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Editorial

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On March 23, 2009 the Oesterreichische Nationalbank organized the workshop *Recent Developments in the Baltic Countries – What Are the Lessons for Southeastern Europe*. The main purpose of the workshop was to review recent economic developments in the Baltic countries and to investigate to what extent the four Southeastern European (SEE-4) countries with comparable monetary policy frameworks, i.e. limited or zero nominal exchange rate flexibility, can draw lessons from the recent boom and bust cycle in the Baltics.[1] The contributions to the workshop thus focused on presenting and discussing country-specific experiences and – notwithstanding the considerable differences between the individual countries – identifying economic policy lessons that can be useful for other countries facing comparable economic challenges.

One or two years ago economic developments in these countries were characterized by different degrees of overheating with financial deepening, increases in real estate prices, EU funding, remittances and expansive fiscal policies being the main drivers of the growth and convergence process. More recently, however, since the 4th quarter of 2008, the situation has changed dramatically and we see now significant recessions or at least severe economic downturns. The countries experience a very strong reduction of capital inflows or in some cases even a reversal of net financial flows. There is a sharp decline of credit growth rates, a sharp decline of wages and an increase in unemployment. Exports are also declining as a result of shrinking external demand. The signs of the previous overheated catching-up processes like double-digit inflation rates and

[1] The four SEE countries with a comparable monetary policy framework are Bosnia and Herzegovina (BH), Bulgaria, Croatia and the Former Yugoslav Republic (FYR) of Macedonia. The euroized economies of Kosovo and Montenegro can also be subsumed under this category but these two countries were not discussed during the workshop.

current account deficits are rapidly vanishing.[2] Instead in particular the Baltic countries are now facing painful adjustment processes with fiscal 'austerity packages' including sizeable reductions in public sector wages and pensions. In the case of Latvia an IMF-EU led financial assistance package became necessary already at the end of 2008 in order to stabilize the Latvian economy. Moreover, there are at times public debates about whether the fixed or tightly managed exchange rate regimes in the Baltics or the SEE-4 countries will survive the current economic and financial crisis.

The presentations and discussions at the workshop showed that a number of macro- and microeconomic lessons can be drawn from the Baltic experience and that these lessons are also relevant for other emerging European countries including the SEE countries. At the same time, however, there are obvious caveats regarding the transferability of such lessons! First and foremost it should be kept in mind that the Baltic countries and – even more so – the SEE-4 countries are a rather heterogeneous group of countries. Country-specific determinants are therefore often of key importance for economic developments. By and large, however, it is fair to say that the Baltics are already further down the *Convergence Road* than most SEE-4 countries in terms of economic developments and institutional integration in the EU. Second, many of the lessons to be drawn from the boom and bust experience of the Baltic countries relate to a world where external capital was readily available and relatively cheap. In the context of the international financial crisis this has changed considerably.

Turning first to fiscal policy, the experience of the Baltic countries shows that fiscal policy should be countercyclical during boom periods and create room for macroeconomic manoeuvre in times of need. The most positive example in this regard is Estonia.[3] Although there was still some pro-cyclicality in fiscal policy in some years, the Estonian government had growing budget surpluses since 2001. The fiscal surplus reached approximately 3% of GDP in 2006 and 2007 and the government sector piled up more than 10% of reserves at the end of 2007 with almost no debt at the central government level. Fiscal policy was considerably less prudent in Latvia and Lithuania as well as – with the exception of Bulgaria – in the SEE-4 countries. As a result, public finances in particular in Latvia and Lithuania are now facing huge adjustment needs resulting in painful and politically difficult austerity packages that aggravate the serious economic downturn in these countries.

[2] For a discussion on the role of the Balassa-Samuelson effect in recent inflation developments see the contribution by Dubravko Mihaljek and Marc Klau, Catching-up and Inflation in the Baltics and Southeastern Europe: The Role of the Balassa-Samuelson Effect, pp. 59–81.

[3] See the contribution by Ülo Kaasik, Reserves Can Help – the Case of Estonia, pp. 82–91.

The workshop illustrated also that the selection of the appropriate exchange rate regime in small open catching-up economies remains a difficult issue. All countries represented at the workshop adopted at an early point of their transition process to monetary policy frameworks which are based on limited or zero nominal exchange rate flexibility and four of the seven countries operate currency boards vis-à-vis the euro. Such fixed ER anchors have obvious advantages and, as emphasized by all country representatives, can be of great help to ensure macroeconomic stability including low inflation. At the same time the Baltic experience shows that fixed exchange rate regimes can lead to very low or negative real interest rates which in turn can accelerate the financial deepening process and GDP growth beyond sustainable levels. In addition, they are likely to increase the share of foreign-currency denominated credits, which increases the foreign-currency risks that individuals and – collectively – the countries are facing.[4] Can exchange-rate regime shifts be a viable policy option? There was consensus among the participants that such a shift would be very difficult and – depending on the country-specific situation – may well be prohibitively expensive. At the same time, however, recent developments in Latvia show that it can also be very difficult and expensive to defend an existing exchange rate regime if the accumulated economic imbalances become excessively large. Looking more systematically at the trade-offs between defending and abandoning existing exchange-rate regimes the flexibility of markets and the extent to which there are unhedged foreign exchange exposures are key variables to assess. [5] This implies a number of concrete lessons. First, once a country decides to adopt a fixed exchange-rate regime it needs to ensure that it's markets are sufficiently flexible to allow an 'internal' adjustment process if needed, i.e. an adjustment process that does not include a change in the nominal exchange rate vis-à-vis the anchor currency. Second, countries with a fixed exchange-rate regime are well advised to try to keep their unhedged foreign exchange exposure limited in order to limit the costs of a change in the exchange-rate regime – should such a change become unavoidable. In this context the experience of Croatia is very interesting. The Hrvatska Narodna Banka used a broad range of measures to slow down the build-up of external vulnerabilities which appears to have had a positive impact on the structure of debt capital inflows as well as the soundness of domestic banks.

The third macroeconomic issue that emerged from the contributions to and discussions at the workshop is the need for a more balanced growth pattern, based on both domestic growth as well as a positive contribution from net exports. Such a *two-pillar* approach to growth can reduce the risk of boom-bust cycles as

[4] See the contribution by Reiner Martin and Claudia Zauchinger, Recent Developments in the Baltics and Southeastern European Countries with Low Nominal Exchange Rate Flexibility, pp. 10–47.

[5] See the contribution by Max Watson, Financial Stability in a Brave New World: The Challenges for Southeastern Europe, pp. 48–58.

experienced by the Baltic countries. In this context it is important to keep in mind that the Baltic countries initially entered the *bust* period as a result of excessive domestic economic imbalances. This took place already before the effects of the international financial crisis reached emerging European economies, although the latter in turn obviously worsened the situation in the Baltics considerably. The aim to have a more balanced growth strategy in turn raises two questions. First, how can domestic *bubbles* be avoided? Second, how can external competitiveness be maintained respectively increased?

It is obviously a very difficult task to avoid domestic *bubbles* in countries that are experiencing rapid financial deepening driven by readily available foreign capital. Nevertheless, a number of lessons can be drawn from the experience of the Baltic countries. First, governments should prevent over-optimistic expectations regarding future incomes and asset / real estate prices taking hold.[6] This can be done e.g. by appropriate public wage setting, prudent fiscal policy or simply appropriate communication with the general public. Second, governments including the monetary authorities should try to avoid 'excessive' growth rates of credit – both by banks and non-banks. Clearly this is a very difficult task requiring not only to determine whether credit growth is excessive[7] but also – if there is sufficient evidence that this is the case – to implement suitable measures to curb credit growth. Some measures that would appear to be suitable in this case are the establishment of a central credit registry and the abolition of policy measures that fuel real estate – and thus mortgage credit booms. The tax deductibility of interest paid on mortgages which still exists in some countries can for example be abolished and property taxes can be increased respectively introduced.[8]

The second precondition for a balanced growth strategy, the need to maintain or ideally increase external competitiveness, is not any easier to achieve. The recommendations emerging from the contributions to and discussions at the workshop are rather traditional insofar as they were part of most international policy advice given to emerging European economies over the past years. First, the need to maintain respectively promote labor market flexibility and to avoid labor market bottlenecks during periods of rapid growth, e.g. by means of suitable education and training measures, a well-designed migration policy etc. Second, the need to maintain respectively promote product market flexibility and to maintain respectively enhance the attractiveness for inward FDI. Suitable labor and product market measures can also help exporting companies to climb the *quality ladder*,

[6] The contribution by Raimondas Kuodis and Tomas Ramanauskas, From Boom to Bust: Lessons from Lithuania (pp. 102–115), looks at the reasons why the irrational exuberance associated with the large-scale 'import' of foreign capital was often incorrectly assessed.

[7] See the contribution by Ljubinko Jankov, Spillovers of the Crisis: How Different Is Croatia?, pp. 126–134.

[8] Regarding this issue see e.g. the contribution by Santa Berzina, Assessment of Past Developments and Economic Policy Challenges in Latvia, pp. 92–101.

thus making them less vulnerable to negative repercussions of real wage increases for their international competitiveness.[9] Cross-country indicators for economic attractiveness and economic flexibility (e.g. by the World Bank and the Fraser Institute) suggest that the Baltic countries as well as Bulgaria have overall rather flexible economies although there are also areas where improvements would be desirable. For the other SEE-4 countries the indicators suggest even bigger needs for improvement. [10]

Summing up, the findings of the workshop summarized in this volume suggest that a careful review of the Baltic *boom and bust cycle* can provide valuable lessons for the SEE-4 countries as well as other emerging European economies. Obviously it is important to keep in mind that many of the lessons to be drawn from the boom and bust experience of the Baltic countries relate to a world where external capital was readily available and relatively cheap, a situation which has changed considerably due to the international financial crisis. In case foreign capital will soon become readily available again in the SEE region and emerging Europe more generally, many of the lessons from the Baltic experience will be directly applicable, e.g. the need to avoid real estate bubbles as a result of excessively fast financial deepening and the need to strengthen financial sector supervision in case of excessively strong credit growth, in particular if credit are mostly denominated in foreign currency. Even if the current crisis turns out, however, to be a *watershed*, requiring a structural change in the growth pattern of the region (e.g. more reliance on domestic rather than foreign capital and more labor- and productivity- rather than capital-intensive growth) there are important lessons to be learnt from the Baltic boom and bust cycle, e.g. regarding the need for sound fiscal policy and well-targeted structural reforms.

[9] The contribution by Amir Hadziomeragic, The Current Crisis – a Challenge as Well as a Chance to Implement Needed Reforms, pp. 116–125 presents the current crisis not only as an economic challenge but also as a chance to make progress with structural reforms.

[10] These indicators are reviewed in the contribution by Reiner Martin and Claudia Zauchinger, Recent Developments in the Baltics and Southeastern European Countries with Low Nominal Exchange Rate Flexibility, pp. 10–47.

Recent Developments in the Baltics and Southeastern European Countries with Low Nominal Exchange Rate Flexibility[1]

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Abstract

This paper analyses recent developments in and the main similarities and differences between the Baltic countries and those Southeastern European countries with low nominal exchange rate flexibility (Bosnia and Herzegovina, Bulgaria, Croatia and the FYR of Macedonia). In addition to having a similar monetary policy framework all seven countries covered in the paper are very small, open economies. They differ, however, in their level of economic development and the degree of their institutional and economic integration with the EU. This paper reviews the main drivers of the growth and convergence process in these seven countries since 2000, describes the associated build-up of internal and external imbalances and looks at the turning point from boom to bust in the Baltic countries. In addition, the paper looks at the key macro-financial vulnerabilities and the structural challenges that these seven countries are currently facing.

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1. Introduction

The Baltic countries (Estonia, Latvia and Lithuania), share some key economic features with the Southeastern European countries Bosnia-Herzegovina (BiH), Bulgaria, Croatia and the FYR of Macedonia (SEE-4).[4] In particular, their exchange rate regimes are either completely fixed (currency boards in BiH, Bulgaria, Estonia and Lithuania) or have a low degree of nominal exchange rate flexibility.[5] In addition, all these seven Baltic and Southeastern European countries (BSEC-7) are very small, open catching-up economies.

There are also significant structural differences between these countries, both within and between the Baltic countries and the SEE-4 sub-groups. In particular their level of economic development (proxied by their level of per capita GDP) is quite different. In addition, whereas the Baltic countries and Bulgaria are EU Member States, the other SEE-4 countries are still candidate or potential candidate countries for EU membership.

Despite these differences, recent economic and financial developments in the BSEC-7 countries have considerable similarities. Since 2000 all these countries experienced strong economic growth, mostly driven by domestic demand and linked with rapid financial deepening. More recently, buoyant GDP growth led to increasing external and internal imbalances and macro-financial vulnerabilities. Following the worsening of the global financial crisis in the autumn of 2008, all BSEC-7 countries became affected by the crisis, although the impact has so far differed significantly.

This paper reviews recent economic and financial developments in the BSEC-7 countries, identifies the similarities and differences between them and flags their main macro-financial and structural challenges. Section 2 reviews the main drivers of the growth and convergence process in the BSEC-7 countries since 2000, describes the associated build-up of internal and external imbalances and looks at the turning point from boom to bust in the Baltic countries. Section 3 looks at the key macro-financial vulnerabilities and the structural challenges that these countries are currently facing and Section 4 summarises the main findings of the paper.

[4] The two euroised economies Kosovo and Montenegro are not covered in this paper.

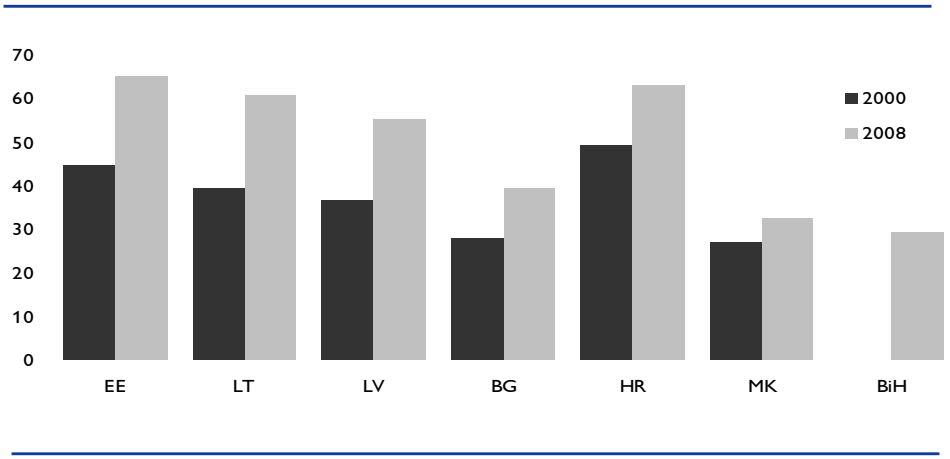
[5] Croatia has a tightly managed float, Latvia is a member of ERM II with a unilateral exchange rate band of +/- 1% and the FYR of Macedonia has a *de facto* peg to the euro.

2. Stylised Facts of the Boom and the Bust

2.1 Main Drivers of the Growth and Convergence Process

The catching-up process of many BSEC-7 countries since 2000 was impressive (chart 1). In 2000 GDP per capita adjusted for differences in purchasing power and relative to the EU average was between around 27% (FYR of Macedonia and Bulgaria) and 45% (Estonia and Croatia). By 2008, however, the Baltic countries and Croatia reached between 55% and 65% of the EU average and Bulgaria about 39%. Together with BiH, the FYR of Macedonia had the lowest per capita income level in 2008.

Chart 1: GDP per Capita in PPS (EU-27=100)



Source: National central banks, WEO.

Progress with real convergence since 2000 is reflected in strong real GDP growth rates, especially in the Baltic countries (table 1). Estonia grew at more than 7% since 2000 and reached its highest growth rate in 2006 before it started to slow in 2007. In 2008, however, Estonia was the first BSEC-7 country in recession and its economy contracted by –3.6%. Latvia's real GDP growth peaked also in 2006 followed by some deceleration in 2007. In 2008, however, the Latvian economy has contracted by 4.6%. Lithuania's real GDP growth remained around 7%–8% between 2003 and 2007 before slowing down to 3% in 2008.
Growth rates for the SEE-4 countries were on average also strong during the 2000-2007 period but somewhat lower than in the Baltics and only Croatian GDP growth decelerated notably in 2008. In Bulgaria real GDP growth was around 5-6% during the 2000 to 2008 period. Following an average growth rate of 4.7% between 2000-

2007 real GDP growth in Croatia decelerated to 2.4% in 2008. Macedonia's average growth rate was 4.5% between 2004 and 2007 and increased to 5% in 2008. Real average annual GDP growth in BiH was around 5% from 2000 to 2007 and 5.5% in 2008.

Table 1: GDP at Constant Prices

% change year on year

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	1Q/09
EE	9.7	7.7	7.8	7.1	7.5	9.2	10.4	6.3	-3.6	-10.0	-1.0	-15.1
LV	6.9	8.0	6.5	7.2	8.7	10.6	12.2	10.0	-4.6	-12.0	-2.0	-18.0
LT	4.2	6.7	6.9	10.2	7.4	7.8	7.8	8.9	3.0	-10.0	-3.0	-13.6
BiH	5.2	3.6	5.0	3.5	6.3	3.9	6.9	6.8	5.5	-3.0	0.5	-
BG	5.4	4.1	4.5	5.0	6.6	6.2	6.3	6.2	6.0	-2	-1	-3.5
HR	3.0	3.8	5.4	5.0	4.3	4.2	4.7	5.5	2.4	-3.5	0.3	-
MK	4.5	-4.5	0.9	2.8	4.1	4.1	4.0	5.9	5	-2	1	-

Source: National central banks, WEO.

Looking ahead, the Baltic countries are expected to remain in a very deep recession in 2009 and a milder recession in 2010. The SEE-4 countries are also expected to be in recession in 2009, although less than the Baltic countries and GDP growth in 2010 is expected to be around zero.[6]

2.1.1 Domestic versus Export-led Growth

In the past years the main drivers of growth changed notably in some BSEC-7 countries. In 2000, net exports still made a considerable positive contribution to real GDP growth in some countries. In 2007, however, GDP growth in all BSEC-7 countries was exclusively driven by domestic demand and the contribution of net exports to real GDP growth turned (or remained) negative.

Domestic demand accelerated in all countries between 2000 and 2007 and reached double digit rates in the Baltic countries in 2006/2007. In 2008, however, the picture changed dramatically, particularly for Estonia and Latvia where the contribution of domestic demand even turned negative. In the SEE-4 countries the domestic demand contributions also accelerated from 2000 to 2007, although less than in the Baltics and 2008 saw some moderation in Bulgaria and Croatia.

[6] At the time of writing growth forecasts for the current and next year are frequently and severely revised.

Table 2: Contribution to GDP Growth

	in percentage points	**2000**	**2007**	**2008**
EE	Domestic demand	7.9	6.7	-5.0
	Private consumption	4.0	4.4	-2.1
	GFCF	4.1	1.6	-3.4
	Net exports	-0.6	-3.9	6.0
	GDP	9.7	6.3	-3.6
LV	Domestic demand	5.7	13.4	-12.5
	Private consumption	4.3	9.6	-8.0
	GFCF	2.4	3.1	-4.7
	Net exports	2.9	-4.9	8.5
	GDP	6.9	10.3	-4.6
LT	Domestic demand	3.6	13.8	2.1
	Private consumption	3.6	8.0	3.0
	GFCF	-2.0	5.2	-1.7
	Net exports	1.3	-5.5	-0.6
	GDP	4.2	8.9	3.0
BiH	Domestic demand			
	Private consumption			
	GFCF			
	Net exports			
	GDP	5.2	6.8	5.5
BG	Domestic demand	7.4	9.9	9.4
	Private consumption	3.1	3.7	3.3
	GFCF	2.3	5.6	6.1
	Net exports	-2.0	-4.9	-2.3
	GDP	5.4	6.2	6.0
HR	Domestic demand	1.0	6.4	3.0
	Private consumption	2.1	3.7	0.5
	GFCF	-0.8	2.0	2.2
	Net exports	2.8	-0.8	-1.1
	GDP	3.0	5.6	2.4
MK	Domestic demand	7.0	7.5	11.5
	Private consumption	7.8	3.1	6.0
	GFCF	-0.2	3.6	3.8
	Net exports	-5.7	-2.3	-1.6
	GDP	4.5	5.6	5.0

Source: Ameco, CBBH.

Turning to net exports, in 2000 Croatia's economic growth was largely driven by net exports and in Latvia and Lithuania net exports contributed a considerable share to real GDP growth. By 2007, however, the contribution of net exports to GDP growth had become negative in all BSEC-7 countries although the dampening effect on GDP growth varied considerably.[7]

2.1.2 Financial Deepening, Asset Prices and Domestic Demand

In all BSEC-7 countries credit growth to the private sector was strong in the past years. In the Baltic countries and Bulgaria credit growth accelerated to annual rates between 40 and 60% in 2006/2007. Since then credit growth in all Baltic countries slowed down dramatically although slightly less in Bulgaria. Private sector credit growth in Croatia, BiH and the FYR of Macedonia remained relatively more moderate until 2007 and the deceleration of credit growth in 2008 was also less pronounced.

Table 3: Private Sector Credit Growth

y/y eop (Claims vs. Non Bank Non Government)

	2000	2001	2002	2003	2004	2005	2006	2007	2008
%									
EE	30.3	22.2	27.8	27.0	31.2	33.4	41.6	33.0	7.2
LV	36.6	50.1	36.6	37.2	46.8	63.6	58.3	34.0	11.8
LT	-1.7	26.9	27.7	54.5	38.9	63.6	40.5	42.8	18.1
BiH	8.7	10.8	27.7	20.3	15.9	27.4	23.3	27.9	20.8
BG	17.0	32.1	44.0	48.3	48.6	32.4	24.6	62.5	31.6
HR	9.0	23.1	30.0	14.6	14.0	17.2	22.9	15.0	10.5
MK	18.7	-0.4	6.2	14.1	25.0	21.0	30.5	39.2	34.2

Source: OeNB, national central banks.

As a result of strong credit growth, the stock of domestic credit to the non-financial private sector increased considerably in all BSEC-7 countries. In 2008, the highest stocks of domestic credit to the private sector relative to GDP were recorded in Estonia and Latvia (between 90% and 100%). In Croatia, Bulgaria and Lithuania the stock of private sector credit is between 60% and 75% of GDP. In BiH and the FYR of Macedonia the private sector credit stock relative to GDP is much lower but in particular in the FYR of Macedonia it has rapidly increased over the last few years.

[7] Annual growth rates of private consumption, investment, exports and imports over time show clear differences between the Baltic countries and the SEE-4 countries (see Annex).

Table 4: Stock of Domestic Credit

% of GDP; e. o. p.

	2000	2001	2002	2003	2004	2005	2006	2007	2008
EE	35.4	38.8	44.1	50.7	59.0	67.8	81.4	93.8	97.6
LV	23.3	28.5	35.7	45.0	53.9	71.9	89.7	89.5	89.1
LT	13.1	15.7	18.0	23.6	30.5	43.1	48.9	60.2	64.2
BiH	25.8	26.6	31.0	35.3	37.5	44.6	48.7	55.2	58.0
BG	17.8	20.2	23.6	29.6	35.4	42.8	42.7	59.2	66.7
HR	40.8	45.9	54.0	55.7	57.5	63.7	70.0	71.9	74.4
MK				17.2	20.8	20.0	23.5	34.4	42.7

Source: OeNB, national central banks.

Nominal and real interest rate developments in the BSEC-7 countries since 2000 suggest a link between strong credit growth and decreasing interest rates. During the 2000–2008 period *nominal* interest rates reached their lowest point in 2005 with nominal short-term rates for the Baltic countries and Bulgaria between 2.4% and 3.6% and nominal long-term rates between 3.7% and 4.2%. The corresponding rates for the other SEE-4 countries at that time were considerably higher, especially for households although the fixed or almost fixed exchange rate regimes had a downward impact on nominal interest rates in all BSEC-7 countries. In line with interest rate developments in the euro area nominal interest rates in the Baltic countries and Bulgaria started to increase in 2006, whereas nominal rates in the other SEE-4 countries mostly remained stable or even decreased. This suggests that the upward impact of euro area rate increases was counterbalanced by other determinants of market interest rates such as increasing competition in the banking sector and lower country-specific risk premia.

Table 5: Short-term Interest Rates

%

Nominal

	2000	2001	2002	2003	2004	2005	2006	2007	2008
EE	5.7	5.3	3.9	2.9	2.5	2.4	3.2	4.9	6.7
LV	5.4	6.9	4.4	3.8	4.2	3.1	4.4	8.7	8.0
LT	8.6	5.9	3.7	2.8	2.7	2.4	3.1	5.1	6.0
BiH*									
corporate			12.07	10.54	9.9	9.0	7.7	7.0	7.4
household					9.8	9.3	9.6	10.5	9.1
BG	4.6	5.1	4.9	3.7	3.7	3.6	3.7	4.9	7.1
HR**									
corporate	8.3	6.0	8.6	7.8	8.2	8.1	7.1	7.0	7.7
household	20.6	19.5	17.2	15.0	14.4	13.1	12.1	12.1	12.2
MK**									
corporate						10.8	9.8	9.1	8.7
household						19.5	17.6	15.7	12.7

Real

	2000	2001	2002	2003	2004	2005	2006	2007	2008
EE	1.8	-0.3	0.3	1.5	-0.5	-1.7	-1.2	-1.8	-3.9
LV	2.8	4.4	2.4	0.9	-2.0	-3.8	-2.2	-1.4	-7.3
LT	7.5	4.3	3.4	3.9	1.5	-0.3	-0.7	-0.7	-5.1
BiH*									
corporate					9.5	5.3	0.2	5.4	7.4
household					9.4	5.6	2.1	8.9	9.1
BG	-5.7	-2.3	-0.9	1.4	-2.4	-2.4	-3.7	-2.7	-4.9
HR**									
corporate	1.8	1.0	6.9	6.1	6.1	4.6	4.0	4.1	1.5
household	14.2	14.5	15.5	13.2	12.3	9.6	8.9	9.2	6.0
MK**									
corporate						10.3	6.5	6.3	1.5
household						19.0	14.3	12.9	5.5

Source: EC Economic Forecast spring 2009, NCB's.
** interest rates on loans in local currency.*
*** interest rates on loans without currency clause.*

Table 6: Long-term Interest Rates

%

Nominal

	2000	2001	2002	2003	2004	2005	2006	2007	2008
EE	10.5	10.2	8.4	5.3	4.4	4.2	5.0	6.1	8.2
LV		7.6	5.4	4.9	4.9	3.9	4.1	5.3	6.4
LT		8.2	6.1	5.3	4.5	3.7	4.1	4.6	5.6
BiH*									
corporate			10.59	9.18	8.2	7.7	7.4	7.1	7.4
household					10.8	9.9	9.3	10.0	10.9
BG			8.3	6.5	5.4	3.9	4.2	4.5	5.4
HR*									
corporate	10.46	8.21	6.79	6.31	6.01	5.38	5.77	6.15	6.78
household	11.62	11.16	9.79	8.70	8.13	7.37	6.63	6.49	7.73
MK**									
corporate						10.9	10.7	9.7	8.9
household						12.1	11.3	10.3	9.4

Real

	2000	2001	2002	2003	2004	2005	2006	2007	2008
EE	6.6	4.6	4.8	3.9	1.4	0.1	0.6	-0.6	-2.4
LV		5.1	3.4	2.0	-1.3	-3.0	-2.5	-4.8	-8.9
LT		6.6	5.8	6.4	3.3	1.0	0.3	-1.2	-5.5
BiH*									
corporate			10.2	8.6	7.8	4.0	-0.1	5.5	7.4
household					10.4	6.2	1.9	8.4	10.9
BG			2.5	4.2	-0.7	-2.1	-3.2	-3.1	-6.6
HR*									
corporate	4.0	3.2	5.1	4.5	3.9	1.9	2.6	3.2	0.6
household	5.2	6.2	8.1	6.9	6.0	3.9	3.5	3.6	1.5
MK**									
corporate						10.4	7.4	6.9	1.7
household						11.6	8.0	7.5	2.2

Source: Ameco, EC Forecast spring 2009, national central banks.
** interest rates on loans in local currency.*
*** interest rates on loans without currency clause.*

Real ex post short-term interest rates (deflated by headline inflation) became negative in Estonia, Latvia and Bulgaria in 2004, followed by Lithuania in 2005. In Latvia and Bulgaria real ex post long-term interest rates were also negative as of 2004. In 2008, short- and long-term real ex post rates in the Baltic countries and Bulgaria were strongly negative due to the considerable increase in inflation (see below). In Croatia and in the FYR of Macedonia also corporate short-term interest rates and long-term corporate and household rates were close to zero or slightly negative.

Table 7: Share of Foreign Currency

% of total		2000	2001	2002	2003	2004	2005	2006	2007	2008
EE	Loans to domestic non-banks	77.9	78.7	82.6	81.5	80.0	79.3	77.5	78.5	84.8
	Loans to households	63.1	67.0	72.8	66.6	64.9	75.0	77.8	77.3	82.2
	Loans to enterprises	81.8	81.9	86.0	87.3	87.5	82.3	77.4	79.8	87.3
LV	Loans to domestic non-banks				56.0	60.9	69.9	76.9	86.3	88.4
	Loans to households	49.2	48.6	54.2	58.3	65.1	69.7	77.1	85.8	87.4
	Loans to enterprises	52.3	58.8	54.4	53.5	58.1	69.8	76.6	86.8	89.0
LT	Loans to domestic non-banks	61.3	57.3	47.9	53.5	57.9	65.3	52.1	54.8	64.0
	Loans to households	48.5	44.5	26.6	29.2	42.8	54.7	43.9	49.8	61.6
	Loans to enterprises	71.6	62.8	54.1	59.8	62.9	69.8	57.4	58.7	66.3
BiH*	FX share of total loans	67.1	51.7	35.2	64.9	65.4	68.7	71.0	74.0	73.0
BG	Loans to domestic non-banks	35.9	36.0	42.2	43.4	48.1	47.2	45.0	49.9	56.7
	Loans to households	3.2	4.9	7.2	8.9	11.0	15.4	19.0	20.0	29.2
	Loans to enterprises	43.5	44.4	52.2	56.3	65.3	66.9	62.5	67.7	72.8
HR*	Loans to domestic non-banks	86.2	85.2	80.4	74.9	76.7	78.3	71.8	62.5	66.2
	Loans to households	89.5	89.8	88.3	81.2	79.4	80.0	77.7	67.6	67.9
	Loans to enterprises	85.6	80.5	74.6	71.4	74.1	75.1	64.4	53.7	59.7
MK*	FX share of total loans				37.6	42.3	47.8	54.4	57.1	55.8

Source: National central banks, OeNB.
** including FX indexed loans, for BH indexed loans included since 2003.*

The strong decrease of real ex post rates in 2007 and 2008 coincided with a deceleration of credit growth in the Baltic countries, suggesting that more recently other factors played an important role in determining credit growth. This could be, inter alia, more restrictive lending practices by commercial banks or the deceleration or decline of property prices. In some BSEC-7 countries the latter may have had an even stronger impact on the behaviour of economic agents than headline inflation.

An important aspect of the rapid financial deepening process in the BSEC-7 countries is the importance of loans denominated in foreign currency. The cross-country picture is somewhat heterogeneous although foreign currency-denominated credit to the domestic non-financial sector played an important role in all BSEC-7 countries. In 2008 the highest stock of FX-loans was registered in Latvia with almost 90%, followed by Estonia, Lithuania and Croatia. Bulgaria and Macedonia have the lowest share of FX-denominated credit stock among the BSEC-7 countries. Looking separately at credits to households and enterprises, the foreign currency shares of credits for households tended in the past to be lower in most countries (but higher in Latvia) and the shares are 'converging' more recently.

Box 1: Determinants of Foreign Currency Lending

The significant share of foreign currency borrowing in per cent of total borrowing in most CESEE countries is well known and well documented. By contrast, there are not many analyses of the determinants of foreign currency borrowing in these countries.

Based on a panel regression analysis for the 10 CESEE EU Member States plus Croatia covering the period 1999-2007, Rosenberg and Tirpak (2008) identify a number of important drivers for foreign currency borrowing, notably the interest rate differential between loans in domestic and foreign currency and the extent to which lending is based on funding from abroad rather than domestic deposits. They also find that some other variables such as country size, per capita income level, trade openness and regulatory policies have some impact on the share of foreign currency lending. Their findings are less clear when it comes to the impact on exchange rate volatility, membership in the EU or ERM II or remittances. The paper by Basso, Calvo-Gonzales and Jurgilas (2007), looking at 24 transition economies arrives at similar conclusions. In particular they emphasise banks' access to foreign funds, interest rate differentials and trade openness (for the corporate sector only) as determinants of foreign currency borrowing.

The 2008 spring wave of the OeNB Euro survey contained a set of questions on the motives for holding foreign currency-denominated loans. Particularly in CESEE countries, many respondents agreed with the notion that 'foreign currency loans are cheaper than local currency loans'. However, this statement received considerably less support from the interviewees in SEE countries. Both, in CEE and SEE, a considerable share of respondents agreed with the statement that they had taken out a foreign currency-denominated loan 'because their bank had advised them to do so' and in both regions some people agreed with the statement 'the interest rate in foreign currency is more stable than that of the local currency'.

Whereas these analyses mostly focus on the demand side of foreign currency borrowing, the role of banks is given less prominence. On the one hand banks face a number of regulatory rules such as limits to their open currency positions. Especially at a time of rapid credit expansion and intense competition for market shares such rules may be a strong incentive for the promotion of credit in foreign currency. It is not clear, however, whether such constraints were the key determinant for the promotion of foreign currency credits. An alternative motive could have been the desire to pass on currency risks from the use of foreign funding to customers. With the benefit of hindsight, however, this may have increased banks' credit risk.

The rapid financial deepening process was closely interlinked with changes in real estate prices.[8] Available data on residential property price developments show that house prices in Bulgaria and the Baltic countries have grown very rapidly compared with the euro area average as well as other CESEE countries and 'old' EU Member States experiencing a sharp increase in property prices such as Ireland and Spain (Égert and Martin, 2009).[9]

Table 8: House Price Growth

% change year on year

	2001	2002	2003	2004	2005	2006	2007	2008	last observation y/y
EE	34.2	29.5	12.9	27.8	30.9	51.8	10.1	-12.3	-20.7 (Q42008)
LV						159.3	45.2	-20.6	-19.6 (Q32008)
LT	23.8	9.5	18.0	9.9	51.8	39.2	33.5	5.2	-5.0 (Q42008)
BG	0.3	1.8	12.2	47.6	36.6	14.7	28.9	24.9	11.7 (Q42008)
HR			2.4	4.8	-0.7	0.3	25.9	7.5	

Source: Datastream, CROSTAT (HR).

Looking at the period from 2005 to 2008, the Baltic countries and Bulgaria recorded very high average annual house price increases. House price increases peaked in the Baltic countries around 2005/2006, followed first by a deceleration

[8] Looking at other asset prices, stock markets peaked around 2007 or early 2008, followed by strong declines, bringing the stock market indices at the end of 2008 back to where they were in 2003 or 2004. However, share ownership in the BSEC-7 countries tends to be restricted to a rather small part of the population which is likely to limit the repercussions for disposable income.

[9] The price level in the late 1990s was, however, significantly lower in the CESEE countries and, in particular, in the Baltic countries and Bulgaria than in the euro area including Ireland and Spain.

of growth and in 2008 by a fall in nominal house prices in Estonia and Latvia. By contrast, annual house price increases remained relatively high in Bulgaria in 2008 and increased strongly in Croatia in 2007.

Box 2: Credit and House Price Growth – Equilibrium Phenomena?

High private sector credit growth in recent years in many CESEE countries and in particular in the Baltic countries and Bulgaria led to the question whether credit developments in these countries were still an equilibrium phenomenon? Estimating equilibrium credit levels in catching-up countries obviously entails considerable uncertainty, especially in a period of rapid financial deepening. Nevertheless the OeNB has produced a number of empirical analyses on this issue, based on a dynamic panel co-integration framework (see e.g. Backé et al. 2006).[10]

The latest available analysis based on this framework (using data until 2008Q1) suggests that credit stock levels in Latvia and Bulgaria were within the estimated equilibrium range, but more tilted towards a deviation at the overshooting side. Credit stock levels in Estonia, Lithuania and Croatia were very close to the mid-point of the equilibrium range or more tilted towards a deviation at the undershooting side, especially Estonia (Backé et al., 2008).[11]

Given the methodological and data-related caveats of this approach the authors urge for caution in the interpretation of their results. Moreover, the ranges for the equilibrium credit levels derived with this model tend to be relatively large. Notwithstanding these shortcomings the empirical analysis suggests that *past* credit growth was largely connected to economic fundamentals.

Credit booms are often associated with asset price booms and the recent rapid credit growth in CESEE countries was indeed associated with a rapid rise in house prices. This in turn led to the question whether real estate price levels in these countries are still in equilibrium or misaligned. Unfortunately, however, analyses on real estate price levels are almost impossible due to the lack of reliable and comparable data.

Égert and Mihaljek (2007), using data up to 2006, argue that their estimates indicate either an equilibrium correction from initial undervaluation of house prices or overshooting. They stress that house price developments in the CESEE countries can in any case not be "completely disconnected from fundamentals". UniCredit Group (2008) argues that residential property prices are in most countries still below their 'equilibrium' level – although moving towards them – and that the rapid increase in residential property prices up until 2007 could still be compatible with the convergence story.

[10] Earlier papers such as Cottarelli et al. (2003) and Coricelli et al. (2006) arrive overall at a rather benign assessment of fast credit growth in CESEE countries but stress already the associated macroeconomic and financial stability risks.

[11] No such estimates are available for Bosnia-Herzegovina and the FYR of Macedonia.

Chart B1: Residential Real Estate Price Levels

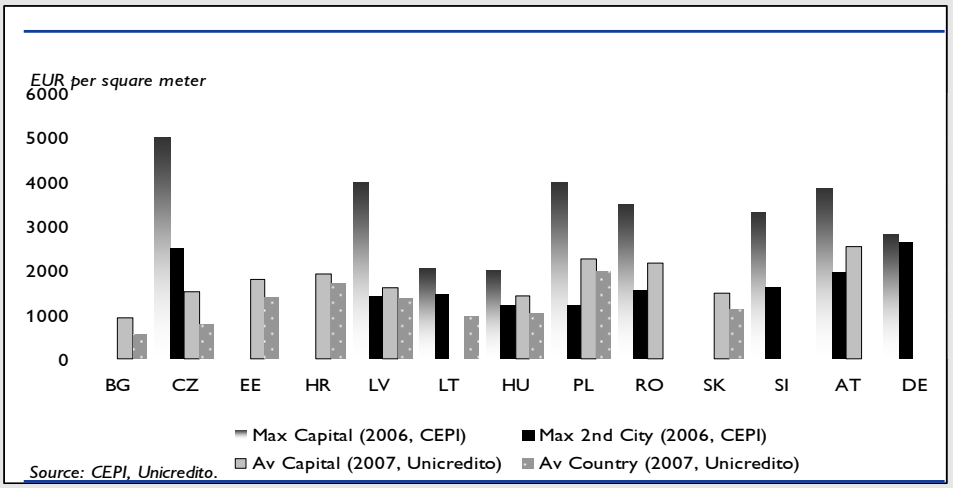


Chart B1 provides an overview of residential real estate price levels in a number of CESEE countries, Austria and Germany. The chart contains average prices in capitals, average prices in the country, maximum prices in capitals and maximum prices in the 'second city'.[12]

These data allow some tentative qualitative conclusions. First, there are major price level differences between CESEE capitals and CESEE '2nd cities' or country averages. Second, there are large differences between maximum and average prices in capitals. Third, average capital price levels in CESEE countries are still below the level of Vienna although average prices for Warsaw and Bucharest come close. Fourth, maximum price levels in a number of CESEE capitals (in particular Prague, Riga and Warsaw) exceed comparable price levels in Berlin and Vienna.

A simple correlation analysis with GDP per capita data tends to confirm that on the basis of the available data only the top end of real estate prices in some CESEE capitals is likely to have moved away from equilibrium levels in 2006 (and possibly even more so in 2007/8).[13] Overall, the limited available information does not suggest a widespread misalignment of house price levels.

[12] (1) and (2) are 2006 data collected by CEPI (the European Council of Real Estate Professions) (www.cepi.eu). (3) and (4) are 2007 data used in UniCredit Group (2008). All data refer to the square meter price of apartments, expressed in EUR.

[13] Correlating the different price level series with national or regional GDP per capita levels (relative to the EU average) yields correlation coefficients of around 0.5 suggesting a reasonably strong link between real estate prices and relative income levels. Only for the maximum price level in capitals, the correlation coefficient with relative regional GDP is significantly lower (around 0.26), indicating that other factors including speculative purchases or the presence of large groups of international buyers may have had a stronger impact on house price levels.

Besides the financial deepening process there are a number of other factors that have played a role in stoking domestic demand in some BSEC-7 countries, namely the remittances they received from an increasingly large number of emigrants and – for EU Member States – the inflow of funds in the context of EU Cohesion Policy.

World Bank data[14] suggest that remittances play a considerable role for the BSEC-7. In 2007, such inflows ranged between 2.1% and 3.8% of GDP for the Baltic countries, Croatia and Macedonia. Inflows to Bulgaria were somewhat higher (5.7% of GDP) and in the case of BiH remittances are a key source of funding at around 15% of GDP. Figures on migration (see below) suggest that the flow of remittances to most BSEC-7 countries has increased over time. Against the background of recent global economic developments, however, the flow of remittances to the BSEC-7 countries is likely to decline.[15]

For BSEC-7 countries that are in the EU, funding from the EU Cohesion Policy is another important provider of capital, in particular for investments in infrastructure. The figures envisaged in the 2007-2013 EU budget framework suggest that the Baltic countries as well as Bulgaria receive on average around 2.5% of GDP per year during this seven-year period.[16] For the period 2004 to 2006 the budget was somewhat lower. Past experience shows, however, that actual Cohesion Policy payments tend to be lower than envisaged at the beginning of the budget period and higher at the end. This is due to initial administrative absorption problems and suggests that the EU BSEC-7 countries will benefit more from these funds in the future.

2.1.3 The Role of Fiscal Policy

Budget balances in the BSEC-7 countries suggest significant differences in fiscal policy. Between 2001 and 2007 Estonia and Bulgaria had almost always budget surpluses which tended to increase over time. Latvia and Lithuania continued to have budget deficits (except for Latvia in 2007) which, however, declined over time.[17] BiH's budget deficit initially improved but worsened again since 2007, Macedonia's budget balance oscillated around a broadly balanced budget and Croatia had sizeable budget deficits which only improved since 2006. In 2008

[14] Downloadable at econ.worldbank.org

[15] Official data are likely to underestimate both actual migration as well as remittances.

[16] On this issue see e.g. Kamps, Leiner-Killinger and Martin (2009). Candidate and potential candidate countries also benefit from some EU support programmes but their financial magnitude is smaller than that of EU Cohesion Policy.

[17] According to European Commission estimates the cyclically adjusted budget balances in all three Baltic countries in 2007 and 2008 were close to zero (Estonia in 2007) or negative (up to –3.9% in Lithuania in 2008). Such estimates should, however, be interpreted with great caution given in particular the difficulty to quantify potential output in catching-up economies.

budget balances deteriorated significantly in the Baltic countries, in BiH and the FYR of Macedonia. Looking forward, budget balances in all BSEC-7 countries are expected to deteriorate (further) in 2009 and 2010, in the case of Latvia the forecast even points to double-digit deficits.[18]

Table 9: Government Net Lending/Borrowing

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
as % of GDP											
EE	-0.2	-0.1	0.3	1.7	1.7	1.5	2.9	2.7	-3.0	-3.0	-3.9
LV	-2.8	-2.1	-2.3	-1.6	-1.0	-0.4	-0.5	-0.4	-4.0	-11.1	-13.6
LT	-3.2	-3.6	-1.9	-1.3	-1.5	-0.5	-0.4	-1.0	-3.2	-5.4	-8.0
BiH[1]					-0.5	0.8	2.2	-0.1	-1.9	-2.5	
BG	-0.5	0.2	-0.8	-0.3	1.6	1.9	3.0	0.1	1.5	-0.5	-0.3
HR					-4.3	-4.2	-3.0	-2.5	-2.0	-3.3	-2.7
MK[2]					0.0	0.2	-0.5	0.6	-1.0	-3.5	-3.7

1 IMF Art IV 10/2008.
2 EC spring forecast 2009.
Source: Ameco, IMF (for BiH).

Overall fiscal policy in the BSEC-7 countries tended to be either insufficiently restrictive or even pro-cyclical. Sizeable improvements in (headline) budget balances in almost all BSEC-7 countries appear to have been largely the result of strong or very strong GDP growth, in particular since 2004. In addition, current public expenditure in per cent of GDP increased in recent years in some BSEC-7 countries, notably the Baltic countries and BiH and low tax levels are likely to have further stoked the boom.

Looking forward, the economic and financial crisis is expected to have a considerable impact on fiscal variables, which is likely to affect the monetary integration plans of some BSEC-7 countries with the euro area, notably the Baltic countries which are already members of ERM II for more than two years. The above-mentioned forecasts for the Baltic countries cast some doubts on the prospects of these countries to fulfil the Maastricht criterion on public finances in the near future.

2.2 The Build-up of Internal and External Imbalances

2.2.1 Internal Imbalances – Changes in Prices and Costs

Inflation in the Baltic countries and Bulgaria increased strongly from quite low levels in 2003/2004 to double-digit figures in 2008. Inflation increased in particular

[18] Developments in debt levels reflect largely the above-mentioned trends in budget balances (see Annex).

since early 2007, peaked around mid-2008 in all four countries and declined since then. Also Croatia and the FYR of Macedonia experienced a large increase in inflation in 2008 but remained at lower levels than the Baltic countries and Bulgaria. Looking forward inflation will decrease sharply in all BSEC-7 countries until 2010 due to favourable base effects and the very strong economic slowdown. The IMF expects inflation to become even negative in Estonia and Latvia in 2010.

Table 10: Inflation, Average Consumer Prices

	2000	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
% year on year change											
EE	4.0	5.8	3.6	1.3	3.0	4.1	4.4	6.6	10.4	0.8	-1.3
LV	2.6	2.5	1.6	3.3	6.2	6.9	6.6	10.1	15.3	3.3	-3.5
LT	1.1	1.6	0.3	-1.1	1.2	2.7	3.8	5.8	11.1	5.1	0.6
BiH	5.0	4.5	0.3	0.5	0.3	3.6	6.1	1.5	7.4	2.1	2.3
BG	10.3	7.4	5.8	2.3	6.1	6.0	7.4	7.6	12.0	3.7	1.3
HR	4.6	3.8	1.7	1.8	2.0	3.3	3.2	2.9	6.1	2.5	2.8
MK	6.4	5.5	2.2	1.2	-0.4	0.5	3.2	2.3	8.3	1.0	3.0

Source: WEO, IMF.

Inflationary pressures in the BSEC-7 countries in recent years were mostly broad-based, with large contributions to inflation coming from external factors such as increases in food and energy prices as well as adjustments in taxes and excise duties. There were, however, also large increases in services prices which mainly reflected the tightening labour market situation in most BSEC-7 countries.

On the back of the fast economic growth in recent years, the unemployment rate in most BSCE-7 countries declined considerably since 2000, except for the FYR of Macedonia and BiH, and fell to rather low levels in the Baltic countries and Bulgaria (5%–6% in 2008). Looking forward, the downward trend in unemployment will reverse and unemployment rates are projected to double in the Baltic countries in 2009. In the SEE-4 countries a slight increase is also expected.

Table 11: Unemployment Rate

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
%											
EE	12.8	12.4	10.3	10	9.7	7.9	5.9	4.7	5.5	11.3	14.1
LV	13.7	12.9	12.2	10.5	10.4	8.9	6.8	6	7.5	15.7	16
LT	16.4	16.5	13.5	12.5	11.4	8.3	5.6	4.3	5.8	13.8	15.9
BiH*			41	42.1	42.9	42	44.8	43.2			
BG	16.4	19.5	18.2	13.7	12.1	10.1	9	6.9	5.6	7.3	7.8
HR	16.1	15.9	14.8	14.2	13.7	12.7	11.2	9.6	8.4	9.6	9.4
MK	32.2	30.5	31.9	36.7	37.2	36.7	36	34.6	33.7	35	36

**EBRD*
Source: Ameco – definition EUROSTAT.

In some BSEC-7 countries migration had a notable impact on labour supply during the years of rapid economic growth.[19] Latvia, Lithuania and the FYR of Macedonia were on average net emigration countries during the period 2001-05. By contrast BiH and Croatia were on average net immigration countries. Data for 2005 suggest that emigration increased notably in Lithuania and Bulgaria compared to the first half of the decade. The situation remained broadly unchanged in the other BSEC-7 countries. In addition to official migration flows it is likely that various forms of unrecorded migration have had a negative impact on labour supply in some BSEC-7 countries. Together with strong GDP growth and mostly unfavourable demographic developments, migration[20] is thus likely to have contributed to labour market tightening in many BSEC-7 countries.

Table 12: Net Migration Rates

	EE	LV	LT	BiH	BG	HR	MK
per 1,000 population							
2001-2005	0.1	-0.8	-1.6	1.6	0	2.6	-2.9
2005	-0.3	-0.5	-3	na	-1.8	2.6	na

Source: Münz (2007).

In line with tight labour markets and high inflation expectations, the growth rate of nominal compensation per employee in the Baltic countries and Bulgaria increased significantly in recent years. Growth in compensation per employee peaked in the Baltic countries in 2007 and the SEE-4 countries in 2008. Looking forward, negative growth rates are expected in the Baltic countries, especially in Latvia and

[19] See e.g. IMF 2008b and Münz 2007.
[20] Especially in a tight labour market the option to migrate may be sufficient for 'stayers' to obtain higher wages.

Lithuania. In the SEE-4 countries the deceleration is expected to be milder than in the Baltics, but still considerable.

Table 13: Nominal Compensation per Employee (Wage+Social Contribution from Employer)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
% growth											
EE	15.7	9.5	9.1	12.2	11.2	11.0	14.0	26.5	14.7	0.7	-3.5
LV	6.9	3.4	4.0	11.3	14.3	25.3	23.6	34.8	16.7	-9.0	-3.0
LT	-0.7	7.1	5.0	8.9	10.9	11.5	16.7	16.9	14.5	-10.3	-8.8
BiH[1]					3.7	5.6	9.1	10.3	17.2	7.3	
BG	-9.9	14.9	5.9	5.1	4.9	5.9	7.4	17.9	19.3	6.5	4.2
HR	0.1	1.5	10.3	-2.9	14.6	5.5	3.9	5.3	9.3	3.7	5.0
MK	2.6	-0.2	4.5	8.0	-2.9	-3.3	11.7	-4.8	10.1	1.7	1.7

[1] *IMF Art. IV 10/2008.*
Source: Ameco.

The strong recent growth rates in compensation per employee exceeded productivity gains in some BSEC-7 countries, resulting in considerable increases in real unit labour costs particularly in Latvia and Estonia. This trend is now expected to reverse. In the SEE-4 countries real ULC remained mostly flat or declined since 2000.

Table 14: Real Unit Labour Costs: Total Economy[1]

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
2000=100											
EE	100	97.4	96.2	97.1	97.3	95.7	97.5	106.3	117.6	122.5	116.2
LV	100	96.1	92.1	93.9	93.4	97.6	102.4	108.1	115.6	112.9	113.4
LT	100	96.8	98.4	100.1	100.9	100.3	103.7	105.2	105.4	95.8	90.6
BiH											
BG	100	102.7	99.9	101.2	97.1	95.8	92.3	97.7	101.9	102.9	103.1
HR	100	94.5	96.2	89.0	95.7	94.5	94.1	93.4	94.8	96.1	96.3
MK	100	99.2	98.8	101.5	91.4	83.5	88.7	77.3	78.0	75.2	73.0

Source: Ameco.
[1] *Ratio of compensation per employee to nominal GDP per person employed.*

Changes in the real effective exchange rate partly confirm this picture. In particular the Baltic countries' REER increased notably over time, in particular since 2006. In addition, however, also the REER in Croatia and in particular in Bulgaria appreciated over time. Only a small appreciation respectively depreciation took place in BiH and Macedonia.

Table 15: Real Effective Exchange Rate Index

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
2000=100										
EE	100	102.1	102.6	104.9	102.8	101.0	101.4	105.0	107.4	102.1
LV	100	97.9	96.7	94.0	100.2	98.4	102.9	106.8	111.4	0.0
LT	100	99.1	103.5	102.7	100.3	98.5	99.7	103.8	107.4	107.5
BiH	100	105.0	96.3	98.9	98.4	101.4	104.8	98.1	102.3	0.0
BG	100	104.8	104.5	104.0	104.9	100.6	104.3	106.7	109.0	0.0
HR	100	103.8	101.0	100.6	102.1	102.0	102.0	100.9	103.9	0.0
MK	100	101.0	106.3	98.5	96.8	96.7	99.9	99.2	103.1	101.0

Source: EIU.

2.2.2 External Imbalances

The strong economic growth in recent years was also linked with external imbalances in nearly all BSEC-7 countries. Particularly in those countries where GDP growth was early on exclusively driven by domestic demand, import growth outpaced export growth, thereby putting pressure on the trade and current account balances.[21]

In the Baltic countries and Bulgaria the current account deficit continuously increased in the past years. In 2007 the current account deficit reached its peak in the Baltic countries and since then is on a clear downward path as the deceleration of domestic demand dampens import growth. In Bulgaria the current account deficit peaked in 2008 and is projected to ease only gradually over the forecast period. Bosnia's current account deficit has been consistently high since 2001 whereas Croatia's current account deficit increased only recently to around 10% of GDP. In the FYR of Macedonia the current account deficit was mostly more moderate but increased sharply to –7.2% of GDP in 2007. Current account balances in the Baltic countries are expected to fall significantly this year[22] whereas relatively few changes are expected for the SEE-4 countries. The limited or non-existent room for nominal exchange rate corrections for the BSEC-7 countries may, however, make it somewhat more difficult for them to retain or increase their export shares.

[21] See the Annex for the trade balance.

[22] According to data for 2009Q1 the current account balance has already turned slightly positive or was balanced in the Baltic countries.

Table 16: Current Account

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
% of GDP											
EE	-5.3	-5.0	-10.4	-11.4	-12.4	-10.1	-16.7	-18.3	-9.1	-1.1	-3.1
LV	-4.8	-7.6	-6.6	-8.2	-12.8	-12.5	-22.5	-22.5	-13.6	-1.5	-1.9
LT	-5.9	-4.7	-5.1	-6.8	-7.5	-7.1	-10.4	-15.1	-12.2	-1.9	0.7
BiH	-8.7	-15.5	-21.3	-19.4	-16.3	-17.3	-7.9	-10.4	-14.6	-14.0	
BG	-5.6	-6.1	-2.7	-5.9	-6.5	-11.5	-18.6	-22.5	-22.9	-18.8	-17.2
HR	-1.1	-1.6	-6.0	-7.2	-4.5	-5.6	-7.0	-7.6	-9.5	-7.4	-8.2
MK	-2.0	-7.1	-9.5	-3.1	-8.4	-2.7	-0.9	-7.2	-13.1	-10.7	-13.5

Source: Ameco, CBBH (until 2008) 2009 (IMF).

In recent years there was considerable discussion about the sustainability of large external imbalances such as those in a number of BSEC-7 countries. On the one hand it was argued that "The large current account deficits […] have plausibly facilitated a more rapid convergence rate in output and living standards" (Lane and Milesi-Ferretti 2006) although it was acknowledged that the sustainability of the rapid convergence process in these countries would depend also on the use of the incoming capital. In addition, large external imbalances raised the question about their financing. In this context it was pointed out that much of the capital inflows have taken the form of Foreign Direct Investment (FDI), which is generally assumed to be a more 'secure' form of external financing than e.g. short-term portfolio investments.

Table 17: Coverage of Current Account by Net FDI

	2000	2001	2002	2003	2004	2005	2006	2007	2008
%									
EE	107.9	104.6	20.3	69.5	50.6	156.9	24.6	26.1	39.9
LV	105.4	18.1	41.0	28.3	29.7	28.9	33.3	29.8	26.5
LT	55.4	76.9	97.7	11.3	29.5	37.0	47.7	25.0	26.6
BiH[1]	33.1	14.5	20.2	23.5	43.0	30.5	69.0	104.6	33.8
BG	144.4	104.4	235.9	187.8	172.4	119.3	130.4	100.1	65.8
HR	199.9	153.2	25.3	87.7	46.8	64.6	95.1	107.3	63.1
MK[1]	36.9	15.9	22.5	23.5	71.4	61.5	755.5	143.0	58

[1] *IMF Art IV.*
Note: Net FDI (inflow-outflow) includes intercompany loans.
Source: National central banks, IMF.

Table 17 looks at the coverage of the current account deficit in BSEC-7 countries by net FDI. This is a rather volatile series, strongly impacted by large-scale privatisations or individual FDI inflows. Overall, however, the data shows that for the Baltic countries the coverage ratio in the later stage of the boom period tended to be lower than in the early stage. In 2007 the share of the current account deficit covered by net FDI was around one third in all Baltic countries. The situation is different for the SEE-4 countries. In Bulgaria net FDI consistently exceeded the current account deficit until 2007. In Croatia the pattern was very volatile but on average higher than in the Baltic countries and in Bosnia and the FYR of Macedonia the initially relatively low coverage ratio tended to increase over time. In 2008 the situation changed completely in the SEE-4 countries as net FDI fell sharply. Only about two thirds of the current account deficit was covered in Bulgaria, Croatia and Macedonia and only one third in BiH.

2.3 From Boom to Bust in the Baltic Countries

As discussed in section 2.1 the recent growth performance of the BSEC-7 countries had similarities but also clear differences. Annual real GDP growth in the Baltic countries peaked in 2006/2007 and decelerated afterwards. By contrast, growth in the SEE-4 countries only started to decelerate in the course of 2008.

These timelines suggest that the triggers for the turning point in the growth cycle of the Baltic countries were country-specific and related to the internal and external imbalances described in section 2.2 rather than the current international financial crisis, which hit most emerging markets only in the second half of 2008. The impact of the crisis, however, severely aggravated the situation in the Baltic countries – as well as all other BSEC-7 countries.

Looking in more detail at the sequencing of events in the Baltic countries, the interaction between financial and 'real' sector played a key role in the process.[23] Exceptionally favourable external financing conditions in recent years facilitated a strong increase in domestic credit in particular for mortgages and the fixed exchange rate regimes helped to keep interest rates low. Affordable credit in turn led to an increase in domestic demand and increasing integration in the EU helped to increase exports. Strong real GDP growth resulted in rapid increases in disposable income and employment which over time fuelled inflation and increased ULC.

Higher inflation resulted in a further decline of already low real interest rates, which further stoked credit growth, domestic demand and external debt. Moreover, strong competition for market shares in the fast-growing Baltic banking markets may have had a negative impact on lending standards. At the same time, buoyant

[23] For a more general description of these interactions see e.g. Martin, Schuknecht and Vansteenkiste (2007) and chapter 3 in IMF (2008b).

demand for imports resulted in large external imbalances which in turn resulted in a further increase in external debt.

In the later stage of the boom strong asset price growth in particular for housing further increased the scope for credit via increased collateral values and asset price increases resulted in exuberant expectations by economic agents as regards future asset price growth. Together these factors resulted in a self-reinforcing cycle and it became increasingly clear that the Baltic countries were overheating.[24]

What was the role of economic policy in the Baltic countries during the boom years? Given the fixed or almost fixed nominal exchange rate regimes in the Baltic countries, monetary policy could influence domestic liquidity conditions and thus credit growth only to a very limited extent. Latvijas Banka, the only Baltic central bank setting national policy rates, raised its key interest rate by a total of three percentage points to 6.0% between September 2002 and May 2007.[25] In addition, increases in the rate and base of reserve requirements were used in Latvia and Estonia. Central banks and supervisors also took measures to strengthen banks' capital bases, encourage better risk management, increase disclosure requirements, broaden the collection of information in the credit registry and made public statements on risks related to developments in the housing market.

The Baltic countries have also undertaken a number of other policy actions during the boom period. Some of these measures had the explicit aim to contribute to a cooling of the economy whereas others rather stoked the boom.[26]

In Latvia a so called 'anti-inflation package' was implemented in March 2007. This package consisted of a number of prudential, structural and fiscal measures. As part of this package only income declared to the tax authorities could e.g. be used to determine loan eligibility, a minimum 10% down-payment was required for all large loans to households and taxation of real estate was tightened.

As argued above it is not straightforward to assess whether fiscal policies had a counter-cyclical effect on the Baltic economies during the boom period. On balance, however, it seems that fiscal policies tended to be either insufficiently restrictive or even pro-cyclical and did not provide an important contribution to reducing macroeconomic imbalances although Estonia had consistently a stronger fiscal position than the other two Baltic countries.

[24] See for example Luengnaruenmitchai and Schadler (2007), IMF (2007 and 2008a), Vamavakidis (2008) and Szekely and Watson (2009).

[25] The de facto impact of changes in the policy rate on monetary conditions in Latvia is, however, limited due to the large degree of euroisation.

[26] The measures designed to dampen economic growth sometimes reversed earlier policy measures that fuelled the boom during its early years. Latvia reduced e.g. the minimum required capital adequacy ratio from 10% to 8% in late-2004. In addition, limits on banks' open positions in euros were eliminated in early 2005, before being reinstalled in April 2007.

Labour and product markets in the Baltic countries are overall assessed as flexible and well-functioning although there is scope for further improvement (see Section 3.2). However, significant increases in minimum and public sector wages during the boom period further fuelled wage increases and thus domestic demand and external imbalances. In addition, the countries were reluctant to foster immigration, which could have helped to ease increasing labour market bottlenecks. Finally, for a long time the countries were reluctant to take measures to dampen housing market developments such as changes in the tax treatment of real estate.

What were the domestic factors triggering the economic turnaround in the Baltic countries? Again there appears to have been a close interaction between the financial sector and the real economy. Growing awareness of the risks associated with increasingly unsustainable internal and external imbalances appears to have resulted in more restrictive lending practices by commercial banks. At the same time there was some cooling of the housing markets, possibly due to the strong increase in housing supply and / or a growing realisation that prices in at least some segments of the real estate market had become out of line with economic fundamentals (see Box 2). These two mutually reinforcing effects resulted in a reversal of investment and consumption growth as well as income and profit expectations. In Latvia, the above-mentioned anti-inflation package most likely accelerated this chain of events.

To conclude, the triggers for the turning point in the growth cycle of the Baltic countries were country-specific and initially unrelated to the international financial crisis. The impact of the crisis, however, severely aggravated the situation in the Baltic countries and – as of the second half of 2008 – impacted all other BSEC-7 countries as well. The interaction between financial and 'real' sector played a key role in the boom-bust cycle and the ability of the Baltic authorities to influence demand conditions during these years was significantly curtailed by the rigid nominal exchange rate regimes. In addition, the policy measures used during the boom years were mostly either not effective and / or came too late. The Latvian anti-inflation package shows that an encompassing set of policy measures could have had a significant effect on credit growth and domestic demand. The package was, however, only introduced when serious internal and external economic imbalances had already been built up, making Latvia highly vulnerable to the impact of the international financial crisis.

3 Macro-financial and Structural Challenges

The current international financial crisis impacts the BSEE7 countries in different ways. First, it creates difficulties to obtain financing abroad to service existing debt and to ensure further credit growth. The magnitude of these difficulties depends critically on factors such as the overall indebtedness of the economy, the share of

short-term external debt and the extent to which this is covered by reserve assets. Second, it weakens foreign demand and reduces exports, which has a negative impact on output and employment. This in turn aggravates problems in the banking sector such as an increase in non-performing loans.

The magnitude of existing economic imbalances and macro-financial vulnerabilities are important to assess how well the BSEC-7 countries are likely to cope with the current economic and financial crisis. In addition the structural features of the economies including the relative quality of the functioning of markets will be important for the speed with which they are likely to return to a growth and convergence trajectory once the current global economic crisis has come to an end.

3.1 Macro-financial Vulnerabilities

A key challenge for BSEE-7 countries at the current juncture is to obtain financing from abroad. The extent of this challenge is associated with the ratio between credits and deposits. In all BSEC-7 countries the credit/deposit ratio was around one in 2000. By 2008, however, it had increased to around 2 in Lithuania and Estonia and 2.5 in Latvia. By contrast there was relatively little change over time in the credit/deposit ratios in the SEE-4 countries.

Table 18: Credit/Deposit Ratio

	2000	2001	2002	2003	2004	2005	2006	2007	2008
EE	1.2	1.2	1.4	1.6	1.8	1.6	1.8	2.1	2.1
LV	1.2	1.4	1.5	1.7	1.8	2.0	2.2	2.3	2.5
LT	1.0	0.9	1.0	1.2	1.2	1.4	1.5	1.8	2.1
BG	0.7	0.7	0.8	0.9	1.0	1.0	1.0	1.1	1.3
HR	1.1	0.9	1.0	1.1	1.1	1.2	1.2	1.1	1.2
MK	1.2	0.7	0.9	0.8	0.8	0.8	0.9	0.9	1.0

Source: National central banks, OeNB.

Looking at gross foreign debt developments the differences between the two country groups are much less developed. In the Baltic countries gross foreign debt (in % of GDP) roughly doubled between 2000 and 2008 to around 71% in Lithuania, 120% in Estonia and 128% in Latvia. Gross external debt in Bulgaria started from a much higher level than in the Baltic countries and declined initially before reaching around 108% of GDP in 2008. In Croatia one can see an almost steady increase to 83% in 2008 and in BiH and in the FYR of Macedonia there is

no clear trend with gross foreign debt oscillating around 40% and 54% of GDP respectively in 2008.[27]

Table 19: Gross Foreign Debt

	2000	2001	2002	2003	2004	2005	2006	2007	2008
in % of GDP									
EE	53.0	53.6	57.9	64.5	76.0	86.1	97.7	112.4	120.2
LV	60.1	67.9	69.3	75.7	88.4	98.4	113.0	127.0	128.1
LT	42.0	43.9	39.5	40.4	42.3	50.7	60.2	72.3	71.4
BiH					47.5	52.6	48.0	48.5	40,5*
BG	86.7	78.3	64.8	59.9	63.7	70.9	81.9	100.2	107.7
HR	53.0	53.3	53.9	66.3	70.0	72.1	74.9	76.9	83.0
MK	43.2	43.5	43.5	39.7	47.9	53.9	49.1	48.4	54.2

** 2008 projection, IMF Art. IV.*
Source: National central banks, OeNB.

Short term debt levels in the BSEC-7 countries show a clear upward tendency. By 2007 this ratio exceeded 50% in Estonia and Latvia and 30% in Bulgaria. In 2008 short-term debt to GDP started to decrease in Estonia and Latvia but further increased in Bulgaria.

Table 20: Short-term Gross Foreign Debt

		2000	2001	2002	2003	2004	2005	2006	2007	2008
%										
EE	STD/GDP	25.0	24.1	26.2	30.9	30.5	42.9	52.5	54.2	46.6
	Reserves/STD	97.3	77.4	68.4	58.1	62.2	49.3	46.3	45.2	38.1
LV	STD/GDP			30.2	35.5	36.9	41.0	45.8	50.6	42.9
	Reserves/STD			58.1	38.0	41.0	46.8	73.8	66.1	28.4
LT	STD/GDP	9.6	13.0	13.5	15.9	15.2	19.7	18.0	18.6	20.8
	Reserves/STD	117.7	103.9	110.7	102.9	93.3	76.4	99.7	91.9	76.9
BG	STD/GDP	9.6	7.1	9.1	8.6	12.3	18.0	24.8	33.7	38.9
	Reserves/STD	257.3	343.3	280.2	326.7	263.8	173.3	132.6	115.2	89.8
HR	STD/GDP	4.5	2.4	2.0	5.7	8.7	10.3	11.9	10.3	11.1
	Reserves/STD	424.7	994.3	1134.1	441.2	256.5	231.2	214.5	241.9	191.4
MK	STD/GDP					13.4	14.8	14.1	18.1	22.5
	Reserves/STD					163.9	201.5	257.2	168.3	150.2

Source: National central banks, OeNB.

[27] Net foreign debt levels are much lower (between 35% and 56% of GDP) but show a clear and sometimes rapid upward trend in all countries for which data are available.

In situations where short-term external debt can not be rolled over quickly enough, foreign currency reserves can for some time be used as buffers. The extent to which BSEC-7 countries can use such buffers is, however, rather uneven across countries. The ratio of reserves to short-term debt in 2008 was between 30% and 40% in Estonia and Latvia, between 76% and 90% in Lithuania and Bulgaria and far above 100% in Croatia and the FYR of Macedonia. Compared to 2007 the ratio declined in all BSEC-7 countries, sometimes significantly.

Structural banking sector indicators show similarities as well as differences between the BSEC-7 countries. The share of foreign ownership is rather similar with between around 85 and almost 100% of the banking sector being owned by foreign parent banks.[28] State ownership is either low or non-existent.

Performance indicators for the banking sector show high and rising profitability for the years from 2005 to 2007 although country differences are considerable. Data for 2008 show a sharp decline in profitability for the Baltic countries and BiH whereas the figures for the other SEE-4 are almost unchanged.

Table 21: Structural Banking Indicators

	Ownership 2007			**Return on assets**				**Return on equity**			
	Foreign	**Domestic**	**State**	**2005**	**2006**	**2007**	**2008**	**2005**	**2006**	**2007**	**2008**
%											
EE	97.5	2.5	0.0	2	1.7	2.6	2	21	19.8	30.2	21.4
LV	78.2	16.3	5.5	2.1	2.1	2	0.3	27.1	25.6	24.2	4.6
LT	95.6	4.4	0.0	1.1	1.5	2	1.2	13.8	21.4	27.3	16.1
BiH	91.0	4.2	4.9	0.7	0.9	0.9	0.5	6.2	8.5	8.9	4.8
BG	84.2	15.7	0.0	2	2.2	2.4	2.1	21.4	25	24.8	23.1
HR	90.4	4.9	4.7	1.7	1.5	1.6	1.8	15.1	12.7	10.9	10.9
MK	85.9	n.a	a.a	1.2	1.8	1.8	1.9	7.5	12.3	15	16.5

Source: IMF, Global Financial Stability Report 04/2009, national central banks.

These figures are consistent with changes in the *share of non-performing loans over total loans*. Between 2002 and 2007 the share of non-performing loans dropped or remained constant in all BSEC-7 countries – hardly surprising given the very strong macroeconomic performance of the countries during these years.[29] The 2008 figures for Latvia, Bulgaria and in particular Estonia show an increase in the ratio of non-performing loans although in absolute terms the share of non-

[28] The banking sector in the Baltic countries is predominantly owned by Swedish banks, the banking sector in Bulgaria and Croatia is dominated by Austrian and Italian banks and the banking sector in BiH and FYR of Macedonia by Austrian, German and Italian banks.

[29] On a more cautious note Maechler et al. (2007) argue that caution regarding credit quality is justified if credit growth accelerates, which was for some years the case in some BSEC-7 countries. Stable rates of credit growth are seen as less problematic.

performing loans is still low.[30] The figure for Croatia has actually declined compared to 2007.

Table 22: Non Performing Loans /Total Loans

	2002	2003	2004	2005	2006	2007	2008
%							
EE	0.8	0.4	0.3	0.2	0.2	0.4	1.6
LV	2	1.4	1.1	0.7	0.4	0.4	2.2
LT	5.3	2.4	2.2	0.6	1.0	1.0	1.1
BiH		8.4	6.1	5.3	4	3	3.1
BG	2.6	3.2	2	2.2	2.2	2.1	2.4
HR	10.2	8.9	7.5	6.2	5.2	4.8	4.8
MK	23.1	22.1	17	15	11.2	7.5	6.6

Source: Global Financial Stability Report 04/2009.

As soon as the international financial crisis spread to the CESEE countries and other emerging markets (in the case of the Baltic countries even before) speculations about the risk of sovereign default in the BSEC-7 countries became topical. In this context sovereign ratings by Fitch, S&P's and Moody's have – except for Estonia and Lithuania in the case of Moody's – all been recently downgraded to 'B' levels. Furthermore the outlook is mostly seen as negative. The Fitch banking system indicator suggests a rather low overall quality of the banking system although this rating is not atypical for emerging market banking systems[31] and the macro-prudential indicator by Fitch suggests – by international standards – an intermediate level of vulnerability.

Another widely used indicator for market perceptions regarding the risk of sovereign default are credit default swaps (CDS) although for many BSEC-7 countries the liquidity in the markets for government bonds is low, which reduces the information contents of long-term interest yields and decreases the share of 'fundamental' information contained by CDS spreads. CDS spreads for the BSEC-7 countries have peaked in March 2009 and since then are on a decreasing trend as markets appear to have calmed down in response to IMF and EU financial assistance packages for some countries in the region. However, they are still far away from pre-crisis levels.

[30] Data until March 2009 show a further increase in Latvia to 7%.

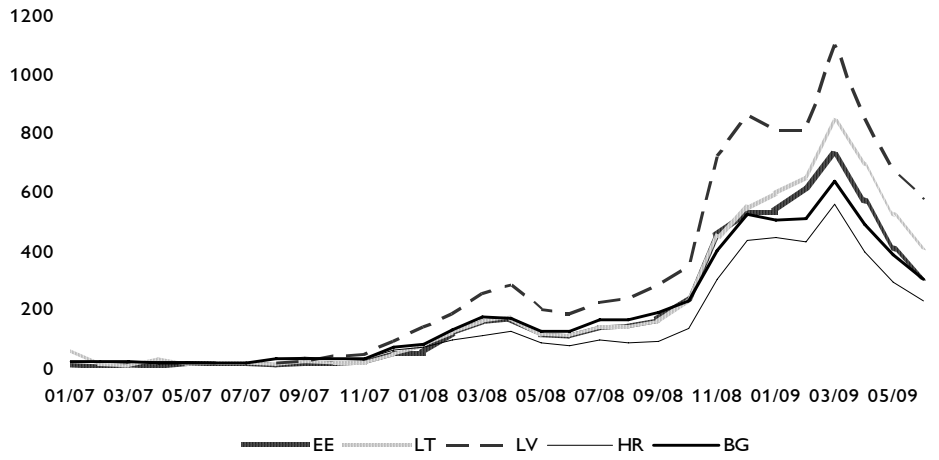
[31] In September 2006 half of all emerging market banking systems was placed in category 'D'.

Table 23: Country Ratings

	Country Rating						Banking System Indicator (BSI)	Macro-Prudential indicator (MPI)
	Fitch		S&P's		Moody's			
		outlook		outlook		outlook		
EE	BBB+	–	A	–	A1	–	D (B)*	2
LV	BB+	–	BB+	–	Baa3	–	D (C)*	2
LT	BBB	–	BBB	–	A3	–	D	2
BiH	n.a.		B+	=	B2	=	n.a.	n.a.
BG	BBB-	–	BBB	–	Baa3	=	D	2
HR	BBB-	–	BBB	–	Baa3	=	D	2
MK	BB+	–	BB	–	n.a		n.a.	n.a.

Note: Figures in brackets are from April 2008.

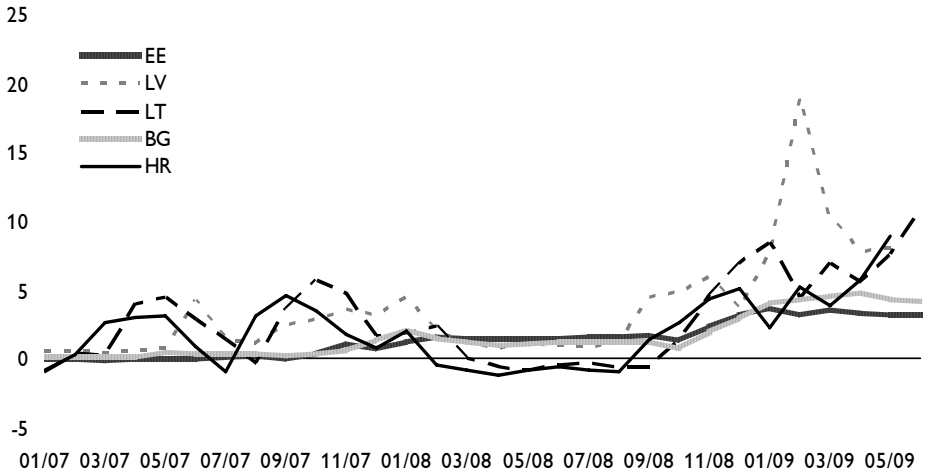
Chart 2: Spreads for Five-Year Credit Default Swaps



Source: Datastream.

Turning to exchange rate developments, the three BSEC-7 currencies with (some) nominal exchange rate flexibility (Croatian Kuna, Latvian lats and Macedonian denar) have recently experienced an increase in volatility compared to the pre-financial crisis period (see Annex).

Chart 3: Spread 1-Month Interbank/Euribor



Source: Datastream, Bloomberg.

Recent money market spread developments vis-à-vis the Euribor suggest that market confidence in the ability of some BSEE-7 countries to retain exchange rate anchors was at times weakened although the explicit aims of the IMF-led support program for Latvia to maintain the exchange rate anchor may have helped to enhance market confidence.[32] The spread peaked in Latvia at 19% in February 2009.

3.2 Structural Challenges

As argued in Section 2.1 the growth and convergence process in the BSEC-7 countries since 2000 became over time increasingly driven by domestic demand, which in turn was closely interlinked with the rapid financial deepening process and resulted in significant external imbalances. These findings are in line with Bems and Schellekens (2007) who argue that the recent rapid financial deepening process in most emerging economies in Europe benefitted disproportionately the non-tradable sector including real estate and construction.[33] At the current juncture, however, the BSEC-7 countries face a rather different situation characterised by a

[32] At times such concerns are also publicly voiced, with regard to Latvia there were a number of public comments suggesting the need for a devaluation of the currency.

[33] The share of GVA in construction in per cent of total GVA in the Baltic countries, Bulgaria and Croatia was between 7 and 8% in 2007 compared to around 5% in the euro area (Égert and Martin, 2009).

deep downturn of domestic growth as well as a considerable reduction in foreign demand. The impact of the latter will inter alia depend on nominal exchange rate developments in competitor countries with flexible exchange rate regimes.

This leads to a set of questions regarding the structural flexibility of the BSEC-7 economies. First, how fast can the allocation of resources between the tradable and non-tradable sector be changed? How long will it take for example for 'inflated' construction sectors to shrink to 'normal' levels?[34] Second, will markets be flexible enough to preserve or regain external competitiveness?

These questions require an assessment of the flexibility of capital, product and labour markets in the BSEC-7 countries, which is difficult given the lack of clarity how to define these types of flexibility and the difficulties of cross-country comparisons. One way to approach this task is to look at available indicators compiled by the EBRD, the Fraser Institute and the World Bank comparing different aspects of flexibility across large groups of countries.

The EBRD and the Fraser Institute provide various indicators with values ranging between 1 and 4+ (EBRD) respectively 1 and 10 (Fraser Institute). The World Bank summary indicators show country ranks out of a total of 181 countries.

Table 24: European Bank for Reconstruction and Development

	Banking sector reform	Enterprise Reform	Competition Policy	Infrastructure reform
EE	4.0	3.7	3.7	3.3
LV	4.0	3.0	3.0	3.0
LT	3.7	3.0	3.3	3.0
BiH	3.0	2.0	2.0	2.3
BG	3.7	2.7	3.0	3.0
HR	4.0	3.0	2.7	3.0
MK	3.0	2.7	2.3	2.3

Source: EBRD Transition Report 2008; data refer to 2008.

Note: 4,3 is the maximum value (standards and performance typical of advanced industrial economies).

[34] Public expenditure programs with a strong focus on construction may cushion the short-term impact of the current financial crisis on growth but may also extend the structural adjustment period.

Table 25: Fraser Institute

	Credit Market Regulations	Business Regulations	Labour Market Regulations	Summary Indicator (Rank)
EE	10.0	7.7	5.2	7,9 (11)
LV	9.7	6.7	5.7	7,3 (40)
LT	9.6	6.8	4.9	7,4 (31)
BiH	9.5	4.5	5.9	6,0 (105)
BG	9.2	5.1	7.0	6,8 (68)
HR	8.8	5.6	5.6	6,4 (90)
MK	8.9	6.3	6.1	6,4 (85)

Source: Fraser Institute: Economic Freedom of the World 2008; data refer to 2006.
Note: Summary indicator values are between 1 and 10; ranks are out of a sample of 141 countries.

Table 26: World Bank

	Getting Credit	Starting a Business	Closing a Business	Dealing with Construction Permits	Registering Property	Employing Workers	Ease of Doing Business Rank (Summary)
EE	43	23	58	19	24	163	22
LV	12	35	86	78	77	103	29
LT	43	74	34	63	4	131	28
BiH	59	161	60	137	144	117	119
BG	5	81	75	117	59	60	45
HR	68	117	79	163	109	146	106
MK	43	12	129	152	88	125	71

Source: World Bank – Doing Business 2009; data refer to 2008.
Note: Ranks are out of a sample of 181 countries.

Starting with capital markets indicators, all BSEC-7 countries and in particular the Baltic countries seem to do rather well by international standards. Some weaknesses are, however, shown by the EBRD indicator for banking sector reform in BiH and Macedonia. Moreover, credit markets in Croatia get a relatively weaker assessment by the Fraser Institute and the World Bank although the EBRD's banking sector reform indicator has a very high value.[35]

Turning to product markets and 'business' indicators the picture is more mixed. According to the EBRD, enterprise reforms are less advanced in the SEE-4

[35] As mentioned above the Fitch banking system indicator suggests by contrast a rather low overall quality of the banking system in the BSEC-7 countries although the rating is in line with the assessment for many other emerging markets.

countries (except Croatia) than in the Baltic countries and the same picture emerges from the Fraser Institute's business regulation index. Selected World Bank indicators in this field suggest, however, that it is relatively burdensome by international standards to start a business in Lithuania (as well as in BiH and Macedonia). In addition, in most BSEC-7 countries it appears to be relatively burdensome to close a business. It is also interesting to note that Estonia, Lithuania and Bulgaria do rather well on real estate related indicators whereas the other SEE-4 countries do rather badly. All BSEC-7 countries still have room for improvements when it comes to infrastructure reform, in particular BiH and Macedonia.

As far as labour market indicators are concerned, the relative international position of the Baltic countries, in particular Estonia and Lithuania, is somewhat poorer than for capital and product markets.[36] The SEE-4 countries are also not doing too well except for Bulgaria which has the best score out of these seven countries both for the Fraser Institute labour market regulations indicator and the World Bank's employing workers indicator.[37]

The overall summary ranks provided by the Fraser Institute and the World Bank suggest that the Baltic countries - and in particular Estonia - have by international standards very flexible economies Bulgaria is also doing rather well by international standards. Macedonia, Croatia and BiH (in this order) have the lowest summary indicator ranks.

4. Conclusions

The catching-up process of many BSEC-7 countries in particular the Baltic countries but also Bulgaria and Croatia during the period 2000 to 2007 was impressive. The main drivers of this process changed notably over time. In 2000, net exports still made a considerable positive contribution to real GDP growth in some BSEC-7 countries. In 2007, however, GDP growth in all BSEC-7 countries was exclusively driven by domestic demand which in turn was fuelled by rapid financial deepening made possible by easy access to international capital and low global interest rates.

[36] Data compiled by the World Economic Forum suggests, however, that the wage determination is very flexible in all three Baltic countries (World Economic Forum 2008).

[37] The relatively weak position with regard to structural labour market indicators could be partly related to tight labour markets in some BSEC-7 countries and the associated increase in the bargaining power of labour, not only with regard to wages but also with regard to structural labour market features such as employment protection and minimum wages. The relatively good performance of Bulgaria, however, casts some doubts on this argument.

Credit growth to the private sector – often denominated in foreign currency – was strong in all BSEC-7 countries, in particular in the Baltic countries and Bulgaria and the stock of domestic credit to the private sector increased considerably. The rapid financial deepening process was fostered by decreasing nominal and real interest rates – not least due to the fixed exchange-rate regimes in the BSEC-7 countries – and rapidly growing asset prices, in particular real estate prices. A number of other factors are also likely to have played a role in stoking domestic demand in some BSEC-7 countries and fiscal policy tended to be either insufficiently restrictive or even pro-cyclical.

Fast growth and real convergence resulted in substantial internal and external macroeconomic imbalances. HICP inflation in the Baltic countries and Bulgaria increased to double-digit figures in 2008 and also Croatia and the FYR of Macedonia experienced a large increase in inflation in 2008. Inflationary pressures were mostly broad-based, with large contributions coming from external factors as well as adjustments in taxes and excise duties. There were, however, also large increases in services prices mainly reflecting the tightening labour market situation in most BSEC-7 countries. Strong economic growth created also significant current account deficits in some BSEC-7 countries. Additional production was concentrated on meeting domestic demand, rather than on the tradable sector and real appreciation may have had a negative impact on competitiveness. The coverage of the current account deficits by net FDI inflows for the Baltic countries tended to decrease over time to around one third in 2007 but exceeded 100% in all SEE-4 countries until 2007.

The triggers for the turning point in the growth cycle of the Baltic countries were country-specific and initially unrelated to the current international financial crisis. The impact of the crisis, however, severely aggravated the situation in the Baltic countries and since the second half of 2008 impacts all BSEC-7 countries in a number of ways. First, it increases the price of foreign capital and may create difficulties to obtain financing abroad. Second, it weakens foreign demand and reduces exports, which has a negative impact on output and employment. This in turn aggravates problems in the banking sector such as an increase in non-performing loans.

The challenge to obtain financing from abroad is associated with the credit/deposit ratio, which has strongly increased in the Baltic countries in particular. Developments in foreign debt are more similar across countries with foreign debt exceeding by mid-2008 100% of GDP in Estonia, Latvia and Bulgaria. Short term debt levels also show a clear and sometimes rapid upward trend across the BSEE7 countries, implying a considerably higher need to obtain short-term external financing than a few years ago. Foreign currency reserves as a share of short-term debt are rather uneven across countries and well below 100% in the Baltic countries and Bulgaria.

Key banking sector indicators show that the share of foreign ownership is rather similar across the BSEC-7 countries and Performance indicators for the banking sector show high and rising *return on equity rates* for the years 2003 to 2007. For some countries data for 2008 show a sharp decline in profitability and a strong increase in the ratio of non-performing loans. Sovereign ratings for the BSEC-7 countries have almost all been downgraded recently and CDS spreads for the BSEC-7 countries have soared. BSEC-7 currencies with (some) nominal exchange rate flexibility have recently experienced increased volatility and recent money market spreads vis-à-vis the Euribor suggest that market confidence in the ability of some BSEE7 countries to retain exchange rate anchors was at times weakened.

The current deep downturn of domestic demand in conjunction with a considerable reduction in foreign demand and the need in some countries to re-allocate resources between the tradable and non-tradable sector requires considerable flexibility of capital, product and labour markets in the BSEC-7 countries. Looking at available flexibility indicators all BSEC-7 countries and in particular the Baltic countries seem to do rather well as regards capital market indicators although some weaknesses are shown in BiH, the FYR of Macedonia and Croatia. For product markets and 'business' indicators the picture is more mixed. Enterprise reforms appear less advanced in the SEE-4 countries except Croatia than in the Baltic countries but there are some weak aspects in all BSEC-7 countries. As regards labour market indicators, the position of the Baltic countries is somewhat poorer than for capital and product markets and the SEE-4 countries are also not doing too well except for Bulgaria. Overall summary ranks suggest, however, that the Baltic countries and Bulgaria have by international standards very flexible economies.

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Annex: Tables

Annex Table 1

Private Final Consumption Expenditure Growth, Constant Prices

%

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
EE	7.2	7.4	11.0	10.0	9.5	9.9	12.7	7.9	-3.8	-9.0	-1.3
LV	6.8	7.5	7.1	8.4	9.7	11.2	21.2	14.8	-11.0	-22.0	-6.5
LT	5.5	4.2	6.0	10.4	11.9	12.2	10.6	12.4	4.7	-17.5	-7.2
BH											
BG	4.4	5.2	7.2	5.5	5.9	6.1	9.5	5.3	4.8	-0.3	0.1
HR	4.2	4.3	8.1	4.8	4.1	4.2	2.6	6.2	0.8	-2.5	2.0
MK	11.2	-11.6	12.5	-1.5	8.0	5.7	6.0	9.8	7.8	2.0	3.0

Source: Ameco.

Annex Table 2

Gross Fixed Capital Formation Growth, Constant Prices

%

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
EE	16.9	9.6	24.0	19.0	4.8	8.3	20.1	7.6	-10.4	-20.7	-1.2
LV	10.2	11.4	13.0	12.3	23.8	23.6	16.4	7.5	-13.2	-24.0	-8.0
LT	-9.0	13.3	10.6	13.7	15.7	11.2	19.4	20.8	-6.1	-22.1	-7.3
BH											
BG	15.4	23.3	8.5	13.9	13.5	23.3	14.7	21.7	20.4	-12.7	-2.0
HR	-3.9	7.1	14.0	24.8	5.0	4.9	10.9	6.6	8.2	-7.5	5.0
MK	-1.5	-8.6	17.6	1.1	10.9	-5.4	11.6	13.1	18.8	-11.6	2.0

Source: Ameco.

Annex Table 3

Export Growth

%

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
EE	38.0	6.8	-0.9	9.4	16.8	26.0	19.5	7.1	6.5	-17.0	-0.4
LV	14.9	9.7	8.5	14.3	21.5	32.6	15.7	24.5	8.8	-19.8	0.0
LT	20.6	18.3	13.3	6.2	12.0	27.0	18.0	9.1	24.9	-19.6	3.1
BH											
BG	40.6	10.8	1.2	10.5	19.9	16.5	23.7	12.5	12.6	-15.5	7.7
HR	23.9	12.5	2.3	14.0	9.0	6.1	10.3	8.2	6.7	-2.6	3.9
MK	30.4	-13.2	-7.1	2.7	14.5	19.5	14.8	26.5	10.7	-12.9	4.4

Source: Ameco.

Annex Table 4

Import Growth

%

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
EE	34.6	5.6	6.1	9.8	17.3	22.2	26.5	7.5	-1.7	-20.6	1.5
LV	9.3	15.4	9.3	19.8	26.8	27.3	31.5	24.4	-3.2	-32.3	4.2
LT	9.1	15.3	13.1	6.7	14.2	25.7	23.1	16.0	18.9	-30.4	0.6
BH											
BG	36.4	14.9	3.5	14.2	20.0	22.9	25.8	17.5	15.0	-16.9	5.0
HR	14.0	13.6	13.1	12.2	5.7	6.5	11.2	9.6	8.7	-5.7	6.0
MK	37.7	-11.8	7.2	-2.8	19.0	9.8	15.2	23.4	22.3	-12.0	8.5

Source: Ameco.

Annex Table 5

Employment Rate

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
EE	41.9	42.4	43.2	44.0	44.1	45.3	48.2	48.9	48.5	47.6	47.1
LV	39.8	41.0	41.9	42.9	43.6	44.6	46.9	48.8	49.6	47.9	47.1
LT	40.0	38.7	40.2	41.3	41.5	42.8	43.8	44.9	44.5	43.4	42.9
BH*		40.6			44.9						
BG	39.7	40.7	41.1	42.5	43.9	45.3	46.9	48.2	50.0	51.0	51.9
HR	34.9	33.0	34.3	34.6	35.1	35.4	35.7	36.3	36.7	37.0	37.3
MK	24.2	23.7	23.8	23.2	22.7	23.1	23.8	24.6	25.3	26.1	27.0

*EBRD

Quelle: Ameco.

Annex Table 6

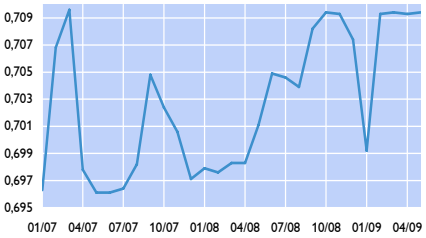
Trade Balance as % of GDP, Current Prices, LC

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
EE	-3.6	-2.5	-7.4	-7.5	-8.2	-6.3	-11.5	-10.9	-4.4	-0.9	-2.2
LV	-7.0	-9.5	-9.7	-12.6	-15.6	-14.4	-21.5	-20.2	-13.1	-4.3	-2.7
LT	-6.3	-5.5	-5.7	-5.8	-7.1	-7.1	-10.2	-13.4	-11.2	-1.5	0.5
BH					-45.6	-45.8	-34.9	-38.4	-40.2	-37.9	-38.7
BG	-5.4	-7.6	-8.4	-10.8	-11.5	-16.2	-18.8	-22.1	-22.8	-17.5	-16.5
HR	-3.2	-3.9	-8.3	-7.9	-6.4	-6.5	-7.0	-7.6	-8.4	-7.0	-7.8
MK	-14.9	-13.9	-20.1	-17.0	-20.7	-17.4	-18.6	-18.8	-26.0	-22.3	-25.0

Quelle: Ameco, IMF (BH Art IMF IV).

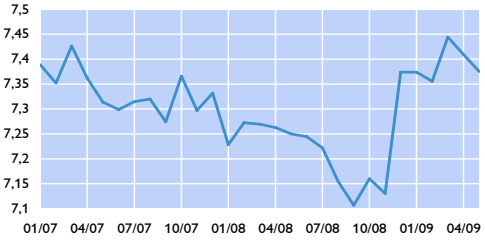
Annex Charts: Exchange Rates

Latvian Lat EUR/LVL



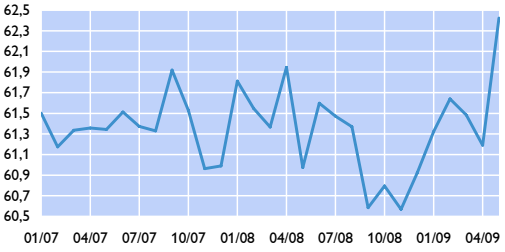
Source: Bloomberg

Croatian Kuna HRK/EUR



Source: Bloomberg

Macedonian Denar MKD/EUR



Source: Bloomberg

Financial Stability in a Brave New World: The Challenges for Southeastern Europe

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Oxford University

Introduction

In the first half of 2009, the impact of the global financial crisis began to reach Southeastern Europe. Insulated at first by somewhat lower levels of financial integration, the economies of the region are now feeling a major impact of the crisis through traditional channels (exports and remittances) as well as capital market linkages. Already, Bosnia-Herzegovina (BiH), Romania and Serbia have arrangements with the IMF. Other countries in the region are now also experiencing varying degrees of financial stress, albeit from somewhat stronger starting positions.

This paper discusses the short and medium-term challenges and options facing policy-makers in Southeastern Europe, taking account of recent experience in other converging economies in Europe. The paper explores in turn the outlook for capital flows; the varied nature of regional transmission mechanisms; the nature and implications of recent financial support packages; the trade-offs facing authorities in terms of adjustment and financing options; and the policy requirements in order to safeguard medium-term financial stability in a changed global setting for capital flows.

The Outlook for Capital Flows

The present global crisis is qualitatively and quantitatively different from the business cycles and credit booms of the past 50 years.

- The sources of the crisis are deep-rooted, reflecting the interaction of market innovations with weaknesses in monetary, fiscal and regulatory policies in many economies, including countries with the strongest systemic impact. These policy and market influences built up over nearly a decade, and will take time to fully reverse.

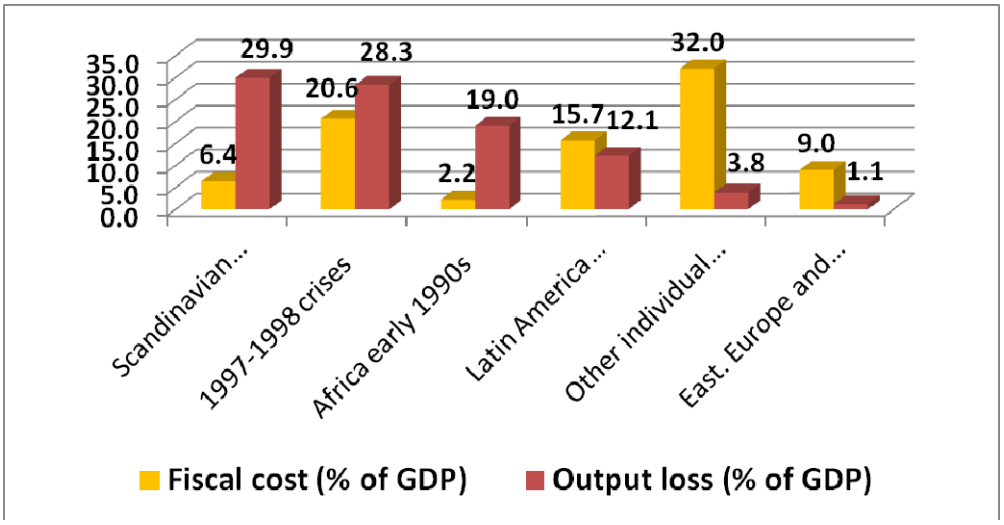
- In a financially integrated global economy, the crisis is affecting all major regions simultaneously, leaving none as a locomotive to help pull others out of recession.
- In those countries, including the United States, that have experienced major asset booms, there is now a need to replace the "wedge" of household savings that were built up in the ephemeral form of wealth increases, and this restoration of liquid savings will exercise a dampening effect on consumption over several years.
- The crisis is being addressed in some cases through major fiscal and monetary stimulus packages, and these will need to be unwound over time, placing a drag upon economies over the medium term. Moreover, as the crisis recedes, it will still take time to wind back the role of state intervention in national economies. And these endeavours will take place against the backdrop of demographic changes that are negatively affecting potential rates of growth.

Evidence presented in the October 2008 IMF World Economic Outlook confirms the unusual breadth and duration of financial stress among world economies, and also underscores that economic downturns and recessions have historically lasted nearly twice as long when preceded by periods of financial stress.

In terms of other crises in the past half century, the present turmoil has closest resemblances with the Asian crisis of the late 1990s, due to the scale of balance sheet problems among both banks and nonbanks. A notable feature of that period was the simultaneous impact of the crisis on both public debt positions and on output, by comparison with other crises (chart 1). This double impact is likely to be mirrored in the current period, given the heavy incidence of balance sheet risk exposures among lending banks as well as firms and households in the countries of the region.

Against this backdrop, the medium-term outlook for capital flows is likely to differ sharply from the environment of the past decade. The need for balance sheet retrenchment by banks in many advanced economies will probably act as a brake on lending flows. The weaker prospects for demand growth in the EU-15 is likely to dampen export-driven direct investment in Southeastern Europe. And remittance flows have already been significantly curtailed in some cases. While FDI and remittances are likely to pick up once a durable recovery in the advanced economies sets in, the same may not be true of bank lending flows (and hence the overall volume of private external financing). This shift puts into question some aspects of the recent pattern of integration in the region, and calls for significant changes in its growth model over the medium term.

Chart 1: Fiscal and Output Costs of Financial Crises



Source: Laeven and Valencia (2008), "Systemic banking crises: A new database".

Regional Transmission Mechanisms

Across the economies of the Baltic region and Southeastern Europe, a number of common features have led to some similarities in transmission mechanisms of the crisis. The over-arching feature of the region is, of course, its close real and financial integration with the EU-15, which implies a simultaneous setback in regional exports. Equally notable was the prevalence of wide current account deficits in Southeastern Europe at the time that the financial crisis began to emerge in 2007.

These current account deficits largely had their origin in private sector saving-investment balances, and they were financed to significant – though varying – degrees by cross-border lending within banking groups based in the EU-15. The deficits have been widest, typically, in those countries with fixed exchange rates and in those where levels of economic catching-up showed the steepest gaps (table 1). As banks faced liquidity constraints and became more risk averse, the scale of this current account financing shrank, resulting in a sharp slowing of consumption and investment.

Despite these basic similarities, transmission channels of financial stress across the region are likely to show some marked differences over time as a result of differing monetary and exchange-rate regimes. In economies with floating exchange rates, an important potential channel of financial stress is the balance

sheet exposure of firms and households through unhedged borrowing in foreign currencies, which can result in a strong upfront contractionary impact.

Table 1: Current Account Deficits in 2007 (% of GDP)

Hard Peg Regimes	**Floating / Intermediate Regimes**
Bulgaria25.1	Czech Republic –3.2
Estonia –18.1	Hungary –6.4
Latvia –22.6	Poland –4.7
Lithuania –14.6	Slovakia –5.1
	Romania –13.9
BiH –12.7	Albania –9.1
	Croatia –7.6
	FYR Macedonia –7.2
	Serbia –15.3

Source: IMF Regional Economic Outlook for Europe, May 2009.

By contrast, those economies with hard peg exchange regimes are more likely to experience financial stress through the impact of a prolonged period of depressed growth as relative prices adjust to restore competitiveness after a period that featured heavy imports of foreign savings. The experience of Portugal after its financial boom is often referred to. However, the depth and duration of recessions in these latter cases will depend in large parts on the extent of sector shifts required, and on the flexibility with which costs adjust. In this respect, it is to some degree reassuring that fiscal positions typically improved during the boom period (table 2), although there were some notable lapses in the later years.

Moreover, across the former transition economies there has been a broad correlation between the pace of financial integration and the track records of productivity and investment growth (charts 2 and 3), which bodes well for their adjustment capacity compared with some earlier crisis countries.

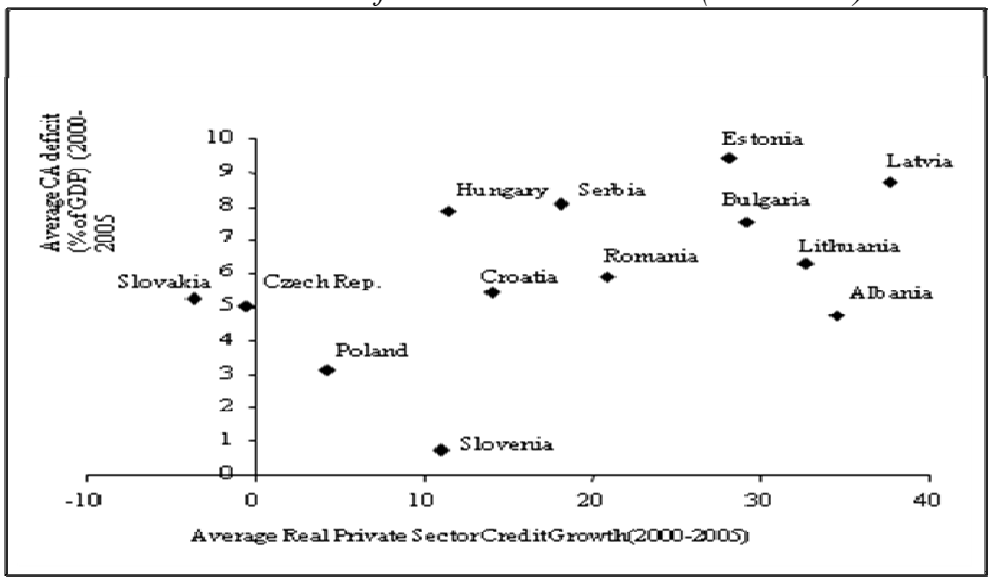
Table 2: Fiscal Deficits and Private Sector Imbalances 2000–2007

in % of GDP

	Fiscal Deficits		Households and Firms	
	2000	2007	2000	2007
Albania	-9.2	-3.8	+5.5	-5.3
BiH	-3.1	-0.1	-3.8	-12.6
Bulgaria	-1.0	3.5	-4.6	-21.6
Croatia	-6.5	-1.2	+4.0	-6.4
Frmr. Ygslv. Rep. of Mac.	+2.5	0.6	-4.4	-7.8
Montenegro	-6.9	6.2	+2.4	-35.5
Romania	-3.8	-3.1	+0.1	-10.8
Serbia	-0.9	-1.9	-0.9	-13.4

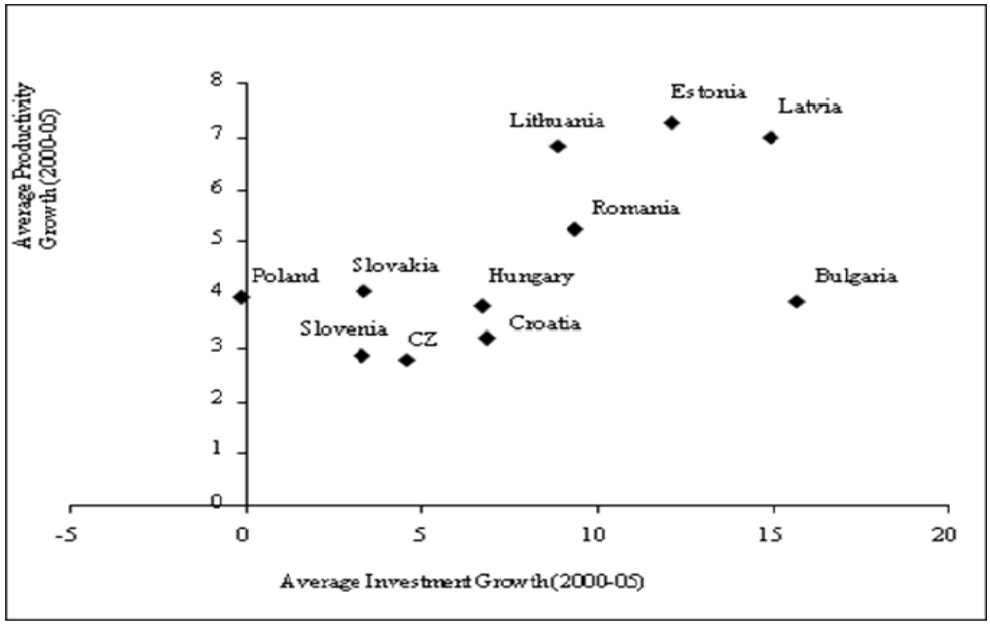
Source: IMF Regional Economic Outlook for Europe, May 2009 and WEO Data Base; European Economy Occasional Paper No. 29, European Commission DG ECFIN, April 2007.

Chart 2: Current Account Deficits and Credit Growth (2000–2005)



Source: European Economy Occasional Paper No. 26, European Commission DG ECFIN,October 2006.

Chart 3: Productivity and Investment (2000–2005)



Source: European Economy Occasional Paper No 26, European Commission DG ECFIN, October 2006.

Financial Support Packages

The differing external adjustment profiles, as well as variations in the severity of financial stresses, has been reflected in some degree of diversity in the support packages concluded so far with the IMF and other providers of financing. The financial support packages launched by the IMF and the European Union have in common, of course, that they have aimed to cushion economies against the full impact of external financial shocks, while in most cases also calling for significant fiscal adjustment to help restore financial confidence. However, the nominal exchange rate and financing profiles of the packages have differed significantly.

In Latvia, the design of the support package reflected the authorities' commitment to maintain their currency peg against the euro, thus shielding the economy from any large, immediate balance sheet shock due to unhedged currency exposure in the non-bank private sector. It is acknowledged, however, that Latvia may face a prolonged period of slow growth as relative prices adjust and the economy reorients to a changed real and financial environment. Similarly, the support package for Bosnia-Herzegovina does not envisage any change in the euro parity of the Convertible Mark.

In Romania and Serbia the current adjustment programmes involve measures to contain fiscal deficits, but are taking place against the backdrop of significant nominal exchange rate depreciation. This should help restore competitiveness, but may also result in some balance sheet stresses in the corporate and household sectors. A further innovation in these cases has been a stronger initiative to secure rollover commitments from foreign banks and sizable corporate investors, thus reducing the net financing gap to be covered by official resources.

These support packages have been put into place swiftly, and represented a large-scale response to the financing stresses in these economies, compared with the average size of past IMF-supported packages. Nonetheless, questions remain how far the initial assumptions of the programmes will stand the test of time in all cases.

Most obviously, the initial packages assumed a less sharp contraction of output than is evident now across the region, and this raises a question how far structural fiscal deficit goals can be maintained in the face of declining private sector demand. There could also be limits to the political acceptability of very slow adjustment through relative price movements, in the hard peg cases – although the shocks to corporate and household balance sheets of any parity changes would themselves have dramatic and discouraging short-term implications for growth.

More subtly, there are questions to reflect on concerning the design and balance of conditionality. In many ways the underlying challenge for these economies is a change in the growth model. This implies that adjustment success may depend even more on structural reform programmes than on the headline fiscal adjustment that countries are aiming for in their efforts, undeniably important in themselves of course, to preserve private sector financial confidence.

As the economic and financial outlook becomes gradually clearer, such questions may need to be revisited. In doing so, policy-makers will need to consider carefully the trade-offs involved in any departure from the first-round design for financial support packages. Moreover, the pattern of official financing for the economies of the region may also need to be revisited over time. If indeed private financial flows fail to pick up quickly, then the replacement of some expiring IMF financing with longer-term bilateral official flows, including export credits and project loans may need to be considered.

Policy Trade-offs and Options

The different profiles of the recent support packages point to a number of potential trade-offs that country authorities need to consider as they design responses to the current financial crisis.

A first set of trade-offs concern the profile of adjustment implied by the decision to retain the existing exchange rate regime. As an illustration, the potential benefits of avoiding devaluation of a fixed exchange rate will be greatest where

two conditions hold (table 3). The first is that costs are relatively flexible (as a result of nominal wage flexibility and/or rapid productivity growth). The second is that unhedged foreign exchange exposures are relatively high.

Table 3: Adjustment Trade-offs

	Low Balance Sheet Risk	**High Balance Sheet Risk**
Flexible costs		Clear case to hold peg
Rigid Costs	Clear case to depreciate	

A second set of trade-offs concern the approach to relations with creditors – in IMF terminology, "financing assurances." A key choice here is the extent to which pressure is put on existing sources of private financing to avoid cutting back exposure to the economy – or in other words committing to roll-over a high proportion of existing loans. The attractions of seeking firm roll-over commitments is that this reduces the call on official financing sources and national exchange reserves to cover gross financing requirements. There is a cost, however, in terms of the "scar tissue" this may leave in terms of relations with private creditors, which may jeopardise the scope for an early re-emergence of new spontaneous financing – suggesting problematic trade-offs in this strategy if a combination of official financing and some depreciation can help close the external gap without departing from spontaneous market relations (table 4).

Table 4: Financing Trade-offs

	Manageable private/ public rollovers	**Major shortfall in p/p rollovers**
Vulnerable to Depreciation		Concert rollovers even if damage future access
Resilient to Depreciation	Can seek high gross new financing, limit damage to reputation	

The design of these recent packages also suggests patterns of explicit or implicit financial burden-sharing that may be taking shape (table 5). Specifically, the part played by each of the main actors may be formally or informally conditioned on a credible contribution by the other parties in the financial support arrangements. The home country of the main lending banks would, where needed, support those banks and encourage them to continue in their support for the host country. The host would conduct sound economic policies, with an IMF/EC seal of approval where needed, and would take on responsibilities for the support of local-owned banks and, possibly, households experiencing severe financial stress from unhedged foreign exchange credit exposures.

Foreign banks, meanwhile, would commit to maintain their exposure. And the IMF and EU would commit policy-based support financing, along with EBRD and World Bank funds. This broad pattern of burden-sharing is reminiscent of the IMF/Federal Reserve approach to financing assurances during the 1980s debt crisis, and reflects a similar pattern of interdependency, where a small group of creditor banks has as much to lose as the debtor countries in the event of a full-fledged financial collapse.

Table 5: Illustrative Patterns of Financial Burden-sharing

Home Country	Host Country	Foreign Banks	EU & IMF
Fiscal/ liquidity support to banks	Responsible policies, with IFI-endorsed fiscal stance	Maintain rollover exposure at 100%	Validate country policy packages
Monitor bank exposure by country	Support to local banks &, possibly, unhedged households	Proceed with new project financing	Condition support on no exit by banks

Financial Stability over the Medium Term

For the reasons outlined at the beginning of this paper, the outlook for capital markets is probably not for a quick return to the easy financing conditions that prevailed during much of the present decade. This has important implications for the kind of policy adjustments that countries will need to make in order to return to a pattern of strong and sustainable real convergence over the medium term. There will need to be a marked change in growth models in many cases, moving towards a pattern of real convergence based on:

- a lower dependence on external savings;
- a somewhat more labour-intensive pattern of growth;
- fiscal policies that internalise macrofinancial risks as well as EU-mandated ceilings;
- monetary policies that pay greater regard to self-insurance, including through stronger reserve build-ups; and
- structural policies that trigger renewed, strong inflows of FDI rather than debt-creating financing.

In other words, the challenge of the current crisis is to achieve a systemic reorientation of macroeconomic and structural policies that will allow economies to benefit fully from a future revival of world trade, and ensure that they enjoy a sustainable pattern of financial integration.

The primary responsibility for designing policy strategies along these lines lies, of course, with country authorities. However, a crucial role of the international financial institutions and the European Union is to help set the right incentive framework to encourage national policy-makers to develop outward-looking adjustment strategies. The regional nature of the real and financial stresses being experienced in Southeastern Europe only serve to underscore the major externalities involved in ensuring win-win solutions to the challenges posed by the current crisis.

Conclusions

The global financial crisis, in sum, cannot be viewed as a hiatus, following which real convergence can resume on a "business-as-usual" basis. The countries of Southeastern Europe need to embark on a significant recasting of growth models, which will require reorienting both macroeconomic and structural policies. As they embark on this process, a number of the adjustment and financing options they face involve important trade-offs, which need to be weighed carefully in arriving at a policy strategy that traces as rapid a path as possible to resumed growth over the medium term. Moreover, the pattern of official financing for the economies of the region may also need to be revisited in the future if private flows fail to pick up: the replacement of IMF financing over time with longer-term bilateral official flows may need to be considered. The aim of this paper has been to explore a number of these options and trade-offs, and also to stress the need to situate future approaches within a comprehensive medium-term policy strategy for the economies of the region.

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Catching-Up and Inflation in the Baltics and Southeastern Europe: the Role of the Balassa-Samuelson Effect

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Abstract

This paper estimates the Balassa-Samuelson effects for five Central, Eastern and Southeastern European countries with fixed exchange rate regimes on a disaggregated set of quarterly data covering the period from the mid-1990s to the first quarter of 2008. The Balassa-Samuelson effects are clearly present and explain around 16% of inflation differentials vis-à-vis the euro area (about 0.4 percentage points on average); and around 47% of domestic relative price differentials between non-tradables and tradables; or about 23% of total domestic inflation (about 1.1 percentage points on average). The paper presents mixed evidence on whether the Balassa-Samuelson effects have declined since 2001 compared with the second half of the 1990s.

JEL Classification*:* E31, F36, O11, P20

Keywords: Balassa-Samuelson effect, productivity, inflation, transition, convergence, European monetary union, Maastricht criteria

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1. Introduction

This paper presents recent estimates of the Balassa-Samuelson effect for five countries in Central, Eastern and Southeastern Europe (CESEE) with fixed or tightly managed exchange rate regimes – Bulgaria, Croatia, Estonia, Latvia and Lithuania. The magnitude of the Balassa-Samuelson effect for these countries is of considerable interest for policymakers and relevant EU institutions because, under a fixed exchange rate regime, faster productivity growth in tradable versus non-tradable sectors at home compared to the euro area will result in higher overall inflation and therefore real exchange rate appreciation. If monetary policy were to keep inflation around the Maastricht benchmark – average of three EU countries with lowest inflation plus 1½ percentage point – but the Balassa-Samuelson effect was greater than the 1½ percentage point margin, the inflation criterion might be missed.[1] The authorities might therefore feel compelled to maintain, at least temporarily, relatively restrictive monetary and fiscal policies in order to meet the inflation criterion. This might dampen economic growth and job creation. In such circumstances, it might be difficult to explain to the public why the economy needs to slow down in order to adopt the common currency – reasonable observers might argue that the country is being "punished" for catching up too fast.

Recent empirical studies found the Balassa-Samuelson effect to be relatively small. For instance, in our earlier paper (Mihaljek and Klau, 2004) we found that the Balassa-Samuelson effect in Central European countries explained on average only between 0.2 and 2.0 percentage points of annual inflation differentials vis-à-vis the euro area. We also argued that, as the pace of catching-up decelerates, these effects were likely to decrease and hence should not become a determining factor in the ability of these countries to satisfy the Maastricht inflation criterion. Other studies (including Cipriani, 2001; Coricelli and Jazbec, 2001; Égert, 2002a and 2002b; Égert et al., 2003; Flek et al., 2002; Kovács, 2002; Lojschova, 2003) similarly found these effects to be small.

One contribution of the present paper is the size and up-to-dateness of the sample – we analyse quarterly data from the mid-1990s through the first quarter of 2008. For the countries in our sample – Bulgaria, Croatia, Estonia, Latvia and Lithuania – there are only a handful of empirical studies of the Balassa-Samuelson effect.[2] Moreover, for these five countries there have been hardly any estimates of

[1] According to the Maastricht inflation criterion, EMU candidates have to show a price stability performance that is sustainable and an average rate of inflation (observed over a period of one year before the examination) that does not exceed by more than 1½ percentage points that of, at most, the three EU Member States with the best price stability performance.

[2] See Burgess et al. (2003); Chukalev (2002); Égert (2005a) and (2005b); Égert et al. (2003); Funda et al. (2007); Mihaljek and Klau (2004) and (2007); Nenovsky and Dimitrova (2002); and Wagner and Hlouskova (2004).

the Balassa-Samuelson effect covering the period since 2004.[3] This period is relevant because, with the exception of Croatia, all countries in the sample have since joined the European Union. The Baltic states have also entered the exchange rate mechanism ERM II and all three have already missed the Maastricht tests in 2006 and 2008, although Lithuania almost managed to meet the reference value for inflation in 2006. Assessing the size of the Balassa-Samuelson effect for these countries is therefore of particular interest.

Another contribution of the present paper is greater precision of our estimates than in the past (eg, compared with Mihaljek and Klau, 2004). One reason is the much better quality of the data that have been released over the past few years by national statistical authorities for the Baltic states and Bulgaria. This has enabled us to extend the coverage of tradable sectors to agriculture, forestry and fishing, which are major sources of exports of several countries in the region; and to directly include one additional key variable, the share of non-tradables, in regression equations that are being estimated. We also examine whether productivity growth and the Balassa-Samuelson effects have diminished in recent years, an issue that has not been addressed systematically in the literature so far.

Finally, one advantage of our approach is the simple, transparent estimating framework that can be easily interpreted by policymakers and replicated by researchers with access to more disaggregated data.

Section 2 discusses the analytical framework and some relevant data issues. Section 3 reviews historical developments in productivity and inflation differentials within CESEE countries and between those countries and the euro area over the sample period. Section 4 discusses our econometric estimates of the Balassa-Samuelson effects. Section 5 summarises the main results and briefly notes some of their policy implications.

2. Analytical Framework

Using the distinction introduced in our 2004 paper, we discuss two versions of the Balassa-Samuelson effect, the "international" effect (equation 1) and the "domestic" effect (equation 2):[4]

$$\hat{p}_t - \hat{p}_t^* = const + \hat{e}_t + (1-\alpha_t)[\left(\frac{\delta}{\gamma}\right)\hat{a}_t^T - \hat{a}_t^{NT}] - (1-\alpha_t^*)[\left(\frac{\delta^*}{\gamma^*}\right)\hat{a}_t^{T*} - \hat{a}_t^{NT*}] \quad (1)$$

[3] In Mihaljek and Klau (2007) we cover the period through 2005:Q1 for six Central European countries.

[4] The two equations are derived in Mihaljek and Klau (2004); see also Égert (2003) and Égert et al. (2006).

$$\hat{p}_t^{NT} - \hat{p}_t^{T} = \left(\frac{\delta}{\gamma}\right)\hat{a}_t^{T} - \hat{a}_t^{NT} \tag{2}$$

where circumflexes (^) stand for the growth rates; "*" denotes variables in the euro area; $\hat{p}_t - \hat{p}_t^*$ is the difference in consumer price inflation between a given CESEE country and the euro area; $\hat{p}_t^{NT} - \hat{p}_t^{T}$ represents the difference in domestic inflation rates of non-tradables and tradables, i. e. the growth rate of the relative price of non-tradables; $\hat{e}_t$ is the rate of nominal exchange rate depreciation (units of domestic currency vis-à-vis the euro); α_t is the share of traded goods in the consumption basket; $\hat{a}_t^T$ and $\hat{a}_t^{NT}$ are the growth rates of average labour productivity in tradable and non-tradable sectors, respectively; γ and δ are production function coefficients (labour intensities in traded and non-traded sectors); and *const* is a term containing coefficients α, γ and δ.

Equation (1) states that the difference in rates of inflation between two countries can be expressed as the sum of changes in the exchange rate (of the home country's currency vis-à-vis the foreign currency) and productivity growth differentials between traded and non-traded industries at home and abroad, weighted by the respective non-tradables' shares.

Equation (2) states that the growth rate of the relative price of non-tradable goods can be expressed as the difference in average labour productivity growth between tradable and non-tradable sectors.

Both versions of the Balassa-Samuelson effect are thus hypotheses about the structural origins of inflation: in the international version, about the tendency for inflation in the catching-up economies to be higher than in the economies they are converging to; and in the domestic version, about the tendency for the domestic prices of non-tradables to rise faster than those of tradables.

The structural factor that explains the tendency in both cases is the relative productivity growth differential. Historically, productivity growth in the traded goods sector has been faster than in the non-traded goods sector. If the law of one price holds, the prices of tradables tend to get equalised across countries, while the prices of non-tradables do not. Higher productivity in the tradable goods sector will bid up wages in that sector and, with labour being mobile, wages in the entire economy will rise. Producers of non-tradables will be able to pay the higher wages only if the relative price of non-tradables rises. This will in general lead to an increase in overall inflation in the economy.

Charts A1 and A2 in the Appendix verify two key assumptions of the Balassa-Samuelson hypothesis: first, that productivity growth in the tradable sector bids up wages in that sector; and second, that wage growth in the tradable sector spreads to the non-tradable sector. As shown in chart A1, real wage growth in tradable

industries generally closely follows productivity growth in tradables over the sample period. In some cases (Croatia, Latvia, Lithuania), strong productivity gains in tradables are not entirely passed onto real wages in that sector. Chart A2 provides clear evidence of wage equalisation between tradables and non-tradables in CESEE countries – it is remarkable how closely together wages in the two sectors have moved over longer periods in virtually all the five countries.

We derive the non-tradables' shares from national income accounts in constant prices rather than the weight of non-tradables in consumer price indices (usually proxied by the weight of services in the CPI). While the latter is analytically correct – equation (1) is derived from the expression for the CPI as a weighted average of tradables and non-tradables – the former is preferable in empirical work because of the downward bias in the CPI weights of services in CESEE countries. For instance, market-based non-tradables account for only around 20 to 30% of the CPI basket in the Baltic states and Southeastern Europe, although they represent on average around two-thirds of the value added in the economy. Using the CPI weights for non-tradables would therefore seriously underestimate the "true" Balassa-Samuelson effects.

The Balassa-Samuelson effect is sensitive to the classification of tradable and non-tradable sectors. There is no accepted criterion for this classification, and data do not always allow one to make a clear distinction. Consider for instance an often used benchmark for tradables proposed by De Gregorio et al. (1994): tradable industries are those with a share of exports in value added of 10% or more. To take an extreme example, housing is usually considered a quintessential non-tradable. But much of the housing in coastal areas of Bulgaria, Croatia and some Baltic states has been constructed and sold to non-residents in recent years. Data on such sales are generally unavailable, so a substantial part of "exports" of the construction industry might be underreported. Business services are another example of an industry typically classified as non-tradable, even though many companies in this sector are providing their services to (i.e., are outsourcing for) foreign companies.

The classification used in this paper nonetheless follows the traditional approach: agriculture, hunting and forestry; fishing; mining and quarrying; and manufacturing are classified as tradables (NACE branches A–D); while electricity, gas and water supply; construction; wholesale and retail trade; hotels and restaurants; transport, storage and communication; financial intermediation; and real estate, renting and business activities (NACE branches E–K) are classified as non-tradables.[5] Not considered because of their largely non-market content are public administration, defence and compulsory social security; education; health and social work; other community, social and personal services; and activities of households (NACE branches L–P).

[5] The Appendix provides a detailed description of all data used in the paper.

The Balassa-Samuelson effect is also sensitive to the assumption about factor intensities in non-traded and traded sectors (δ and γ). Like the rest of the literature, we assume that $\delta/\gamma = \delta^*/\gamma^* = 1$, i. e., that factor intensities in tradable and non-tradable sectors are the same and do not differ across countries. The reason is practical: very few countries publish income-based GDP data disaggregated for different sectors of the economy. We verified this assumption only for the case of Hungary – the assumption that factor intensities can be approximated by factor shares seems to hold there. In general, however, the labour share in non-tradable industries is higher and, moreover, the ratio of labour shares should be higher in the euro area because tradable industries in CESEE are probably more labour-intensive than in the euro area. This effect would tend to reduce the contribution of productivity differentials to inflation differentials. In other words, it is likely that the "true" Balassa-Samuelson effects are lower than those estimated here under the assumption of equal factor intensities.

3. Productivity and Inflation in Tradable and Non-tradable Sectors

Table 1 summarises developments in productivity growth and inflation in our sample of five CESEE countries and the euro area from an initial observation in the 1996–98 period to the first quarter of 2008. In line with the Balassa-Samuelson hypothesis, productivity growth was higher in tradable sectors, and relative prices increased faster in non-tradable sectors, in all six economies considered.[6] However, no clear pattern between productivity differentials and relative price differentials seems to emerge at first sight: Latvia, for instance, had the second highest productivity differential and the lowest relative price differential; while Bulgaria had the lowest productivity differential and the highest relative price differential (chart 1).

[6] In the euro area, inflation of non-tradables was only marginally higher than that of tradables.

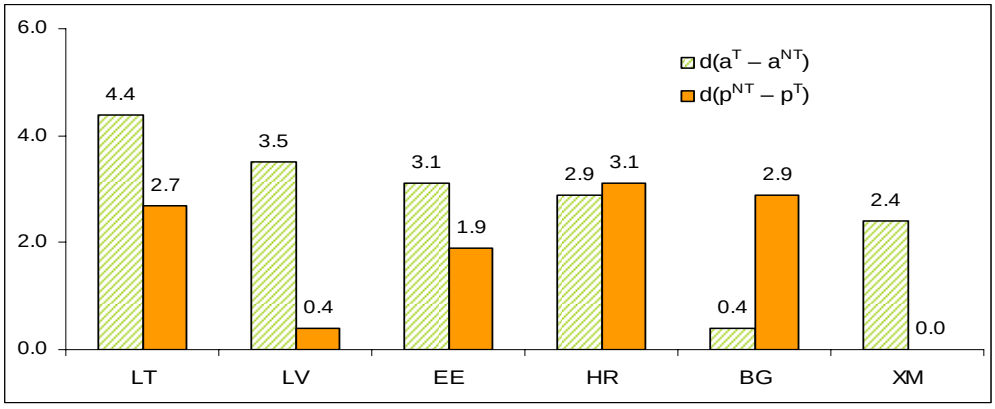
Table 1: Productivity Growth and Inflation in CEE[1]

Country (t_0)	Productivity Growth			Inflation			
	a^T	a^{NT}	$a^T - a^{NT}$ [2]	P [3]	p^T	p^{NT}	$p^{NT} - p^T$ [4]
Bulgaria (1998:Q2)	3.3	2.9	0.4	6.8	4.7	7.6	2.9
Croatia (1997:Q1)	5.2	2.3	2.9	3.4	2.8	5.9	3.1
Estonia (1997:Q1)	9.0	5.9	3.1	5.1	4.2	6.1	1.9
Latvia (1998:Q2)	8.8	5.3	3.5	5.0	5.1	5.5	0.4
Lithuania (1996:Q1)	9.6	5.2	4.4	3.3	2.1	4.8	2.7
Average	***7.2***	***4.3***	***2.9***	***4.7***	***3.8***	***6.0***	***2.2***
Euro area (1997:Q1)	2.8	0.4	2.4	2.0	1.9	1.9	0.0

[1] *Four-quarter percentage changes, period averages (initial observation t_0 shown in parentheses after the country name). T = tradables; NT = non-tradables. For the composition of tradable and non-tradable industries and price indices see the Appendix.*
[2] *Difference between productivity growth in tradable and non-tradable sectors, in percentage points.*
[3] *Overall CPI inflation.*
[4] *Difference between inflation of non-tradable and tradable components of the CPI, in percentage points.*

Chart 1: Domestic Productivity Growth and Relative Price Differentials

in percentage points, period average



Source: Authors' calculations, based on the data described in the Appendix.

Yet when one looks at country averages, there seems to be strong support for the domestic Balassa-Samuelson hypothesis. More specifically, data in table 1 suggest that the average productivity differential $(a^T - a^{NT})$ (2.9 percentage points), corrected for the share of non-tradables (67%, shown in table 2), accounted for 88% of the sectoral price differential $(p^{NT} - p^T)$ of 2.2 percentage points.

Table 2 summarises developments in productivity and inflation differentials of CESEE countries vis-à-vis the euro area. All countries in the sample recorded higher average annual inflation than the euro area over this period, with the differential ranging from around 1.3 percentage points in Croatia and Lithuania to 4.8 points in Bulgaria. All CESEE countries (with the exception of Bulgaria) also achieved faster productivity growth in tradables vs. non-tradables than did the euro area. The sectoral productivity differential was on average equal to 0.9 percentage point, or 0.3 point when corrected for the share of non-tradables. This suggests that productivity differentials could explain only around 11% of the CESEE countries' average 2.7 percentage points inflation differential vis-à-vis the euro area. On this preliminary evidence, the international Balassa-Samuelson effect appears to be weaker than the domestic effect, which is in line with previous findings in the literature.[7]

As with the domestic Balassa-Samuelson effect, no clear cross-country pattern emerges between the average size of productivity differentials vis-à-vis the euro area on the one hand and inflation differentials on the other (chart 2). The two differentials are of about the same size only in Lithuania. This preliminary evidence suggests that the international Balassa-Samuelson effects might be small.

With the Balassa-Samuelson effect explaining only about one-tenth of inflation differentials vis-à-vis the euro area in this simple accounting framework, it is clear that other factors probably play a more important role in inflationary dynamics in CESEE countries. What these factors are will not be pursued in this paper; for an exhaustive review see Égert (2007). We turn instead to the task of trying to estimate the Balassa-Samuelson effects more precisely in an econometric framework.

[7] Although countries in our sample have fixed (or, in the case of Croatia, tightly managed) exchange rates, only Bulgaria had the fixed exchange rate against the euro for the entire sample period, so changes in the exchange rates do explain a fraction of inflation differentials vis-à-vis the euro area.

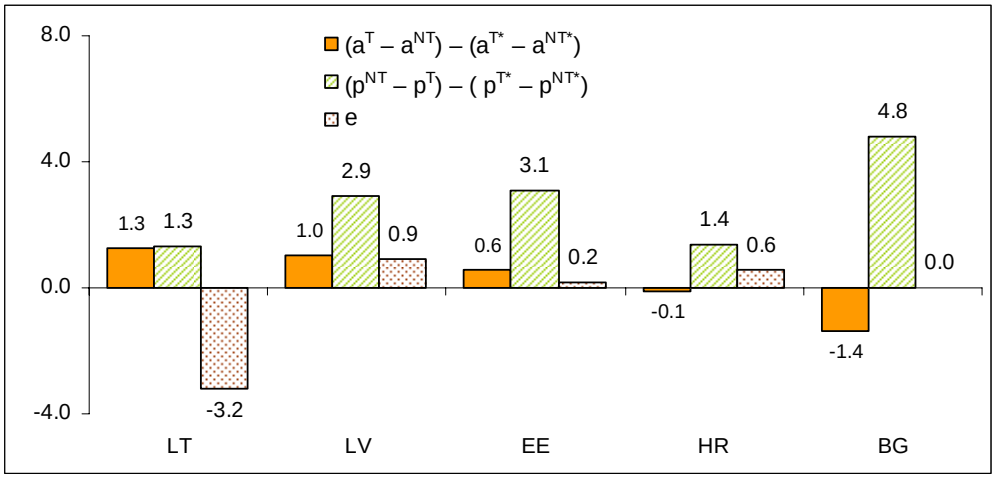
Table 2: Productivity and Inflation Differentials in CEE vis-à-vis the Euro Area[1]

Country (t_0)	**Inflation Differential** $p - p^*$	**Change in Nominal Exchange Rate** [2] E	**Sectoral Productivity Differential** $(a^T - a^{NT}) - (a^{T*} - a^{NT*})$	**Share of Non-tradables (%)** $(1 - \alpha)$	**Balassa-Samuelson Effect** [3] $(1-\alpha)(a^T - a^{NT}) - (1-\alpha^*)(a^{T*} - a^{NT*})$
Bulgaria (1998:Q2)	4.8	0.0	–2.0	62.7	–1.4
Croatia (1997:Q1)	1.4	0.6	0.5	56.5	–0.1
Estonia (1997:Q1)	3.1	0.2	0.7	71.0	0.6
Latvia (1998:Q2)	2.9	0.9	1.1	76.9	1.0
Lithuania (1996:Q1)	1.3	–3.2	4.4	66.4	1.3
Average	***2.7***	***–0.3***	***0.9***	***66.7***	***0.3***
Euro area (1997:Q1)	…	…	2.4	68.7	…

[1] *Four-quarter percentage changes, period averages (initial observation t_0 shown in parentheses after the country name).*
[2] *Negative sign denotes appreciation (fewer units of domestic currency per euro), positive depreciation.*
[3] *Contribution of sectoral productivity differentials to the inflation differential vis-à-vis the euro area.*

Chart 2: Productivity and Inflation Differentials vis-à-vis the Euro Area

in percentage points, period average



Source: Authors' calculations, based on the data described in the Appendix.

4. Econometric Estimates of the Balassa-Samuelson Effects

To estimate the two versions of the Balassa-Samuelson effect using time series data, equations (1) and (2) are re-specified as follows:

$$log(CPI/CPI^*)_t = c_1 + \beta_0 log(CPI/CPI^*)_{t-1} + \beta_1 log(E_t/E_{t-1}) + \beta_2[(1-\alpha)\, log(LP^T/LP^{NT})_t - (1-\alpha^*)\, log(LP^{T*}/LP^{NT*})_t] + \varepsilon_t \quad (3)$$

$$log(CPI^{NT}/CPI^T)_t = c_2 + \gamma_0 log(CPI^{NT}/CPI^T)_{t-1} + \gamma_2\, log(LP^T/LP^{NT})_t + \upsilon_t \quad (4)$$

where c_1 *and* c_2 are constants; "*" denotes variables in the euro area; *CPI* is the index of changes in consumer prices; CPI^{NT} and CPI^T are indices of changes in non-tradable and tradable goods prices; *E* is index of nominal exchange rate changes; LP^T and LP^{NT} are indices of average labour productivity growth in tradable and non-tradable industries; and ε_t and υ_t are error terms.

These two equations are estimated separately for each CESEE country because we are interested in whether these effects might be a determining factor in the ability of each of these countries to meet the Maastricht inflation criterion. Admittedly, from an econometric perspective, pooling of the data for all countries or for groups of countries based on exchange rate regimes (e. g. , fixed vs floating regimes) or other criteria (eg, geographical region, size of the economy) and estimating panel regressions seems highly attractive. However, in the assessment of the Maastricht criteria, convergence reports are prepared for individual countries, not groups of countries. Moreover, as the results below will show, there is considerable heterogeneity among the countries in our sample, so pooling of the data might bias the estimates and make the interpretation of the results tenuous.

By construction, all regression variables are differenced – all productivity and price indices in equations (3) and (4) show seasonally adjusted, four-quarter percentage changes, and the exchange rate enters the regressions in the form (E_t/E_{t-1}). The stationarity of all time series was tested using the augmented Dickey-Fuller test. The results are not shown because of the large volume of test output.[8] The vast majority of time series proved to be stationary in difference form with constant and/or with constant and trend, making it possible to use ordinary least squares to estimate the regression equations. This has significantly simplified the estimation procedure.

A lagged dependent variable is included on the right-hand side in both regressions. One reason is that the Breusch-Godfrey tests pointed to serial correlation of residuals in many regressions. Another is that we wanted to capture persistence in inflation differentials and, at the same time, allow the possibility of partial adjustment of inflation differentials to the changes in explanatory variables.

[8] There would be over 180 test results to report: 12 different time series for 5 countries, each for 3 cases (with constant, trend, constant and trend).

The short-run Balassa-Samuelson elasticity is thus given by the coefficient β_2, and long-run elasticity by $\beta_2/(1-\beta_0)$.

Standard regression statistics are not reported. The fit of regressions is generally very good (adjusted R^2 of 0.90 or higher), and standard test statistics are for the most part satisfactory. Many regressions of equation (4), and some of equation (3), initially had serially correlated residuals, but after applying standard transformations of lagged dependent variables, serial correlation was eliminated from most (though not all) regressions. As with the small number of non-stationary time series, it is highly unlikely that the presence of serial correlation in such a small number of cases could contaminate the estimates.

The estimates of the *international Balassa-Samuelson effects* are shown in table 3. With few exceptions, all estimated parameters have the expected positive sign and are statistically significant at the 5% (or higher) test level. The estimates of the short-run Balassa-Samuelson coefficient β_2 range from –0.10 (Croatia) to +0.12 (Latvia), and of the long-run coefficient from –1.3 (Croatia) to around 2.4 (Lithuania). On average, the short-run Balassa-Samuelson coefficient is about 0.03 and the long-run coefficient is about 0.65.

Table 3: Estimates of the International Balassa-Samuelson Effect

Dependent Variable: Inflation Differential vis-à-vis the Euro Area

Country (Period yy:q)	**Explanatory Variables**				**International Balassa-Samuelson Effect**[1]	
	$log(CPI/CPI^*)_{t-1}$	$log(E/E_{t-1})$	$(1-\alpha)_t log(LP^T/LP^{NT})_t - (1-\alpha^*)_t log(LP^{T*}/LP^{NT*})_t$		**Short-run**	**Long-run**
	β_0	β_1	$\beta_2^{short\ run}$	$\beta_2^{long\ run}$		
Bulgaria (98:2–07:3)	0.796	…	–0.003	–0.016	0.006	0.031
Croatia (98:4–08:1)	0.923	0.127*	–0.102	–1.317	0.013	0.165
Estonia(97:1–08:1	0.963	…	0.058	1.583	0.035	0.947
Latvia(98:4–07:3)	0.815	0.104*	0.120	0.649	0.115	0.619
Lithuania(96:2–08:1)	0.963	–0.097	0.086	2.352	0.170	4.628
Average	***0.892***	***0.045***	***0.032***	***0.650***	***0.068***	***1.278***

All estimated coefficients are statistically significant at the 5% (or higher) test level, except for those marked with "", which are significant at the 10% test level, and those marked with "x", which are not significant.*

[1] *Contribution of sectoral productivity differential to inflation differential vis-à-vis euro area, in percentage points. Calculated as β_2^i times the average productivity differential $[(1-\alpha)(LP^T-LP^{NT}) - (1-\alpha^*)(LP^{T*}-LP^{NT*})]$ over the period for which the regression is estimated; i denotes short-run and long-run elasticities.*

When these coefficient estimates are multiplied by the actual productivity growth differentials vis-à-vis the euro area $(LP^T–LP^{NT}) – (LP^{T*}–LP^{NT*})$ observed over the sample periods, one obtains the international Balassa-Samuelson effects. The short-run effects were around 0.07 percentage point on average; the long-run effects around 1.3 points on average. According to this calculation, inflation in CESEE countries was on average about 1.3 percentage points higher than in the euro area because productivity growth in tradables vs. non-tradables in these countries was faster than in the euro area. In Lithuania, the estimated long-run international Balassa-Samuelson effect was higher than the 1½ percentage point margin allowed by the Maastricht treaty; in Estonia it was close to 1 percentage point; and in Latvia around 0.6 point. In Croatia, the estimated Balassa-Samuelson effect was below 0.2 percentage point; in Bulgaria, it was very small (0.03 point).

Very high estimates of the international Balassa-Samuelson effect for Lithuania are the result of unusually strong productivity growth in Lithuania's tradable industries. For instance, real output per worker in tradables doubled between Q4:2002 and Q1:2008, while in non-tradables it increased 15% (in the euro area, real output per worker increased 15% in tradables and 3% in non-tradables over the same period). Strong productivity growth in Lithuania's tradables resulted in turn from a 50% increase in real output and a 28% reduction in employment in tradable industries. No other country in the sample recorded such a large increase in output combined with such a large decline in employment.

For Bulgaria and Croatia, the estimates of the coefficient β_2 for the short-run Balassa-Samuelson effect are negative. This reflects the fact that tradable/non-tradable productivity growth differentials in these countries are lower than in the euro area (see table 2). Nonetheless, when these negative coefficients are multiplied by, on average, negative productivity growth differentials vis-à-vis the euro area $(LP^T–LP^{NT}) – (LP^{T*}–LP^{NT*})$, one obtains positive international Balassa-Samuelson effects for both countries (table 3, last two columns).

All five countries exhibit a very high persistence of inflation differentials vis-à-vis the euro area: estimates of the coefficient β_0 averaged 0.9 percentage point. Estimates of this coefficient had the lowest standard errors.

Estimates of the pass-through of exchange rate changes to inflation differentials are less satisfactory. For Lithuania, the estimated coefficient was negative and highly significant; and for Croatia and Latvia it was significant at the 10% level only. Bulgaria and Estonia have kept fixed exchange rates against the euro over the sample period, so exchange rates were not included in their regressions. Latvia and Lithuania switched from their pegs to the Special Drawing Rights (SDR) and the US dollar, respectively, closer to 2004, when they joined the EU, so the results for these countries – in particular the negative exchange rate pass-through for Lithuania – are not entirely surprising.

While these results on the whole suggest that the long-run Balassa-Samuelson effects in the Baltics and Southeastern Europe (SEE) might be fairly large, one

should not jump to the conclusion that they support claims that the Maastricht inflation criterion needs to be reconsidered. The only country for which the above regression estimates are very robust to small changes in specifications is Lithuania. For all other countries, small changes in initial or final observations, or in the lag structure of explanatory variables, often affected the size and statistical significance of the estimates.

Estimates of the *domestic Balassa-Samuelson effects* are shown in table 4. All estimates of the coefficient γ_2^s except one are statistically highly significant. However, the sign of the short-run Balassa-Samuelson coefficient for Latvia and Lithuania is negative, although the size of the coefficient in each case is relatively small. In these two countries, faster productivity growth in tradable vs. non-tradable industries has been associated with a small *decline* in the relative price of non-tradables, contradicting the Balassa-Samuelson hypothesis. In all other countries, the coefficient on relative productivity growth has the expected positive sign; its size ranges from 0.08 (Estonia) to 0.24 (Bulgaria).

Estimates of the coefficient γ_0 on lagged relative price changes have the expected positive sign and are statistically highly significant. Their fairly large size indicates strong persistence of past relative price changes and also leads to high estimates of the long-run effects of differential productivity growth γ_2^l.

The contribution of changes in relative productivity differentials $(LP^T–LP^{NT})$ to changes in relative price differentials (CPI^{NT}/CPI^T) is obtained by multiplying the short-run and long-run coefficients γ_2 with the respective average values of productivity differentials over the sample periods. For the countries with positive Balassa-Samuelson effects – Bulgaria, Croatia and Estonia – these contributions amount to 0.1–0.3 percentage point in the short run and 0.8 to 2.6 points in the long run.

The contribution of relative productivity differentials to relative price differentials can be translated into the contribution to *overall* inflation as follows. Starting from the definition of consumer price inflation as a weighted average of tradable and non-tradable goods price inflation (equation 5):

$$\hat{p}_t = \alpha\hat{p}_t^T + (1-\alpha)\hat{p}_t^{NT} \tag{5}$$

where α is the share of traded goods in the CPI basket, and using the expression for the relative price of non-tradables from equation (2) one obtains equation (6):

$$\hat{p}_t = \hat{p}_t^T + (1-\alpha)(\hat{a}_t^T - \hat{a}_t^{NT}) \tag{6}$$

I. e., the contribution of relative productivity differentials to overall inflation is proportionate to the share of non-tradables $(1–\alpha)$ multiplied by the contribution of relative productivity differentials to relative price differentials. This expression gives estimates of the domestic Balassa-Samuelson effect shown in the last two columns of table 4. For Bulgaria, Croatia and Estonia, the short-run effect amounts up to 0.2 percentage point, and the long-run effect up to 1.8 points. Faster growth

of relative prices of non-tradables, resulting from faster growth of productivity in tradable relative to non-tradable industries, may thus have contributed over the long run around 1.8 percentage points to inflation in Estonia, about 0.9 point in Croatia and 0.5 point in Bulgaria. For these three countries, the domestic Balassa-Samuelson effect explains on average 23% of overall domestic CPI inflation of 5.1% over the sample period.

Table 4: Estimates of the Domestic Balassa-Samuelson Effect

Dependent Variable: Domestic Relative Price Differential $P^{NT/}$Portugal

Country (Period yy:q)	Explanatory variables			Contribution of (LP^T/LP^{NT}) to (CPI^{NT}/CPI^T)		Domestic Balassa-Samuelson effect[2]	
	$log(CPI^{NT}/CPI^T)_{t-1}$	$Log(LP^T/LP^{NT})_t$					
	γ_0	γ_2^s	γ_2^l	Short-run	Long-run	Short-run	Long-run
Bulgaria (98:2–07:3)	0.873	0.244	1.924	0.103	0.811	0.065	0.509
Croatia(98:4–08:1)	0.794	0.121	0.584	0.320	1.552	0.181	0.877
Estonia(97:1–08:1)	0.877	0.077*	0.628	0.315	2.561	0.223	1.814
Latvia(98:4–07:3)	0.897	–0.039	–0.377	–0.128	–1.248	–0.099	–0.963
Lithuania(96:2–08:1)	0.965	–0.036	–1.023	–0.156	–4.481	–0.103	–2.975
Average	***0.881***	***0.074***	***0.347***	***0.091***	***–0.161***	***0.053***	***–0.147***

All estimated coefficients are significant at the 1% test level, except the one for Estonia marked with "", which is sgnificant at the 10% test level.*

[1] Contribution of the sectoral productivity differential $(LP^T–LP^{NT})$ to non-tradable/tradable goods inflation, in percentage points. Calculated as γ_2^i times the average productivity differential observed over the sample period, where i denotes short-run and long-run elasticities.

[2] Contribution of sectoral productivity differential $(LP^T–LP^{NT})$ to (CPI^{NT}/CPI^T) adjusted for the share of non-tradables $(1–\alpha)$; in percentage points. This is a proxy for the contribution of $(LP^T–LP^{NT})$ to overall inflation.

What is the evidence on the size of the *Balassa-Samuelson effect over tim*e?

In the simple accounting framework presented in tables 1 and 2, the results are mixed. If we take the last quarter of 2001 as the mid-point of the sample, the international and domestic Balassa-Samuelson effects declined in the more recent sub-period (from 2002 to Q1:2008) in Bulgaria, Croatia and Latvia; but increased in Estonia and Lithuania (table 5).

The results of econometric estimates are also mixed. For the international effect, the Chow breakpoint test indicated the presence of a structural breakpoint in the series for differential productivity growth $(LP^T–LP^{NT})–(LP^T*–LP^{NT}*)$ only for Croatia (at 2004:Q1) and Lithuania (at 2000:Q1). Evidence on changes in the size of the short-run Balassa-Samuelson coefficient β_2^s in the respective sub-periods

was mixed. The size of the coefficient declined in the second sub-period (ie, from the breakpoint through 2008:Q1) in Croatia and Lithuania, but did not change in Bulgaria, Estonia and Latvia. These estimates are unreliable, however, because of the short length of the time series and the long time lags (7–10 quarters) with which differential productivity growth affects inflation differentials vis-à-vis the euro area.

For the domestic Balassa-Samuelson effect, the Chow breakpoint test indicated the presence of a structural breakpoint in the (LP^T/LP^{NT}) series for all the countries except Latvia. The breakpoints were at 2002:Q1 for Bulgaria, Croatia and Romania; 2003:Q1 for Estonia; and 2001:Q1 for Lithuania. The size of the short-run coefficient γ_2^s declined in the second, more-recent sub-period in Bulgaria, Croatia and Estonia, reflecting the slowing of productivity growth in tradables vs. non-tradables in recent years compared with the second half of the 1990s. The coefficient γ_2^s increased in the more recent sub-period only in Lithuania. Because of the short length of the time series, these sub-period estimates of the domestic Balassa-Samuelson effects are less reliable than the estimates shown in table 4, though on the whole they are somewhat better than those for the international effect by sub-periods.

Table 5: Balassa-Samuelson Effect over Time

Country	Accounting Framework[1]				Change in Econometric Estimates[2]	
	International BSE		Domestic BSE			
	t_0–2001:Q4	2002:Q1–2008:Q1	t_0–2001:Q4	2002:Q1–2008:Q1	International BSE	Domestic BSE
Bulgaria	0.7	–2.8	0.7	–2.8	no Δ	↓
Croatia	0.8	–0.5	4.7	1.7	↓	↓
Estonia	–1.4	1.9	4.2	4.7	no Δ	↓
Lithuania	–0.5	2.7	2.1	6.2	↓	↑
Latvia	2.3	0.5	4.2	2.6	no Δ	no Δ

[1] *Based on the historical data summarised in tables 1 and 2.*

[2] *Based on the estimates of regression equations (3) and (4) for two sub-periods of the main mid-1990s–2008:Q1 period (determined for each country by Chow breakpoint tests). The entries indicate no change (no Δ, increase (↑) or decrease (↓) in the estimated Balassa-Samuelson coefficient between the earlier and later periods.*

5. Concluding Remarks

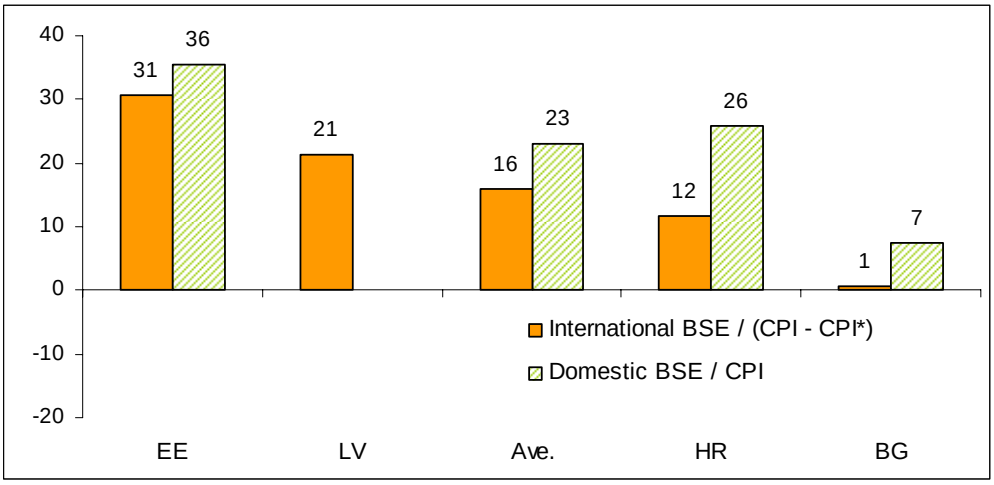
This paper has confirmed the presence of the Balassa-Samuelson effects in three Baltic states, Bulgaria and Croatia in the period since the mid-1990s through the first quarter of 2008. Higher productivity growth in tradable relative to non-tradable industries has contributed to both higher inflation vis-à-vis the euro area (the international Balassa-Samuelson effect) and faster increases in domestic relative prices of non-tradables (the domestic Balassa-Samuelson effect).

As shown in chart 3, for Bulgaria, Croatia, Estonia and Latvia the international effects explain on average around 16% of inflation differentials vis-à-vis the euro area (about 0.4 percentage points on average). For Lithuania, the international Balassa-Samuelson effect is higher than the inflation differential vis-à-vis the euro area; the entry for Lithuania is therefore not shown in chart 3. This result is a consequence of the unusually strong productivity growth in Lithuania discussed above.

The domestic Balassa-Samuelson effects for Bulgaria, Croatia and Estonia explain on average 47% of the domestic relative price differentials of non-tradables vs. tradables, or about 23% of overall domestic CPI inflation (about 1.1 percentage points on average). For Latvia and Lithuania, domestic Balassa-Samuelson effects are negative, i. e., faster productivity growth in tradable vs. non-tradable industries has been associated with a small *decrease* in the relative price of non-tradables and hence overall inflation. For these two countries domestic Balassa-Samuelson effects subtract from rather than add to overall inflation.

For several reasons, estimates of the Balassa-Samuelson effects obtained in this paper are likely to be upward biased. In particular, we used the shares of non-tradables in value added rather than in the consumption basket, and we classified some low-productivity tradable services as non-tradables. Additional control variables such as regulated prices, which are important in non-tradable sectors, might also reduce the Balassa-Samuelson effects compared to the ones estimated in this paper. However, by extending our sample to a larger number of countries and a much longer period; by including the important sector of agriculture in tradables; and especially by using country- and time-specific shares of non-tradables, we have obtained more precise and representative estimates of the Balassa-Samuelson effects than have other available studies.

Chart 3: Percentage of Inflation Differential vis-à-vis the Euro Area and of Domestic CPI Inflation – Explained by International and Domestic Balassa-Samuelson Effects



Source: Authors' calculations, based on the data described in the Appendix.

Real convergence since the early 2000s seems to have reduced the domestic Balassa-Samuelson effects in several countries and the international effects in somewhat fewer countries. But for several countries, the size of both effects may have increased. Although most of the estimates of the Balassa-Samuelson effects are rather small, these effects cannot be entirely disregarded. Moreover, they can help understand competitiveness issues. More specifically, estimates of the international Balassa-Samuelson effect in table 5 (accounting framework) suggest that Bulgaria, Croatia and Latvia lost competitiveness in recent years, whereas Estonia and Lithuania appear to have maintained it. This contrasts with real exchange rate developments, which suggest that Croatia, Latvia and Lithuania maintained their competitiveness over time, or at least until 2007. Such differences indicate a need to evaluate in more detail alternative measures of competitiveness, not least given the important role external imbalances have played in the Baltic and fixed exchange rate SEE countries in recent years.

As discussed in Mihaljek and Klau (2008), the experience of Slovenia and Slovakia, both of which have relatively strong Balassa-Samuelson effects vis-à-vis the euro area (estimated at 2.0 and 1.7 percentage points, respectively), shows that it is possible to fulfil the Maastricht inflation criterion even if these effects might be higher than the 1½ percentage point margin allowed by the Maastricht treaty. At the same time, it cannot be ruled out that a strong Balassa-Samuelson effect could

complicate the policy tradeoffs for some EMU candidate countries. Arguably, Lithuania's strong Balassa-Samuelson effect, estimated at 4.6 percentage points, may have been one of the factors behind the country's unsuccessful bid to join the euro area in 2007. This suggests that the Balassa-Samuelson effects are likely to remain on the policy and research agenda for a while, given that the pace of catching-up is likely to remain uneven across countries seeking to join EMU.

Against this background, one should perhaps caution against attempts to start using estimates of the Balassa-Samuelson effects in policy assessment. Obtaining precise and reliable estimates of these effects is much more difficult than, for instance, obtaining estimates of potential GDP. In particular, measurement errors and room for discretion in transforming the data and applying even the simplest estimating procedures are not negligible. Issues of equal treatment would inevitably arise if one sought to standardise these estimating procedures in practice. Therefore, one would be hard pressed to recommend, in good confidence, an operationalisation of the concept of the Balassa-Samuelson effect for the assessment of the Maastricht inflation criterion.

Appendix

Data Description

- Traded goods and services are: agriculture, forestry and hunting; fishing; mining and quarrying; manufacturing.
- Non-traded goods and services are: electricity, gas and water supply; construction; wholesale and retail trade, repair of motor vehicles, personal and household goods; transport, storage and communication; financial intermediation; real estate, renting and business activities.
- Not included are public administration, defence and compulsory social security; education; health and social work; other community, social and personal services; and activities of household.

Description of Variables

- Quarterly indices of value added growth (in constant prices) from the production-side estimates of GDP. Sectors are aggregated into traded and non-traded using industries' shares in total value added in a given quarter.
- CPI rates of inflation with subcomponents (quarterly averages of monthly rates). The breakdown into traded and non-traded goods and services followed the production-side classification as closely as possible. However, the complete matching of sectors with price indices was not always possible. The subcomponents are aggregated into traded and non-traded goods inflation using their weights in the CPI basket.

- Nominal exchange rates of domestic currency against the euro (quarterly averages of daily rates).
- Employment (total number of workers, quarterly averages of monthly figures) in traded and non-traded goods industries following the above classification. Employment in traded and non-traded sectors obtained from industries' shares in total employment (quarterly averages).

Data Transformations

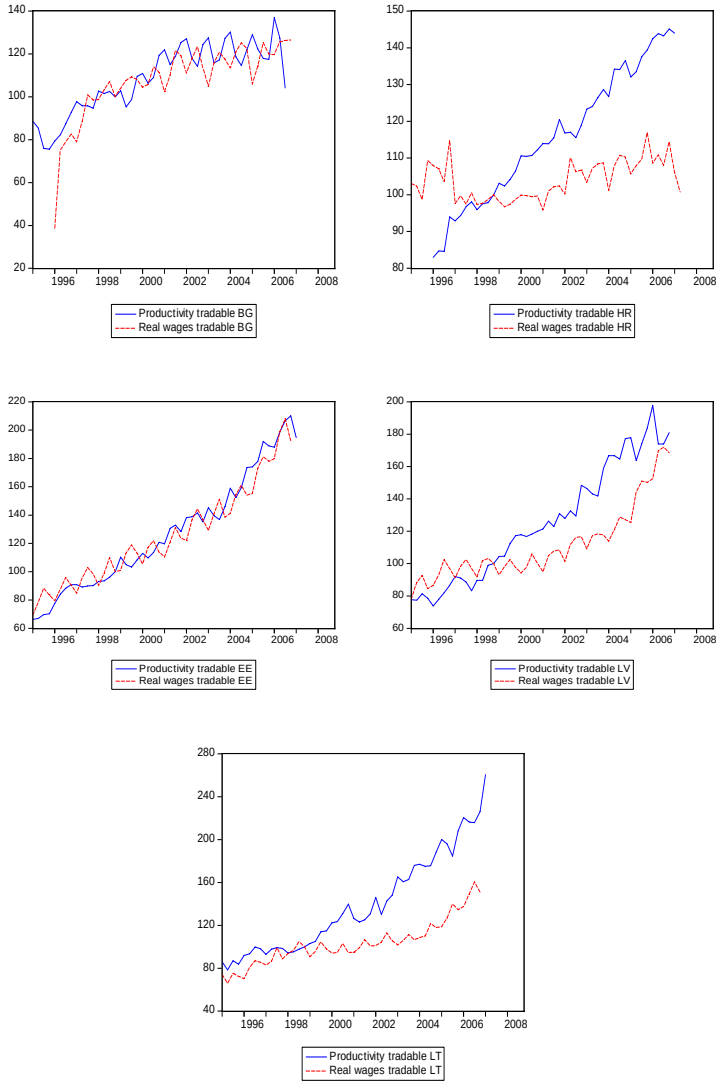
- All variables entering regressions are first expressed in terms of chain indices showing four-quarter percentage changes, with 1999:Q4 = 100.
- For some initial observations in the mid-1990s (sectoral breakdown of value added and employment), quarterly data were linearly interpolated from annual data.
- All indices are then seasonally adjusted using the X-12 procedure.
- Finally, natural logarithms of seasonally adjusted indices are taken.
- These time series are tested for stationarity using the augmented Dickey-Fuller unit root test.

Data Sources

Eurostat; national central banks and statistical offices; European Central Bank; BIS Data Bank; BIS staff estimates.

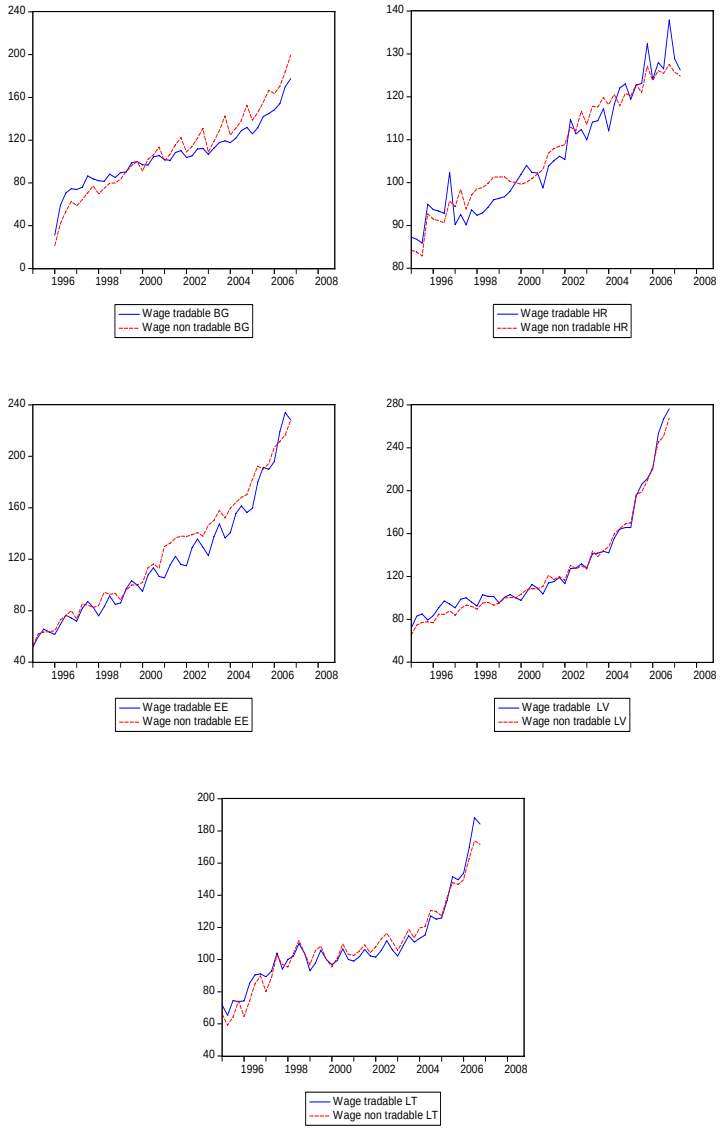
Appendix Chart A1: Productivity and Wages in Tradable Industries

2000:Q4 = 100; not seasonally adjusted



Appendix Chart A2: Wages in Tradable and Non-tradable Industries

2000:Q4 = 100; not seasonally adjusted



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Reserves Can Help – the Case of Estonia

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Eesti Pank[1]

1.Introduction

The Estonian economy has experienced a very rapid development after the country regained independence in 1991. However, a gradual decline in GDP growth rates started in 2007 and the Estonian economy entered into recession in 2008. The recession was amplified by the global economic crisis at the end of 2008 and beginning of 2009. Double-digit growth rates have remained, but the sign has turned negative. This paper analyses the following issues: What happened in Estonia, what were the reasons for overheating, why did the country enter recession, were there any policy options available to avoid or smoothen the current cycle, and what are the main policy challenges for the future?

The article starts with a short overview of the policy framework in Estonia, then discusses the main factors which have influenced development over the past years and concludes with an analysis of policy measures and options.

2. Economic Policy Framework in Estonia

Estonia has operated a currency board arrangement without deviations ever since the country introduced its own currency in 1992. The Estonian kroon has been tied to the German mark and later to the euro, which has ensured high stability of the Estonian kroon vis-à-vis euro area countries. It has also given a cornerstone to other economic policies.

The rule-based features of the currency board imply an important characteristic of the Estonian monetary policy framework – the absence of other active monetary policy tools. There is no central bank policy rate or any other operational monetary policy target in addition to the exchange rate in Estonia. The price stability objective is tied to the anchoring role of the exchange rate, and all the necessary adjustments are left to the market. This strategy also means that markets have to be flexible and market participants must understand the working mechanism of the

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currency board in order to cope well with different shocks. This has been the case in Estonia, where the currency board arrangement has been an important argument in shaping the policies of the product and labour markets to be more flexible. It also gives more importance to prudence in the financial sector and in fiscal policy, which have to cope with the negative shocks themselves, especially since the central bank's ability to support them is limited.

The main monetary policy instrument besides the forex window (through which the exchange rate parity is held) in Estonia is the reserve requirement. The task of the latter is to create sufficient liquidity buffers for commercial banks and to offset the limitations of the Lender-of-Last-Resort facility as well as the lack of other monetary policy instruments. The reserve requirement can also be viewed as a tool that implicitly affects broader monetary conditions through changes in the money multiplier or in the cost of resources for the banking sector. This possible effect is, however, questionable in the context of an open economy where there are no restrictions on capital movements, most of the financial sector is foreign-owned and no liquidity constraints are in place during "normal times". To sum up, this instrument is not an active monetary policy device, but rather aimed at supporting the efficient functioning of markets and creating sufficient liquidity buffers for the financial sector.

It is impossible to ensure financial system stability in a small and open economy without considering the developments in the international financial landscape. Therefore, the developments of both financial markets and the regulatory environment in Europe are particularly important for Estonia's open economy and financial intermediation and hence, our policy must be evaluated particularly in this light. Prudential ratios and other banking regulations are stricter in Estonia than prescribed by international standards, but this corresponds to higher macroeconomic and microeconomic risks, characteristic of an economy in a fast growth phase.

Eesti Pank's principles of safeguarding financial sector stability divide responsibility between the private and the public sector, increasing self-regulation and strengthening general management, improving good banking practices, as well as the transparency of activities and assumed risks. It is also necessary to improve market discipline through increasing the responsibility of owners and minimizing the possibility of moral hazard. The choice of monetary policy has been central to the development of the financial sector. Tight monetary policy with a fixed exchange rate regime has favoured the emergence of financial market discipline by reducing liquidity (from the central bank) available to the banking system, forcing banks to manage the liquidity available more efficiently and to build up their own liquidity buffers.

3. Developments before the Crisis Hit the World

In order to understand why the Estonian economy entered recession, and why it is discussed whether the convergence path in the past was unsustainable or not, one should identify the main drivers of growth since 2003. In Estonia's case, three main types of factors can be established when analysing growth dynamics: common cyclical, convergence related and structural factors.

Common Cyclical Factors
Estonia is a very small and open economy, which depends heavily on global developments. When Estonia joined the European Union (EU), its business cycle became even more synchronised with that of the euro area. Foreign demand was growing very rapidly between 2003 and 2007 and the monetary environment was extremely expansionary in the whole world, with very easy access to credit. Things started to change only in 2007, when first signs of a financial crisis emerged and food and energy price shocks started to impact economic activity in Estonia.

Convergence Related Factors
The Estonian economy started to function as a market economy at the beginning of the 1990s. It is much easier to grow faster from a low starting point, provided that one has good neighbours and the country's development is supported by good macro policies, as has been the case in Estonia. However, it has always been difficult to assess how fast the convergence process should be. At the same time, it has to be noted that the richer the converging country becomes, the slower the convergence process should be, indicating that the convergence factors that pushed growth differential ten years ago are much weaker now. There are different assessments indicating that on average, the Estonian economy should have grown some 3% to 4% faster than the EU average in the past and it should expand probably 2% to 3% quicker these days.

Structural Shocks
After joining the NATO and the EU in 2004, Estonia became part of the EU single market and more credible in the eyes of investors. This resulted in at least four positive shocks to the Estonian economy:

1. **Increase in productivity.** Estonia became member of the single market, thus our companies had better market access. Increased competition and investment in Estonia's companies also boosted the productivity of our enterprises.
2. **Enhanced labour mobility and increased wage expectations.** Free movement of labour meant better possibilities for the Estonian people to work abroad. It added pressure to wage increases and income expectations

escalated, since rapid convergence (at least to a certain level) was widely expected.

3. **Fast financial integration and longer maturities in lending.** This took place because Nordic banks started to look at Estonia as part of their domestic market. They acquired 100% of four bigger banks (approximately 95% of the market share) operating in Estonia and started to apply the same conditions on their loans here as in their home countries. Thus, credit conditions in Estonia were basically the same as in Scandinavia.
4. **Lower interest rates.** The risk premium on Estonia was declining very quickly and local interest rates converged with interest rates in older EU Member States

In reality, it is hard to distinguish between these factors. But even though the convergence related and common cyclical factors have played an important role in the developments of the past five years, the structural changes that occurred after joining the EU and the NATO are probably the most important. It could be argued that they were the main reason for the Estonian economic developments to differ from those in some other countries with more sustainable growth paths.

There were both positive demand and supply side shocks affecting the very fast credit growth which led to overheating in the real estate market and the construction sector and to large external and internal imbalances.

From the supply side, financial integration within Nordic Banking groups with its longer maturities in lending and lower interest rates meant that Estonia's households were able to borrow about twice as much as before at the same income level, even though other credit standards like down payments and the proportion of income allowed for debt servicing remained the same. The supply of credit was basically unlimited and totally demand driven in Estonia, since the Estonian market was very small compared to the balance sheets of the banks operating in Estonia. Because the banks were also competing quite heavily for their market share, and probably didn't have very adequate assessments of what is going to happen in the longer term, the limitations were clearly not there.

From the demand side, the main driver for growth consisted in expectations, because households became more optimistic about their future income level. On the one hand, this derived from the typical convergence hypothesis – becoming a member of the EU and joining the single market with free movement of labour, capital, goods and (to a lesser extent) services gave good reasons to expect that lower-income regions would converge to the same level as their richer neighbours. The convergence hypothesis was supported by strong export performance after joining the EU, with both services and goods exports growing very fast and productivity rising rapidly. On the other hand, free labour movement enabled people to work abroad if they were dissatisfied with their income in Estonia, adding to wage pressures at home (as average nominal wage in Estonia was approximately four times lower than in Finland). In Estonia's case the main

influence came from its cultural, linguistic and geographical proximity to Finland. It meant that people did not have to emigrate in order to work abroad, because they were able to commute quite easily, if needed.

The demand for credit was also intensified by the lack of housing in Estonia. Estonian households' living conditions are worse than in the EU on average, since they have less square meters per capita compared to most other EU countries. On top of that, construction activity had been extremely low since Estonia regained independence, meaning that the quality of the existing housing stock was (and still is) very poor and there exist huge investment needs.

4. Policy Reactions

When the pace of financial deepening started to pick up, it was obvious that the developments were unsustainable. However, it was not (and is still not) clear whether and to what extent these developments were step-like (i.e., structural changes enabling fast permanent changes in income and productivity levels) or bubble-like (i.e., fast growth is to be followed by fast decline). At the moment it seems that both of them have a part to play.

In both cases the developments were unsustainable and incorporated several growing risks. Policy-makers started to react to the situation from the very beginning in Estonia. The currency board arrangement can cope effectively with different shocks, but it requires a strong banking sector that is able to manage the shocks. In addition, markets have to work well, and the government has to be flexible in its behaviour. As mentioned above, the currency board arrangement leaves little room for manoeuvre with monetary policy operations other than exchange rate. At the same time its simple rule-based features should help economic agents in the decision-making process and to formulate their expectations in line with the functioning of the system.

Policy reactions tried to address these issues in order to mitigate the risks that could harm the performance of the system and to strengthen its weaker parts. At least four types of policy reactions can be specified:

1. Manage expectations

In order to signal the working mechanism of the currency board, Eesti Pank started to warn about the risks incorporated in high credit growth through its regular public statements. Eesti Pank also advised the government to abandon different schemes that were in place to help people take mortgages, but not all of them were taken on board by the government (like abandoning the deduction of mortgage interest rates payments from taxable income). Signals that could have changed borrowers' attitudes (e.g. a rise in interest rates, signs of stabilisation in the real estate market, the postponement of adopting the euro, signs pointing to possible economic overheating) did not diminish optimistic future expectations very quickly.

2. Ensure a strong banking sector.

In order to make its signals more credible, Eesti Pank took steps to warn the banking sector about the unsustainable developments and risks related to it. Eesti Pank's first step was to delay its previously announced plan to lower the reserve requirement ratio in 2003, which had been raised to 13% on all liabilities in 1997. As the imbalances and risks continued to grow further in 2005 and 2006, Eesti Pank decided to take further measures. Several moral suasion measures were taken - giving recommendations to the banks together with the Financial Supervisory Authority, about good lending practices, and how to avoid the risks, meetings with home country authorities in order to point to the risks incorporated in fast credit growth in Estonia. As of 1 March 2006, the new procedure for capital adequacy calculation entered into force. Pursuant to that, banks had to increase the risk weight on housing loans used for calculating capital adequacy to 100% instead of the earlier 50%. As a result, the capital buffers of banks increased. However, this did not entail a change in the behaviour of borrowers and lenders. In order to limit strong domestic demand driven by loan growth and send another signal to the banks, Eesti Pank decided to raise the reserve requirement from 13% to 15% as of 1 September 2006. Since risks remained the same during the two-year forecast period, Eesti Pank decided to preserve the 100% risk weight on housing loans and the 10% capital requirement for the three-year transition period within the framework of the new capital adequacy accord (Basel II) that entered into force as of 2007.

3. Create buffers in the government sector.

The Estonian government has run a balanced budget strategy since the beginning of the 1990s and it continued quite successfully its prudent fiscal policy after the deficit during the Russian crisis, by having budgets in growing surpluses since 2001. The fiscal surplus reached approximately 3% of GDP in 2006 and 2007 and the government sector piled up more than 10% of reserves at the end of 2007 with almost no debt at the central government level. However, ex post one could still indicate procyclicality in fiscal policy in some years.

4. Better coordination with foreign supervisors

Estonia's financial sector mainly consists of the subsidiaries and branches of the financial intermediaries of other EU countries, which means that for Estonia it is inevitable to have very good cooperation with different authorities in home countries. Estonian authorities have continuously improved cooperation with its main partners in Nordic and Baltic countries. For example, Eesti Pank has concluded a multilateral memorandum of understanding with institutions responsible for the financial stability in the EU countries and with the central banks of Sweden, Latvia and Lithuania. In autumn 2007, the Nordic-Baltic regional financial crisis simulation exercise was conducted. Cooperation with Riksbank led

to the precautionary agreement between Eesti Pank and Riksbank to put in place mechanisms how to provide liquidity to Swedish banks' subsidiaries in Estonia in case of a liquidity crisis.

When trying to assess the policy measures taken, one has to take into account that in case of a small and very open economy with a highly integrated financial system (within the Nordic banking sector), different measures on the financial sector might not have a very strong effect during the cycle. Fiscal policy also tends to have less effect in the case of a small and open economy, since the private sector can find unlimited resources from abroad and fiscal policy has therefore less power than in more closed economies. At the end of 2006 and beginning of 2007 clear signs that the credit and real estate cycle started to turn, emerged. It is unclear, whether it was a natural development amplified by the nature of the currency board arrangement, which helps anchor price expectations quite effectively, or whether the measures taken before also had a role to play.

It is hard to assess now, if some other policy measures could have helped to alleviate the cycle and avoid the overheating. For example, Eesti Pank suggested the government to abandon the deduction of mortgage interest rates payments from taxable income. It could have helped to somewhat lower the incentives to take a mortgage loan, though it was clearly not the primary incentive for borrowing. The main reason were very optimistic expectations and lack of housing. It is very hard even in retrospect to make a proper policy suggestion regarding how these problems should have been coped with, but an overall better policy mix probably could have helped.

Despite hikes in reserve and capital requirements, the behaviour of banks did not change very quickly. Credit growth continued to be high and banks were still very aggressive in the market. Expectations started to change only when comparable price levels started to converge and households and real estate developers started to doubt in further price rises (i.e., some comparisons showed that house prices in Estonia started to reach the levels of Germany, although they were still about twice lower than in the neighbouring Finland and Sweden).

The Estonian economy started to cool down more notably in the first half of 2007, when credit growth decelerated and real estate prices started to decline. The drop was amplified by the events abroad, where sharp increases in food and oil prices exerted a significant price shock on Estonia, making consumers less confident. Estonia's economy started to contract in the first half of 2008, mainly driven by domestic demand – both consumption and investment started to react to the changes in expectations.

However, labour market developments were still lagging behind, wage growth peaked and unemployment reached the bottom in 2008. Still, inflation expectations were very low at the beginning of 2008, indicating that market participants understood well how the currency board arrangement should work and that one-off price hikes were not the reason for another round of wage and price rises.

Unfortunately, the government was unable to quickly react to the turn of the cycle, since its behaviour was clearly procyclical in 2007, and its plans for 2008 were too optimistic, with expenditures continuing to rise some 20% in 2008. There are probably several reasons for that. One of them is that with no debt and having accumulated a significant amount of reserves (approximately 10% of GDP), it was hard for the government to justify a continuous build-up of reserves during good times (in 2007). In addition, Estonian exporters were performing quite well until the fourth quarter of 2008, when the financial crisis started to hit the world trade figures, indicating that there would be an orderly adjustment from the real estate boom. It also showed that there was no significant loss in exporters' market share and thus also no loss in competitiveness during the boom years, even despite very sharp wage cost increases in 2007 and 2008.

5. Current and Future Policy Challenges

The situation in the world changed dramatically after the collapse of Lehman Brothers in September 2008. After that event it became very difficult for a small country like Estonia or the banks from such a small country to get any financing from the markets. Another blow came from the trade channel, as exporters all over the world were hit very hard. The trade volumes of Estonia's main trading partners declined by about 30% or more.

Shocks of such magnitude have a significant impact on the small and open economy of Estonia. The timing of the shock was also very unfortunate, because domestic adjustment caused by the overheated real estate market and fast credit growth was already in progress: house prices were dropping, the current account deficit was narrowing very rapidly, and wage growth and inflation were moderating.

The additional shock led to a very fast contraction of the Estonian economy, reaching close to a 10% year-on-year GDP decline in the fourth quarter of 2008 and about a 15% decline in the first quarter of 2009.

The Estonian economy has shown its flexibility under the stress. Both domestic and foreign demand have collapsed and turnovers of companies are down at least 20%, indicating it is time for the enterprises to start making changes. The need has been more pronounced since the beginning of 2009. It is reflected by labour market indicators, which have reacted very quickly - average wages declined 1.5% and employment decreased 6.8 % in the first quarter of 2009. The current account deficit came close to balance at the beginning of 2009. Consumer prices have dropped and in May 2009 they were lower than a year before.

The shock put all the policy measures taken in the past and also the challenges ahead into a new perspective. In the short run it no longer mattered how good the other policies and plans for the future had been. The only thing that was important

for a small country like Estonia was whether it had money in its pocket or not. That is when the past policy measures came in very handy for Estonia.

Since Estonia does not have any big domestic financial institutions (about 98% of the banking sector is foreign-owned), there has been no need for a government bailout of domestic banks. With the help of the measures taken by the governments and central banks in the home countries, the financing environment of the parent banks has stabilised and therefore the Estonian financial system has been quite resilient. Higher reserves in the banking sector are also helping a lot at the current juncture, especially because these reinforce confidence. With the required reserve ratio being 15% of all liabilities and around a half of the liabilities being borrowing from the parent banks, approximately 30% of the deposits are covered by the mandatory liquidity reserves that serve as buffers should a severe setback take place.

Higher capital buffers are also very valuable, since the banks operating in Estonia are facing quite significant loan losses. The average capital adequacy ratio is over 20%, which leaves enough free capital for the banks to cover their losses.

The government is facing the toughest challenges. The government had substantial reserves, which have allowed them to run a budget deficit without a need for financing from the markets. That has given the Estonian government some room for manoeuvre in the current situation, but it is not going to last forever. Government revenues have started to fall (in nominal terms) due to the very severe recession. The depth and length of the recession will remain unclear until the start of a new growth cycle.

Global uncertainties have also caused considerable mistrust towards the Estonian economy and the region as a whole. With sustainable fiscal policy being the most crucial element in building confidence, the government has started to make substantial improvements to the fiscal position. In the first half of 2009, the government has taken measures to cut the deficit by about 6% of GDP. The steps have been a mix of measures from both the expenditure and the revenue side. But still, it is an enormous challenge to achieve a sustainable fiscal position, since the cuts only helped to prevent the deficit from exceeding 10% of GDP and cut it to tolerable levels for 2009. Several medium and long term challenges are still ahead of us. For example, one option under consideration is to lower pensions, as expenditures on pensions to GDP have increased substantially because GDP has fallen. Some of the measures taken have also postponed payments to the second pillar of the pension system. These should be re-established, because problems related to ageing population have not disappeared.

Curtailing the fiscal deficit serves also another goal. Namely, the government intends to join the euro area as quickly as possible, in 2011 at the latest. It is clear that euro area membership should contribute a lot to restoring confidence among investors and economic agents. However, the task is not easy in the current environment.

7. Conclusions

The Estonian economy developed very rapidly after the country regained independence in 1991. After joining the EU and NATO, the pace of growth accelerated further, leading to overheating of the real estate and the construction sector. Despite several policy measures, such as raising reserve and capital requirements in the banking sector, budget surpluses, tighter cooperation in the supervisory field, and different measures to manage expectations, the developments did not change their course in the short run.

However, changes took place after expectations started to alter at the end of 2006 and beginning of 2007. It is unclear what exactly caused the changes (since the rapid developments in the credit and real estate market have not lasted for a very long time, only 3 to 4 years). One of the main factors seems to come from the monetary policy arrangement, namely from the fact that due to the fixed exchange rate, the price comparability is very easily understandable and real estate prices in Estonia started to converge to levels where further increases were not expected in the medium term. However, this could not avoid the overheating as the same problems emerged in other countries as well.

Even if the policy measures taken during the boom years did not contribute to turning the cycle in the short run, they were very helpful when the financial crisis hit the global economy after the collapse of Lehman Brothers. The reserves that had been accumulated in the good times gave the government the necessary space for manoeuvring and reserves in the financial system help stabilise it during the current turbulent times.

Assessment of Past Developments and Economic Policy Challenges in Latvia

Santa Berzina[1]

Latvija Banka

1. Macroeconomic Risks and Policy Responses

Latvia's accession to the EU has presented both opportunities and challenges. It provided many opportunities for the free flow of goods and services and marked a step toward a the free movement of labour. The availability of EU Structural Funds and the EU membership being a guarantee to investor confidence triggered capital inflows. Investors' perception of Latvia as a location with high capital yields has allowed to increase productivity and contributed to income growth.

At the same time, while the rapidly developing economy brought important benefits it also accumulated long-term risks. In itself strong economic growth is desirable, because it allows for an increased standard of living. However, EU accession fostered over-optimistic expectations of the economic agents thus boosting real estate and consumption-oriented economic growth. This period was characterized by real GDP growth rates of over 10% on average, which led to an accumulation of macroeconomic risks and so-called overheating of the economy.

Acceleration of inflation and widening of the current account deficit to double digit figures, tensions in the labour market, and accumulating foreign debt were the most obvious macroeconomic consequences of such a rapid expansion. Capital inflows, in particular into the banking sector, fuelled domestic demand and gradually boosted consumption based on over-optimistic expectations regarding real estate prices and future earnings. The annual rate of domestic demand growth until 2007 exceeded 12% on average in real terms. If initially both private consumption and investments contributed equally to the economic growth, then from mid-2005 private consumption took the leading role, growing by 30% at the beginning of 2007.

In addition, the improvement in supply side conditions was not sufficient. Despite the fact that during the period of 2004-2007 investment volumes in the

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Latvian economy almost doubled, rapid growth of investments in the real estate sector and its dominance in the investment structure in 2007 played a crucial role in stimulating consumption as well as causing labour shortages in productive sectors of the economy. Tight labour market conditions have resulted in strong wage growth that outpaced productivity improvements, exerted upward pressure on inflation and undermined competitiveness.

The years 2007-2008 demonstrated clearly that the period of buoyant development was over. Instead of the expected gradual adjustment of domestic demand concerted by domestic policy measures, the global financial market turmoil has magnified accumulated risks and led to a severe economic downward adjustment.

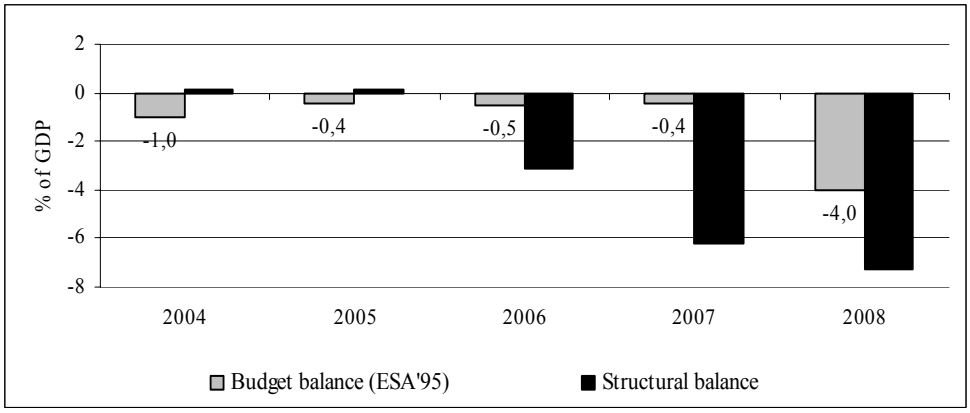
1.1 Fiscal Leverage: Was It Used?

The new EU Member States, including Latvia, are expected to enter the euro area as soon as they fulfil the necessary conditions. The gradual increase of the euro's role in the domestic economy and future euro introduction plans were behind Latvijas Banka (LB) decision to repeg the lats to the euro in January 2005 and to join the ERM II in May 2005. Bearing in mind that under a fixed exchange rate regime the monetary policy options are limited, fiscal policy should have taken the leading role in demand management.

As the risks of overheating continued to rise, the LB, beginning in 2004, implemented monetary policy measures at its disposal aimed at the reduction of macroeconomic imbalances and at curbing the overly vigorous domestic demand. More specifically, the LB has raised the refinancing rate (from 3.0% in 2004 to 6.0% in 2007) and increased the minimum reserve ratio (from 3.0% in 2004 to 8.0% in 2007). However, taking into account the dominance of euro loans in the loan structure, it was obvious that the LB policy should have been complemented by restrictive fiscal policy for which the Government is responsible. Was fiscal policy used adequately?

The level of the General Government budget balance recorded in previous years indicates that additional income brought about by the above potential economic expansion was spent, thereby fuelling the already high domestic demand. Despite the rapid GDP increase in the course of five years starting from 2004 the ratio of General Government expenditure to GDP has grown by close to 4%age points. Government borrowing in the domestic market to fund additional spending tended to crowd out productive investments of the private sector.

Chart 1: Structural Budget Balance in Latvia 2004 – 2008



Source: Central Statistical Bureau in Latvia, Bank of Latvia's calculations

Bearing this in mind, even though the budget balance has improved gradually in nominal terms, it has worsened considerably as of 2006 in cyclically adjusted terms, substantially exceeding the medium term objective which is set at -1% of GDP in the latest Convergence Programme of the Republic of Latvia[2] according to the Stability and Growth Pact provisions. International institutions, including rating agencies, the European Commission and the IMF stressed the procyclical nature of the fiscal policy implemented by Latvia's Government.

As the economic growth was expected to slow down and the inflationary pressures started to abate, the LB has started to ease monetary conditions already since February 2008. The LB cut the minimum reserve ratio for bank liabilities in 2008 in five steps: from 8% to 3% for bank liabilities with agreed maturity over two years and from 8% to 5% for bank liabilities with agreed maturity up to two years. In 2009, against the background of falling economic activity, inflation deceleration and weak lending activity, the LB reduced in two steps its refinancing rate from 6.0% to 4.0%. The implementation of the fiscal measures stimulating the economy proved to be a very complicated task since the Government has not accumulated any reserves in “good times”.

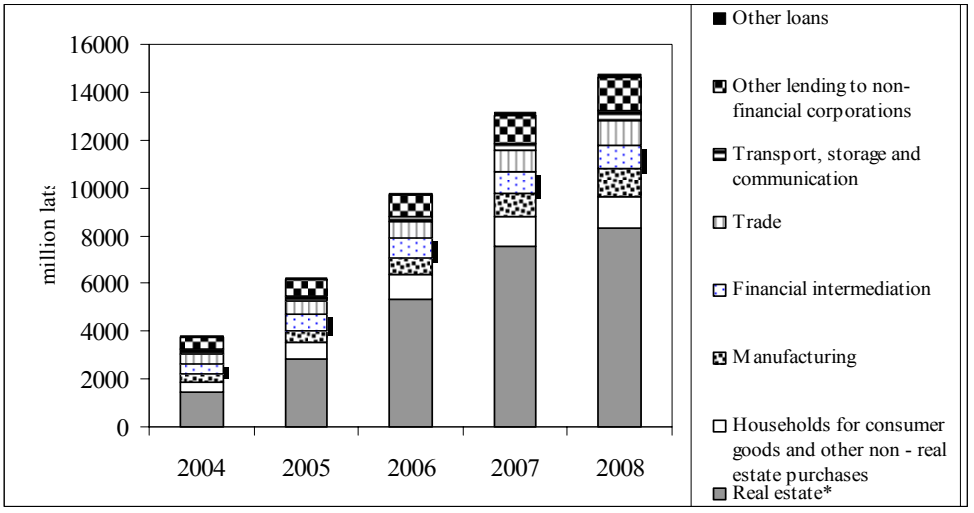
[2] Convergence Programme of the Republic of Latvia 2008–2011. Ministry of Finance of the Republic of Latvia, January 2009.

1.2 Positive and Negative Aspects of Lending

Credit availability is a crucial prerequisite for growth, especially for a catching up economy. Rapid growth of lending was facilitated, on the one hand, by both favourable global financing conditions (and thus inflows of cheap financial resources) and bank competition for market shares and, on the other hand, by optimistic expectations regarding the future development of real estate prices and private sector income levels.

The pace of lending growth reached 60% annually in 2005 and 2006, with the loan stock increasing by 300 million lats a month. In addition, real estate related lending became dominant, particularly as of the second half of 2006. Until mid-2007 the banking sector portfolio of loans granted to the real estate related segments grew by more than 500 million lats a quarter for five consecutive quarters, indicating an inefficient use of credit resources. Bearing in mind the strongly cyclical nature of the real estate sector, it could be expected that during an economic downturn such investments would not generate profit, becoming a risk factor both for the private sector involved in real estate development and trading and for the banking sector and borrowers.

Chart 2: Loans Granted to Residents in Latvia by Lending Segment, from 2004 – 2008



** Real estate includes loans to real estate activities sector and household mortgage loans.*

Source: Financial and Capital Market Commission in Latvia.

The first measures to contain excessive real estate related borrowing were implemented by the Government in 2007 as part of the so-called counter-inflation or economic stabilisation plan. To slow down the rapid pace of real estate orientated lending growth, several new requirements and changes in taxes and duties were adopted. For instance, the amount of the mandatory first down payment on loans for real estate purchase and the loan-to-value ratio of mortgage-backed loans were set; loans in excess of 100 minimum monthly wages could only be granted based on legal income; income from the sale of a real estate property that had been owned by the seller less than five years was taxed; the duty amount for registering the real estate with the Land Register was varied depending on the number of properties owned and the state duty for securing the collateral rights in the Land Register was increased and varied. These measures were expected to promote a gradual correction in the real estate market and mitigate the related macroeconomic risks.

However, it is difficult to assess the impact of measures taken by the Government of Latvia in 2007 as part of the counter-inflation plan since their adoption coincided with the beginning of the global financial crisis. Increased funding costs, lack of confidence and limited resource availability in the global financial markets adversely affected the Latvian banking sector, resulting in much more conservative lending standards thus leading to real estate price corrections in Latvia.

The risk of corrections in the real estate market and a contraction of domestic demand has materialized. Standard apartment prices have already dropped from their historical peak-level by more than 60%. Severe price correction is triggering other risks, e.g. related to the ability to repay loans as well as to the decreasing value of collateral. In economic downturns investments in productive sectors become supportive for the recovery, while the dominance of investments in real estate and its related sectors could hinder the economic recovery.

1.3 Fighting Inflation: Plans or Action?

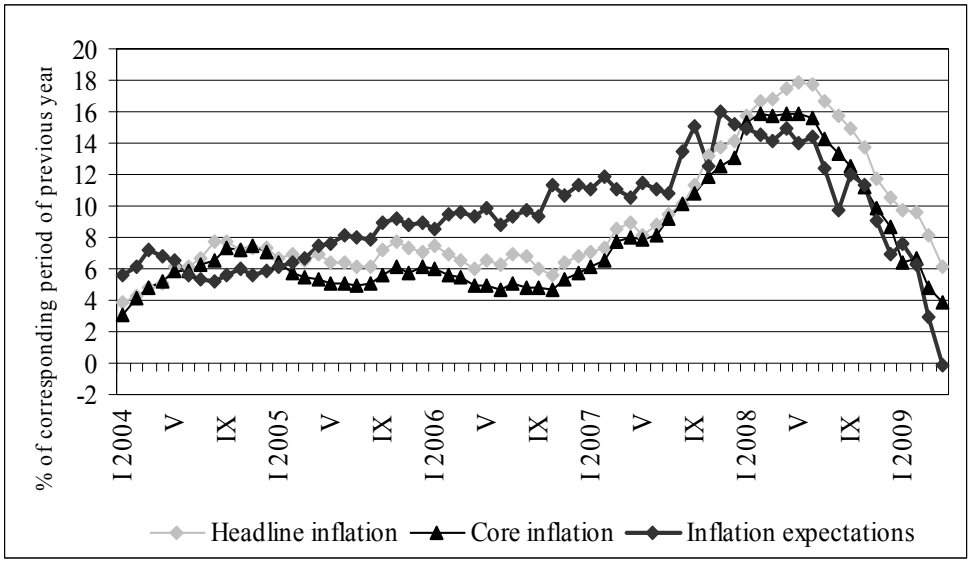
The strong increase in domestic demand facilitated by the lending boom was accompanied by inflation acceleration. In 2004 and 2005 the pick-up of inflation was determined largely by cost-related factors and one-off effects stemming from EU accession. Gradually demand-side pressures became increasingly pronounced as well. For three years, inflation increased above 6% annually reaching double digit level in 2007 and 2008. Strong credit expansion had played an obvious role among other demand-driven factors pushing up inflation.

At this stage, a clear set of policy measures aimed at containing inflation would have had a stabilizing effect on inflation expectations and could have prevented the formation of a price-wage spiral. The inflation acceleration was not only a social problem as it had two other adverse effects. First, as domestic prices and (through

the price-wage spiral) wages grew, the competitiveness has deteriorated; second, since the euro introduction was a Government-declared strategic goal, accelerating inflation gave rise to concerns regarding the ability to meet the Maastricht criteria.

In view of all this, an inflation-fighting ad hoc group started work in 2005. However, real actions were taken only in 2007 when the above mentioned counter-inflation plan was adopted. The reduction of inflation caused by demand pressures was expected to be achieved primarily through measures aimed at regulating the real estate market and moderating real estate oriented growth. However, instead of the expected gradual adjustments of domestic demand and the alleviated inflationary pressure, the changing economic and financial environment resulted in a very strong and painful reduction of domestic demand. Owing to the sharp contraction of domestic demand and economic activity and to the declining import prices and inflation expectations the inflation rate is expected to continue decelerate significantly.

Chart 3: Inflation and Inflation Expectations in Latvia, 2004 – Q1 2009



Source: Central Statistical Bureau in Latvia, Bank of Latvia's calculations[3]

[3] Calculations based on Benkovskis and Paula (2007).

2. Lessons and Opportunities Brought by the Crisis

Could this outcome have been predicted? The experience of other countries[4] and the adverse changes in the structure of the economy indicate that economic growth rates such as those experienced in Latvia in recent years cannot be sustained in the long term. However, the point of evaluating past events and assessing the policies implemented at the time is not necessarily to conclude what would have been the case if these actions were different. It is rather necessary to understand what lessons should be learnt from this experience.

- Rapid growth of real estate related lending based on over-optimistic expectations of real estate price movements raises macroeconomic vulnerabilities and is not sustainable in the long term;
- As the risks accumulate, under the conditions of a fixed exchange rate, a timely and adequate fiscal policy should be implemented before the accumulated economic risks become an impeding factor for policy action.
- Since euro adoption is a strategic goal of Latvia and given the obvious advantages that euro area accession could bring, all important decisions must be taken keeping in mind the conditions for euro introduction.

Can the crisis present new opportunities? On the macroeconomic level, it can already be observed in Latvia that a lack of labour is no longer a business-impeding obstacle: employers have a chance to hire better qualified workforce, thus improving productivity. On the enterprise level too the economic crisis can serve as an opportunity to optimize business operations and find new market segments. The available resources should be directed to the increase of production and export capacity. In other words, measures taken should not amount to "patching up" the existing problems, but must be effective also in the long term in order to ensure that investment generates income. Science and education should not be neglected as it is crucial to achieve that the Latvian economy will become strongly based on efficiency-driven growth and will smoothly move towards an innovation-driven stage of development.

3. Key to Economic Recovery in Latvia: Stable National Currency and Tight Income Policy

At the end of 2008, as a result of the global economic crisis and against the background of macroeconomic risks, the direction of capital flows in Latvia has changed. To relieve tensions in financial markets and promote confidence in the financial system, Latvia was granted international financial assistance. To set a clear course for the Latvian economy, the government developed a program for

[4] See e.g. Drees and Pazarbasioglu 1998.

economic stabilization and recovery. The exchange rate strategy that has been successful for 15 years (i.e. fixed exchange rate with a narrow +/- 1% fluctuation band) was retained as a cornerstone for future development. It will serve as a basis for sustained convergence and the attainment of Latvia's goal to enter EMU as soon as possible.

The Latvian authorities are strongly committed to maintain the exchange rate peg as the estimated costs associated with a forceful weakening of the national currency would outweigh potential competitiveness gains which are typically observed in large economies. Latvia is a small, open, foreign-trade-reliant economy and a price taker in international markets with low price elasticity of exports and imports – therefore, the so called Marshall-Lerner condition[5] is not met. The import component is high in Latvia's exports and consumption, and balance-sheet effects would have a significant adverse effect on domestic demand. Moreover, investors' confidence is crucial for economic recovery in Latvia.

A monetary policy framework with a fixed exchange rate regime requires vitally important fiscal and income policy adjustments. The bulk of the short-term fiscal adjustment comes from public sector expenditure cuts that will be supported by institutional and structural reforms to promote the effectiveness of the public sector and to ensure the mid-term fiscal sustainability. The Latvian Government[6] is strongly committed to wage restraint, which is seen as the most effective tool for the correction of imbalances in the economy and the restoration of competitiveness and also as a precondition for economic recovery in Latvia. The reductions of remuneration in the public sector supported by loose labour market conditions should further enhance and contribute to the correction of wages in the private sector. In addition, the National Tripartite Co-operation Council has been established to monitor the implementation of measures to reduce nominal wages in the public and private sectors.

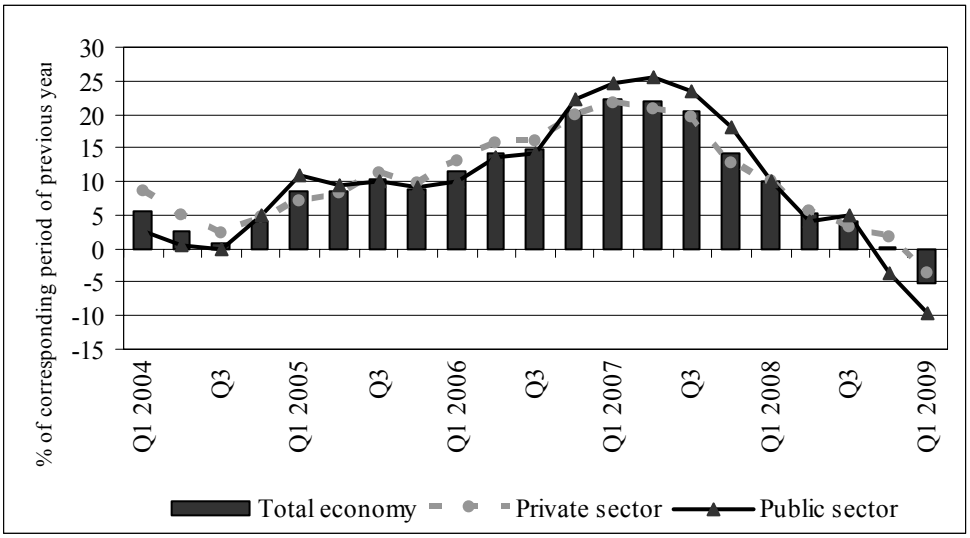
As estimated by Zasova and Melihovs (2005), the labour market in Latvia is flexible and the main adjustment comes through the flexible wage setting mechanisms. There are strong institutional fundamentals for that – trade unions play a limited role in the wage bargaining process which is highly decentralized at company level. Also according to international comparisons, Latvia has one of the lowest trade union density and wage bargaining coverage levels in the EU (Keune 2006). Falling labour demand in all sectors of the economy and tight income policy in the public sector led to a deceleration of the annual growth rate of real wages already in the second half of 2008 and a drop in the 1st quarter of 2009. In the

[5] Calculations based on Krugman and Obstfeld 1994.

[6] As defined in the Latvia's Economic Stabilisation and Growth Revival Programme. Riga: Cabinet of Ministers, 2008.

Global Competitiveness Report 2008/2009 the flexibility of wage determination is assessed as a competitive advantage for Latvia (Porter and Schwab, 2008).

Chart 4: Growth Rate of Real Wages in Latvia, 2004 – Q1 2009



Source: Central Statistical Bureau in Latvia, Bank of Latvia's calculations

With the easing of global deleveraging pressures and the recovery of the global economic environment it is expected that the improved cost competitiveness largely through tight income policy in the public sector and the flexible wage setting mechanisms and a rebalancing of the economy towards the tradable sector will create good prospects for an export-based economic recovery in Latvia.

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From Boom to Bust: Lessons from Lithuania

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Lietuvos Bankas[*]

1. Introduction

One could hardly find an emerging European economy which, after the accession to the EU, did not experience a period of economic, financial and asset price boom followed by a sharp economic downturn and the burst of an asset price bubble recently. Yet in the three Baltic states the credit cycle and economic swings seem to have been particularly hefty, which makes this case worthwhile a close examination.

Recent economic and financial developments in the Baltics serve as a clear reminder of how easy it is to succumb to the wishful thinking about sound economic convergence, nearly perfectly functioning financial and goods markets, and high resilience to macro-financial shocks. The explosive mix of global, regional and domestic factors first ignited, then overheated and in the end derailed economic expansion of the Baltic states. At present policy makers and the private sector face a difficult challenge of preserving the macro-financial stability and putting economies back on the sustainable growth track.

In this paper we provide a brief discussion of Lithuania's experience with the recent dramatic change in external and internal economic conditions. The essay gives a brief analysis of the reasons why Lithuania is among the countries that have been hit very hard by the credit crunch. We also discuss main economic policy measures that have been taken and speculate about what steps could have been more effective. We then characterize the state of the economy in the face of the falling exports, deflating asset bubble, credit crunch and contractionary fiscal policy. Finally, we reflect on some immediate macro-financial stability challenges

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and longer-term goals aimed at restructuring the economy and preserving competitiveness.

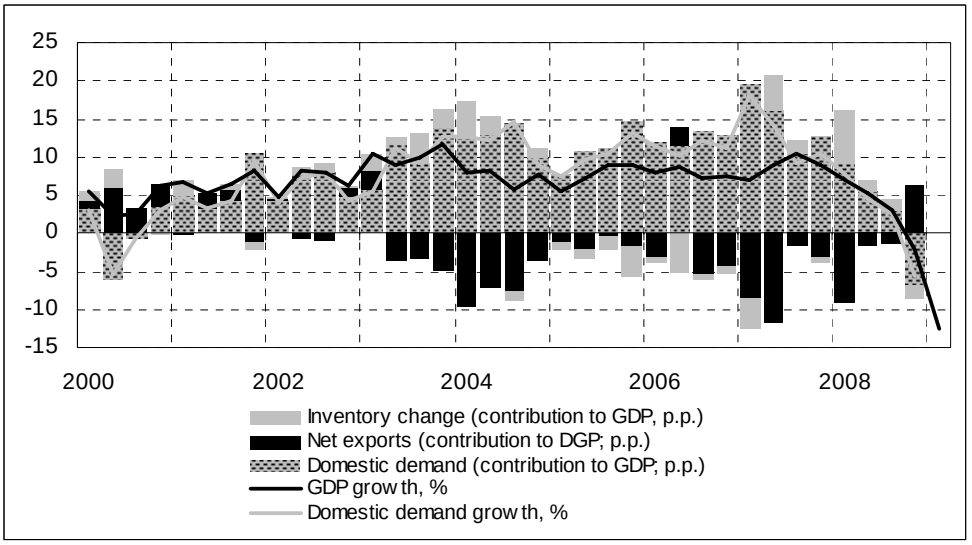
2. Determinants of the Boom and the Bust

For most of this decade Lithuania enjoyed a very strong economic boom: in the period from 2000 to 2007 the GDP grew on average by almost 8% (see chart 1), which is well above the potential growth. Our estimates of the average growth rate at which unemployment neither increases nor decreases point to the range of 5 to 5.5%.

However, in the second half of 2008 economic activity virtually stalled resulting in 3% growth for the full year. The latest economic data and forecasts of the Bank of Lithuania suggest that in 2009 a GDP drop of at least 15% seems to be unavoidable.

One of the main reasons behind the boom-and-bust cycle has been the credit-fuelled domestic demand. Its exuberant growth during the boom years provided a powerful stimulus for overall economic activity but it collapsed dramatically along with the burst of the house price bubble and the onset of the global economic crisis and local credit crunch.

Chart 1: Drivers of Economic Growth in Lithuania

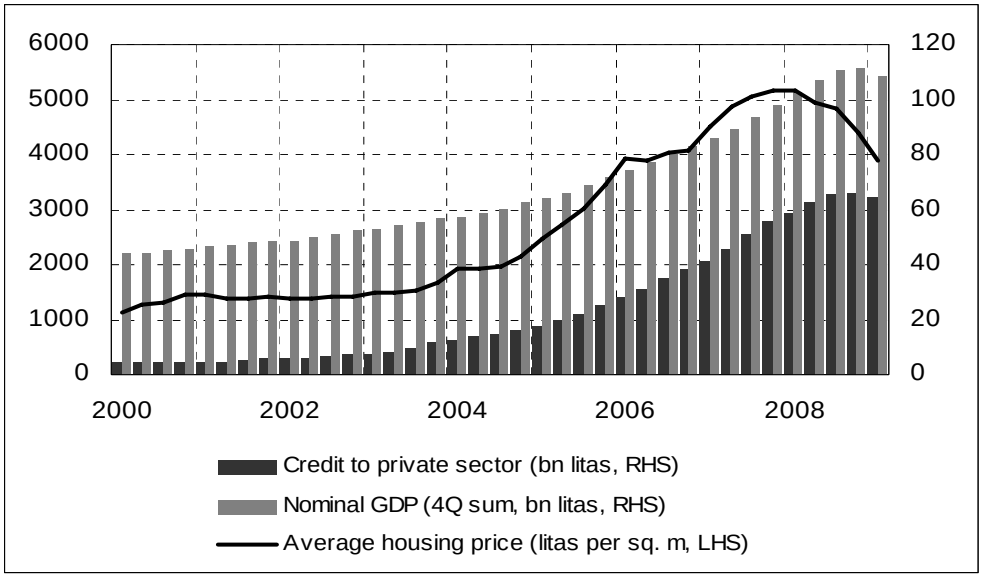


Source: Department of Statistics, Bank of Lithuania.

When analyzing this period one has to have in mind two interdependent processes: an economic and financial convergence process on the one hand, and the credit and

housing boom on the other. Starting from relatively low levels, credit to the private sector grew on average by 51% per annum in the period from 2003 to 2007, then showed signs of a stagnation and eventually – trend reversal. House prices more than tripled over the same period before market liquidity dried up in 2008 and house prices plummeted by some 25% from the peak (see chart 2).

Chart 2: Credit and House Price Growth



Source: Bank of Lithuania, Department of Statistics, Oberhaus.

3. Competing Narratives

The "convergence versus overborrowing in the emerging European economies" debate shaped the economic discussion among policy makers, business executives, domestic economic commentators and international observers. Unfortunately, Lithuania's undeniable progress on the economic, financial, and social fronts due to the European integration processes made lone voices warning of the coming housing bubble (e.g., Kuodis, 2004, Ramanauskas, 2006a) and threats of overheating (e.g., Ramanauskas, 2005, 2006a) virtually inaudible.

The saying that "the proof of the pudding is in the eating" certainly held true in this case and with no rock-solid evidence of imminent threats to macro-financial stability it was difficult for policy makers and individual decision takers to collectively agree on unpopular precautionary measures, which would have implied foregone political popularity and short-term economic gains. With the benefit of

hindsight, it is getting obvious that the role of the convergence process was grossly over-stated and the inefficient over-borrowing for non-productive purposes was one of the reasons for the hard landing.

Let us examine in more detail how it all started and what went wrong later. The strong credit expansion started at the beginning of this decade when Lithuania began to recover after the Russian crisis and economic prospects improved considerably with the highly successful reorientation of Lithuanian exports to the stable and promising western markets and with the EU accession prospects.

One could argue that the credit market processes could be rightly regarded as financial deepening ("credit democratization"), which shared many attributes with the peer countries of Central and Eastern Europe. Credit supply was boosted as a result of the banks' privatization, financial liberalization, the advent of foreign (mostly Scandinavian) resource-affluent banks, new lending and risk management practices, and the environment of low nominal interest rates due to the credible peg of the national currency to the euro.

Credit demand was fuelled by rosy income prospects, in particular after the accession to the EU, rising profits and wages, declining unemployment and the tax code, which favored housing loans and external financing of corporate investment projects. The combination of credit supply and demand factors plus favorable global economic environment, which emerged on the back of global credit easing, helped to pull the economy out of the stagnation in the aftermath of the Russian crisis.

4. Some Empirics

What did the empirical cross-sectional research of similar episodes in other economies have to say about this? Many empirical investigations suggested that there are clear risks associated with financial liberalization and ensuing strong credit expansion. For instance, Borio and Lowe (2002) suggest that periods of strong credit growth, booming asset prices and high levels of investment almost invariably lead to stresses in the financial system. From their analysis of a broad sample of countries, Fratzscher and Bussiere (2004) provide evidence of accelerated economic growth following liberalization and opening of capital account and a subsequent period of subdued economic activity due to the over-borrowing and over-investment. Tornell and Westermann (2002) assert that a typical lending boom ends in a soft landing but with a non-negligible probability of a crisis (in their sample it is 6% in a given year of a boom). The IMF (2004) examines emerging market credit booms[3], identifiable by strong deviation from long-term trends, and finds that they are synchronized across countries, last on

[3] Understood in their study as an excessive credit expansion that is unsustainable and eventually collapses of its own accord.

average for 3 to 4 years, often coincide with consumption or investment booms and end with very high probabilities in banking and currency crises.

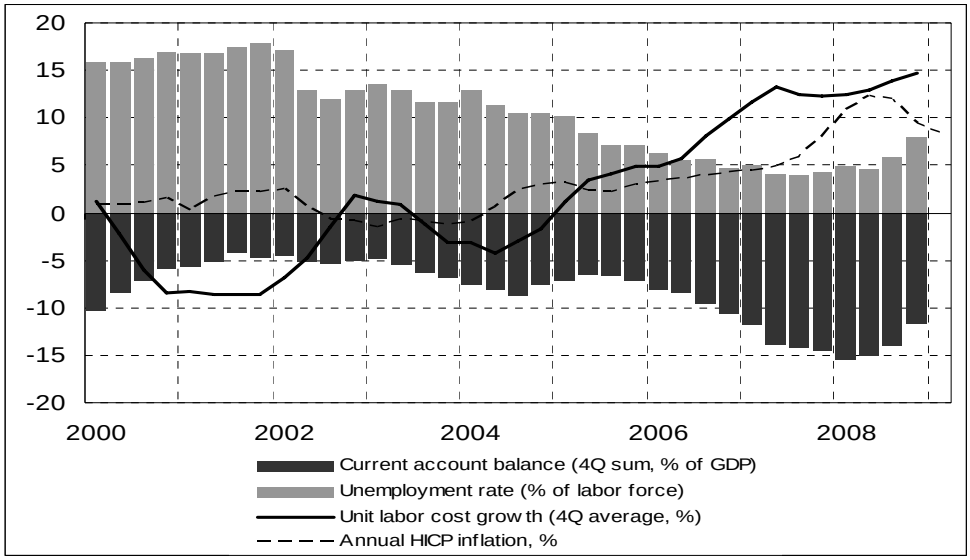
In contrast, there seemed to be many reasons to think that this time things were going to be different. In terms of financial convergence, Lithuania was traditionally regarded as a "late riser" (after a term coined by Cottarelli et al., 2003). At least until 2004 its credit-to-GDP ratio seemed to be well below the level justified by fundamentals (see, e.g., Backé et al., 2006, and Ramanauskas, 2007). Some studies, e.g. Kiss et al. (2006) and Sebastian (2005), claimed that fast credit growth in Lithuania could be fully explained by convergence. Some concerns related to strong credit growth were raised by Ramanauskas (2006a, 2006b) as he discussed the growing evidence of the strengthening financial accelerator and credit cycle.

Some authors, e.g. Ahmed and Bakker (2007), also pointed to the resemblance of the Baltic boom to the unsustainable Portuguese scenario due to possibly inefficient use of borrowed funds. However, it was generally perceived that risks to macro-financial stability were contained mostly due to low initial indebtedness, vested interests of reputable Scandinavian banks in Lithuania, banks' adherence to regulatory requirements, a well-developed institutional setting and the lack of clear indications of overheating (Bank of Lithuania, 2008).

With the benefit of hindsight, it is easy to track down that the first signs of the credit boom in Lithuania surfaced as early as in 2003, and starting from 2005 they were becoming more and more evident. Credit growth was becoming partly self-induced through the financial accelerator effect. Easing credit constraints and the associated surge of liquidity in the economy had a profound effect on asset prices. Steeply rising housing prices in turn spurred housing acquisition and development, and rising equity values via Tobin's q channel provided incentives to invest into the pro-cyclical sectors. All of this further simulated borrowing and created overheating pressures (see chart 3).

It is important to note that the booming real estate sector was the main gateway for the credit to pour into the real economy. At the end of 2008, the loans directly related to real estate acquisition and development constituted around half of outstanding bank loans to the private sector. However, despite this concentration of credit, its stimulating effects propagated throughout the whole economy and fostered seemingly broadly-balanced growth of output and incomes.

Chart 3: Some Important Indicators of Overheating Pressures



Source: Bank of Lithuania, Department of Statistics.

Large injections of "imported" liquidity into the economy simply could not leave wage and profit levels unchanged. A large fraction of credit-fuelled domestic demand automatically fed into higher incomes, especially in the non-tradable, pro-cyclical sectors, and contributed to higher capital and labor utilization rates. The grave problem with this is that the vast majority of economists, decision makers and foreign observers failed to take the interdependence between the real activity and incomes on the one hand, and the housing and credit boom on the other appropriately into account. The associated irrational exuberance eventually resulted in bank losses, excessive and inefficient investments, excessive indebtedness of the private sector, and overly optimistic projections of tax revenues.

Yet these assessment errors were not trivial, as the discussion of credit endogeneity was basically underpinned with the presumption of economic convergence. There were many analyses attempting to rationalize the strong economic growth accompanied by large external imbalances with the help of the neoclassical growth theory (see e.g. Bems and Jonsson, 2006, or Bems and Schellekens, 2007). These analyses suggest that active borrowing and large external imbalances are justified in the context of strong economic convergence provided that capital inflows raise productive capacity and expected future incomes.

It turned out that in the Lithuanian case the largest part of incoming capital flows were financing consumption and nonproductive, non-tradable activities

thereby invalidating the initial premise of convergence. Moreover, there are significant risks that due to the inefficient allocation of capital and labor and due to the excessive debt burden the long-term economic potential of the country may have been dented.

The whole boom-bust period was largely determined by compounded risk assessment errors made by various economic decision makers. But banks do stand out in this respect. Given the strong dependence of the economy on credit conditions and bank lending policies, the banks exerted immense influence on actual economic developments, and their risk assessment errors were detrimental for the overall economy. Individual borrowers and even companies acquiring bank financing for their business projects usually do not have sufficient expertise for the well-rounded assessment of micro- and macro-economic risks – banks' as financial intermediaries' primary function is therefore to resolve asymmetric information problems, assess and monitor investment risks and thereby ensure the efficient allocation of financial resources. In contrast, during the whole boom episode banks underestimated various risks, most notably credit risk.

Possible reasons for such inadequate assessments were rather standard in the regional context. They included overestimation of the role of collateral for ensuring portfolio quality, overestimation of the speed and sustainability of economic convergence, inadequate assessment of capital crowding-in, downplaying local risks from the foreign banking group perspective, market share buying, principal-agent problems in bank employee remuneration schemes, excessive profitability requirements set out by shareholders, etc.

5. Assessment of Economic Policy Measures

Arguably economic developments in Lithuania were slightly more moderate than in the two neighboring Baltic states, because the credit democratization process in Lithuania started later and lagged behind by a couple of years.

Nevertheless in the recent past Lithuania was persistently among those EU Member States that shared the most pronounced overheating pressures (i.e. well above potential GDP growth combined with large external and internal imbalances), and the unfolding economic contraction has been much worse than expected. For the sake of illustration of the magnitude of the seismic shift in economic conditions, note that downward revisions of the GDP growth forecast made by various institutions for 2009 amount to a staggering 10-20 percentage points compared to their earlier expectations.

One of the reasons of the strongly amplified economic cycle were economic policy failures. We claim that policy makers failed to curb excessive credit and house price growth and did not make effective use of fiscal stabilization tools.

There has been much controversy around certain issues of economic legislation, namely ill-devised income tax incentives for individuals taking housing

loans, the absence of the property tax (levied on natural persons) (see Kuodis, 2004). The (credible threat of prospective) introduction of a general property tax and the abolishment of the tax incentive, which effectively reduced mortgage interest rates by 33%[4], could have had suppressing impact on property prices. That would probably not have pricked the bubble but the damage would have been smaller.

Together with other above-mentioned factors, such government policy stance clearly fostered credit and house price growth. At the same time both central and municipal governments imposed heavy "red tape" constraints on housing development, which added to the distortions of the supply and demand balance in the housing market.

Finally, fiscal policy has been highly pro-cyclical in this boom-bust episode. The boom period was utilized by the ruling social democratic coalition for tax reductions and increases in government spending on social programs and wage increases in the public sector. Populist government succumbed to pressures to raise spending of boom-related tax revenues, especially in the context of the convergence saga and generally positive economic assessments from the EU and other international institutions. When the economy came to a halt in the second half of 2008, the newly elected center-right wing coalition had to dramatically cut public spending in the face of an imminent collapse of public finances, thereby exacerbating the economic slump.

Turning to monetary policy, it is important to note that it is based on the 15-year-long tradition of a currency peg (with the aim of the euro adoption as soon as possible) and on the commitment to free movement of capital. Within this monetary policy framework the Bank of Lithuania was basically left with only prudential oversight and administrative regulation measures to tackle any possible excesses in the credit market. The larger burden of the macroeconomic management should have fallen on the fiscal (tax) policy makers, but they failed to respond as we demonstrated above.

Arguably it is hardly a coincidence that the CEE countries that have their exchange rates fixed to the euro (most notably the Baltic states) tend to experience a more pronounced boom-bust episode than other CEE countries. Some authors suggest that a fixed exchange rate regime is an inherently risky policy option in the preparation for the euro adoption (see e.g. Zanghieri, 2004). The argument is that in the face of price convergence and capital inflows, a currency peg prevents the nominal exchange rate appreciation, thereby excess liquidity, price and current account pressures emerge, which may result in balance-of-payments, currency or banking crises.

The situation in the Baltic countries serves as a vivid illustration of such risks. Foreign banks, which control the lion's share of Lithuania's banking system,

[4] The statutory personal income tax tariff at the time when the incentive was introduced.

flooded the domestic market with relatively cheap and abundant external financing. Under the credible currency peg exchange rate risk was virtually eliminated, and euro-denominated loans were widely regarded as very close substitutes to litas-denominated loans. This resulted in extremely low (sometimes even negative) real rates of loans (denominated both in euros and litas), which stimulated investment, housing acquisition and consumption. At the same time, negative real deposit rates reduced incentives to save.

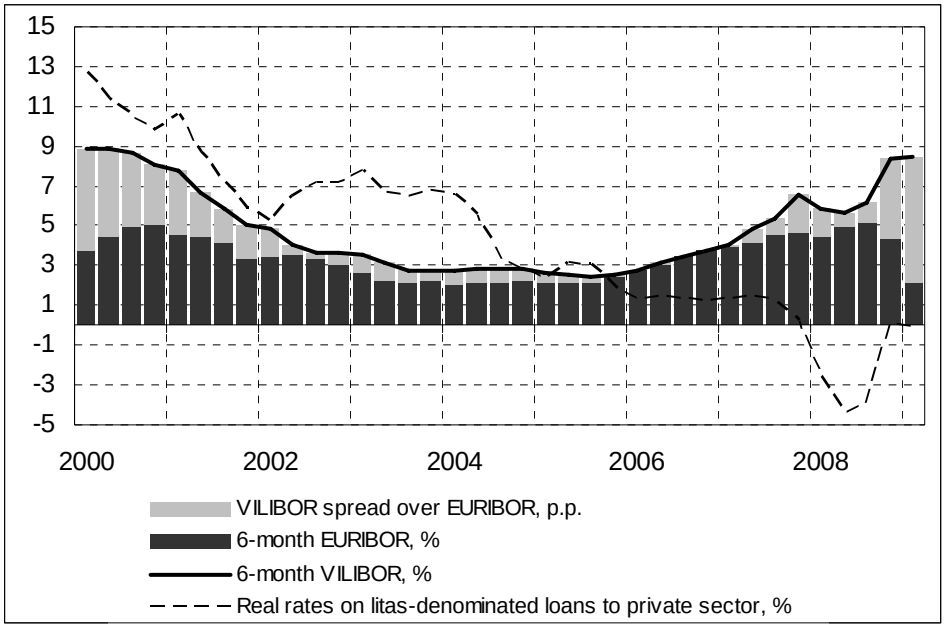
Such a situation is inherently risky because credit-fuelled domestic demand forms inflationary pressures, which result in even lower real rates, again stimulates credit and may create a vicious cycle leading to overheating and over-borrowing. Under the flexible exchange rate regime, currency depreciation risks should in theory rise once overheating pressures emerge, and this should hamper credit expansion[5]. In the case of the currency peg and in the absence of this automatic stabilization mechanism foreign banks should revise country's risk premia and should gradually become reluctant to provide financing.

There was a serious case to have *a priori* expectations of the almost inevitable transformation of too low interest rates into credit risks due to overheating. In the course of 2007 and 2008 banks were actively encouraged by the Bank of Lithuania to assess risks more conservatively but they were slow to react. They changed lending conditions – and did that dramatically – only when the domestic house price bubble burst and global bank financing conditions tightened (see chart 4).

If the currency peg added to overheating pressures, was there something that could be done about it? Against the background of overly favorable credit conditions rendered by imported policy rates and banks' exuberance, the Bank of Lithuania chose strengthening bank oversight and communicating risks as its primary financial stability enhancing measures. The Bank of Lithuania held the view that potential risks associated with credit growth would be best offset by the strong bank capital base and effective risk management (Bank of Lithuania, 2008). Prudential oversight measures included tightening rules of capital base formation, implementation of the Basel II accord, keeping relatively high reserve requirements (6%), conducting stress testing exercises, preparation for crisis management and strengthening regional cooperation of banking supervision.

[5] However, the experience of other CEE countries shows that this did not happen during the boom episode, which may just be another indication that the underestimation of credit risks (rather than, say, exchange rate risks) played a crucial role in this global boom-bust cycle.

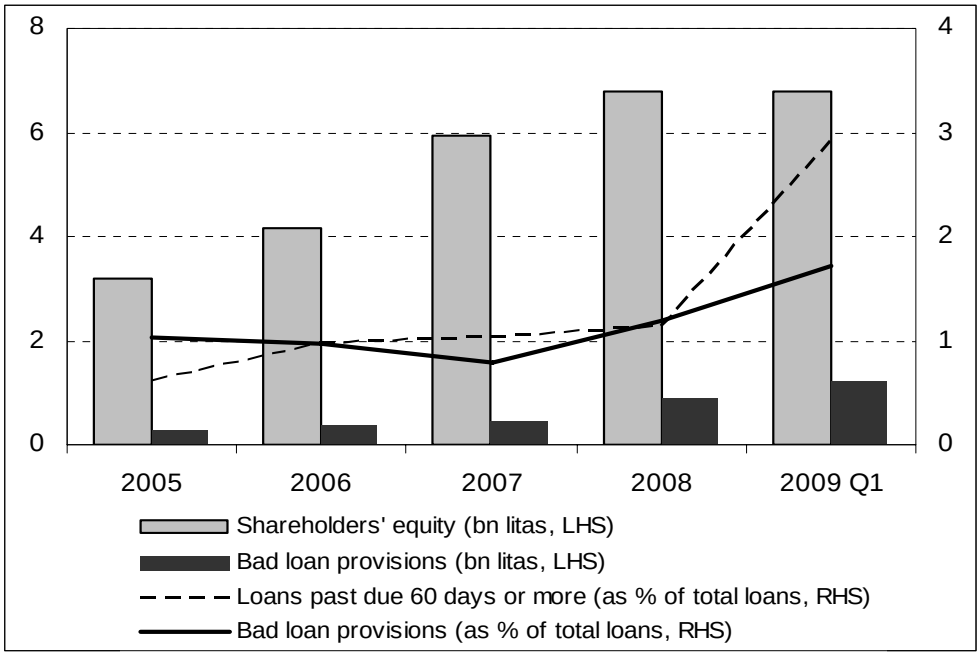
Chart 4: Lending Conditions



Source: Bank of Lithuania, European Banking Federation, authors' calculations.

Retrospectively, this approach proved to be insufficiently effective because the banking system did not have much trouble adhering to existing formal regulatory norms and yet the subsequent rapid deterioration of bank portfolio quality clearly reflects banks' excessive risk taking in the past few years (see chart 5). Despite excellent adherence to regulatory requirements, alarming signs of possible problems in the future included banks' practices to extend the maximum duration of housing loans up to 40 years, allow very small income buffers for borrowers (i.e. it was common to allow debt servicing to make up to 60% of household's income), require very small down-payments and tolerate loan-to-value (LTV) ratios of close to 100% and even up to 120%, etc.

Chart 5: Quality of Bank Loan Portfolio



Source: Bank of Lithuania.

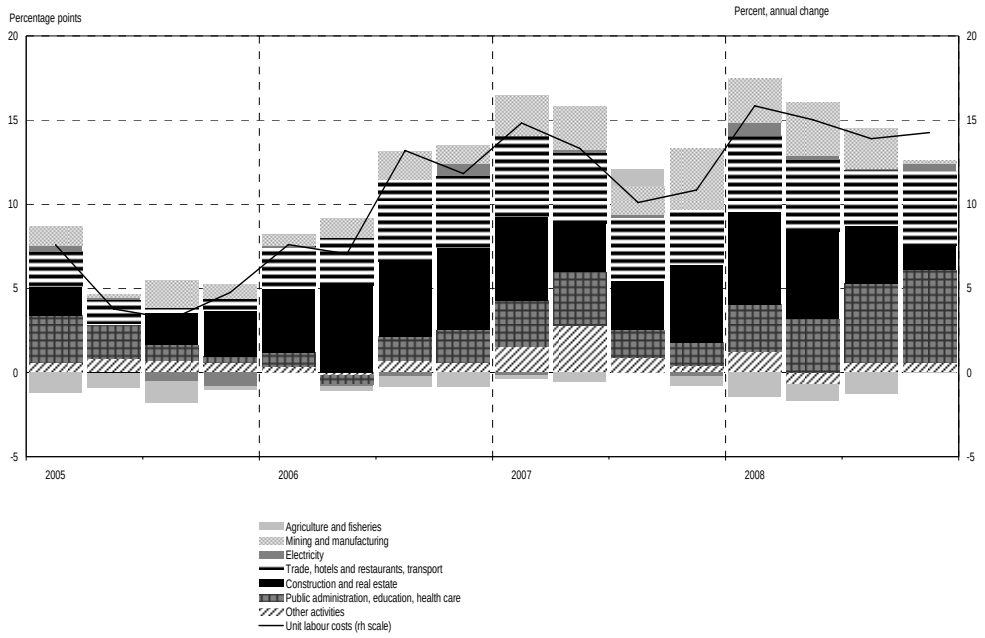
The prudential and administrative measures that may have smoothed the credit cycle and hindered excessive risk taking include imposing stringent constraints on the duration and size of housing loans, regulatory requirements for LTV ratios and down-payments, much stricter or possibly cyclically adjusted capital adequacy requirements or even outright taxation of excessive credit growth. Against the background of overwhelming optimism most of these measures were unfortunately dismissed as unnecessary, ineffective or contradicting the government's policy of supporting free movement of capital. On the other hand, the pro-active approach may have not worked due to the very strong economic incentives offering huge short-term gains against the backdrop of the global frenzy in financial and property markets. An important reservation regarding pro-active policy stance was possible regulatory arbitrage by foreign-owned banks that had branches in all three Baltic states.

6. Concluding Remarks

One of the main arguments we convey in this essay is as follows: retrospectively it is clear that economic overheating was almost predestined. The first-best policy

would have been to anticipate possible excesses and tackle them beforehand with a broad coordinated effort. The second-best policy would have been to try to minimize the damage from the boom. Lithuania's authorities in our view were not even close to the second best.

Chart 6: Decomposition of the Unit Labor Costs



Source: Statistics Lithuania and Bank of Lithuania.

The full extent of this damage remains to be seen. Thankfully, the increases in unit labor costs during the boom years were concentrated in the construction and related sectors (as a result of workers fight for "a fair share of the real estate price bubble"), the public sector and domestic services (see chart *6*). In the exporting industries wage developments were more or less in line with productivity advancements.

It should be emphasized that policy errors or economic agents' decisions were not the only reasons for the ongoing macroeconomic and financial distress. The global financial bubble and its regional repercussions and rosy expectations after the EU accession probably were simply too powerful forces to be counteracted effectively by even a very far-sighted government.

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The Current Crisis – a Challenge as Well as a Chance to Implement Needed Reforms?[1]

Amir Hadziomeragic

Centralna banka Bosne i Hercegovine

1. Robust Growth, Real Convergence and High Imbalances

The economy of Bosnia and Herzegovina (BiH) has been exhibiting robust growth (real growth averaged 6% annually between 2003 and 2008) coupled with a low inflation rate over the past five years. Considering its late start to transition and the devastating effects of the 1992–95 war, current level of per capita income in Bosnia and Herzegovina is remarkable. BiHs growth dynamics helped to put it on similar convergence path like other countries at a similar point in transition. Domestic demand has been primary engine of economic growth over the previous periods. Consumption was growing substantially over the whole period, while investment growth was uneven (even negative contribution to the GDP in 2006) over these years, but with significant acceleration in 2007 and 2008. The process of trade liberalization with the EU and within the region (SAA and CEFTA[2] agreements) has been very helpful for promoting trade and expanding the market for export. Privatization was not fully completed as planned due to a lack of political readiness and unresolved ownership rights. However, privatized companies have been very active in raising new capital and creation of jobs, especially where strategic foreign investors found interest for long-term investing.
The persistent imbalance on the external side has even widened in the last two years. The current account deficit refelcts the absorption boom and insufficient domestic saving. The trade deficit has been very large (over 37% of GDP in 2007 and 2008) despite very pronounced export growth in the last three years. An important source of financing of the trade deficit has been workers' remittances

[1] The opinions expressed in this papar are those of the author and do not necessarily reflect the views of the central bank of Bosnia and Herzegovina.

[2] Multilateral trade agreement CEFTA encompasses Bosnia and Herzegovina, Croatia, Macedonia, Moldova, Montenegro and Serbia.

from numerous BiH diaspora as well as workers compensation for temporary employments in the neighboring countries and the EU. Foreign official assistance has not been any more such a significant part of foreign capital inflows, but foreign direct investments (FDI) have become an important source of financing the current account gap. FDI inflows accounted for approximately 33% to 73% of the current account deficit, with exception in 2007 when large-scale privatization attracted FDI over 10% GDP. Despite the large current deficit, international reserves were steadily growing due to large privatization proceeds and banking foreign borrowing till the last quarter of 2008. The external public debt is relatively low (18% in 2007 and 16.7% in 2008) and mostly under concessional terms. Thus the debt service does not pose a severe threat for external liquidity. Total public debt has been estimated[3] at 30% of GDP. Growth of the private external debt has been more intensive, since companies privatized with FDI were able to start foreign borrowing. Total foreign debt is estimated to be still below 50% of GDP, indicating no immediate problems related to foreign indebtedness in the coming period.

Table 1: Key Macroeconomic Indicators 2004–2009

in % of GDP unless otherwise indicated	**2004**	**2005**	**2006**	**2007**	**2008**	**2009f**
Real GDP growth (in %)	6.3	3.9	6.9	6.0	5.5	-3.0
CPI (change in %, average)	0.4	3.8	6.1	1.5	7.4	2.1
Current account balance	-16.3	-17.3	-7.9	-10.4	-14.6	-9.3
FDI (% of current account)	42.8	32.8	73.9	132.7	36.7	25.0
General government balance	1.6	2.9	2.4	1.3	-1.5	-4.0
Reserve cover (months of import)	3.7	4.0	5.2	5.4	4.4	5.5
Gross external debt	47.5	52.6	48.0	48.5	40.5	42.0
Public debt	25.5	25.6	21.2	18.1	14.6	16.0

Source: BiH authorities, IMF.

The real effective exchange rate has been quite stable and does not raise significant external stability concerns. Indicators of price and cost competitiveness vis-à-vis neighboring countries (being the most important trading partners) have been benign, while export growth has been remarkable over several years prior to the crisis. Constant-market-share analysis suggests that export growth between 2003 and 2006 can be mainly explained by the competitiveness effect. Relative to non-tradeables, average labor productivity of tradeables was much higher than that of main trading partners (euro area and neighboring countries).

[3] Statistics on internal debt is still missing, so estimates of debt stock are necessary. Data have been quoted from IMF Article IV 2008.

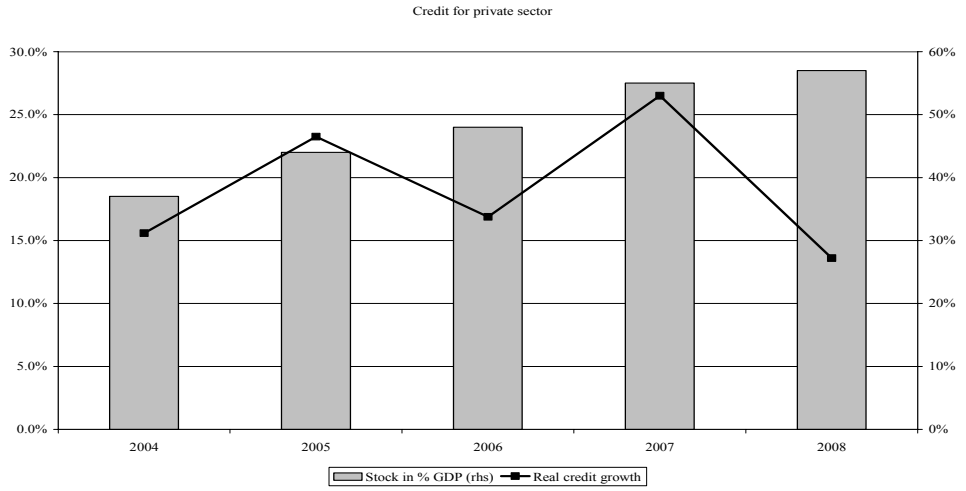
After the period of fiscal consolidation, the fiscal position has deteriorated in the last two years as a result of pro-cyclical fiscal policy. The large increase in public spending started in 2006 in the context of the fiscal space created by the introduction of the value-added tax (VAT). The general government surplus of 1.3% of GDP in 2007 was much lower than the surplus of 3% of GDP in 2006, which will lead to a deficit larger then 2% of GDP in 2008. Fiscal consolidation prior to 2008 alleviated pressure on external imbalance. Also, fiscal consolidation has been necessary to create space for settlement for resolving of accumulated arrears and liabilities from the pre-war period. Driven mainly by sharp increases of transfers to households, capital spending and public wages, government expenditures reached 50% of GDP. Strong revenue performance has continued even in 2008, but a gradual slowdown is expected even without effects of the current economic crisis. Tax reforms encompassed direct taxation as well, corporate and personal income taxes were streamlined and simplified in order to broaden the tax base and reduce the tax burden for employers. Results of these tax reforms are still not fully reflected in economic growth, but their positive impact is to be recognized soon.

The monetary regime based on the currency board with the peg to the euro has been successful in keeping inflation low. Inflation has been only slightly higher then in the euro area with the only exception in 2006. Due to a one-time price adjustment after introduction of the VAT, annual inflation in 2006 was substantially higher than in the previous years, but it proved not to have a prolonged effect. However, inflation dynamics abruptly changed in 2008, when inflation peaked at 9,9% in July due to an enormous increase of world energy and food prices. The nominal growth of wages has been much higher than inflation, so real wage growth was significant (10% in March 2009). Such a wage growth was partially underpinned with an increase of productivity in manufacturing, finances and the tradable sector. But wage pressure from the public has mounted in the recent period, after the government raised public wages to levels sometimes even higher than in the private sector.

Rapid financial deepening has been a key growth contributor and has been continuing for several years. After successful privatization and massive capital inflows in the banking sector credit flows have been very intensive in response to high demand from the private sector. Foreign-owned banks dominate the banking sector and liquidity management and financing is mostly managed through relation between local subsidiaries and foreign parent companies. Real credit growth for the period 2004–2008 averaged 19%, which led to an increase of the private credit stock to 57% of GDP at the end of 2008. Prolonged rapid credit expansion raised concerns about the widening current account deficit and about possible uncontrolled accumulation of credit risk by banks. Although the credit level was very low at the very beginning and credit expansion was understandable, it has become clear that such expansion may have negative macroeconomic

consequences over time. The central bank was prompted to tighten reserve requirements in order to slow down credit growth. The last increase of the reserve requirement rate from 15% to 18% was introduced at the end of 2007. Simultaneously, supervision authorities introduced additional prudential measures with the aim for more reliance on domestic funding instead of foreign borrowing by banks. However, the effects of these measures have been limited in circumstances of high liquidity in the international markets and increased demand for loans.

Chart 1: Credit for the Private Sector (2004 – 2008)



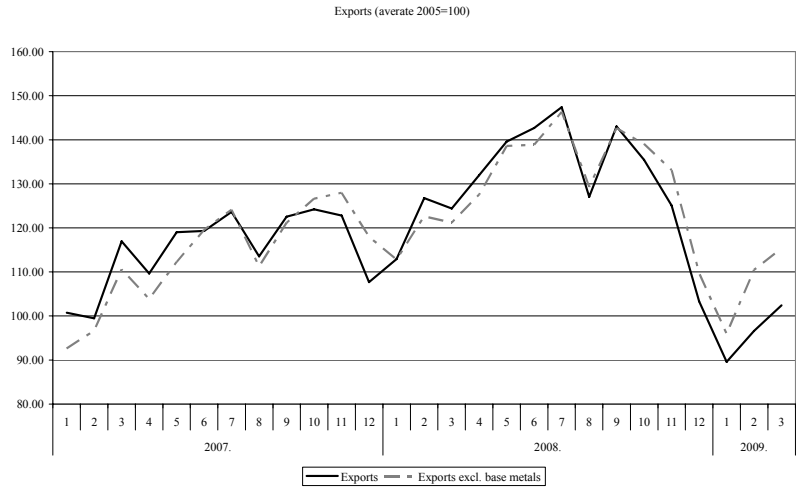
Source: CBBH statistics.

Banking supervisory activities have been focused on controls of both compliance with prudential regulations and business and financial operations on bank-by-bank basis. Supervision framework is still based on Basel I principles. Banking sector has grown steadily without any major banking crisis (only problematic banks are two insolvent banks without any active participation in the market) and need for fiscal remedies. Recently, more emphasis was given to the financial stability issues and systemic analysis of the banking sector. The central bank and supervisory authorities have been engaged in intensive coordination with the aim to ensure financial stability of the whole system. Cross-border supervisory cooperation has not been very effective, despite several bilateral and multilateral Memorandums of Understanding on supervisory co-operation. Some of the foreign supervisors have not been keen to establish effective co-operation and domestic supervisors have been deprived from access to key information about parent-banks consolidated balance sheet data and relevant supervisory assessment.

2. Crisis Impact and Untested Resilience

Over the first three quarters of 2008, real sector developments evolved pretty much according to the predicted scenario with a gradual slowdown in economic activities. However, the worsening of the financial crisis in September and October brought this benign scenario to an abrupt end. Industrial production and exports decelerated significantly in November and December, with a particularly pronounced decline in the base metal and the automobile industry. This deterioration of economic trends continued in the first quarter of 2009 and the output forecast has been drastically cut to around minus 2% for 2009. Thanks to a restart of large oil processing facilities industrial production is still growing, but almost all other industries declined by at least 15% to the first quarter of 2008. The export sectors have been suffering from weak metal[4] prices and import demand in the EU and CEFTA countries. For instance, aluminum prices fell nearly 40% from their peak in summer 2008 and prices of some steel products fell 30%. Moreover, EU import growth is projected to almost half in 2009 from 7% to 4%. The construction sector, except few large public infrastructures, is directly hit by the credit crunch, which will affect the demand for new business and residential buildings, as well as the ability to finance new projects. Finally, the retail sector has been affected by the slowdown of export earnings, reduced access to credit and reduced confidence on the side of consumers, so retail sales were down 10% in the first quarter to the same period last year.

Chart 2: Export Performance



Source: BiH Agency for Statistics.

[4] Base metals export account for around 30% of total export.

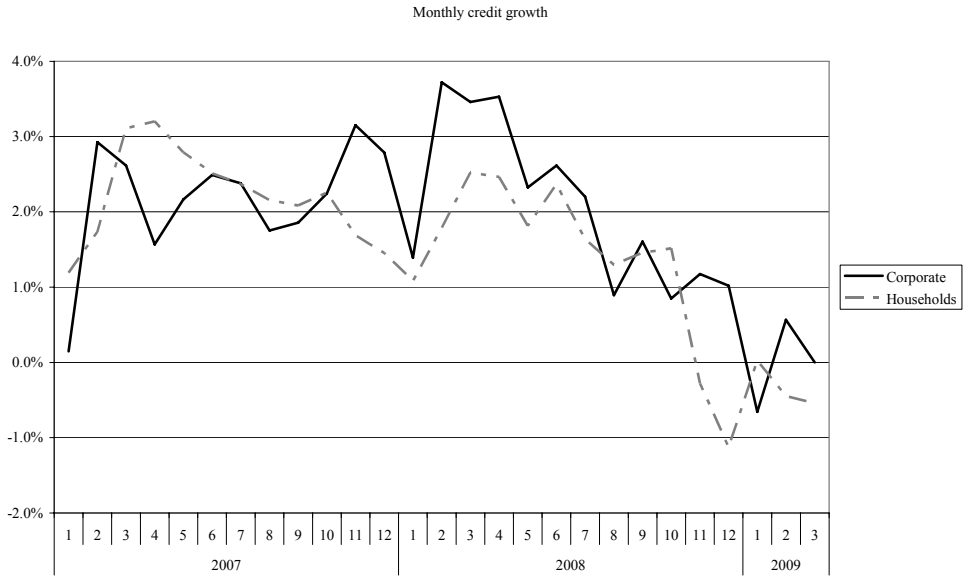
The external imbalance is likely to moderate in 2009 as a consequence of weaker domestic demand. Hence the current account deficit (CAD) will be bellow 10% of GDP, which is much lower than in previous years. The anticipated reduction of CAD is also the result of a substantial drop in oil, food, but also base metals prices, which together comprised around 44% of BH imports in 2008. The sources of CAD financing are more uncertain than previously. In 2008, less than half of the CAD was financed by FDI (5.7% of GDP), and another 10 to 12% by capital grants and drawings of loans by the government. Thus, about 40% of CAD depended on foreign borrowing by commercial banks and to a lesser extent private companies. In 2009, the FDI inflow is likely to decline relatively to previous years. (IMF WEO reports dramatic drop of 116% in capital inflows in the CEE) Moreover, the private sector is finding it increasingly difficult to borrow from abroad. Consequently, a larger portion of CAD financing may put pressure on foreign exchange reserves, which suffered a loss of 15% since October. The current level of foreign exchange reserves would be adequate to absorb this kind of shock in 2009, but there are realistic expectations that international financial institutions will provide additional financial assistance (Stand-by arrangement with the IMF has been recently discussed and other IFIs will likely make available additional sources for international reserves).

Inflation rates have been declining to 0.8% in March as a consequence of the slowdown in transport and food prices (drop of 3.5%). As the commodity prices and economic activity are on a downturn across the globe, BiH will not be importing inflation in 2009. Forecasted inflation in 2009 will be in the range of 2 to3% and depend on the price of goods and services provided by the public sector, public sector wage policy, and the aggregate level of public expenditures.

The first wave of the ongoing crisis hit the banking sector when depositors started to withdraw deposits from the banks in October, when KM 814 millions or 6.3% of total deposits were taken out of the banks. Although resident banks were stable and without any losses from the international financial crisis, households were alerted with events in other countries and market downgrades for large international banks. The episode did not last too long and confidence in banks was restored after two weeks. The central bank of Bosnia and Herzegovina (CBBH) reacted promptly and reduced the reserve requirement rate from 18% to 14% in order to provide additional liquidity and compensate the withdrawn deposits. Also, the government increased the threshold for insured deposits from EUR 3,250 to 10,000in early 2009. The CBBH continued with the relaxation of available monetary instruments, so reserve requirements have been further lowered to 10% for long-term liabilities (and 14% for short-term liabilities) and new foreign borrowings are totally exempted from the reserve requirements. Despite all these measures, credit flows to the private sector dropped significantly in the beginning of 2009. (private sector credit growth was only 12.7% in March compared with 26.9 % in September 2008), while lending rates increased significantly. Foreign

subsidiaries have been facing a lack of foreign funding, since these banking groups are in a deleveraging process and can not provide much funding for their subsidiaries. Profitability of the banking sector for 2008 strongly deteriorated compared to 2007 (total profits are 43% lower and main profitability indicators declined accordingly), and even worse results are expected in 2009.

Chart 3: Rapid Credit Slowdown after Break-up of the Crisis



Source: CBBH statistics.

In the current global downturn the banking sector is likely to face a further deterioration and shocks on both sides of its balance sheet. In this environment, enhancing crisis preparedness and improving monitoring are key priorities. Various authorities will work jointly on contingency planning arrangements and prepare for various crises scenarios. To this end, the creation of a Standing Committee for Financial Stability (comprising of fiscal authorities, banking agencies, deposit insurance agency, CBBH) has been under discussion. Its main task would be to review crisis preparedness and to discuss individual cases of significance and other developments relevant to financial stability.

The fiscal position has been very strained after the crisis started. The robust growth of tax revenue that was seen in recent years will not continue in 2009. The tax revenue will probably decline in nominal terms and also as percentage of GDP due to decreasing domestic demand and lower domestic and import prices. Under such circumstance, consolidated expenditures would need radical adjustment in

order to run tolerable fiscal deficit (up to 4% GDP) in 2009. Authorities are keen to reduce current public consumption (especially public wages and social transfers) and continue necessary public investment. Even without any a fiscal expansion (such as a fiscal stimulus or bank bail-outs), the level of public debt is likely to grow as a result of the economic crisis.

3. A Need for Structural Changes and Different Growth Patterns

The existing monetary and exchange rate regime will be the cornerstone of future economic policies. The Currency Board Arrangement has served well over the past 12 years, ensured macroeconomic stability with low inflation, and has broad political and public support. The conservative financial system embedded in the currency board arrangement proved very beneficial as the financial crisis evolved and many other countries with more sophisticated countries were engulfed in credit problems, partly as a result of loose monetary policy. One of the main tasks for the next period is to secure the stability of the financial system. It would require further improvement of banking supervision, especially cross-border cooperation and approximation with the euro zone regulation and innovation. Also contingency planning and monitoring need to be further developed to ensure prompt and adequate reaction in the case of emergency. As it is likely that real sector circumstances deteriorate, banks will face further problems with asset quality.

Some of the main trading partners of BiH have recently experienced sizeable exchange rate deprecation, which might have an adverse impact on our competitiveness. It will necessitate to implement tools to prevent real appreciation of domestic currency. Wage flexibility needs to be maintained, and the government is determined to have a strict wage policy over the next 3 years. It is expected that wage restraint in the public sector will provide a strong signal for wage moderation in private sector settlements. Wages have been mostly negotiated at company level, which will facilitate necessary downward adjustment. However, some regulations of the labor market still need to be reformed in order to ensure more flexibility for employers (like part-time jobs, severance payment, …)

The current fiscal position has been very tight and does not provide space to finance fiscal stimulus from domestic sources. Ongoing reshuffling of public expenditures have been designed to reduce current consumption, without any increase in capital investment. It is, therefore, necessary to rely on external sources of capital for the stimulus aimed to boost domestic demand. Efforts should be made to secure additional funding for more projects from IFIs and foreign governments, since the access to international markets is severely constrained due to the low sovereign credit rating and increased risk aversion of foreign investors. After the worst part of the crisis is over, there is an urgency to ensure medium and long term fiscal sustainability. The level of public debt will rise over the next 2 to3 years, but

it would require undertaking very bold steps to gradually reduce the debt level after the crisis is over. Future accession to the EU would impose strict rules on fiscal position and fiscal policies need to take it into account well before actual joining the EU. The limited room for fiscal maneuver underlines the importance to undertake the most effective measures including an increase in spending efficiency by e.g. cutting public administration costs, urging state-owned enterprises to devise saving plans or reducing the rate of public sector wage increases and pensions. At the same time, public sector salaries and social benefits should not be presented as mandatory budgetary items. Only debt payments are mandatory items and even they could be postponed, although it would not be wise to suggest that at the moment. Increases in public sector salaries and social benefits are the consequence of long-term pressures from certain interested groups and future fiscal sustainability should be saved at any cost. So, the government should cut its current expenses on a more permanent basis and avoid temporary reduction (especially wages and social transfers).

Current government interventions are mainly aimed at preserving jobs and tempering output loss. To this end, governments have prepared, after a certain delay, a comprehensive action plan, but efficiency of these actions is still very limited. The main problems are a lack of fiscal space for massive interventions (subsidies, guarantees, capital injections and recapitalization) and complexity of structural reforms, which normally take a long time to complete.

Economic downturns are usually in times when existing economic policies and structure are being revised and new reforms are introduced. BH needs to prepare its economy for the post crisis resurgence and acceleration of European integration through tackling complex reforms. Governments and enterprises need accelerated economic reforms and increase efficiency to become more internationally competitive and able to achieve faster real convergence. Progress on structural reforms is uneven. BiH trails its best-performing peers on most structural and transition indicators and transition.

Private sector (still well below 60% of the economy) development has been hampered with burdensome regulations and weak institutions. Several international analyses[5] suggest that some of the reforms for more conducive business environment are important. The ongoing crisis will be an opportunity to address these deficiencies, which were frequently neglected during the periods of economic prosperity. It would enable to attract more foreign investments (which will be more difficult in the coming years) and to increase economic efficiency and lower production costs.

[5] Doing Business by the World Bank, EBRD transition indicators, Global Competetive Index, Corruption Perception Index

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Spillovers of the Crisis: How Different Is Croatia?

Ljubinko Jankov[1]

Hrvatska Narodna Banka

1. Overview

Central and Eastern Europe, a region which had been a recipient of massive capital inflows from Western Europe during the last twenty years, has been hit hard by the current global financial and economic crisis. After the collapse of Lehman Brothers it faced soaring risk premia and falling demand for its exports. The sharp downturn in real economic activity was accompanied by problems in the banking sector in some countries and the need for international official financial assistance.

The purpose of this paper is to explain why Croatia is one of the countries that have so far managed to cope with the crisis relatively well. The second section describes the causes of capital inflows and various measures adopted by the Hrvatska Narodna Banka (HNB) to slow them down, and stresses that it was almost an impossible mission for the HNB. The third section explains how these measures ensured the continued normal functioning of the Croatian banking system in the period of economic distress and suggests that avoiding the exchange rate and banking crisis was the key reason why the current decline in real economic activity is less pronounced than in peer countries. The fourth part admits that such policy is not without risks, particularly given that international competitiveness has been in decline for the last several years.

2. Main Features of HNB Policy after Obtaining EU Candidate Status

Since 2000, Croatia has significantly improved its political relations with the international community. Better political relations helped finalize negotiations on joining the World Trade Organization in 2001 and contributed to the signing of the Stability and Association Agreement with the European Union (EU) in 2002. Political integration was followed by higher foreign capital inflows to Croatia.

[1] Executive Director, Hrvatska Narodna Banka.

When Croatia obtained the candidate status for EU membership in 2005, inflows intensified even further.

Foreign owned local banks were the main players moving foreign capital into Croatia. Their owners are major foreign banks that operate in the region, and most of them came to Croatia around 2000. They encouraged their local subsidiaries to increase domestic lending and financed the lending by foreign borrowing from other banks belonging to the same banking group. Making a profit on the difference between domestic and foreign interest rates has been the main motive of foreign banks' business in Croatia. Namely, while foreign interest rates fell to historically low levels in 2001 and remained there for several years, interest rates in Croatia have been much higher than abroad. Furthermore, the expectation that the nominal exchange rate would remain stable also supported capital inflows. Although the primary goal of the HNB is price stability, tight management of the nominal exchange rate of the Croatian kuna (HRK) against the euro has been the main feature of HNB monetary policy since 1993 and it has also proven to be successful in controlling inflation. This is a result of the fact that Croatia is a small open economy with a high degree of euroization (about 2/3 of bank deposits are in foreign currency).

Although capital inflows are considered positive, there were rising concerns within the central bank that Croatia receives, in the short run, too much of what is otherwise a good thing. Such concerns were supported by the fact that, on the one hand, the speed of economic growth was similar to other countries in the region, while on the other hand external vulnerabilities were materializing much faster. This was partly due to the fact that most of the new bank loans were granted to households, i.e. for consumption. The HNB recognized such trends as the seeds of future crisis, and decided to act. However, it had to do so within the following constraints: 1) the room for independent monetary policy was limited due to the exchange rate regime, 2) despite the HNB's legal power to impose capital controls, this was not possible due to the EU accession efforts, and 3) the cooperation with fiscal authorities was limited due to the large structural problems in the government budget. Therefore, the HNB's response to capital inflows was a combination of soft monetary policy and the adoption of various administrative and prudential measures. Such measures were introduced already in 2003, and were changed and gradually tightened afterwards. The choice of particular measures and changes in those measures over time were not simple and smooth processes because banks always tried to find ways to arbitrage them.

In 2003 the HNB introduced a speed limit to bank lending and a rule on minimum retained earnings if bank lending exceeds a certain threshold. The speed limit was set as the annual growth of banks' domestic credits of 16%. As the penalty for breaching it was high, banks formally met the limit, and the rate of growth of banks' credits to the non-government sector fell from 28.7% in 2002 to 11.8% in 2003. Because of the banks' attempts at arbitrage, the rate of growth of

total domestic credits in the economy as a whole declined by much less. Banks actually adjusted to the limit by: 1) selling a part of their loan portfolio to affiliated Croatian leasing companies, securing the funding by borrowing abroad from the mother bank or other banks within the same banking group; and 2) selling the credit risk to the mother bank; under the accepted accounting standards banks can remove such loans from the balance sheet. The latter operation should had been recorded by statistics as foreign direct lending to non-bank clients (using the local bank credit office expertise), but it was not captured by statistics in 2003. The other measure adopted by the HNB was the requirement for fast-growing banks to retain a portion of earnings for three years. The purpose of such a requirement is to provide a cushion against possible deterioration of newly granted credits in the future.

The speed limit regulation was discontinued in 2004 and replaced by other measures believed to be better. The important new measure introduced in July 2004 was the marginal reserve requirement, which required banks to make additional non-interest bearing deposits with the HNB if their foreign liabilities increased above their value recorded at end-June 2004. The marginal required reserve rate was set in July 2004 at 24%. The rate was later gradually increased, reaching 55% at the end of 2005. Throughout that period, the HNB was also active in refining the regulation and closing all loopholes found by banks. For instance, marginal required reserves were also later applied to increases in liabilities to affiliated leasing companies, to off-balance sheet items related to the selling of credit risk and to debt securities issued. The latter were included because some banks started issuing debt securities by placing them privately with the mother bank. Prior to that, bank debt securities were not issued at all.

Marginal required reserves came in addition to the regular required reserves and the minimum foreign exchange liquidity requirement. Taken together, these three requirements reached their peak at the end of 2005, and – although there were some minor variations in the minimum foreign exchange liquidity requirement – remained there until October 2008. Banks were required to place 72% of the increase in foreign liabilities with the HNB, or in liquid foreign assets, while the remaining 28% was disposable for lending to clients (see table 1). In spite of extremely high reserve requirements, banks' domestic lending increased again. The annual rate of growth of banks' domestic credits was at 22.3% in 2005 and 23.9% in 2006. However, in 2006 banks' foreign liabilities started to decline because foreign borrowing as the source of banks' funds for domestic lending was replaced by raising new equity capital. At this time, incoming cash transfers from mother banks for the purpose of raising bank equity capital tripled relative to the previous three years' average.

Table 1: Required Reserves Set by the HNB

Source of financing	Disposable for lending		Cost of financing (%)		Break even average interest rate (BEAIR)	
	2007	2009	2007	2009	2007	2009
Foreign liabilities						
HRK (100)	28	86	4,30%	5,87%	15,04%	6,73%
HRK indexed to FX (100)	28	66	4,30%	5,87%	15,04%	7,76%
FX (100)	28	69,5	4,30%	5,87%	14,67%	7,51%
Household deposits						
HRK (100)	83	86	2,80%	6,65%	3,27%	7,65%
HRK indexed to FX (100)	51	66	4,21%	5,09%	5,70%	6,58%
FX (100)	56,1	68,1	2,87%	4,97%	2,82%	6,23%
Average interest rate on new placements			8,69%	9,76%		

Source: HNB.

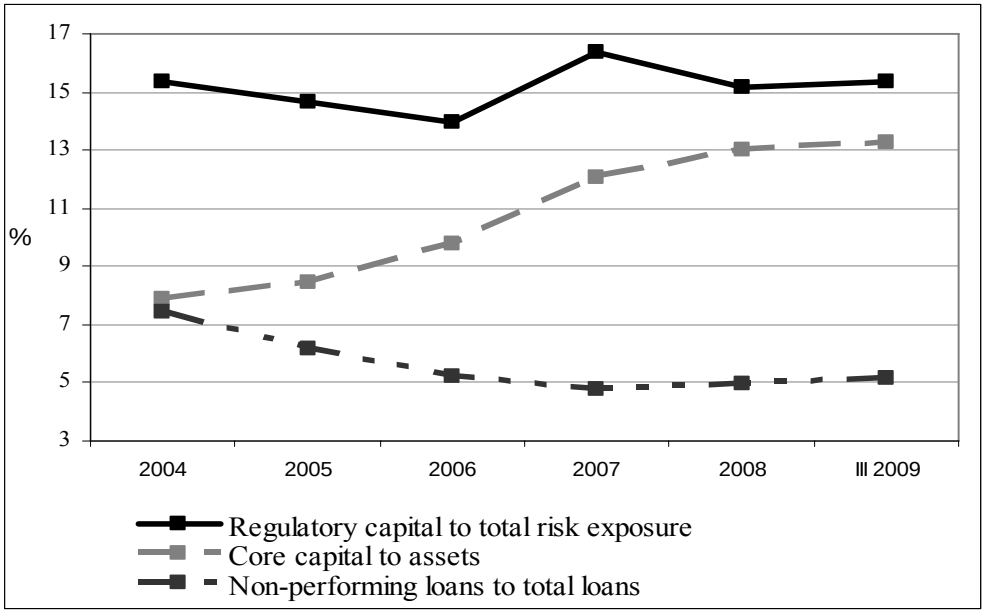
Furthermore, according to a survey of bank managers, changes in capital adequacy regulation also contributed to the increase in bank equity capital. As of mid 2006, risk weights applied to bank loans in foreign exchange or loans in kuna indexed to foreign currency, granted to un-hedged clients, have been higher than those required by Basel II. Applying such higher risk weights to a substantial part of bank assets (almost all households' loans are unhedged) caused a fall in banks' capital adequacy ratio by two percentage points.

Raising banks' reserve and capital adequacy requirements failed to weaken capital inflows. In 2005 and 2006, total domestic lending in the economy as a whole grew even higher than bank lending (24.6 vis-à-vis 23.1 annually), due to fast growth of direct foreign lending to non-bank enterprises. Creditors of non-bank clients were the same foreign banking groups. To discontinue such trends in domestic lending and the buildup of external vulnerabilities, the HNB decided to employ the speed limit to bank lending again in 2007. The regulation was prepared more carefully than in 2003, covering the selling of credit portfolio and credit risk. Loans granted by local bank affiliates were covered by the limit as well. The speed limit was set as the annual growth of bank lending of 12%. Penalties for breaching the limit were high, causing the annual growth of bank lending to fall to 15.3% in 2007. As bank lending is an important source of household credit, limiting it caused a significant decline in the growth rate of overall household credit, which fell from 23.5% in 2006 to 19.2% in 2007. On the other hand, the growth rate of credit to enterprises remained at 25%, because borrowing from domestic banks was replaced by foreign borrowing.

The speed limit was successful in restricting household credit, so the HNB employs it even today, although it is no longer binding. However, due to its obvious drawbacks, the HNB has also considered revoking the speed limit in the future, with the exit provided by linking bank capital adequacy with credit growth.

Such a link was incorporated in the capital adequacy regulation at the beginning of 2008. According to it, banks growing at 12% annually have to satisfy a minimum capital adequacy rate of 12%, while banks growing faster than that face higher capital adequacy requirements. The HNB also tried to link the additional capital adequacy requirement negatively with the growth of core deposits. In addition, other supervisory regulation was also tightened prior to the crisis; weights used in the calculation of risk weighted assets were increased, as were the minimum retained earnings ratios for fast growing banks. Higher risk weights applied to bank loans in foreign exchange, as well as those in kuna indexed to foreign currency granted to unhedged clients, caused a decline in the banks' capital adequacy similar to that in 2006 and forced banks to raise more equity capital (see chart 1). Consequently, by the end of September 2008 the ratio of banks' core capital to total assets reached almost the same value as bank capital adequacy, which was quite unique and high.

Chart 1: Capital Adequacy Ratios



Source: HNB.

Looking back at the period preceding the global crisis from the point of view of a small transition country that has just started the accession process to the European Union, it turns out that it was extremely difficult to control the volume of capital imports. Due to the exchange rate regime, capital inflows forced the HNB to operate like a currency board and to build large international reserves. Various

administrative and supervisory measures had to provide a cushion and slow down the buildup of external vulnerabilities. Applying such measures, the HNB managed, for the most part, to alter the structure of debt capital inflows – bank foreign borrowing from mother banks was replaced by enterprises' non-guaranteed direct foreign borrowing from the same creditors. This, in turn, altered personal consumption and private investments as more credit was provided to non-financial enterprises than to households. On the other hand, the cushion was provided by the high capital adequacy and high liquid assets held mostly in foreign currency, ensuring the soundness of domestic banks.

3. The Monetary Policy Response to the Global Financial Crisis

The bankruptcy of Lehman Brothers in September 2008 shook Europe. International capital flows to Central and Eastern Europe were suddenly viewed as extremely risky and the profitability of banking groups engaged in such transactions started to be questioned by their investors. The future trend of capital inflows to Croatia also became uncertain. In addition, expectations of future exports were revised downwards substantially due to rapidly declining foreign demand. The Croatian government was unprepared for the crisis; the budget was, until April 2009, based on unrealistic real growth projections, while the government's foreign currency debt obligations due in the coming period were high. Rumors of possible problems in mother banks caused an immediate reaction of Croatian depositors. In October 2008 they started withdrawing their funds from local banks, hoarding the withdrawn foreign currency cash mostly under mattresses. Although withdrawals had stopped already by the end of October 2008, they caused capital outflows in the amount of 2% of GDP in the last quarter of 2008[2].

When the crisis started, the appreciation pressures that had previously been a common feature of the foreign exchange market were replaced by depreciation pressures. These exchange rate pressures were successfully contained. The HNB acted by providing liquidity in foreign and tightening liquidity in domestic currency. It did this mostly by lowering required reserves in foreign currency, i.e. it avoided large direct market interventions. As it was in fact only repaying banks' required reserve deposits, its net international reserves did not decline. On the other hand, banks regulatory costs fell substantially (see table 1).

Defending the exchange rate was extremely complex due to the very large financial needs of the government. The required reserve reduction that took place

[2] In October the Government reacted quickly by raising the maximum insured deposit amount from HRK 100,000 to HRK 400,000, while the CNB provided foreign currency liquidity by revoking the marginal reserve requirement.

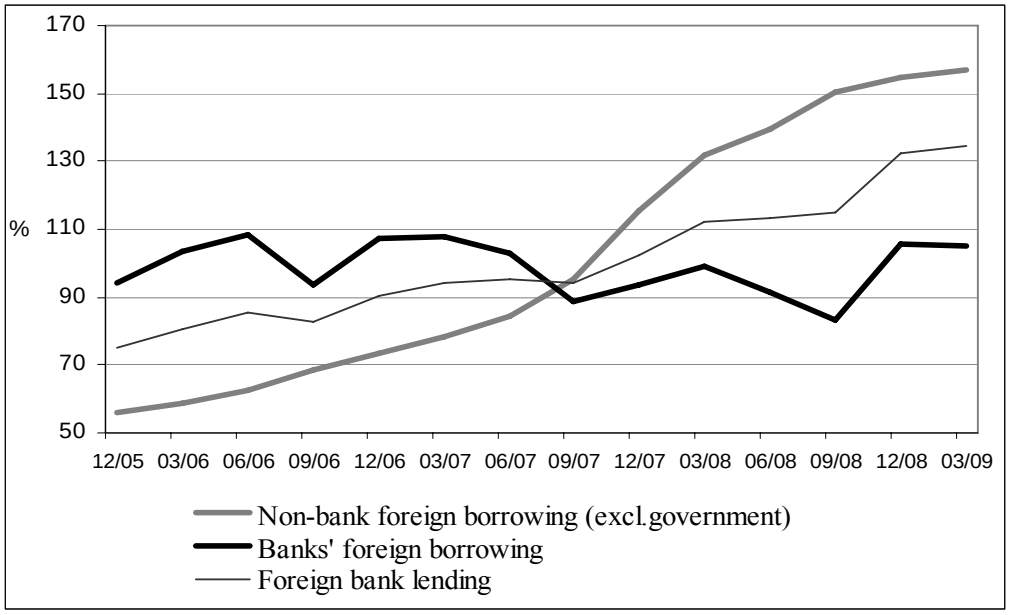
from October 2008 to March 2009 was sometimes implicitly conditioned by granting new credit to the Croatian government. In fact, it turns out that within the same period an increase in banks' net claims on the government amounted to about 50% of funds freed by the reduction and 25% of the value of deposit withdrawals in October. In addition to providing foreign currency liquidity to banks by lowering required reserves, the HNB also tightened banks' liquidity in HRK, resulting in double digit overnight interbank lending rates as opposed to single digit ones prior to the crisis. The rates were extremely volatile and even reached 40% on a daily basis. However, the increase in lending rates to banks' clients was moderate due to lower regulatory costs (less than one percentage point), as well as the fact that the interbank market is not an important source of funds.

Although the money and foreign exchange markets stabilized as of March 2009, it is still early to judge the impact of the global financial crisis on Croatia. Based on the evidence of the last two quarters, it seems that there are some important positive trends: capital inflows to Croatia have continued, the banking system has remained stable, and the decline in real economic activity has been moderate relative to peer countries.

After the crisis had started, capital inflows continued as a result of a huge increase in domestic banks' foreign debt. The stock of non-bank enterprises' debt increased moderately as well (see chart 2). This indicates that, thanks to earlier measures of the HNB, banks were well prepared for the crisis and had the opportunity to borrow abroad as much as was needed during the peak of the crisis. The total bank domestic lending rate continued its rapid growth. As new loans were mostly granted to the government, there was a sharp increase in banks' net claims on the government, while domestic bank credit to the private sector stagnated for the first time since September 2000, due to demand rather than supply factors.

HNB policies aimed at maintaining exchange rate stability have also preserved the stability of the banking system. Banks remained profitable and loan loss reserves low (see chart 1). As the HNB sets limits on banks' foreign currency exposure, banks are not directly exposed to foreign currency risk. However, since their clients are unhedged, the stability of the exchange rate is of crucial importance for banks. According to bank reports to the HNB, more than 90% of banks' claims in foreign currency, or claims in HRK indexed to foreign currency, are unhedged. Therefore the materialization of their clients' exchange rate risk could seriously lower the quality of banks' credit and provoke large losses. In addition, the large foreign debt of enterprises amplifies the exchange rate risk.

Chart 2: Foreign Debt Stocks to Medium Term 2005 – 2008 Average



Source: HNB.

In general, the need to protect the exchange rate in bad times also means that the HNB monetary policy framework does not allow for the use of countercyclical monetary policy. Such a limitation of the HNB monetary policy framework has not proven to be important in this crisis. The fact that Croatia has been handling the crisis without having to clean the mess in its banking system ensures a less severe decline in real economic activity.

4. Challenges for the Future

The HNB policy of exchange rate stability is a long term concept. Building adequate official and bank reserves in good times has enabled the HNB to anchor expectations even in bad times, as well as to ensure the stability of the banking system. Although the HNB was willing to spend part of its international reserves in the crisis period, it was aware that they are not infinite, so it tightened monetary policy in order not to lose reserves in the future. In a longer-term perspective, the implementation of monetary policy will depend on future capital flows. If they continue to finance the current account deficit, there will be room for softer monetary policy; the less sufficient they are for the financing of the current account deficit, the tighter monetary policy will be.

The HNB policy of maintaining a stable nominal exchange rate of the kuna against the euro also means that the exchange rate is not used as a tool for the improvement of international competitiveness. The Croatian economy faces a number of structural weaknesses: low total factor productivity, low labor participation, a smaller share of goods exports in GDP than in peer countries, etc. Although the Croatian government tried to launch structural reforms to address some of these weaknesses, international competitiveness measured by relative unit labor costs started to worsen after Croatia became an EU candidate (see the HNB Bulletin No 141). This presents a challenge for the implementation of economic policy in the long run. This trend in international competitiveness should be reversed by launching more structural reforms that increase the economy's long run growth potential.

The HNB has not questioned its exchange rate and monetary policy regime because of the changing international environment. In spite of low inflation since 1993, the moderate real appreciation of the HRK as well as regulatory banking costs which continuously favor deposits in HRK, financial euroization has not declined in the period prior to the crisis. During the crisis it has even increased further. Therefore, the main reasons for the existing exchange rate and monetary policy regime remain unchanged. Whether such a policy will continue to be as successful as it has been in the past remains to be seen.

Contributors

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		published
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publications, studies or working papers as well as events (conferences, lectures and workshops).
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