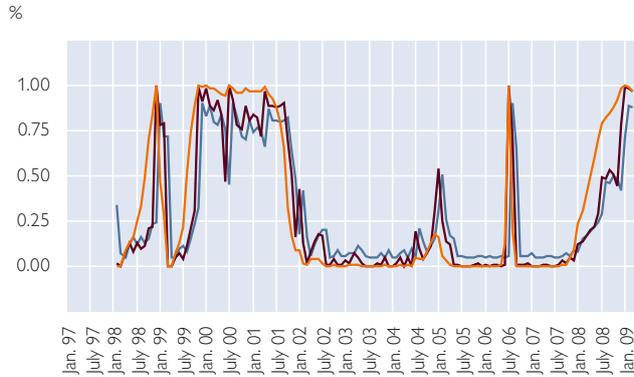
Source: Authors' estimations.

Note: We show the time-varying probability of being in regime 1 as reported in table 3 at time t , based on all the available information up to time $t-1$ (ex ante probabilities), up to time t (filter probabilities) and up to time T , i.e. as an ex post analysis for the whole sample period (smoothed probabilities).

Chart 2 continued

Regime Switching Probabilities from the MS-ECM for Real Domestic Private Sector Credit Growth

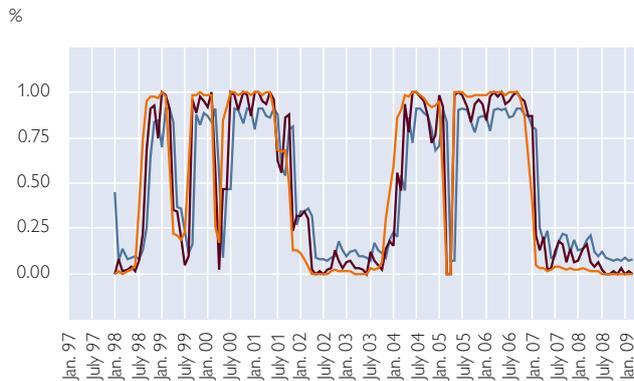
Lithuania



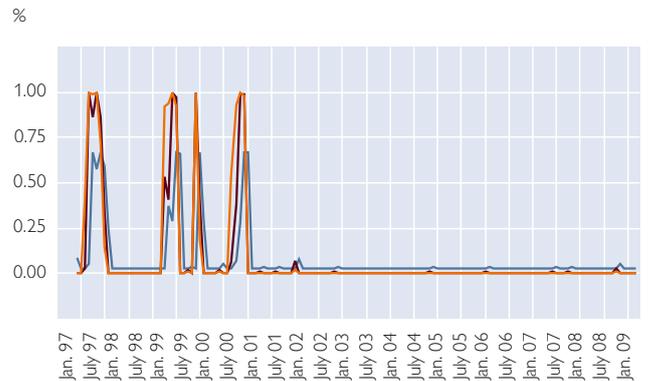
Latvia



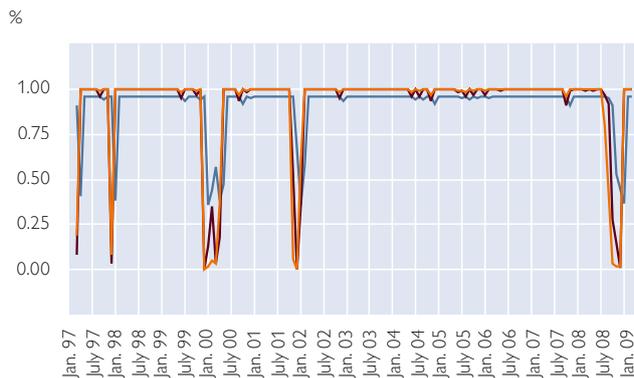
Bulgaria



Romania



Croatia



— Ex ante probabilities — Filter probabilities — Smoothed probabilities

Source: Authors' estimations.

Note: We show the time-varying probability of being in regime 1 as reported in table 3 at time t , based on all the available information up to time $t-1$ (ex ante probabilities), up to time t (filter probabilities) and up to time T , i.e. as an ex post analysis for the whole sample period (smoothed probabilities).

Regime-specific descriptive statistics for real GDP growth and real domestic private sector credit growth (table 4) provide more information about the macro factors that underlie the two different regimes in each country. It is evident that in the three Baltic countries and in the Czech Republic the two regimes clearly coincide with the respective business cycle position of the country: One regime

represents a boom period with high GDP and credit growth, while the other regime represents more of a crisis period with relatively poor economic performance, higher economic volatility and relatively low – if not negative – credit growth. In the other countries, the regime differences appear to be less business cycle-dependent.

Table 4

Regime-Specific Descriptive Statistics for GDP Growth and Credit Growth

		Real GDP growth in %		Real credit growth in %	
		Average	SD	Average	SD
Countries with two equally pronounced regimes					
Czech Republic	Regime 1	4.4	2.6	11.4	11.3
	Regime 2	1.3	1.9	-9.7	9.2
Poland	Regime 1	4.0	2.4	7.8	6.4
	Regime 2	5.2	2.0	22.8	5.2
Estonia	Regime 1	8.3	2.1	24.5	7.3
	Regime 2	0.6	7.0	11.8	16.9
Latvia	Regime 1	3.0	7.3	24.8	19.8
	Regime 2	8.7	3.5	41.8	15.7
Lithuania	Regime 1	1.5	5.5	7.6	10.0
	Regime 2	7.9	2.3	36.6	14.6
Bulgaria	Regime 1	4.9	2.3	19.8	18.1
	Regime 2	4.8	2.5	25.2	26.6
Countries with mainly one regime and only short switches					
Hungary	Regime 1	2.6	4.3	16.8	3.8
	Regime 2	3.8	1.4	14.3	6.2
Slovakia	Regime 1	4.3	2.5	1.5	11.2
	Regime 2	4.9	4.2	3.0	16.0
Slovenia	Regime 1	3.6	0.9	11.5	9.6
	Regime 2	4.1	2.6	15.3	7.6
Romania	Regime 1	n.a.	n.a.	-18.3	21.9
	Regime 2	n.a.	n.a.	20.3	27.3
Croatia	Regime 1	4.6	4.7	13.8	10.2
	Regime 2	5.8	8.5	5.3	16.7

Source: Eurostat, IMF, NCBs, ECB, authors' calculations.

Note: Averages and standard deviations (SD) are calculated for the year-on-year percentage change of quarterly GDP at market prices and for the year-on-year percentage change of CPI-deflated monthly domestic private sector credit stocks. These statistics are calculated separately for regime 1 and regime 2 as indicated by the smoothed probability depicted in chart 2 (as soon as it is larger than 0.5, we classify the related subperiod as regime 1).

5.3 Robustness Checks

Finally, we performed various robustness checks, whose results are not presented here but are available from the authors on request. In particular, we checked various alternative specifications of the long-term equation. First, we replaced in equation (1) the interest rate with alternative ones, namely real interest rates and different maturities. This had almost no effect on the results; the observed positive relation between credit volume and the interest rate, in particular, remained stable.

Second, we included cross-border credits in our analysis, since they account for a substantial share of total credit volume in some of the CESEE-11 countries (especially in Croatia and Bulgaria, but also in Estonia and Latvia; see section 4). Their inclusion did not substantially affect the sign and size of coefficients in the

cointegration equation, however. Since our proxy for cross-border credits is only available on a quarterly basis for households and firms combined (and thus, in contrast to other variables, interpolation would be necessary), we decided to work exclusively with the domestic private sector credit stock in the estimations.

Third, we included government credit as an additional variable in the cointegration equation to account for potential crowding-out effects. Again, there was no impact on the estimation results.

Fourth and finally, we constructed a dummy¹⁴ that captures substantial reform progress in the financial sector based on the EBRD transition indicator for banking reform and interest rate liberalization. We included it in the cointegration equation to account for long-run structural conditions that are most likely to have determined the evolution of credit volumes over time (in contrast to short-run competition effects approximated by the interest spread in the credit growth equation). There is a strong and positive correlation with credit volume in nearly all of the CESEE-11, which indicates that credit expansion in CESEE had also been based on better-functioning financial institutions. The effect on the other coefficients in the long-term equation and on the residuals to be used in the ECM is, however, only marginal.

6 Summary

In this paper, we analyze the determinants of domestic private sector credit developments in eleven CESEE countries, namely the CESEE EU Member States and Croatia, from January 1997 to April 2009. Our multidimensional approach (distinction between supply- and demand-side determinants, separate analysis of lending to firms and to households, identification of subperiods with a different impact of credit growth determinants) contributes to the existing literature since studies researching determinants of credit developments at this level of disaggregation are still rare (see Aisen and Franken, 2010). The finance and growth literature showed that countries with more developed financial systems tend to record stronger growth than countries with less developed systems (see e.g. Rajan and Zingales, 1998). Thus, it is crucial to learn more about the long-run driving forces of credit developments in order to assess the catching-up potential of the examined CESEE countries. Moreover, analyzing the variables that determine credit growth in the short run and especially their varying impact over time is important to assess financial sector risks and macrofinancial stability in the CESEE region.

We find long-term equations that are in line with our expectations. In most countries, there exists at least one cointegration relationship. The most significant long-term determinant of domestic bank lending to the private sector is economic activity (especially pronounced for household credits). Inflation shows the expected negative relation to lending for most countries, whereas the lending rate

¹⁴ Based on the EBRD transition indicator for banking reform and interest rate liberalization (see EBRD, 2009), the dummy was constructed as follows: 0 if the transition indicator's score was smaller than 3.33 and 1 if it was larger than or equal to 3.33. Note that 3 marks "substantial progress in establishment of bank solvency and of a framework for prudential supervision and regulation; full interest rate liberalisation with little preferential access to cheap refinancing; significant lending to private enterprises and significant presence of private banks" and 4 stands for "significant movement of banking laws and regulations towards BIS standards; well-functioning banking competition and effective prudential supervision; significant term lending to private enterprises; substantial financial deepening." As the transition indicators are only available at an annual frequency, a change in the dummy starts in July of the respective year.

displays in some cases a counterintuitively positive sign, which is, however, in line with the existing empirical evidence. In the short run, credit supply factors like bank deposits and banks' equity explain a major part of the variation in credit growth rates.

Applying a Markov-switching error correction model, we provide a model that is more plausible than a simple linear error correction model as it relaxes the assumption of a time-invariant credit growth relation. We present the following findings: First, deposits and equity remain the main short-run determinants of credit growth; yet, the strength of their impact differs substantially across the identified subperiods ("regimes" in the diction of the Markov-switching error correction model). This finding is important for financial stability analysis as it should – in the assessment of short-run credit developments – focus also on bank-related credit supply variables and their apparently changing impact over time. Second, as the error correction coefficients differ significantly across the identified regimes only in a few countries, the regime switches are mostly driven by differences in the short-run credit supply factors rather than by the adjustment to the credit equilibrium. Third, for a few countries, the linear model suggests that there is either a very slow or no correction toward the credit equilibrium if the credit level departs from its underlying macroeconomic fundamentals. The Markov-switching error correction model, in contrast, reveals that, in some of these countries, correction does take place in particular subperiods and is correlated with bank restructuring or low growth phases. Fourth, the subperiods separated by the regime shifts differ across the countries under review. We nevertheless identify two groups of countries: those with one dominant regime that is only temporarily interrupted by a second, short-lived one and those with two equally pronounced regimes leading to long-lasting regime switches. While the majority of regime switches seems to be country-specific rather than determined by the global environment, we find for most of the countries in the latter group a marked regime switch just before or during the current global crisis. This switch pushed the way credit growth was determined back to a regime that had already been observed earlier (in most cases, before the economic boom period from 2000 to 2007) and that is characterized by a weaker relation of deposit growth and credit growth.

Based on this evidence, future research could further explore country-specific reasons for the detected regime switches. This could shed light on the effectiveness of policy measures that were implemented to curb rapid credit growth in the period up to 2007–2008¹⁵ and that have been used to sustain lending during the more recent crisis situation.

¹⁵ Such as the tightening of capital adequacy requirements, of minimum reserve requirements, or of foreign exposure regulations; particularly in Croatia, Bulgaria, Romania, and Poland, and, to a more limited extent, in the Baltic countries.

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Annex: Data Issues and Description of Variables

For our analysis we use data with monthly frequency (from January 1997 to April 2009) that are real-valued, seasonally adjusted and denominated in local currency. Those variables that are only available in nominal terms are deflated by using the all-items HICP index (2005=100). All series are seasonally detrended by applying the Census X12 method (also used by Eurostat to de-seasonalize EU series). Table A1 provides detailed definitions and sources of the variables used in the analysis.

Table A1

Description of Variables

Variables	Description	Source
Credit variables		
Total domestic private sector credits	Credit to resident nonmonetary financial institutions (non-MFIs), excluding the general government, in local currency (LC) million, end of period	IMF (1993–1996), NCBs (1997–2003), ECB (2004 onward)
Domestic firm credits	Domestic credit to resident enterprises (nonfinancial corporations and other financial intermediaries) in LC million, end of period	
Domestic household credits	Domestic credit to resident households and nonprofit institutions serving households in LC million, end of period	
Cross-border credits to the private sector	Calculated as external debt of the nonbank private sector, excluding intercompany loans and trade credits (liabilities); in EUR million, end of period (conversion to LC million by using the end-of-period exchange rate). Available only on a quarterly basis, and thus we interpolated them linearly to monthly frequency		NCBs and IMF (International Investment Position)
Long-run (demand-side) determinants		
Industrial production (IP)	Real industrial production (excl. construction), gross volume index (wiw). For the Baltic countries and the euro area (IP_EA), we use working day adjusted data from Eurostat	wiwi, Eurostat
Lending rate (LR)	Weighted average rate charged by non-MFIs on short-term loans to the private nonfinancial sector; the counterparties, maturities and weightings vary slightly from country to country	IMF International Financial Statistics (Datastream)
Inflation rate (π^{CPI})	Year-on-year percentage change of the all-items HICP (index, 2005=100)	Eurostat
Short-run (supply-side) determinants		
Bank equity (equity)	Banks' capital and reserves in LC million, end of period	IMF (1993–1996), NCBs (1997–2003), ECB (2004 onward)
Domestic bank deposits of households and firms (depos)	Deposits of residents, excluding the general government, in LC million, end of period. For the Czech Republic, Hungary, Latvia and Slovakia, we used deposits of resident non-MFIs excluding the central government (longer time series available)	
Banks' net external position (extpos)	External assets minus external liabilities, LC million, end of period	IMF International Financial Statistics (Datastream)
Lending-deposit rate (spread)	Spread between lending rate (see above) and deposit rate (weighted average rate offered by non-MFIs on deposits of the private nonfinancial sector), in percentage points	
Exchange rate volatility (er_vola)	Monthly variation of daily nominal exchange rates from their monthly mean in percent, as measured by the coefficient of variation	WMI/Reuters (Datastream)

Source: Compiled by authors.

Table A2

Unit Root Properties of Variables Used in the Cointegration Relation

Country	Test	$\log(c_t^{\text{TOTAL}})$	$\log(c_t^{\text{FIRMS}})$	$\log(c_t^{\text{HOUSEHOLDS}})$	$\log(IP_t)$	LR_t	π_t^{CPI}
Czech Republic	ADF	I(1)	TS	I(1)	I(1)	I(1)	I(0)
	PP	I(1)	TS	I(1)	I(1)	I(1)	I(1)
Hungary	ADF	I(1)	TS	I(1)	I(1)	I(0)	I(1)
	PP	I(1)	I(1)	I(1)	I(1)	I(0)	I(1)
Poland	ADF	I(1)	I(1)	I(1)	I(1)	I(1)	I(0)
	PP	I(1)	I(1)	I(1)	TS	I(1)	I(0)
Slovakia	ADF	I(1)	I(1)	I(1)	I(1)	I(1)	I(1)
	PP	I(1)	I(1)	I(1)	TS	I(1)	I(1)
Slovenia	ADF	I(1)	I(1)	I(1)	I(1)	I(0)	I(1)
	PP	I(1)	I(1)	I(1)	TS	I(1)	I(1)
Estonia	ADF	TS	I(1)	I(2)	I(1)	I(1)	I(0)
	PP	I(1)	I(1)	I(2)	I(1)	I(1)	I(1)
Latvia	ADF	I(1)	I(1)	I(2)	I(1)	I(1)	I(0)
	PP	I(1)	I(1)	I(1)	I(1)	I(0)	I(1)
Lithuania	ADF	I(1)	I(1)	I(1)	TS	I(0)	I(0)
	PP	I(1)	I(1)	I(1)	TS	I(0)	I(0)
Bulgaria	ADF	TS	TS	TS	I(1)	I(0)	I(0)
	PP	TS	TS	I(1)	I(1)	I(0)	I(0)
Romania	ADF	I(1)	I(1)	I(1)	I(1)	TS	I(0)
	PP	I(1)	I(1)	I(1)	I(1)	I(1)	I(1)
Croatia	ADF	I(1)	I(1)	I(1)	I(1)	I(0)	I(1)
	PP	I(1)	I(1)	I(1)	TS	I(0)	I(1)

Source: Authors' estimations.

Note: Based on the Augmented Dickey Fuller (ADF) and Phillips-Perron (PP) unit root tests, we show whether a series used in equation (1) has no, one or two unit root(s), i.e. is integrated of order zero – I(0), of order one – I(1), or of order two – I(2). „TS“ indicates that the series is trend-stationary, i.e. the hypothesis of a nonstable series is rejected as soon as a deterministic trend is included in the test equation in levels. The detailed test output is available from the authors on request.

Table A3

Wald Tests for Differences in Coefficients across Regimes

Country	ϵ_{t-1}	$\Delta \log$ (equity)	$\Delta \log$ (depos)	$\Delta \log$ (extpos)	$\Delta(\text{spread})$	er_vola	$\Delta \log$ (IP_EA)	$\Delta \log(c_{t-1})$
Czech Republic	0.09	0.31	2.17	0.15	0.00	3.37	1.02	8.40**
Hungary	0.00	11.46***	5.46*	32.64***	0.00	10.13**	12.51***	68.97***
Poland	0.22	0.46	20.58***	1.89	0.00	0.00	28.99***	0.97
Slovakia	12.88***	146.16***	3.61	8.98**	0.02		1.45	17.88***
Slovenia	2.67	31.74***	0.07	1.03	0.04		1.52	2.11
Estonia	1.58	0.24	2.48	0.72	0.00		0.27	3.46
Latvia	0.14	0.02	0.25	1.20	0.00		3.89*	6.45*
Lithuania	10.31**	5.79*	2.07	0.02	0.00		0.38	0.75
Bulgaria	1.01	1.32	43.77***	0.39	0.00		4.43*	6.47*
Romania	30.20***	14.04***	20.79***	1.82	0.00	29.29***	63.47***	47.20***
Croatia	1.17	3.84*	32.09***	15.78***	0.04	12.89***	21.11***	0.33

Source: Authors' estimations.

Note: This table shows whether there are significant differences in the coefficients in equation (3a) and equation (3b), i.e. the Wald test statistics for rejecting the null hypothesis of $b_{k1} = b_{k2}$, where k represents the different explanatory variables. The asterisks *, **, *** indicate significance at the 10%, 5% and 1% level, respectively. The results for the constant are not reported.

Real Effects of Crisis Have Reached CESEE Households: Euro Survey Shows Dampened Savings and Changes in Borrowing Behavior

Sandra Dvorsky,
Thomas Scheiber,
Helmut Stix¹

Evidence from the 2009 fall wave of the OeNB Euro Survey in Central, Eastern and South-eastern Europe (CESEE) provides indications of the real effects that the economic downturn has had on CESEE households since the crisis arrived in the region. On the asset side, we find that the ability of households to save has been dampened, which may be explained, at least partly, by the fact that many households had to use the deposits they withdrew to finance their current expenses. On the liability side, we find that a substantial share of CESEE households indebted in foreign currency has already reacted to the crisis, be it by converting their loans, be it by renegotiating their credit terms. All in all, the overall degree of euroization of households' financial assets has remained virtually unchanged throughout the crisis and can be expected to increase even further: euro deposits are perceived as increasingly attractive despite higher interest rates offered for deposits in local currency. At the same time, the crisis may have increased households' perception of the exchange rate risk associated with foreign currency loans. As a consequence, the appetite for foreign currency loans may be expected to keep declining in the years ahead, which would go hand in hand with recent efforts on the regulatory side.

JEL classification: D14, E41, E50, G01

Keywords: Euroization, global financial crisis, portfolio decision, foreign currency loans, remittances, survey data, Central, Eastern and Southeastern Europe

1 Introduction

This article presents selected results from the 2009 fall wave of the OeNB Euro Survey of households in Central, Eastern and Southeastern Europe (CESEE), which was conducted in October/November 2009, just one year after the global financial crisis had reached the region. While changes in sentiment fed through to survey results right at the beginning of the crisis, the real effects of the economic downturn on CESEE have accumulated more gradually over the last 12 months.

Households' portfolio decisions with respect to saving and borrowing are governed by income and by opportunity costs. Opportunity costs are commonly assumed to be related to interest rate spreads, exchange rates, the inflation rate and the level of trust in institutions. A sufficiently large change in opportunity costs, i.e. in the relative costs or returns and in the perceived risks of various financial assets as well as credit instruments, will prompt households to adjust their portfolios accordingly.

Recent research on euroization (e.g. Nicolo, Honohan and Ize, 2005; Scheiber and Stix, 2009) stresses the comparatively high sensitivity of CESEE households to changes in trust in institutions and in banks, as well as to changes in trust in the local currency. By combining data gathered through the OeNB Euro Survey and data from national monetary statistics, we try to shed some light on the interplay of income and substitution effects which have driven the recent developments of households' portfolio choices with respect to saving and borrowing.

In the following, we will present survey evidence on how households report to have been affected by the crisis (section 2). Furthermore, we examine survey

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results with regard to changes in people's savings behavior. In particular, we will shed some light on how people used the money they withdrew from their savings accounts at the peak of the financial crisis, which they have only partly put back into the banking system (section 3). Section 4 presents some survey evidence on households that are indebted in foreign currency and their reactions to the crisis. Section 5 gives an outlook on the overall degree of euroization. Section 6 concludes.

2 Fall Wave 2009: Households Increasingly Affected by Financial Crisis

When asked to assess their current financial situation² in the fall 2008 wave of the OeNB Euro Survey, respondents were answering under the fresh impression of the financial crisis that had just arrived in the region. The same question posed one year later actually drew broadly the same – negative – answers, above all in Serbia, Croatia and Bosnia and Herzegovina. In the Czech Republic, the answers reflected a significant deterioration one year on, whereas the results from Hungary, Romania and FYR Macedonia showed significant improvements, even though the balance of answers remained negative. The only exception in this context is Poland, where the situation has improved significantly, with more than half of the respondents considering their household's financial situation to be "good" in the fall of 2009.

Looking ahead as to how respondents expect their household's financial situation to develop over the next 12 months, a considerable degree of optimism was found for Albania³ and Poland. Moreover, respondents in Hungary and in FYR Macedonia⁴ were more optimistic than one year earlier.

In the 2009 spring wave, respondents were for the first time asked to indicate whether they perceived the global financial crisis to have had an impact on the financial situation of their household. By fall 2009, the share of respondents who considered themselves to have suffered under the crisis had increased to more than 60% in eight of the ten countries surveyed (except for Poland and the Czech Republic). In five of the countries (Hungary, Bulgaria, Bosnia and Herzegovina, Croatia and Serbia) this share reached even around 80%. Albania was the only country in the sample to show a significant improvement, even though its share remains at a comparatively high level (see chart 1).

Participants in the survey were also asked whether the financial crisis had affected their jobs or their chances to find a job. Here, the picture is more diverse across countries. The share of respondents who answered in the affirmative was generally very high in the fall of 2009, ranging from 31% (Poland) to 65% (Hungary). Compared with the spring 2009 results, this share has increased substantially for Hungary, Bulgaria, the Czech Republic and Bosnia and Herzegovina (by 21, 17, 10 and 7 percentage points, respectively), while it has decreased for Romania, Albania, Croatia and FYR Macedonia, where the respective shares went down by 5 to 7 percentage points.

² Specifically, participants were asked whether they agreed or disagreed with the following statement: "Currently, the financial situation of my household is good."

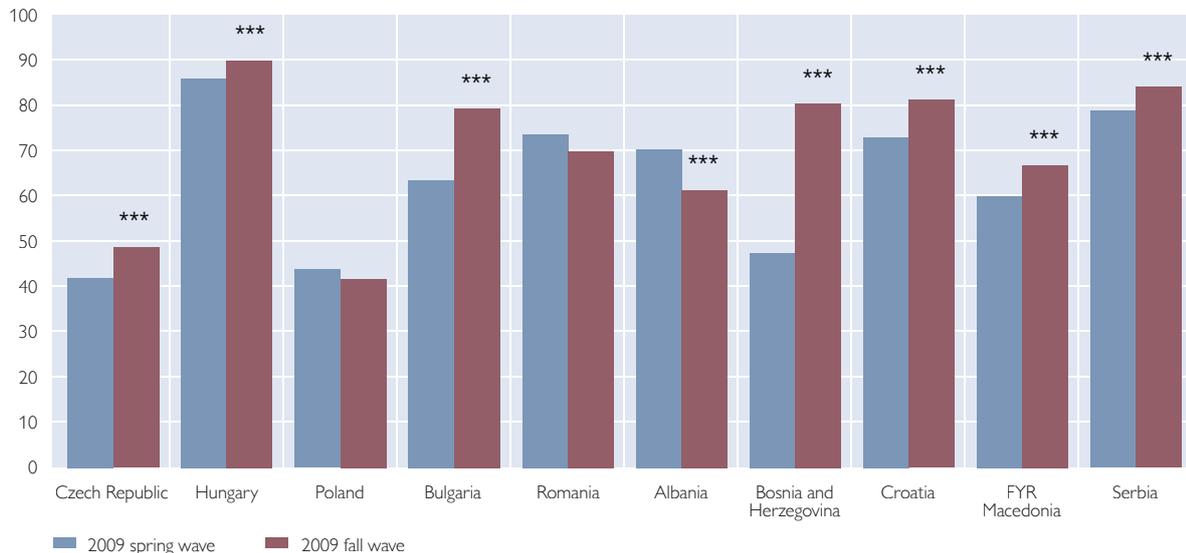
³ This is in line with results of the Consumer Confidence Indicator for the fourth quarter of 2009, published by the Bank of Albania (2010).

⁴ Results for FYR Macedonia are remarkable, as the majority of respondents expect their household's situation to improve over the next 12 months.

Chart 1

Have You Been Affected By the Global Financial Crisis with Regard to the Financial Situation of Your Household?

Percentage share of respondents answering yes



Source: OeNB Euro Survey.

Note: This chart excludes the "Don't know," "No answer" and "Not applicable" response categories (whose shares ranged between 0% and 18%). *** indicates a significant change in normalized sample means (1% level) between the 2009 spring and fall waves.

To sum up, one year after the financial crisis first arrived in the region, households increasingly perceived their financial situation to have been affected. Furthermore, real effects from the economic downturn were being severely felt by respondents in a number of countries. Based on these survey findings, we expect these changes to have caused a drag on households' financial portfolio choices, i.e. a negative income effect constraining both their ability to save (see section 3) as well as their willingness to take out a loan (see section 4).

3 Households' Savings Behavior during the Crisis: Withdrawn Deposits and How the Money Was Used

Regarding the portfolio choices of households, the choice of the currency denomination of asset holdings seems to be governed by people's confidence in the local currency, and the choice of cash versus deposits seems to be governed by people's trust in banks (Scheiber and Stix, 2009).

Monetary statistics (adjusted for exchange rate movements) show that the arrival of the financial crisis in CESEE in the fall of 2008 prompted households to adjust their portfolios immediately (see chart 2). On the one hand, these adjustments were driven by a substantial substitution effect caused by a significant deterioration of both trust in banks and trust in the future stability of the local currency, in particular in Southeastern European (SEE) countries (see Dvorsky, Scheiber and Stix, 2009b).⁵ On the other hand, the development of total household deposits reflects an income effect caused by the (actual and expected) adverse

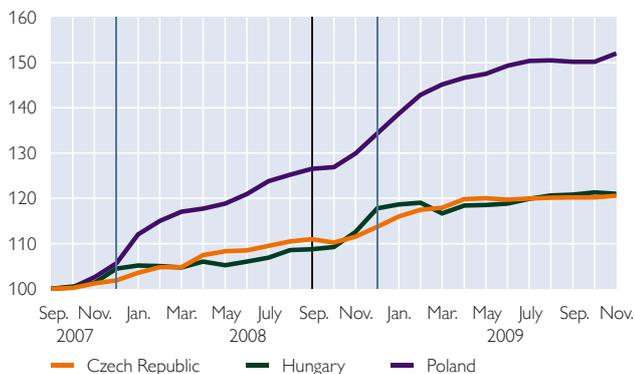
⁵ For further results on economic sentiments and trust, see ceec.oenb.at.

Chart 2

Total Savings Deposits (Exchange Rate-Adjusted) of Households at Banks in CESEE

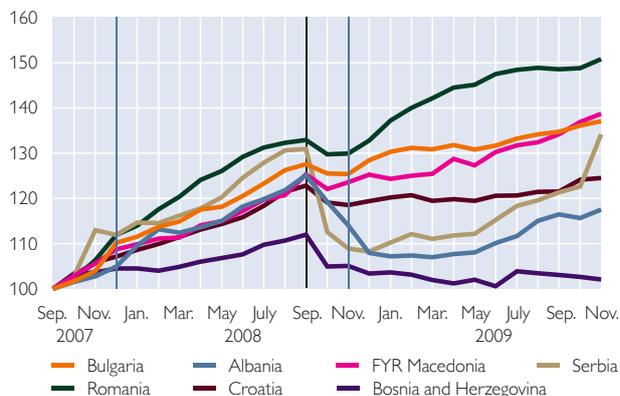
CEE Countries

Index September 2007=100



SEE Countries

Index September 2007=100



Source: National central banks.

Note: The constructed index keeps the exchange rate fixed at the level of end-September 2007 and therefore depicts the actual change of total savings deposits through net flows.

effects of the recession, too. The size and sign of the combined effect differs across Central and Eastern European (CEE) and SEE countries as well as over time.

In CEE, the growth of total savings deposits came to a temporary halt in October 2008, but growth resumed in the following months at an even higher pace than before the start of the crisis. This development may partly reflect a portfolio shift from riskier assets to savings deposits as well as an increase in precautionary savings. However, in the second quarter of 2009 the growth of savings deposits slowed down and has stagnated since then. This may be seen as a reflection of the real effects of the financial crisis, which are now being felt by households and which dampen their ability to save.

In SEE, public trust in the banking system and the perceived safety of bank deposits dropped sharply as the crisis started to unfold (see Dvorsky, Scheiber and Stix, 2009a). This drop provoked massive withdrawals of savings deposits in many SEE countries in the fall of 2008. Savers in Bulgaria, Romania and FYR Macedonia were fairly quick to redeposit those funds in the following months, whereas this process took considerably longer in Serbia and Croatia. In those two countries, the pre-crisis level of total savings was not reached until the end of 2009, and in Albania and Bosnia and Herzegovina the level of total savings deposits was still below pre-crisis levels in January 2010.

One of the particular assets of the OeNB Euro Survey is that it provides evidence on aspects of savings behavior which are not covered by monetary statistics. Thus we know that a relatively high share of savers withdrew their deposits for fear of a bank collapse (see table 1). In Serbia, for instance, 34% of respondents reported to have withdrawn money for this reason. Interestingly, the share of respondents who answered that they had savings deposits significantly declined in six out of ten countries in fall 2009, as compared to pre-crisis levels.

Dvorsky, Scheiber and Stix (2009b) offer several explanations about the possible whereabouts of the withdrawn money: First, withdrawn amounts might have been kept as cash “under the mattresses.” Judging from local cash-in-circulation figures,

this hypothesis was, however, only part of the explanation for some countries. Therefore, we hypothesized that withdrawn deposits and cash reserves in euro mainly served to replace lost or decreased income. The third hypothesis related to the possibility that the withdrawn amounts and euro cash reserves might have been reinvested in alternative assets or abroad.

Direct evidence from ad hoc questions of the 2009 fall wave of the OeNB Euro Survey broadly confirmed the second hypothesis, namely that people essentially used the money they withdrew to cover their current expenses (see chart 3). This result was particularly pronounced for Hungary, Bosnia and Herzegovina, Bulgaria, FYR Macedonia and Croatia. Only 20% to 30% of respondents reported to have redeposited the money (or parts thereof) with the banking system. Between 10% and 30% of respondents answered that they had retained the withdrawn money in cash. The share of respondents who reported to have reinvested the money alternatively or abroad was lowest; this share may – in the absence of quantitative information – be assumed to reflect the wealthier households covered by the survey.

To complement the picture, the role of remittances over the past year deserves a closer look. Results from the OeNB Euro Survey show that remittances are of some relevance for households, in particular in SEE countries. In the 2009 spring

Table 1

Financial Crisis and Dissemination of Savings Deposits

	Share of savers in % who withdrew money for fear of a bank collapse	Pre-crisis level: Share of respondents in % who hold savings deposits	2009 fall wave: Share of respondents in % who hold savings deposits
Czech Republic	13.6	35.7	32.2
Hungary	17.1	23.1	24.6
Poland	9.4	13.5	10.6
Bulgaria	10.7	22.9	16.4
Romania	16.9	16.5	13.5
Albania	16.1	23.4	15.5
Bosnia and Herzegovina	19.1	6.3	3.8
Croatia	5.6	27.0	20.1
FYR Macedonia	19.3	18.6	24.3
Serbia	33.8	10.9	10.1

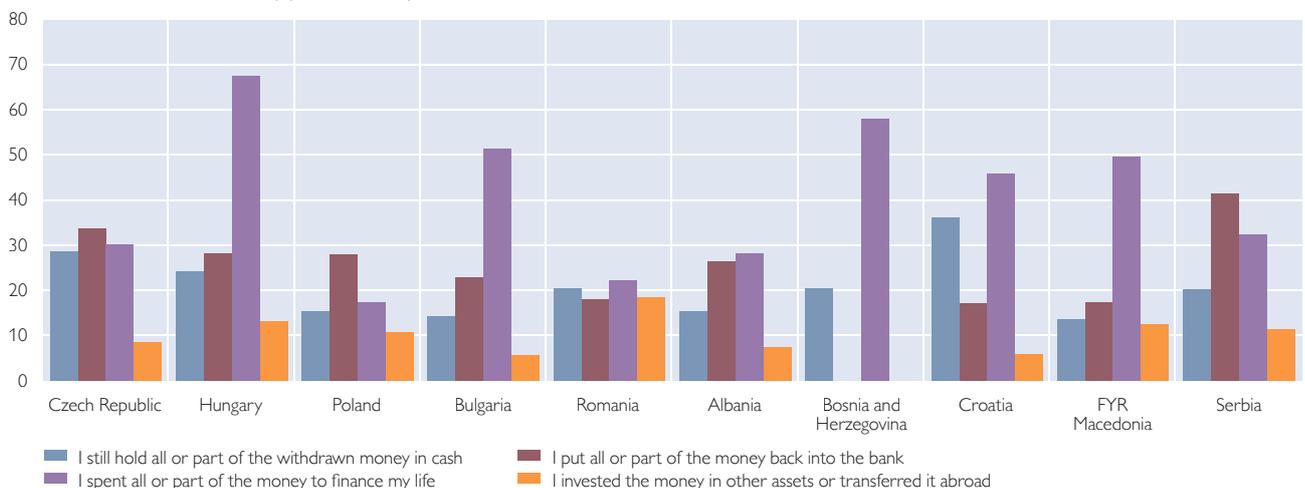
Source: OeNB Euro Survey.

Note: Entries for the pre-crisis level refer to the combined average of the responses received in the 2007 fall/2008 spring waves. The pre-crisis entry for Poland refers to the 2008 fall wave.

Chart 3

How Did You Use the Money You Have Withdrawn since September 2008?

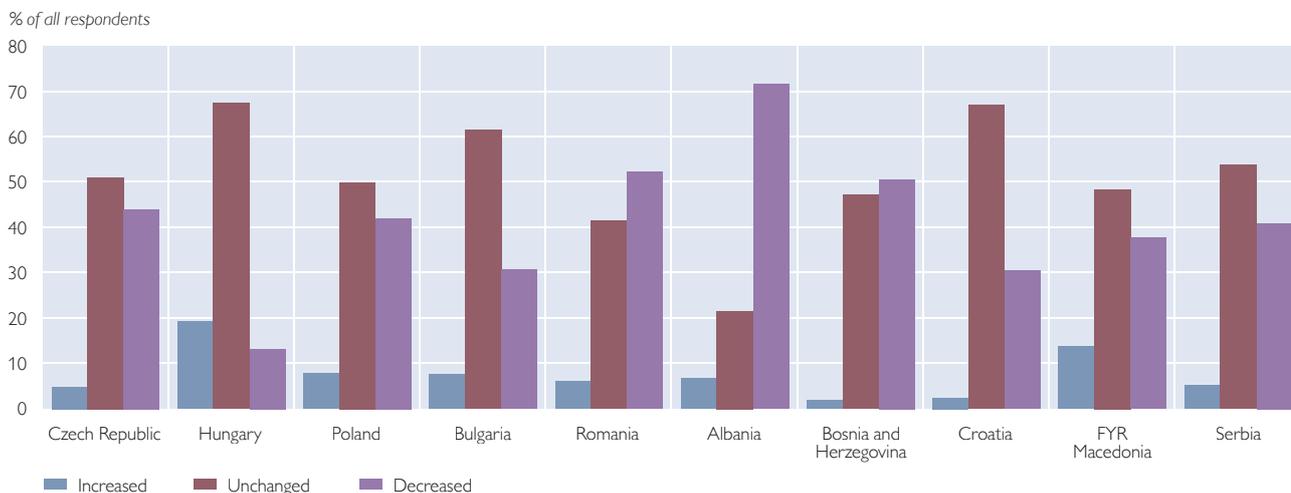
% of respondents who withdrew money (multiple answers)



Source: OeNB Euro Survey, 2009 fall wave.

Chart 4

Has the Amount of Remittances You Receive Changed during the Last 12 Months?



Source: OeNB Euro Survey 2009.

Note: Answers based on the question "If you frequently or infrequently receive money from abroad, has the amount you receive changed during the last 12 months?" The chart excludes the "Don't know" and "No answer" response categories.

and fall waves, an average of almost 25% of Albanian respondents and 15% of interviewees in FYR Macedonia reported frequent or infrequent receipts of cash from abroad. For Romania, Bosnia and Herzegovina, Croatia and Serbia this share is around 10%. During the fall wave 2009 of the OeNB Euro Survey, a comparatively large share of respondents answered that their remittances had decreased over the past 12 months (see Chart 4). This development was particularly pronounced in countries where remittances have a higher relevance for households (e.g. Albania, Romania, Bosnia and Herzegovina).

To sum up, aggregate statistics show that the growth of savings deposits slowed down considerably in many of the countries analyzed. The survey results reveal that this may be explained, at least partly, by households' dampened ability to save and by the need of many households to use the deposits they withdrew to finance their current expenses. This situation was accompanied by decreasing receipts of remittances in many of the countries surveyed.

4 Development of Household Loans

While there is ample evidence from monetary statistics on aggregate amounts of loans taken out by CESEE households, both in local and in foreign currency, such statistics do not quantify the number of borrowers. Since the 2008 spring wave, the OeNB Euro Survey has regularly included questions about outstanding loans. Chart 5 depicts the average dissemination of loans based on results from four survey waves and shows that this number ranged between 7% of respondents in Albania and 37% in Croatia. In general, households in EU member countries seem to be more frequently indebted than households in candidate and potential candidate countries, with Croatia being an exception in this context. Compared to pre-crisis levels (spring 2008) the dissemination of loans increased significantly in Bulgaria and FYR Macedonia, while a significant decrease can be observed for

Poland. For all other countries changes are insignificant (partly due to a low number of observations).⁶

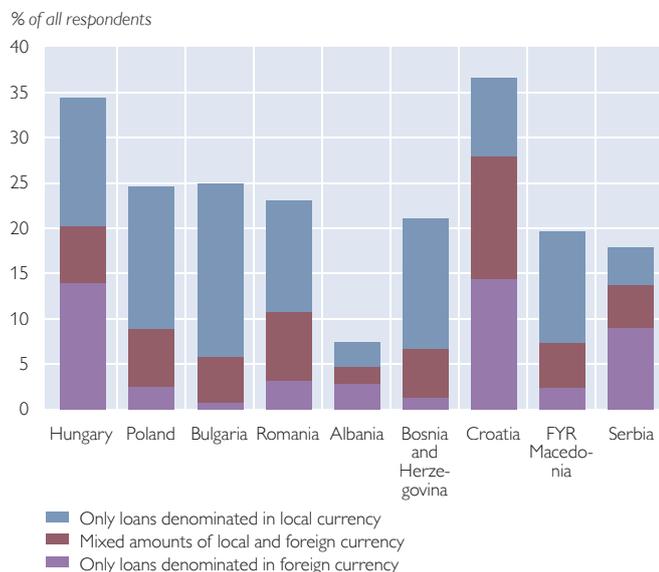
In addition, those respondents who had answered that they had a loan were asked whether this loan was denominated solely or partly in foreign currency. In this context it needs to be noted that foreign currency loans (FCLs) are denominated in euro in most CESEE countries, while in Hungary and Poland substantial shares of total FCLs are also denominated in Swiss francs. The picture obtained is rather diverse across countries, with traditionally very high shares of respondents reporting FCLs in Serbia and Croatia and substantial FCL shares also found for Hungary, Romania and Albania. As compared to pre-crisis levels, the share of respondents having FCLs increased significantly in five countries, namely Poland, Romania, Bosnia and Herzegovina, Croatia and Serbia.

Given the rather strong depreciation of local currencies for some countries, one may expect that conversions of FCLs into local currency loans might have occurred since the beginning of the crisis. Therefore, during the spring and fall waves 2009, respondents were asked whether they had converted all or part of their loans from a foreign currency to their local currency since October 2008. On average, 8% of Serbs, 9% of Macedonians, 17% of Albanians and 33% of Bosnians having a FCL reported to have converted this loan into their local currency. Note that the Polish zloty depreciated by about 24% between September 2008 and September 2009 against the euro, the Serbian dinar by 21%, the Romanian leu by 13% and the Albanian lek by 11%. Interestingly, the highest percentage share of loan conversions can be found for Bosnia and Herzegovina, which has a fixed peg vis-à-vis the euro under its currency board arrangement (CBA).

In order to better understand the possible future behavior of foreign currency borrowers, participants were also asked what they would do with their FCL supposing that the exchange rate were to stay at its current level. Chart 6 shows the average results obtained from the 2009 spring and fall survey waves. Interestingly, the share of respondents who consider converting their FCL into a local currency loan is substantial, amounting to 40% in Albania, and ranging between 20% and 28% of respondents in Romania, Croatia, FYR Macedonia and Serbia. In contrast, the share of respondents who are ready to convert their FCL is relatively

Chart 5

Dissemination of Loans and Foreign Currency Loans



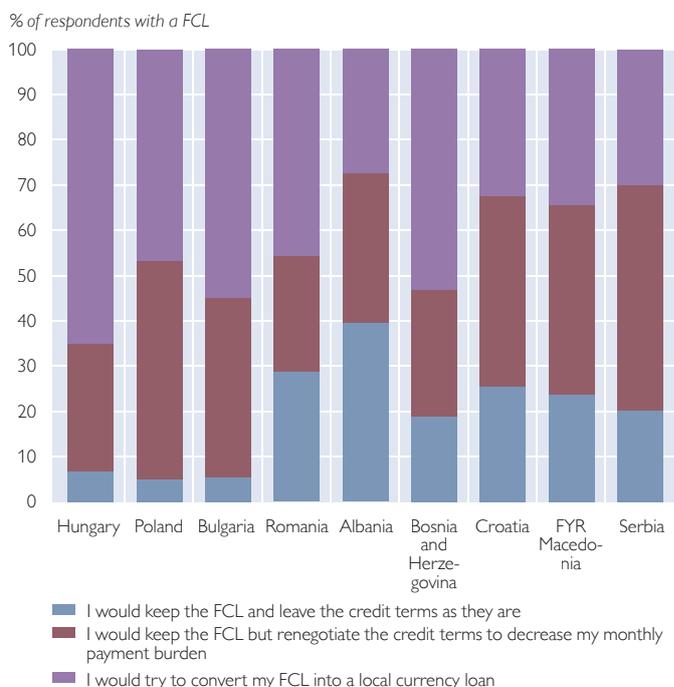
Source: OeNB Euro Survey.

Note: The percentages correspond to the combined average of the responses received in the 2008 and 2009 spring and fall waves of the OeNB Euro Survey. The chart excludes the "Don't know" and "No answer" response categories. The question was not posed in the Czech Republic.

⁶ Note that aggregate statistics on credit growth may show different patterns, as results from the OeNB Euro Survey refer to shares of respondents, whereas aggregate statistics refer to households' credit volumes.

Chart 6

Suppose the Exchange Rate Were to Stay at its Current Level - What Would You Do with Your Foreign Currency Loan?



Source: OeNB Euro Survey.

Note: The percentages correspond to the combined average of the responses received in the 2009 spring and fall waves of the OeNB Euro Survey. The question was not posed in Czech Republic.

low for the CBA countries Bulgaria and Bosnia and Herzegovina. Furthermore, in almost all countries a substantial share of households with a FCL reported that they were thinking about renegotiating their credit terms in order to decrease their monthly payment burden. As their regular income is denominated in local currency, respondents are finding it increasingly difficult to bear the cost of the foreign currency loan.

Since the spring wave 2008, participants have been asked whether they plan to take out a loan within the next year. In view of the adverse (income) effects of the recession being increasingly felt by households in the region, the share of respondents planning to take out a loan might be expected to have gone down. Indeed, we found significant decreases as compared to the pre-crisis situation (spring 2008) for the Czech Republic, Bulgaria, Romania, Albania and Serbia, while in the other countries the share of respondents with plans to take out a loan remained broadly unchanged.

Furthermore, the survey inquired about plans to take out a foreign currency loan. Results on this question provide a rather mixed picture (see chart 7). In some countries, the share of respondents planning to take out a FCL had gone down significantly by fall 2009 compared with 2008 spring wave results (i.e. pre-crisis levels). In particular, the survey revealed significant decreases for Hungary, Poland, Romania, and Croatia. In Bosnia and Herzegovina, the share of respondents planning to take out a FCL has decreased following a peak in spring 2009 but continues to be significantly higher than in spring 2008.

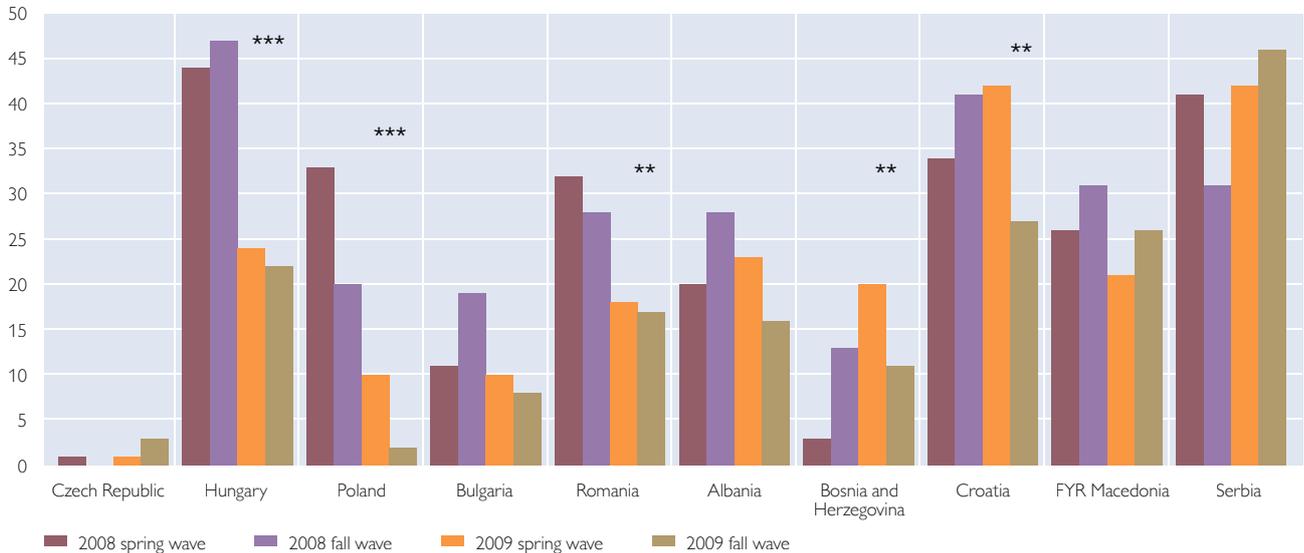
Although several of the countries surveyed have taken regulatory measures to discourage foreign currency lending in recent years, no clear-cut relationship can be identified between the effectiveness of measures taken and the development of existing or planned FCLs, as reported by survey respondents. This may be related to the fact that regulatory measures are typically targeted at commercial banks and their aggregate lending activities.⁷ However, the OeNB Euro Survey provides evidence on the number of individual borrowers rather than information about (aggregate) amounts of FCLs. Furthermore, it may be assumed that these measures

⁷ Measures taken so far largely differ across countries and typically include increased risk weights imposed on commercial banks, quantitative restrictions on total lending, but also administrative measures such as restrictions on payment-to-income ratios etc.

Chart 7

Do You Plan to Take Out a Foreign Currency Loan Within the Next Year?

% of respondents who plan to take out a loan



Source: OeNB Euro Survey.

Note: Percentages based on positive answers, excluding the "Don't know" and "No answer" response categories. Null hypothesis: The percentage share of spring 2008 equals the percentage share of fall 2009. ** indicates a statistically significant change at the 5% level, and *** at the 1% level, respectively.

were hardly perceived by the broad public. On the contrary, CESEE households may have been motivated by other factors, such as exchange rate developments or interest rate differentials as well as by general economic sentiment. As a case in point, Hungary, Poland, Romania and Croatia, which recently witnessed a decreasing willingness of households to borrow in foreign currency, have experienced a sizeable depreciation of their local currencies in the course of the crisis. The growing reluctance to take out a FCL in the future may indicate rising risk awareness and presumably a rising aversion to the associated exchange rate risk.

To sum up, results from the OeNB Euro Survey provide rather mixed evidence on the impact of the crisis on CESEE households' foreign currency borrowing behavior. Since the beginning of the crisis, the share of respondents who took out FCLs even increased in five countries and remained broadly unchanged in the other countries surveyed. At the same time, 2009 results reveal that sizeable shares of respondents have already converted their loans into local currency or consider doing so in the near future, and others consider renegotiating the terms in order to alleviate their monthly burden. As of fall 2009, results from four countries show that the share of respondents planning to take out a FCL went significantly down as compared to pre-crisis levels, possibly reflecting their growing awareness of exchange rate risks.

5 Overall Degree of Euroization Virtually Unchanged

Monetary statistics show that the currency composition of households' savings deposits has remained broadly unchanged compared with pre-crisis patterns, with the exception of FYR Macedonia and Croatia, where the share of foreign currency

deposits in total savings deposits has increased substantially since the start of the crisis.

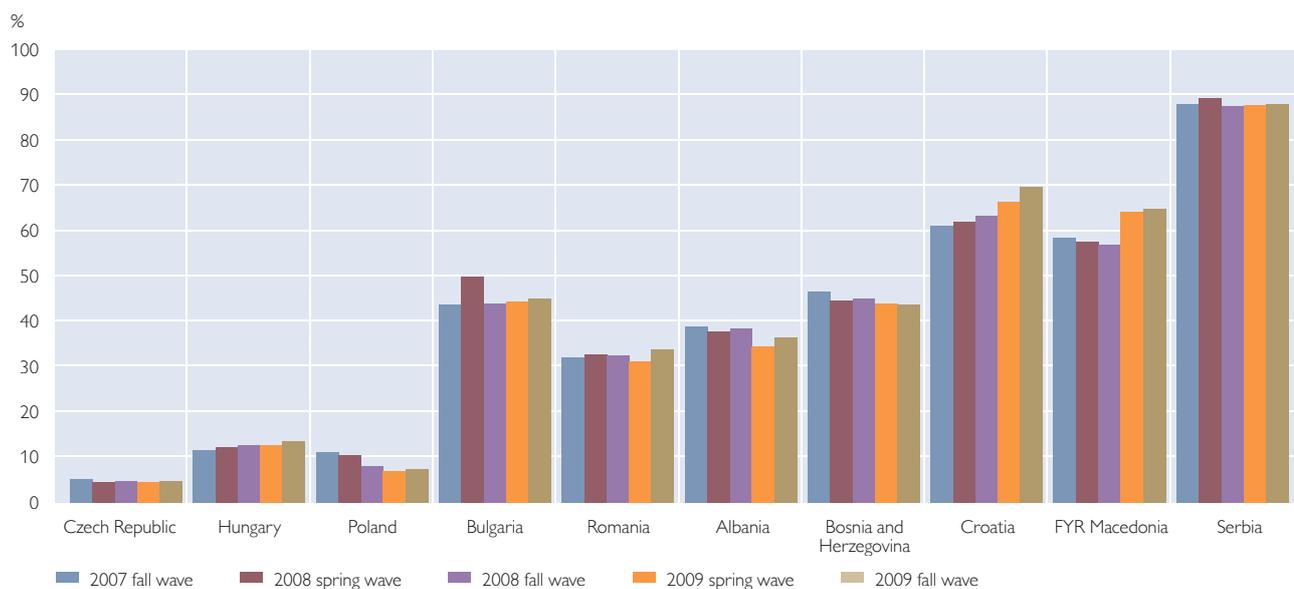
By contrast, the dissemination of euro cash holdings, which used to be a widespread phenomenon throughout the region, considerably went down in non-EU Member States. Survey evidence from the fall wave 2009 reveals that fewer people held euro cash and the amounts reported were lower than before the beginning of the crisis. Serbia and FYR Macedonia constitute an exception, as fewer respondents held cash, but they reported higher amounts on average. In our view, this development reflects the aforementioned (temporary) strong negative income effect rather than a permanent decrease in the extent of currency substitution. In the EU Member States covered by the survey, neither the dissemination of euro cash holdings nor the amounts per capita showed significant changes vis-à-vis pre-crisis levels.

The overall degree of euroization, i.e. euro cash and euro deposits over total cash in circulation plus total deposits, remained unchanged in eight of the ten countries analyzed (see chart 8). A substantial increase of overall euroization as compared to one year earlier, however, could be found for Croatia (by 6 percentage points) and FYR Macedonia (by 8 percentage points).

How will the situation evolve in the near future? Will the crisis introduce a stronger bias towards euro-denominated assets? An indicative answer can be derived from a direct survey question about whether the crisis has caused respondents to reassess the attractiveness of local currency deposits. As summarized in chart 9, the attractiveness of foreign currency-denominated assets increased in six of the ten countries surveyed – notably in those three countries which had the highest degree of euroization even before the economic and financial crisis

Chart 8

Euroization Index



Source: OeNB Euro Survey.

Note: Euroization index = (euro cash + euro deposits) / (total cash + total deposits).

Chart 9

Attractiveness of Deposits in Foreign Currency versus Deposits in Local Currency

Balance statistics (percentage share "more attractive" minus "less attractive")



Source: OeNB Euro Survey, 2009 spring and fall waves.

Note: Recoded answers based on the question "How has the global financial crisis changed your attitude towards the following types of savings...Have they become safer or less safe in terms of preserving the value of your savings?" Sample restricted to respondents holding deposits or transaction accounts.

(Croatia, FYR Macedonia and Serbia). In another two countries things have remained unchanged, and in a mere two countries foreign currency denominated assets have become less attractive.

On an individual level, answers to this question might reflect a surrogate of both current economic conditions as well as expectations about the future, in particular exchange rate expectations. A more thorough micro-econometric analysis confirms this contention (Stix, 2010): agents' assessment of the attractiveness of euro-denominated assets is significantly influenced by exchange rate expectations. However, we also find an indication of a habit persistence effect: the euro has become more attractive for those who held euro-denominated assets even during the crisis. One interpretation of this effect can be seen against the background of exchange rate depreciation during the crisis. Those who had euro assets were shielded against such depreciation, which reinforces the incentive to stick to euro assets in the future.

Looking ahead, it can be expected that households are likely to increasingly save in euro as compared to before the crisis, irrespective of higher interest rates offered for deposits in local currency.

6 Conclusions

After the arrival of the financial crisis in fall 2008, the real effects of the economic crisis reached CESEE households in the course of 2009. Evidence from the OeNB Euro Survey shows that households report to have been severely affected in their financial situation.

These real effects of the crisis, combined with currency depreciation in a number of countries and deteriorating trust in banks have implications for individuals' portfolio choices, in terms of their savings and their borrowing behavior.

Aggregate statistics show that the growth of savings deposits has slowed down considerably in many of the countries analyzed. The survey results reveal that this may be explained, at least partly, by households' dampened ability to save and by the need of many households to use the deposits they withdrew to finance their current expenses. On foreign currency loans, the survey results show that the general readiness to take out FCLs seems to have been largely unaffected by the crisis, with the share of respondents reporting a FCL having even increased in five countries as compared to pre-crisis levels. At the same time, a substantial share of indebted CESEE households had already reacted to the crisis by 2009, be it by converting their loans, be it by renegotiating credit terms.

On the asset side, the overall degree of euroization of households' financial assets has remained virtually unchanged throughout the crisis and can be expected to even increase further: euro deposits are perceived as increasingly attractive despite higher interest rates offered for deposits in local currency. On the liability side, the crisis may have raised households' perception of the exchange rate risk associated with foreign currency loans. As a consequence, the appetite for FCLs may be expected to keep declining in the years ahead, which would go hand in hand with recent efforts on the regulatory side.

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Highlights

SUERF Conference and Special East Jour Fixe Contagion and Spillovers – New Insights from the Crisis

Compiled by
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On February 12, 2010, the Oesterreichische Nationalbank hosted the SUERF Conference and Special OeNB East Jour Fixe on “Contagion and Spillovers – New Insights from the Crisis.” More than 100 participants took part in the event jointly organized by SUERF – The European Money and Finance Forum, the OeNB and the Austrian Society for Bank Research. The conference focused on three aspects of contagion and spillovers: real economy channels of crisis transmission, financial sector contagion and spillovers to emerging markets.

Following some introductory remarks by the President of SUERF, *Cathérine Lubochinsky*, Professor of Economics and Finance, University of Paris 2, OeNB Governor *Ewald Nowotny* emphasized in his introductory statement the importance of SUERF’s dedicated and systematic efforts of bringing together academics, practitioners from the financial industry and policy makers. He noted that the transmission of crises across borders has significant welfare and policy implications, which is why an understanding of the underlying mechanisms is vital. Governor Nowotny then sketched some striking features of the global crisis. He for instance referred to the fall of Lehman Brothers, which had set off an avalanche of worldwide deleveraging and had caused major disruptions in a financial system that had become more and more globalized in recent decades. With regard to Central, Eastern and Southeastern Europe (CESEE), Governor Nowotny mentioned the remarkable achievement that uncontrolled currency collapses had been avoided even though Ukraine had come close. Finally, he pointed to the forceful global policy response that had succeeded in preventing the crisis from escalating. In this respect, Governor Nowotny also underlined the important role of the Vienna Initiative.

The keynote session was chaired by *Philipp Hartmann*, Vice President of SUERF and Head of the Financial Research Division at the European Central Bank. The first keynote speech, “Contagion and Spillovers – Recent European Experience and the Way Forward,” was delivered by *Jürgen Kröger*, Director of the Economies of the Member States I Department, DG ECFIN, European Commission. Kröger started by highlighting vulnerabilities created by the divergent developments of real effective exchange rates within the euro area and the potential for spillovers due to increased trade and financial openness. He then presented the results of an empirical study, which show that the impact of external shocks differs considerably across euro area countries and the financial transmission channel dominates across all countries. Kröger concluded with three policy lessons: First, timely correction of imbalances and divergences within the euro area is important for the cohesion of the euro area in withstanding external (and internal) shocks. Second, financial innovation/integration is good for risk-sharing, but complex instruments pose problems for risk managers, investors and policy makers. And third, given increasingly complex financial linkages across Member States, there is an urgent need for coordination across the euro area in financial regulation and supervision.

Javier Santiso, Director and Chief Economist at the OECD Development Centre, talked about how politics and elections shape financial and capital market

sentiment. He pointed to the clear link between elections and instability in debt and currency markets. Focusing on a comparison of Latin America and OECD countries, Santiso emphasized that in Latin America there is still a lot of room for structural reforms. As a case in point, education spending per pupil is still five times lower in Latin America than in OECD countries. In a politically unstable environment, market participants, however, tend to question the sustainability of new reforms. This is mirrored in systematic downgrades of investment banks' recommendations prior to elections, which are then followed by revisions (upgrades) after a certain transitional phase. Since this "election effect" has become weaker over time, Santiso concluded that capital markets tend to perceive Latin America's democracies as more mature than before.

Session 1, chaired by *Ernest Gnan*, Secretary General of SUERF as well as Counsel to the Board and Head of the Economic Analysis Division of the OeNB, dealt with real economy channels of crisis transmission. *Filippo di Mauro*, Head of the External Developments Division, European Central Bank, presented a study on "The Real Impacts of the 2008-09 Financial Crisis: What We Knew and What We Have Learned about International Linkages." He mentioned that it is a long-standing stylized fact that the U.S. business cycle leads the world economy, with the lead vis-à-vis the euro area cycle equaling about five quarters. Furthermore, U.S. downturns are transmitted faster than recoveries. Trade empirically figures as the most important transmission mechanism. Di Mauro also showed that financial variables can serve as important predictors of the probability of recessions. He concluded that the most recent crisis has confirmed the established wisdom that trade – not least through third-country effects – is the most important cross-border business cycle and crisis transmission channel. Financial market channels may, however, magnify global interactions, particularly during turbulent periods.

Julia Wörz, economist at the OeNB's Foreign Research Division presented a paper on "The Impact of the Global Recession in Europe – The Role of International Trade." The sample covers 38 countries, including the EU Member States, advanced OECD members and a number of CESEE countries. The particularly strong response of trade to the recent recession is traceable to several reasons, including increased vertical specialization and global supply chains. The econometric findings show that a high degree of export orientation is not necessarily related to a stronger growth downturn, but only if the share of industry in GDP is large. Countries specializing in consumption goods exports suffered relatively less than those specialized in intermediate goods exports. Furthermore, export orientation toward the EU-27 on average cushioned the impact of the crisis in 2009. Wörz concluded with two policy issues: First, should the particularly pronounced decline in manufacturing and industry be taken as a sign for lasting structural change, implying that short-term interventions should not aim at preserving existing structures? Second, will trade be able to spur growth during the recovery? On the latter issue, she recalled that trade, being merely a facilitator of transactions, ultimately is only a mirror of demand; in other words, demand will lead trade, and not vice versa.

The presentation by *Simon Evenett*, Professor of International Trade and Economic Development, University St. Gallen, dealt with the issue "Has Stabilization Limited Protectionism? Evidence from the Global Trade Alert." Evenett identified four key developments in global protectionism during the recent economic crisis:

First, the currently observed intensification of protectionist measures is not confined to any specific regions. Second, a new mix of protectionism has arisen. Discriminatory bailouts and subsidies are the most widely used protectionist measures, followed by trade defense, tariffs, public procurement and migration-related measures. Third, the sectoral incidence of protectionism has not changed. Finally, protectionism is so far showing no signs of slowing down. Although the current wave of protectionism is much less severe than the one in the 1930s, Evenett warned against complacency – rising protectionism has to be taken seriously: Vigilance, close monitoring and peer pressure are needed. As many contemporary protectionist measures are not self-terminating, the G-20 should develop principles for an unwinding.

Session 2 was chaired by *Peter Mooslechner*, Director of the OeNB's Economic Analysis and Research Department, and dealt with aspects related to financial sector contagion. *Már Gudmundsson*, Governor of the Central Bank of Iceland, held a keynote speech on the lessons from the crisis on cross-border banking. By way of introduction, Gudmundsson pointed to the high growth of international bank claims prior to the financial crisis and argued that there was a link between claim growth and crises in general. Gudmundsson then elaborated on the process of global deleveraging following the collapse of Lehman Brothers and the case of the Icelandic banking sector. In October 2008, three Icelandic banks failed and were put into special resolution regimes after years of rapidly expanding their activities abroad (total assets equaled 11 times Iceland's GDP before the collapse). Gudmundsson linked these events, on the one hand, to Iceland's boom-bust cycle and problems in the macroeconomic management in small open and financially integrated economies and, on the other hand, to weaknesses in the European supervisory legislation. Despite a common legal and regulatory framework for banking and finance, the safety net remained largely national. He concluded that the global and European frameworks for the operation of cross-border banking are in need of reform.

Ove Sten Jensen, Head of the Government Debt Management Department, Danmarks Nationalbank, talked about the nature of the crisis, its impacts and consequences for financial markets from the perspective of a public debt manager. Jensen noted that the primary goal of a debt manager lies in covering the central government's financing needs at the lowest possible borrowing costs. In the aftermath of the crisis, debt managers had to assume an additional role: to support financial stability. When the turmoil started, swap spreads widened considerably and the refinancing cost of governments increased heterogeneously across countries. Jensen had observed a "flight to liquidity and quality" as evidenced by investors' soaring demand for German government bonds. The crisis also revealed a breakdown of stable correlations among bond markets. Finally, Jensen emphasized the high uncertainty – with a view to future borrowing conditions – as to when fiscal stimulus packages and extraordinary monetary policy measures will be unwound.

Session 3, chaired by *Peter Backé*, Deputy Head of the OeNB's Foreign Research Division and Head of the Central, Eastern and Southeastern European Analysis Unit, focused on the spillovers of the crisis to specific emerging market regions and on two country cases. *José María Serena*, economist at the Banco de España, and *Reiner Martin*, Head of Section at the ECB and currently at

the OeNB's Foreign Research Division, presented a paper on "The Impact of the Global Economic and Financial Crisis on the CESEE region and on Latin America." This comparative analysis examines the macrofinancial vulnerability profiles of these two emerging market regions at the onset of the recent financial crisis and relates them to the actual knock-on effects the crisis had on both regions. The two presenters highlighted that CESEE and Latin America differ in some important structural features, which are of relevance for the transmission of external shocks. Booming economic conditions in both regions before the global crisis were largely driven by capital inflows, but also supported by region-specific features (commodity prices in Latin America, EU accession in CESEE). Despite notable differences in pre-crisis macrofinancial vulnerabilities between the two regions, both were hit hard after the fall of Lehman Brothers. CESEE was, however, affected more strongly given the region's higher trade openness and more pronounced drop in capital inflows. A fully-fledged financial meltdown materialized neither in Latin America nor in CESEE, with integration into European banking networks proving to be an asset for CESEE during the crisis.

Lars Tranberg Rasmussen, senior analyst at Danske Bank, presented a paper on "The Contribution of a Poor Economic Policy Mix to Economic Vulnerability – the Case of Latvia." He argued that the poor policy mix during the boom years (procyclical fiscal policy, benign neglect of rapid credit expansion) contributed to economic and financial vulnerability and has dented the competitiveness of the Latvian economy. The current situation is seen as very challenging, and there is no quick fix. A change in the exchange rate regime would bring forward the negative balance sheet effects that Latvian households and firms will be facing anyway. Internal devaluation, i.e. a real depreciation through goods and factor downward price adjustments, will take several years and Latvia's prospects for euro adoption over the medium term are slim, given the large fiscal adjustment needs.

Finally, *Dimitry Sologoub*, Head of Research at Raiffeisen Bank Aval, spoke on "Ukraine: The Story of Boom and Bust." He stressed the procyclical policy stance during the boom years between 2001 and 2007 and the stalling of structural reforms during the last five years, which substantially added to the weaknesses and vulnerabilities of the Ukrainian economy (low productivity growth, lack of trade diversification, widening external imbalances, banking sector risks, fiscal vulnerabilities). Low steel prices, contagion in the banking sector and the lack of a coherent policy response contributed to the depth of the crisis. Looking forward, the recovery after the crisis will be gradual, with weak policies constituting a drag on future performance. The ensuing discussion touched on the role of commodity price developments in the boom years before the crisis, the issue of foreign currency loans as well as on the political and economic outlook for Ukraine and Latvia.

66th East Jour Fixe

Kazakhstan – From Star Performance to Crisis Management and Back Again?

Compiled by
Stephan Barisitz and
Mathias Lahnsteiner

On April 30, 2010, the Oesterreichische Nationalbank hosted the 66th East Jour Fixe (EJF) on “Kazakhstan – From Star Performance to Crisis Management and Back Again?”. The event focused on real economic and financial sector developments in Kazakhstan, examining in particular the country’s experiences during the recent crisis as well as current challenges and prospects.

Peter Mooslechner, Director of the OeNB’s Economic Analysis and Research Department made an introductory statement and chaired the keynote session. In his statement, Mooslechner presented some stylized facts about Kazakhstan and drew comparisons with other CESEE economies. Inter alia, he pointed out that Kazakhstan is a large and sprawling Eurasian country, whose area equals about two-thirds of the territory of today’s European Union, and whose population is almost twice as large as Austria’s. Moreover, Kazakhstan’s GDP per capita in PPP exceeded EUR 9,000 in 2009, which corresponds approximately to the level of Turkey’s, Bulgaria’s or Serbia’s GDP per capita. As regards the financial sector, Kazakhstan features a particularly dynamic banking sector, whose depth of intermediation (measured in terms of credit to the private sector in % of GDP) in 2007 had expanded to a level comparable with that of Hungary.

The keynote speech was delivered by *Ralph de Haas*, who is a Senior Economist in the Office of the Chief Economist of the European Bank for Reconstruction and Development (EBRD). His presentation consisted of two parts: 1) Kazakhstan and the crisis, and 2) beyond “oil and banks”: the need to diversify. In the first part, de Haas referred to the pre-crisis credit boom that was largely fueled by strong foreign capital inflows to the banking sector. Eventually Kazakhstan faced a sudden stop in foreign lending, when global liquidity conditions tightened as a result of the U.S. subprime crisis. The collapse of the oil price in the second half of 2008 intensified the crisis impact. As a consequence, GDP growth declined markedly before bouncing back in the final quarter of 2009. In the second part of his presentation, de Haas elaborated on the rationale for economic diversification of the Kazakh economy. In his view, the dominance of hydrocarbons increases macrovolatility, which discourages investments in physical and human capital. Moreover, Kazakhstan has to prepare for the post-peak oil production period. As one of the structural problems that make bottom-up diversification difficult, de Haas mentioned the lack of medium-sized companies. According to him, industrial policy should focus on improving educational standards and infrastructure as well as on reducing corruption, while the financial system would benefit from the development of a local deposit and currency market that would reduce the dependency on foreign funding.

The panel session, which was chaired by *Doris Ritzberger-Grünwald*, Head of the Foreign Research Division of the OeNB, provided more insights into specific features of the Kazakh economy. *Olga Pindyuk*, Research Associate and Country Specialist Kazakhstan, Vienna Institute for International Economic Studies (wiiw), spoke about the role of the oil sector. Once extraction from the giant Kashagan oil field in the Caspian Sea gathers momentum, Kazakhstan will become the 10th largest world producer of oil. Most of the produced oil is exported, and oil

and related products account for 65% of merchandise exports. Pindyuk then elaborated on the “resource curse” or “paradox of plenty.” Resource-rich countries often face difficulties in transforming oil wealth into physical and human capital and often display less economic growth and worse development outcomes over the long term. However, in the case of Kazakhstan, Pindyuk *inter alia* pointed to the relatively low poverty rate achieved. She also mentioned that money from the oil stabilization fund was used to finance the government’s anti-crisis package. Pindyuk concluded that Kazakhstan should continue pursuing the current fiscal and macroeconomic policies and that diversification of the economy should be encouraged. Improving the investment and business climate should also be on the agenda of policymakers.

Stephan Barisitz, Economist at the Foreign Research Division of the OeNB, gave an analytical overview of recent developments in Kazakhstan’s banking sector, based on a paper coauthored by *Mathias Lahnsteiner*, also OeNB. Whereas foreign strategic investors dominate the banking sectors of most CESEE countries, this is not so in Kazakhstan, where domestic capital holds sway. In comparison with peer countries, Kazakhstan featured a particularly dynamic credit boom and bust. As Barisitz pointed out, large losses stemming from real estate exposure (burst of the housing bubble), generous lending to dubious partners, and fraud, played a role in the skyrocketing of nonperforming loans and the decapitalization of the sector in 2009. Despite costly crisis-response measures, which included the nationalization of two leading banks, the latter two subsequently defaulted on their large foreign liabilities and initiated debt-restructuring negotiations, promising steep haircuts for creditors. In Barisitz’s view, continuing high credit and solvency risks and a weak institutional environment weigh on investor sentiment. But he also drew attention to shock-absorbing factors: the oil price-driven recovery of the real economy, improved liquidity, depositor confidence, record-level official foreign exchange reserves and the oil stabilization fund, and modest public debt.

Finally, *Hans Holzacker*, Chief Economist of ATF Bank (UniCredit Group), presented developments of the Kazakh banking sector from the perspective of a leading bank operating in that country. Holzacker drew attention to the decoupling of credit from deposits that Kazakhstan had experienced particularly in the years prior to the crisis. He also argued that at the current juncture there are already various factors in place that could lift lending activity: sufficient liquidity, a decrease of the loan-to-deposit ratio, the reduced foreign debt load of banks, declining indebtedness of households and the economic recovery. However, there are still several factors that prevent the actual acceleration of credit growth, including weak investment and credit demand. Economic growth has not yet improved the financial situation of sectors in which problem loans are concentrated (construction, trade, for small banks also consumer credit). Furthermore, Holzacker presented the regulatory measures that are currently considered by the Kazakh financial sector regulators. These measures focus on capital adequacy requirements, liquidity regulations and provisions. In addition, several measures are to be taken to reduce off balance sheet activities.

Olga Radzyner Award 2010 for Scientific Work on European Economic Integration

The Oesterreichische Nationalbank has established an award to commemorate Olga Radzyner, former Head of the Foreign Research Division, who died in a tragic accident in August 1999. The award is bestowed on young economists for excellent research focused on topics of European economic integration and is conferred annually. In 2010, four applicants are eligible to receive a single payment of EUR 3,000 each from an annual total of EUR 12,000.

The submitted work shall be in English or in German, should not exceed approximately 30 pages and shall preferably be in the form of a working paper or a scientific article. The topic of the submitted work should be on European economic integration issues. Authors shall submit the work before their 35th birthday and shall be citizens of any of the following countries: Albania, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, the Czech Republic, Estonia, FYR Macedonia, Hungary, Kosovo, Latvia, Lithuania, Moldova, Montenegro, Poland, Romania, Russia, Serbia, Slovakia, Slovenia and Ukraine. Previous winners of the Olga Radzyner Award, ESCB central bank employees as well as current and former OeNB staff are not eligible. In case of coauthored work, each of the coauthors has to fulfill all the criteria.

To identify their work as a submission, applicants shall mark the envelope with the reference “Olga Radzyner Award” and send it to the Oesterreichische Nationalbank, Foreign Research Division, Otto-Wagner-Platz 3, PO Box 61, 1011 Vienna, Austria. The Oesterreichische Nationalbank shall receive the work submitted for the award in 2010 by October 4, 2010, at the latest.

For more information, please see www.oenb.at or contact Eva Gehringer-Wasserbauer in the Foreign Research Division of the Oesterreichische Nationalbank either by e-mail (eva.gehringer-wasserbauer@oenb.at) or by phone (+43-1-40420-5205).

Selected Abstracts

The selected abstracts below alert readers to studies on CESEE topics in other OeNB publications. You may find the full-length contributions at www.oenb.at.

From Stormy Expansion to Riding Out the Storm: Banking Development in Kazakhstan

Pushed by expanding income (on the back of rising oil prices) and by rapid external debt accumulation, the Kazakh banking sector featured one of the most dynamic credit booms in Central, Eastern and Southeastern Europe (CESEE) until 2007. Following the U.S. subprime crisis, banks' access to external funding plummeted and credit expansion ground to zero. The Great Recession forced credit institutions to drive down their external indebtedness. Moreover, the collapse of the oil price in late 2008 and the devaluation of the tenge in February 2009 cut domestic demand, liquidity and solvency. The share of nonperforming loans skyrocketed from 7% at end-2008 to 38% a year later. Large losses stemming from real estate exposure (burst of the housing bubble), lending to dubious partners and fraud played a role. Loan loss provisions were sharply ramped up, profitability was all but wiped out in 2008 and hefty losses were incurred in 2009 (return on assets at end-2009: -24%). Sector capital even turned negative. The authorities' crisis-response measures inter alia provided for the recapitalization of four, including the nationalization of two, of the largest banks (which accounted for two-thirds of sector assets). The two nationalized banks then defaulted on their high foreign liabilities and initiated debt restructuring negotiations that are currently in the process of completion. They promised steep haircuts for creditors, which should reduce the sector's debt burden and positively impact its capital. Very high credit risk and a weak institutional environment weigh on investor sentiment. But there are also important shock-absorbing factors: the (oil price-driven) recovery of the real economy, depositor confidence, record-level official foreign currency reserves and the oil stabilization fund and modest public debt.

To be published in *Financial Stability Report 19*.

Stephan Barisitz,
Mathias Lahnsteiner

Statistical Annex

Statistical Annex

This section presents statistical information on selected economic indicators for CESEE countries not covered in the Recent Economic Developments section, namely Albania, Bosnia and Herzegovina, FYR Macedonia¹, Serbia, Montenegro and Ukraine.

Table 1

Gross Domestic Product

	2003	2004	2005	2006	2007	2008	2009
	Annual real change in %						
Albania	5.8	5.7	5.7	5.4	6.0	7.8	4.2
Bosnia and Herzegovina	3.8	6.3	3.9	6.9	6.0	5.4	-3.0
FYR Macedonia ¹	2.8	4.1	4.1	4.0	5.9	4.8	-2.0
Serbia	2.4	8.3	5.6	5.2	6.9	5.5	-2.9
Montenegro	2.5	4.4	4.2	8.6	10.7	6.9	-5.0
Ukraine	9.6	12.1	2.7	7.3	7.9	2.3	-15.1

Source: *wiiw*.

¹ Former Yugoslav Republic of Macedonia.

Table 2

Industrial Production

	2003	2004	2005	2006	2007	2008	2009
	Annual real change in %						
Albania	29.0	14.1	11.7	12.1	-10.3	9.4	4.3
Bosnia and Herzegovina	5.1	12.1	10.8	11.5	6.4	11.0	-3.3
FYR Macedonia	4.1	-2.2	7.1	3.6	3.7	5.5	-7.7
Serbia	-3.0	7.1	0.8	4.7	3.7	1.1	-12.1
Montenegro	2.4	13.8	-1.9	1.0	0.1	-2.0	-32.2
Ukraine	15.8	12.5	3.1	6.2	10.2	-3.1	-21.9

Source: *wiiw*.

Table 3

Average Gross Wages – Total Economy

	2003	2004	2005	2006	2007	2008	2009
	Annual change in %						
Albania	12.0	2.8	5.0	9.2	25.2	6.0	10.0
Bosnia and Herzegovina ¹	5.1	12.1	10.8	11.5	6.4	11.0	-3.3
FYR Macedonia	4.9	4.1	2.7	8.0	4.8	8.7	14.1
Serbia	25.3	23.7	24.1	24.4	22.0	17.9	-3.3
Montenegro	7.8	11.7	7.8	15.6	31.7	22.5	5.6
Ukraine	22.8	27.6	36.7	29.2	29.7	33.7	5.5

Source: *wiiw*.

¹ Net wages.

¹ Former Yugoslav Republic of Macedonia.

Table 4

Unemployment Rate

	2003	2004	2005	2006	2007	2008	2009
	%						
Albania ¹	15.0	14.4	14.1	13.8	13.2	12.7	12.8
Bosnia and Herzegovina ¹	41.9	43.2	44.1	44.1	42.5	40.6	42.4
FYR Macedonia ²	36.7	37.2	37.3	36.0	34.9	33.8	32.2
Serbia ²	14.6	18.5	20.8	20.9	18.1	13.6	16.1
Montenegro ²	22.7	27.7	30.3	29.6	19.3	17.2	19.0
Ukraine ²	9.1	8.6	7.2	6.8	6.4	6.4	8.8

Source: wiiw.

¹ Registered unemployment, end of period.

² Labor Force Survey, period average.

Table 5

Industrial Producer Price Index

	2003	2004	2005	2006	2007	2008	2009
	Period average, annual change in %						
Albania ¹	8.7	12.2	4.9	0.8	3.5	6.5	-1.6
Bosnia and Herzegovina ²	-0.1	2.3	-0.6	3.4	4.6	6.9	-3.1
FYR Macedonia	-0.3	0.9	3.2	7.3	2.5	10.3	-6.5
Serbia	4.6	9.1	14.2	13.3	5.9	12.4	5.6
Montenegro	4.5	5.8	2.1	3.6	8.5	14.0	-3.9
Ukraine	7.6	20.5	16.7	9.6	19.5	35.5	6.5

Source: wiiw, national sources.

¹ Manufacturing industry.

² Federation of Bosnia and Herzegovina.

Table 6

Consumer Price Index

	2003	2004	2005	2006	2007	2008	2009
	Period average, annual change in %						
Albania	2.4	2.9	2.4	2.4	2.9	3.4	2.2
Bosnia and Herzegovina	1.1	0.8	3.0	6.2	1.5	7.5	-0.4
FYR Macedonia	1.2	-0.4	0.5	3.2	2.3	8.3	-0.8
Serbia	9.9	11.4	16.2	11.7	7.0	11.7	8.4
Montenegro	6.7	2.4	2.3	3.0	4.2	7.4	3.4
Ukraine	5.2	9.0	13.5	9.1	12.8	25.2	15.9

Source: wiiw.

Table 7

Trade Balance

	2003	2004	2005	2006	2007	2008	2009
	<i>% of annual GDP</i>						
Albania	-23.3	-21.7	-22.5	-23.1	-26.9	-27.4	..
Bosnia and Herzegovina	-49.5	-45.6	-45.8	-34.8	-37.2	-38.1	..
FYR Macedonia	-18.3	-21.1	-18.4	-19.7	-20.4	-26.9	..
Serbia	-20.3	-27.3	-21.0	-21.2	-22.5	-22.0	-15.5
Montenegro	-23.8	-24.9	-28.3	-39.5	-43.3	-48.3	..
Ukraine	-8.6	5.8	-1.3	-4.8	-7.4	-8.9	-4.5

Source: wiiw.

Table 8

Current Account Balance

	2003	2004	2005	2006	2007	2008	2009
	<i>% of annual GDP</i>						
Albania	-6.9	-5.8	-9.0	-6.6	-10.6	-14.9	-18.6
Bosnia and Herzegovina	-19.4	-16.3	-17.3	-7.9	-10.4	-14.9	-7.8
FYR Macedonia	-4.1	-8.4	-2.6	-0.5	-7.3	-13.1	-7.7
Serbia	-7.7	-13.7	-8.7	-10.0	-15.6	-17.8	-5.7
Montenegro	-6.8	-7.2	-8.5	-24.7	-24.0	-32.6	-15.0
Ukraine	5.8	10.6	2.9	-1.5	-3.7	-7.1	-1.5

Source: wiiw.

Table 9

Net FDI Inflows

	2003	2004	2005	2006	2007	2008	2009
	<i>% of annual GDP</i>						
Albania	3.1	4.5	3.2	3.5	6.0	6.7	..
Bosnia and Herzegovina	4.6	7.0	5.7	5.8	13.7	5.7	..
FYR Macedonia	2.4	6.0	1.6	6.8	8.8	6.3	2.7
Serbia	6.9	4.1	6.1	14.1	6.2	5.3	4.5
Montenegro	2.6	3.0	21.0	21.7	19.6	18.4	..
Ukraine	2.8	2.6	8.7	5.3	6.5	5.5	4.0

Source: wiiw.

Table 10

Reserve Assets Excluding Gold

	2003	2004	2005	2006	2007	2008	2009
	<i>End of period, % of annual GDP</i>						
Albania	15.6	16.7	17.9	18.5	18.1	18.4	16.8
Bosnia and Herzegovina	19.3	22.0	25.0	28.5	30.8	25.5	25.7
FYR Macedonia	16.7	15.1	22.0	25.8	24.2	20.9	19.0
Serbia	15.8	15.8	23.4	37.7	32.0	23.2	33.4
Montenegro	1.8	2.0	3.4	8.0	9.7	7.0	5.8
Ukraine	12.1	13.4	23.2	19.3	20.8	17.8	21.2

Source: wiiw.

Table 11

Gross External Debt

	2003	2004	2005	2006	2007	2008	2009
	<i>End of period, % of annual GDP</i>						
Albania	22.0	20.8	20.9	20.2	18.5	29.6	33.6
Bosnia and Herzegovina ¹	27.7	25.5	25.6	21.3	18.2	17.2	20.5
FYR Macedonia	35.9	48.1	54.1	46.9	49.1	50.8	55.5
Serbia	62.3	54.3	64.2	63.3	60.2	63.6	74.0
Montenegro	30.6	29.3	28.3	23.5	17.2	15.6	18.0
Ukraine	42.9	43.1	48.5	48.2	52.2	58.6	86.2

Source: *wiiw*.¹ Gross external public debt.

Table 12

General Government Balance

	2003	2004	2005	2006	2007	2008	2009
	<i>% of GDP</i>						
Albania	-4.9	-5.1	-3.5	-3.3	-3.5	-5.5	-7.0
Bosnia and Herzegovina	0.7	1.6	2.4	2.9	1.3	-2.0	-3.0
FYR Macedonia	-1.1	0.0	0.3	-0.5	0.6	-1.0	-2.8
Serbia	-1.1	0.9	0.9	-1.7	-1.9	-2.5	-4.2
Montenegro	-3.1	-2.0	-1.7	1.6	8.1	1.3	..
Ukraine	-0.2	-3.2	-1.8	-0.7	-1.1	-1.5	-2.4

Source: *wiiw*.

Table 13

Gross General Government Debt

	2003	2004	2005	2006	2007	2008	2009
	<i>% of annual GDP</i>						
Albania	60.7	57.7	58.1	56.0	52.8	52.6	55
Bosnia and Herzegovina	30.2	25.5	25.6	22.0	29.6	27.6	30.0
FYR Macedonia	45.0	42.6	46.9	39.9	33.3	28.7	30.0
Serbia	64.3	50.7	50.5	39.8	30.0	25.8	31.5
Montenegro	47.1	44.5	38.6	32.6	26.3	26.8	37.0
Ukraine	29.3	24.7	17.7	14.8	12.3	19.9	31.7

Source: *European Commission, wiiw*.

Table 14

Broad Money

	2003	2004	2005	2006	2007	2008	2009
	<i>End of period, annual nominal change in %</i>						
Albania (M2)	7.6	8.2	11.7	7.6	9.8	7.4	8.7
Bosnia and Herzegovina (M2)	4.8	21.0	17.6	21.1	25.1	13.6	-1.2
FYR Macedonia	15.7	17.0	15.0	25.0	29.3	11.2	6.0
Serbia (M3)	29.1	31.2	39.1	37.4	41.1	29.6	11.5
Montenegro (M21)	-0.3	10.6	58.7	82.9	71.9	-14.3	..
Ukraine	46.5	32.4	54.3	34.5	51.7	30.2	-5.5

Source: European Commission, wiiw.

Table 15

Official Key Interest Rate

	2003	2004	2005	2006	2007	2008	2009
	<i>End of period, %</i>						
Albania (refinancing base rate)	6.5	5.3	5.0	5.5	6.3	6.3	5.3
Bosnia and Herzegovina ¹	x	x	x	x	x	x	x
FYR Macedonia ²	6.2	10.0	8.5	5.7	4.8	7.0	8.5
Serbia (two-week repo rate) ³	10.6	16.4	19.2	14.0	10.0	17.8	9.5
Montenegro ⁴	x	x	x	x	x	x	x
Ukraine (refinancing rate) ⁵	7.0	9.0	9.5	8.5	8.0	12.0	10.3

Source: Eurostat, Bloomberg, wiiw, IMF.

¹ Currency board.² Monthly weighted average interest rate on Central Bank Bills auctions (28 days).³ 2002–2005: Weighted average interest rates on securities used in open market operations by Narodna banka Srbije.⁴ Unilateral euroization.⁵ Average.

Table 16

Exchange Rate

	2003	2004	2005	2006	2007	2008	2009
	<i>Period average, national currency per EUR</i>						
Albania	137.51	127.67	124.19	123.08	123.63	122.80	132.06
Bosnia and Herzegovina	1.96	1.96	1.96	1.96	1.96	1.96	1.96
FYR Macedonia	61.26	61.34	61.30	61.19	61.18	61.27	61.32
Serbia	65.05	72.57	82.91	84.19	79.98	81.47	94.12
Montenegro	x	x	x	x	x	x	x
Ukraine	6.02	6.61	6.39	6.34	6.92	7.71	10.87

Source: wiiw, national sources, Thomson Reuters.

Notes

Legend, Abbreviations and Definitions

Legend

x = No data can be indicated for technical reasons

.. = Data not available at the reporting date

Discrepancies may arise from rounding.

Abbreviations

BIS	Bank for International Settlements
BOFIT	Bank of Finland Institute for Economies in Transition
CEE	Central and Eastern Europe(an)
CEEI	Conference on European Economic Integration (OeNB)
CESEE	Central, Eastern and Southeastern Europe(an)
CDS	credit default swap
CIS	Commonwealth of Independent States
CPI	consumer price index
EA	euro area
EJF	East Jour Fixe (OeNB)
EBRD	European Bank for Reconstruction and Development
ECB	European Central Bank
Ecofin	Council of Economic and Finance Ministers (EU)
EDP	excessive deficit procedure
EMU	Economic and Monetary Union
ERM (II)	exchange rate mechanism (II)
ESA 95	European System of Accounts 1995
ESCB	European System of Central Banks
EU	European Union
FCL	foreign currency loan
FDI	foreign direct investment
FEEI	Focus on European Economic Integration (OeNB)
FYR Macedonia	former Yugoslav Republic of Macedonia
GDP	gross domestic product
HICP	Harmonised Index of Consumer Prices
ILO	International Labour Organization
IMF	International Monetary Fund
IP	industrial production
LC	local currency
LR	lending rate
MFI	monetary financial institution
MS-ECM	Markov-switching error correction model
NCB	national central bank
NPL	nonperforming loan
OECD	Organisation for Economic Co-operation and Development
OLS	ordinary least squares
PPI	producer price index
PPP	purchasing power parity
SD	standard deviation

SEE	Southeastern Europe(an)
SME	small and medium-sized enterprise
SUERF	Société Universitaire Européenne de Recherches Financières (SUERF – The European Money and Finance Forum)
SVAR	structural vector autoregressive
ULCs	unit labor costs
VAR	vector autoregressive
VAT	value-added tax
wiiw	Wiener Institut für internationale Wirtschaftsvergleiche (The Vienna Institute for International Economic Studies)

National Central Banks

BNB	Bulgarian National Bank
BoA	Banka e Shqipërisë (Bank of Albania)
BOF	Suomen Pankki – Finlands Bank (Bank of Finland)
BNR	Banca Națională a României (National Bank of Romania)
BS	Banka Slovenije (Bank of Slovenia)
CBBH	Centralna banka Bosne i Hercegovine (Central Bank of Bosnia and Herzegovina)
CBCG	Centralna banka Crne Gore (Central Bank of Montenegro)
CBR	Central Bank of the Russian Federation (Bank of Russia)
CNB	Česká národní banka (Czech National Bank)
CNB	Hrvatska narodna banka (Croatian National Bank)
MNB	Magyar Nemzeti Bank (Hungary's central bank)
NBP	Narodowy Bank Polski (National Bank of Poland)
NBS	Národná banka Slovenska (Slovakia's central bank)
NBS	Narodna banka Srbije (National Bank of Serbia)
NBU	National Bank of Ukraine
OeNB	Oesterreichische Nationalbank (Austria's central bank)
TCMB	Türkiye Cumhuriyet Merkez Bankası (Central Bank of the Republic of Turkey)

ISO Currency Codes

ALL	Albanian lek
BGN	Bulgarian lev
CZK	Czech koruna
EUR	euro
HRK	Croatian kuna
HUF	Hungarian forint
PLN	Polish złoty
RON	Romanian leu
RSD	Serbian dinar
RUB	Russian ruble
SFR	Swiss franc
SIT	Slovenian tolar
SKK	Slovak koruna
TRY	Turkish lira
USD	U.S. dollar

ISO Country Codes

AL	Albania
BA	Bosnia and Herzegovina
BG	Bulgaria
CZ	Czech Republic
EE	Estonia
HR	Croatia
HU	Hungary
LT	Lithuania
LV	Latvia
ME	Montenegro
MK	FYR Macedonia
PL	Poland
RO	Romania
RS	Serbia
RU	Russia
SI	Slovenia
SK	Slovakia
TR	Turkey
UA	Ukraine

Definitions

Croatia, FYR Macedonia and Turkey are candidate countries within the EU enlargement process. Candidate countries are countries which have formally applied to the European Union for membership and have been officially recognized by the European Council as a candidate for membership. Accession negotiations with Croatia and Turkey were opened in October 2005. No date has been set yet for the opening of accession negotiations with FYR Macedonia.

Albania, Bosnia and Herzegovina, Montenegro, Serbia and Kosovo under UNSC Resolution 1244/99 are potential EU candidate countries, i.e. countries that may become officially recognized candidates for membership. Western Balkan countries involved in the Stabilisation and Association process are recognized as potential candidate countries.

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For further details on the periodical publications of the OeNB see www.oenb.at

Monetary Policy & the Economy quarterly

This quarterly publication, issued both in German and English, offers analyses of current cyclical developments, medium-term macroeconomic forecasts and studies on central banking and economic policy topics. It also summarizes the findings of macroeconomic workshops and conferences organized by the OeNB.

Focus on European Economic Integration quarterly

The Focus on European Economic Integration (FEEI) is a channel for communicating the OeNB's ongoing research on Central, Eastern and Southeastern European (CESEE) countries, thus reflecting a strategic regional research priority of the OeNB. Contributions to the quarterly FEEI include peer reviewed studies dealing primarily with macrofinancial and monetary integration as well as economic country analyses and cross-regional comparisons.

Statistiken – Daten & Analysen quarterly

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three to four issues a year

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about ten papers a year

The OeNB's Working Paper series is designed to disseminate, and provide a platform for discussing, findings of OeNB economists or outside contributors on topics which are of special interest to the OeNB. To ensure the high quality of their content, the contributions are subjected to an international refereeing process.

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Conference Proceedings of the Conference on European Economic Integration annual

The OeNB's Conference on European Economic Integration (CEEI) focuses on Central, Eastern and Southeastern European issues and the ongoing EU enlargement process. The Conference Proceedings comprise contributions to the CEEI and are published in English by a renowned international publishing house. For further details see <http://ceec.oenb.at>

Annual Report (Sustainability Report) annual

The Annual Report of the OeNB provides a broad review of Austrian monetary policy, economic conditions, new developments in the financial markets in general and in financial market supervision in particular as well as of the OeNB's changing responsibilities and its role as an international partner in cooperation and dialogue. It also contains the OeNB's financial statements, its Intellectual Capital Report and its Environmental Statement.

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