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INTEGRATION

This Issue's Special Focus:
Monetary Policy in Southeastern Europe

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The OeNB's semiannual publication **Focus on European Economic Integration** (the successor of **Focus on Transition**) provides a wide range of CEEC- and SEE-related material – country analyses and data, studies on economic topics as well as descriptions of events hosted by the OeNB.

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The views expressed are those of the authors and need not necessarily coincide with the views of the Oesterreichische Nationalbank.

Dear reader,

After the historically unique enlargement round had been completed in May 2004, the second half of 2004 was not a period to sit back and rest on one's laurels. Quite to the contrary. The Brussels European Council meeting on December 16 and 17, 2004, took several important decisions paving the way for future enlargement rounds.

A number of milestones were reached during the Dutch Council Presidency in the second half of 2004. In a historic move, the heads of state or government decided at the European Council of December 16 and 17, 2004, to open accession negotiations with Turkey. Negotiations are to begin on October 3, 2005, on condition that by then Turkey formally recognizes the Republic of Cyprus and that it sustains the reform process. Moreover, the heads of state or government agreed to open accession negotiations with Croatia, which are anticipated to start on March 17, 2005. At the same European Council meeting, accession negotiations were closed with Bulgaria and Romania; the accession treaty is to be signed in April 2005.

In keeping with the above-cited decisions of EU bodies, this new issue of Focus on European Economic Integration reflects the geographical shift of our economic analyses even more than the last issue. In fact, every contribution deals with Southeastern Europe in some respect. Hence, we have designated a special focus for this issue: Monetary Policy in Southeastern Europe is the overarching theme.

The first contribution, by Sandra Dvorsky, entitled "Central Bank Independence in Southeastern Europe with a View to Future EU Accession," definitely addresses a crucial topic, as central bank independence is not simply a stand-alone value. As history has so incisively shown in numerous countries, central bank independence is a necessary precondition for a sound macroeconomic development and the establishment of a stable financial system. The paper provides a qualitative overview on current central bank legislation in Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Macedonia, Romania, and Serbia and Montenegro, and assesses the degree of central bank independence these countries have attained, using the Maastricht Treaty requirements as a yardstick. The paper concludes that the reviewed laws already comply with Treaty requirements in some areas, while a considerable number of weaknesses remain. With a view to future EU accession, a further strengthening of both legal and actual central bank independence will be necessary for the countries to fulfill the requirements of the Maastricht Treaty.

The next three papers deal with exchange rate economics, highlighting that Southeastern Europe (SEE) is facing a special challenge that requires countries to strike a balance between giving enough room for catching-up while at the same time stabilizing expectations and bringing high inflation rates down.

The paper "Equilibrium Exchange Rates in Southeastern Europe, Russia, Ukraine and Turkey: Healthy or (Dutch) Diseased?" by Balázs Égert is a first attempt to analyze the region's exchange rate challenges. In line with his previous work on new EU Member States, Égert investigates the equilibrium exchange rates of three Southeastern European countries, namely Bulgaria, Croatia and Romania, of two CIS economies, namely Russia and Ukraine,

and of Turkey. The paper presents a systematic approach to assessing the equilibrium exchange rate at different time horizons in combination with a careful analysis of country-specific factors. The deviation from absolute purchasing power parity and from the real exchange rate, which is given by relative productivity levels, is investigated. For Russia, a first look is taken at the Dutch disease phenomenon as a possible driving force behind equilibrium exchange rates. Finally, the author estimates a Behavioral Equilibrium Exchange Rate (BEER) model that includes productivity and net foreign assets using both time series and panel techniques.

Next, Stephan Barisitz offers an analytical overview of exchange rate regimes and monetary policy frameworks in ten SEE countries or nonsovereign territories, namely Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Kosovo, the Former Yugoslav Republic of Macedonia, Montenegro, Romania, Serbia and Turkey, which pursue a broad range of different exchange rate regimes: Hard pegs and nominal exchange rate anchors feature in four cases, managed floats and money growth targeting in three cases, unilaterally euroized regimes in two cases, and a managed float and real exchange rate anchor in one case. The paper deals with the institutional importance as well as the unofficial role of the euro in SEE. Furthermore, individual economic developments in recent years and current monetary and exchange rate policies, instruments, issues and outcomes are explored in more detail. The paper concludes with a brief outlook focusing on the euro as a stable anchor and point of convergence.

A different approach is chosen by the following team of researchers: Jesús Crespo-Cuaresma, Jarko Fidrmuc and Maria Antoinette Silgoner. In their paper they deal with exchange rate challenges in the four candidate countries Bulgaria, Croatia, Romania and Turkey. For the two countries with freely floating currencies, i.e. Romania and Turkey, the authors evaluate possible exchange rate misalignments based on a monetary model of exchange rate determination. In the case of Bulgaria and Croatia, two countries with currency board and narrow-band peg arrangements against the euro, possible exit strategies are discussed. The preliminary outcome is that a continuation of their current exchange rate regimes is likely to represent an optimal strategy for these countries for the time being.

Finally, Jarko Fidrmuc, together with Iikka Korhonen from the Bank of Finland Institute for Economies in Transition (BOFIT), provides a “Meta-Analysis of Business Cycle Correlations between the Euro Area, CEECs and SEECs,” asking “What Do We Know?” The authors review the literature on business cycle correlation between the euro area, eight new EU Member States and two Southeastern European candidate countries, namely Bulgaria and Romania, which are expected to join the EU in 2007. The meta-analysis suggests that several new Member States have already achieved a comparably high degree of synchronization with the euro area business cycle. The authors also find that estimation methodologies can have a significant effect on correlation coefficients. Finally, they show that Bulgaria and Romania also display a lower but still positive correlation of business cycles with Europe, although these countries have been increasingly disregarded in most recent publications.

Following the comprehensive presentation of this issue’s special focus, we come to a summary of the Conference on European Economic Integration,

which took place at the end of November 2004 and attracted some of Europe's most prominent central bankers: the President of the European Central Bank, Jean-Claude Trichet, and the President of the Deutsche Bundesbank, Axel Weber. Moreover, the conference speakers included leading experts on SEE, such as Erhard Busek, Special Coordinator of the Stability Pact for South Eastern Europe. These and other well-known speakers contributed to the conference entitled "South Eastern EUROPEAN Challenges and Prospects," which offered participants a broad range of information, highlighted the challenges for the region and discussed how to overcome the manifold remaining problems. The conference provided food for thought, showing similarities with former catching-up processes and EU enlargement rounds, but also huge differences. Still, the detected problems do not seem to be unsolvable. As always, the conference fulfilled another quite important task: It brought together experts from different countries and different fields, and laid the basis for an even better understanding in the future. All of you who were not able to participate in our conference may find the papers – and further CEEC-related information – on our website at ceec.oenb.at. In addition, papers and contributions will be provided in a conference volume to be published by Edward Elgar.

If you have further comments or are looking to exchange ideas, please do not hesitate to contact us at
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You may also fax your comments to (43-1) 404 20-5299 or mail them to doris.ritzberger-gruenwald@oenb.at, Head of the Foreign Research Division.

Klaus Liebscher
Governor

RECENT ECONOMIC DEVELOPMENTS

Stephan Barisitz,
Jarko Fidrmuc,
Antje Hildebrandt,
Silvia Kirova,
Tamás Magel,
Thomas Reininger,
Zoltan Walko

1 Introduction

In the first three quarters of 2004, economic growth in the new EU Member States in Central Europe (the Czech Republic, Hungary, Poland, Slovakia, Slovenia) ranged from 3.7% year on year in the Czech Republic to 5.9% year on year in Poland. In these five countries, the weighted average growth rate of 4.9% was again clearly higher than the average growth rate in the euro area (1.9%). By contrast, Bulgaria, Romania and Russia outperformed most or all of these five new Member States with growth rates of 5.8%, 8.1% and 7.0%, respectively, while Croatia lagged behind most of them with a growth rate of 3.9%.

Compared to the full year 2003, most countries posted higher GDP growth. In the Central European new Member States, the growth acceleration of 1.4 percentage points was equal to that in the euro area. Poland and Slovenia showed the strongest acceleration within this group, with 2.2 and 2.0 percentage points, respectively. However, Romania posted the largest rise in GDP growth among all the countries under study (3.2 percentage points). Only three countries, i.e. the Czech Republic, Croatia and Russia (the latter from a high starting level, though), had slightly lower growth rates than in 2003.

Table 1

Gross Domestic Product (Real)							
	1999	2000	2001	2002	2003	Q1 2004	Q2 2004
	<i>Annual change in %</i>						
Czech Republic	1.2	3.9	2.6	1.5	3.7	3.5	3.9
Hungary	4.2	5.2	3.8	3.5	3.0	4.3	4.2
Poland	4.0	4.0	1.0	1.4	3.8	6.9	6.1
Slovakia	1.5	2.0	3.8	4.6	4.5	5.4	5.5
Slovenia	5.6	3.9	2.7	3.3	2.5	3.9	4.7
Bulgaria	2.4	5.4	4.1	4.9	4.3	5.3	6.0
Croatia	-0.9	2.9	4.4	5.2	4.3	4.2	3.8
Romania	-1.2	2.1	5.7	5.0	4.9	6.1	7.0
Russia	6.3	9.0	5.1	4.7	7.3	7.5	7.3

Source: Eurostat, national statistical offices, wiw.

Looking at growth dynamics from the demand side, country groups may be distinguished according to patterns of change (compared to 2003) observed in domestic and net foreign demand's contribution to overall GDP growth.

- Despite a considerably larger contribution by domestic demand than in 2003, GDP growth in Russia decreased slightly, because the contribution of net exports switched from positive to negative.
- In the other two countries that experienced a slight slowdown in GDP growth, i.e. the Czech Republic and Croatia, the contribution of net exports was less negative than in 2003, but this was more than offset by a reduction in the positive contribution of domestic demand, implying a more balanced growth structure.
- The negative contribution of net exports was also less pronounced in Bulgaria, Hungary and Slovenia, where GDP growth accelerated. In Bulgaria, the positive contribution of domestic demand declined. This decline, however, did not offset the growth-enhancing change in the contribution of net exports. In Hungary and Slovenia, the contribution of domestic demand remained nearly unchanged. Thus, in parallel to growth acceleration, the growth structure for these three countries was more balanced as well.

- Finally, in Poland, Slovakia and Romania, the contribution of net exports was less positive (Poland), eroded to zero (Slovakia) or remained negative at the same level (Romania), while the simultaneous increase in the positive contribution of domestic demand led to an acceleration of GDP growth.

In all those countries (with the exception of Russia) where the contribution of domestic demand increased, i.e. Poland, Slovakia and Romania, growth of gross fixed capital formation accelerated to a larger extent than consumption growth. Moreover, in Hungary, where the contribution of domestic demand was nearly unchanged, and in the Czech Republic, where it declined, growth of gross fixed capital formation accelerated significantly, too, while consumption growth declined. In Bulgaria, where the contribution of domestic demand declined, growth of fixed capital formation decelerated to a smaller extent than consumption growth. Thus, for most countries a relative shift from consumption to investment growth can be observed for 2004. The exceptions are Slovenia, where both consumption and investment growth increased slightly, and Croatia and Russia, where gross fixed capital formation growth decreased (substantially in Croatia and moderately in Russia) from high levels, while consumption growth was nearly unchanged (Croatia) or increased (Russia).

The fact that in most countries the contribution of net exports to growth was less negative or less positive than in 2003 means that the dynamic of change in net exports was generally lower and the levels of external balance or imbalance tended to change to a lesser extent than before. The exceptions are Romania, where the negative contribution was unchanged, and Russia, where both the direction and the size of the contribution of net exports changed, from moderately positive to more considerably negative. In all those countries (with the exception of Croatia) where the contribution of net exports was less negative or unchanged, this was based on export growth acceleration, while import growth accelerated less or, in some cases, decelerated. Even among the three countries where the contribution of net exports was less positive or turned negative (Poland, Slovakia, Russia), there was one country, namely Poland, where export growth accelerated, too.

The level of net exports' contribution achieved in the first three quarters of 2004 as a result of the above-mentioned changes was positive only in Poland, while it was most negative in Bulgaria (despite its significant reduction), in Romania and in Russia. Thus, in Poland there was an improvement in the level of real net exports (decreasing deficit), as opposed to a significant further deterioration in the level of real net exports in Bulgaria and Romania, where the deficit increased, and a moderate deterioration in Russia, where the surplus decreased. It is worth noting that the most negative contribution of net exports can be found precisely in those three countries (apart from Poland) where GDP was highest, i.e. Bulgaria, Romania and Russia. Indeed, in these countries the contribution of domestic demand was very high, ranging from 9.0 to 11.0 percentage points, which implies a significantly imbalanced growth structure.

The changes in the level of real net exports are generally also reflected in the balance of goods and services in the balance of payments statistics, albeit to a lesser extent (in nominal terms, as percentage points of GDP), with Poland showing an improvement, and Bulgaria and Romania a further deterioration of this balance in the first three quarters of 2004 compared to the same period

in 2003. However, in the case of Russia, the deterioration in real terms is not reflected, as the nominal balance has further improved, which may be explained by the high price level of important export goods.¹

Finally, taking a look at the level of the balance of goods and services (in percentage points of GDP) in the first three quarters of 2004, Bulgaria and Romania showed the highest deficit levels, reaching 6.6% and 8.6%, respectively. Russia and Slovenia, by contrast, recorded a surplus which reached the impressive level of 12.4% in Russia and came close to balance in Slovenia. In Bulgaria and Romania, other subbalances led to a lower deficit in the current account balance than implied by the balance of goods and services alone (4.0% and 5.9% of GDP, respectively), while in the Czech Republic and Hungary the negative income balance increased the deficit from -0.2% and -3.2% of GDP, respectively, in the balance of goods and services to -5.5% and -9.1%, respectively, in the current account balance.

Price developments have been quite heterogeneous throughout the region. Among the new Member States in Central Europe, inflation rates (as measured by year-on-year changes of consumer prices in the third quarter of 2004) ranged from 3.0% in the Czech Republic to 7.0% in Hungary and 7.2% in the Slovak Republic. Of all the countries under study, Croatia had the lowest inflation rate (1.9%), while Romania (11.9%) and Russia (11.0%) were the only countries with double-digit inflation.

There were strong upward pressures on prices in 2004. In addition to rising international energy prices, hikes in indirect tax rates and adjustments of agricultural prices in the new Member States related to EU accession put upward pressure on prices. Moreover, in some countries, there was a delayed inflationary effect of the nominal depreciation that had taken place up to the first quarter. In Bulgaria, the rise in international energy prices was exacerbated by adjustments to regulated energy prices. Food prices also sharply increased in the country, partly as a result of drought damages. While the subindices of the HICP (Harmonised Index of Consumer Prices) indicate that demand side-driven inflationary pressure has played a limited role in the new Member States, it seems that demand-side pull effects as well as strong credit expansion and – in Russia – increases in net foreign assets have contributed to overall inflation in Bulgaria, Romania and Russia to a larger extent.

Compared to the annual average inflation in 2003, there was a significant inflation acceleration in four out of the nine countries under review (the Czech Republic, Hungary, Poland, Bulgaria). However, despite the upward pressures on prices, inflation went down in four countries (Slovakia, Slovenia, Romania, Russia). In Slovakia, the relatively low level of core inflation (about 2%) pulled down headline inflation, which was influenced by hikes in administered prices and tax changes. Moreover, the favorable base effect (due to sizeable hikes in administered prices in 2003) and the activities of retail trade companies helped to more than offset the upward pressures. Inflation also declined in Slovenia,

¹ For other countries, there are deviations, too. The Czech Republic and Hungary posted a moderately negative contribution of net exports, but their balance of goods and services actually improved. In Slovakia, the contribution of net exports was close to zero, but the balance of goods and services deteriorated.

on the back of lower unit labor cost advances, which resulted from the gradual de-indexation of the economy.

The inflation rates in October and November generally signal disinflation in most countries, except Russia. In particular, the Czech Republic, Hungary and Poland as well as Bulgaria seem to have already passed the inflation peak. In Romania, single-digit inflation could be reached for the first time since the start of the transition process.

Table 2

Consumer Price Index (here: HICP)

	2000	2001	2002	2003	Q1 2004	Q2 2004	Q3 2004
	Annual change in %						
Czech Republic	3.9	4.5	1.4	-0.1	2.0	2.5	3.0
Hungary	10.0	9.1	5.2	4.7	6.8	7.4	7.0
Poland	10.1	5.3	1.9	0.7	1.8	3.4	4.7
Slovakia	12.2	7.2	3.5	8.5	8.2	8.0	7.2
Slovenia	8.9	8.6	7.5	5.7	3.7	3.8	3.6
Bulgaria	10.3	7.4	5.8	2.3	6.4	6.7	6.8
Croatia ¹	6.4	5.0	1.7	1.8	1.9	2.3	1.9
Romania ¹	45.7	34.5	22.5	15.3	13.6	12.3	11.9
Russia ¹	20.8	21.6	16.0	13.6	10.8	10.3	11.1

Source: Eurostat, national statistical offices, wiiv.

¹ CPI.

As far as the quality of *sovereign long-term foreign currency debt* is concerned, both Moody's and Standard & Poor's continue to award Slovenia the highest rating among the countries discussed in this contribution. The Czech Republic and Hungary share the second-highest rating by both agencies. Moreover, in December, Standard & Poor's upgraded its rating for Slovakia to be equal to that of the Czech Republic and Hungary. Moody's still ranks Poland third, closely followed by Slovakia, whose outlook, however, was described as positive in October. At present, both agencies rank Croatia right after the new Member States and higher than Bulgaria and Romania, since Standard & Poor's upgraded the rating for Croatia in December. However, both Bulgaria and Romania could improve their ratings in recent months as well; Moody's upgraded the former in November and Standard & Poor's upgraded the latter in September.

Table 3

Ratings of Sovereign Long-Term

Foreign Currency-Denominated Debt

Currency	Moody's			Standard & Poor's		
	Former rating	Last change	Current rating	Former rating	Last change	Current rating
CZK	Baa1	12.11.02	A1	A	05.11.98	A-
HUF	A3	12.11.02	A1	BBB+	19.12.00	A-
PLN	Baa1	12.11.02	A2	BBB	15.05.00	BBB+
SKK	Baa3	12.11.02	A3	BBB+	13.12.04	A-
SIT	A2	12.11.02	Aa3	A+	13.05.04	AA-
BGN	Ba2	17.11.04	Ba1	BB+	24.06.04	BBB-
HRK	..	27.01.97	Baa3	BBB-	22.12.04	BBB
ROL	B1	11.12.03	Ba3	BB	14.09.04	BB+
RUB	Ba2	08.10.03	Baa3	BB	27.01.04	BB+

Source: Bloomberg.

2 Czech Republic: Economic Growth Gains Momentum

Real GDP growth was 3.7% year on year in the first nine months of 2004, much like growth in the full year 2003 (3.7%). However, the similar growth rates mask considerable changes in the structure of growth. In particular, in the first three quarters of 2004, private consumption growth decreased to only 2.7% year on year (after 4.9% in the full year 2003) and public consumption even declined by 2.6% (after rising by 4.2% in 2003). On the other hand, the growth rate of gross fixed capital formation accelerated steadily from the last quarter of 2002, coming to about 10% in the first three quarters of 2004 after 4.8% in 2003. With export growth of 19.8% exceeding import growth of 19% year on year in the first three quarters of 2004, the deterioration of real net exports slowed down, implying a smaller negative contribution of net exports to GDP growth of 1.5 percentage points (against 3 percentage points in 2003). In the second quarter of 2004, both real export growth and real import growth jumped to about 26% (from 10.4% and 11.3%, respectively, in the first quarter of 2004) and decreasing only moderately to 22.7% and 19.3%, respectively, in the third quarter of 2004. The higher level of export and import growth may be traced partly to the effects of EU accession.

Table 4

Gross Domestic Product and Its Demand Components							
	1999	2000	2001	2002	2003	Q1 2004	Q2 2004
<i>Real year-on-year change in %</i>							
Gross domestic product	1.2	3.9	2.6	1.5	3.7	3.5	3.9
Private consumption	2.1	2.9	2.6	2.8	4.9	3.4	2.6
Public consumption	5.4	0.2	3.8	4.5	4.2	-1.3	-0.8
Gross fixed capital formation	-3.5	4.9	5.4	3.4	4.8	9.3	10.5
Exports of goods and services	5.7	16.8	11.8	2.7	5.5	10.4	26.0
Imports of goods and services	5.0	16.2	12.9	4.9	8.1	11.3	25.8
<i>Contribution to GDP growth in percentage points</i>							
Domestic demand	1.1	4.6	4.4	3.7	3.8	4.7	4.9
Exports	3.6	11.1	8.7	2.2	4.5	8.7	21.0
Net exports	0.1	-0.7	-1.8	-2.2	-3.0	-1.8	-2.9

Source: Eurostat, OeNB.

After outstanding growth of industrial production in the second quarter of 2004 (+12.6%), the growth rate came down to 8.8% in the third quarter of 2004, which was partly due to the slightly lower export growth. After an annual decline of industrial employment since the end of 2001, industrial employment increased by 0.5% year on year in the second quarter of 2004 and 1.0% year on year in the third quarter. However, in the second quarter of 2004, the total unemployment rate (ILO definition) was again higher than in the same period of the previous year, coming to 8.2% against 7.5%. For the third quarter, some improvement in the labor market compared to the same period of 2003 is evident in the registered unemployment rate. Despite slightly higher nominal wage growth, nominal industrial unit wage costs continued to fall in year-on-year terms in the first three quarters of 2004 (-1.7%). However, inflation of industrial producer prices rose to 4.9% year on year in that period, from -0.4% in 2003, inter alia because of higher oil prices and the Czech koruna's depreciation against the euro by 2% from September 2003 to March 2004. After peaking in

October at 8.6% year on year, industrial producer price inflation declined to 8.2% in November, supported by the Czech koruna's renewed appreciation by 5.4% against the euro from March to November. Following inflation (HICP) of -0.1% in 2003 and of 1.0% in December 2003 (year on year), the inflation rate accelerated to 3.2% in August 2004 and then decreased to 2.5% by December 2004. The harmonization of excise duties and VAT with EU law, the increase in agricultural prices (partly related to EU accession), the growth in regulated prices and the sharp increase in fuel prices were the major factors behind the price development in 2004. The rise in VAT rates in May still affected price increases at the end of 2004, especially in the service sector.

Table 5

Productivity, Wages, Prices, Exchange Rate and Key Interest Rate

	1999	2000	2001	2002	2003	Q1 2004	Q2 2004
<i>Year-on-year change of period average levels in %</i>							
Gross production of industry (real)	-3.1	5.4	6.7	4.9	5.9	8.7	12.6
Labor productivity of industry (real)	3.6	9.1	6.1	6.8	7.9	9.0	12.0
Gross average wage of industry (nominal)	6.6	7.1	6.4	6.7	5.9	8.7	6.3
Unit labor cost of industry (nominal)	3.0	-1.8	0.3	-0.1	-1.9	-0.2	-5.2
Producer price index (PPI) of industry	0.9	4.8	2.9	-0.5	-0.4	1.8	5.0
Consumer price index (here: HICP)	1.8	3.9	4.5	1.4	-0.1	2.0	2.5
<i>Exchange rate (nominal):</i>							
CZK ¹ per 1 EUR, + = EUR appreciation	2.3	-3.5	-4.3	-9.5	3.3	3.9	1.8
EUR per 1 CZK, + = CZK appreciation	-2.2	3.6	4.5	10.6	-3.2	-3.8	-1.7
<i>Period average levels</i>							
Unemployment rate (ILO definition, %)	8.8	8.9	8.2	7.3	7.8	8.7	8.2
Key interest rate per annum (%)	6.7	5.3	5.1	3.6	2.3	2.0	2.0
<i>Exchange rate (nominal):</i>							
CZK ¹ per 1 EUR	36.89	35.60	34.07	30.81	31.84	32.86	32.02
EUR per 1 CZK	0.0271	0.0281	0.0294	0.0325	0.0314	0.0304	0.0312

Source: Bloomberg, Eurostat, national statistical office, national central bank, OeNB, wiw.

¹ CZK: Czech koruna.

Although the inflation pick-up was primarily supply side-driven, Česká národní banka (ČNB) decided to increase the key interest rate from 2.00% to 2.50% in the summer of 2004 in order to contain second-round effects. After the real key interest rate (12-month moving average) had fallen continuously from 1.4% in December 2003 to -1.1% in August 2004, it came to -0.4% in November 2004.² While the decline of real interest rates eased monetary conditions, the real appreciation by 2.5% (CPI-deflated) and 6.7% (PPI-deflated) during the 12-month period up to November had a tightening impact. The increase in annual money growth in the first three quarters of 2004 was accompanied by a marked shift from contraction to expansion in lending to the corporate sector, while household lending growth remained high and net general government credit growth slowed sharply.

After the budget deficit had reached a record high of 12.6% of GDP in 2003 (as the government had to account fully for a partially realized one-off state guarantee), the update of the government's Convergence Program of December 2004 points to a deficit of 5.2% including two one-off operations and of about 4% excluding these operations in 2004 against a deficit of 5.3% expected in the

² Ex post real key rate per annum as measured by the real (CPI-deflated) key rates per month compounded over the past 12 months. The similarly measured PPI-deflated key rate per annum declined from 1.5% in December 2003 to -5.6% in November 2004.

Table 6

Monetary Developments							
	1999	2000	2001	2002	2003	Q1 2004	Q2 2004
<i>Nominal year-on-year change of the annual average stock in %</i>							
Broad money (including foreign currency deposits)	8.9	6.5	10.8	7.1	5.2	8.8	11.5
<i>Contributions to the nominal year-on-year change of broad money in percentage points</i>							
Net foreign assets of the banking system	13.0	8.0	8.0	7.9	1.2	-2.6	3.4
Domestic credit (net) of the banking system	-3.2	-1.1	0.2	-9.7	7.7	12.3	9.3
<i>of which: claims on the private sector</i>	-3.8	-5.0	-5.6	-12.3	0.9	4.1	6.0
<i>claims on households</i>	0.1	0.3	1.1	1.7	3.3	4.0	4.2
<i>claims on enterprises</i>	-4.0	-5.3	-6.7	-14.0	-2.5	0.1	1.8
<i>net claims on the public sector</i>	0.6	3.9	5.8	2.5	6.8	8.2	3.3
Other domestic assets (net) of the banking system	-0.9	-0.4	2.6	8.9	-3.7	-0.9	-1.3

Source: National central bank, OeNB.
Note: Data since 2003 according to ECB methodology.

May 2004 program. The Convergence Program expects the public debt-to-GDP ratio to have risen from 37.8% at end-2003 to 38.6% (against 38.4% in the May program) at end-2004. According to the Ecofin recommendation under the excessive deficit procedure in July 2004, the Czech Republic should take effective action to achieve the 2005 deficit target set in May and should reach a deficit below 3% by 2007. In line with the national budget law, the December program sets the deficit target for 2005 at 4.7% of GDP, much like the target in the May program and the figure in the European Commission's autumn forecast. It expects the debt-to-GDP ratio to decline to 38.3% at end-2005.

Table 7

Government Budget							
	1999	2000	2001	2002	2003	2004	2005
<i>% of GDP</i>							
General government							
Revenues	39.2	38.5	39.1	40.2	41.9	41.9	41.6
Expenditures	42.9	42.1	45.0	46.9	54.5	46.7	46.3
<i>of which: interest payments</i>	1.0	0.9	1.1	1.5	1.3	1.2	1.4
Balance	-3.6	-3.7	-5.9	-6.8	-12.6	-4.8	-4.7
Primary balance	-2.6	-2.8	-4.8	-5.2	-11.3	-3.6	-3.3
Gross public debt	16.0	18.2	25.3	28.8	37.8	37.8	39.4

Source: European Commission.

In the first three quarters of 2004, the trade deficit amounted to 0.7% of GDP, against a deficit of 1.9% in the same period of 2003. However, the current account deficit in the first three quarters of 2004 was larger than the year before, reaching 5.5% of GDP, up from 4.9% of GDP. The worsening of the current account was caused by the development of the income balance (increasing flows of repatriated and reinvested profits) as well as by the reduction of the surplus in the transfer balance. In the same period, net foreign direct investment (FDI) inflows remained unchanged on the previous year at a level of 4.7% of GDP, covering 85% of the current account deficit. Upcoming privatization projects are likely to ensure strong inflows of FDI in the near future. For

Table 8

Balance of Payments

	1999	2000	2001	2002	2003	H1 2003	H1 2004
<i>EUR million</i>							
Merchandise exports	24,651	31,509	37,271	40,713	43,080	21,355	25,239
Merchandise exports:							
year-on-year change in %	6.9	27.8	18.3	9.2	5.8	5.3	18.2
Merchandise imports	26,448	34,918	40,705	43,034	45,250	21,910	25,567
Merchandise imports:							
year-on-year change in %	4.1	32.0	16.6	5.7	5.1	4.3	16.7
Trade balance	-1,797	-3,409	-3,434	-2,322	-2,170	-555	-328
% of GDP	-3.2	-5.6	-5.0	-3.0	-2.7	-1.4	-0.8
Services balance	1,130	1,536	1,706	706	416	239	249
Income balance							
(factor services balance)	-1,265	-1,490	-2,450	-3,760	-3,656	-1,286	-1,792
Current transfers	552	403	524	934	487	171	135
Current account balance	-1,379	-2,960	-3,653	-4,442	-4,923	-1,432	-1,736
% of GDP	-2.5	-4.9	-5.4	-5.7	-6.1	-3.6	-4.2
Direct investment flows (net)	5,879	5,356	6,121	8,870	2,094	1,691	1,792
% of GDP	10.6	8.9	9.0	11.3	2.6	4.2	4.3

Source: Eurostat, national central bank, OeNB.

example, the government plans to sell 51% of its stake in Český Telecom (ČT) in 2005.

During the first three quarters of 2004, gross official reserves declined both in absolute terms and in import months of goods and services (from 5.0 to 4.4).

Table 9

Gross Official Reserves and Gross External Debt

	1999	2000	2001	2002	2003	Q2 2004
<i>End of period, EUR million</i>						
Gross official reserves (including gold)	12,771	14,158	16,400	22,614	21,340	21,784
Gross external debt	22,765	23,285	25,368	25,738	27,599	28,758
<i>% of GDP¹</i>						
Gross official reserves (including gold)	23.1	23.4	24.1	28.8	26.6	26.6
Gross external debt	41.1	38.5	37.3	32.8	34.4	35.1
<i>Import months of goods and services</i>						
Gross official reserves (including gold)	4.8	4.2	4.2	5.4	5.0	4.5

Source: Eurostat, national central bank, OeNB, wiw.

¹ Q2 2004: As a percentage of rolling four-quarter GDP.

3 Hungary: Strong Gross Fixed Capital Formation and High External Deficit

Hungarian GDP grew by 4.1% year on year during the first nine months of 2004 (full-year 2003: 3.0%), with the growth rate gradually easing to 3.7% by the third quarter. Domestic consumption grew by 2.8% during the January to September period, sharply down from 7.3% in 2003. The main reason for this slowdown was the stagnation of real wages and employment. Although off the highs seen in the first quarter of 2004, gross fixed capital formation remained the domestic demand component that delivered the highest contribution to GDP growth in the first nine months of 2004, rising by 13.2% year on year. Particularly strong investment growth marked the largest sectors: manu-

facturing (26.6%), transport, storage and communications (26.4%) and real estate, renting and business activities (20.3%). Although export and import growth rates were roughly halved from the second to the third quarter, they grew by 15.4% and 16.0% year on year, respectively, during the first nine months. Thus, net exports deteriorated further, implying a negative contribution of 1.2 percentage points to the GDP growth rate during the first nine months of 2004, which was less than the negative contribution of 2.6 percentage points in 2003.

Table 10

Gross Domestic Product and Its Demand Components							
	1999	2000	2001	2002	2003	Q1 2004	Q2 2004
<i>Real year-on-year change in %</i>							
Gross domestic product	4.2	5.2	3.8	3.5	3.0	4.3	4.2
Private consumption	5.6	5.5	5.7	10.2	7.6	3.7	5.0
Public consumption	1.5	2.0	6.2	5.0	6.7	0.5	-1.5
Gross fixed capital formation	5.9	7.7	5.0	8.0	3.4	18.9	10.0
Exports of goods and services	12.2	21.0	7.8	3.7	7.6	18.0	18.7
Imports of goods and services	13.3	19.4	5.1	6.2	10.4	16.7	20.4
<i>Contribution to GDP growth in percentage points</i>							
Domestic demand	5.1	4.7	1.7	5.6	5.6	3.8	6.8
Exports	7.9	14.6	6.3	3.1	6.3	15.4	15.9
Net exports	-1.0	0.5	2.1	-2.1	-2.6	0.4	-2.6

Source: Eurostat, OeNB.

The slowdown of economic activity impacted on the labor market. The unemployment rate rose to 6.1% in the period from August to October 2004 from 5.6% in the same period of 2003. In the same period, the employment rate dropped by 0.6 percentage point to 50.7%. Deteriorating labor market conditions supported wage moderation in the private sector, where nominal gross wage growth slowed down to 8.7% year on year in the third quarter of 2004 from 11.5% in the first quarter. Wage dynamics in the public sector were significantly slower in September (3.3%), though they showed some acceleration from the middle of the year.

In line with expectations, HICP inflation peaked in May 2004 at 7.8% year on year. Since then price pressure has eased gradually, and the inflation rate dropped to 5.7% in November. Disinflation has been supported by falling import prices on the back of the strengthening of the currency and the moderation of inflation expectations. Wage restraint in the private sector despite the sharp rise in prices between mid-2003 and mid-2004 has also been beneficial, as it implied a stagnation of CPI-deflated wages and, thereby, supported the weakening of private consumption growth. Moreover, nominal unit wage costs in industry even declined in year-on-year terms. The Hungarian central bank (Magyar Nemzeti Bank, MNB) expects a sharp drop in inflation to below 5% during the first quarter of 2005, when the effect of indirect tax increases at the beginning of 2004 will drop out of the calculation. Thereafter, disinflation is expected to slow down, mainly on the back of lower food and oil price inflation, while core inflation will remain roughly unchanged. The MNB expects an inflation rate of 4.4% in December 2005, which would be slightly above the midpoint of the inflation target band of 4% \pm 1 percentage point. According

Table 11

Productivity, Wages, Prices, Exchange Rate and Key Interest Rate

	1999	2000	2001	2002	2003	Q1 2004	Q2 2004
<i>Year-on-year change of period average levels in %</i>							
Gross production of industry (real)	10.1	18.5	4.1	2.9	6.3	10.3	10.3
Labor productivity of industry (real)	5.1	17.0	5.6	4.7	8.4	12.8	12.3
Gross average wage of industry (nominal)	13.4	15.0	14.5	12.4	9.4	11.8	10.2
Unit labor cost of industry (nominal)	7.9	-1.7	8.4	7.4	1.0	-0.9	-1.9
Producer price index (PPI) of industry	5.0	11.4	5.7	-1.1	2.5	4.9	4.8
Consumer price index (here: HICP)	10.0	10.0	9.1	5.2	4.7	6.8	7.4
<i>Exchange rate (nominal):</i>							
HUF ¹ per 1 EUR, + = EUR appreciation	5.2	2.9	-1.3	-5.3	4.3	6.7	0.5
EUR per 1 HUF, + = HUF appreciation	-4.9	-2.8	1.4	5.6	-4.2	-6.3	-0.5
<i>Period average levels</i>							
Unemployment rate (ILO definition, %)	7.0	6.4	5.7	5.8	5.9	6.1	5.9
Key interest rate per annum (%)	15.2	11.5	11.1	9.1	8.6	12.5	11.8
<i>Exchange rate (nominal):</i>							
HUF ¹ per 1 EUR	252.76	260.07	256.60	242.95	253.51	260.00	252.16
EUR per 1 HUF	0.00396	0.00385	0.00390	0.00412	0.00394	0.00385	0.00397

Source: Bloomberg, Eurostat, national statistical office, national central bank, OeNB, wiw.

¹ HUF: Hungarian forint.

to the MNB, inflation should fall further in 2006, to 3.9% in December, against a target band of 3.5% \pm 1 percentage point.

Encouraged by the easing of price pressures, the improvement in the structure of GDP growth and the strengthening of the currency during 2004 (+7.6% year on year against the euro in nominal terms in December 2004), the MNB cut interest rates by a total of 300 basis points from the beginning of 2004. At the end of 2004, the policy rate stood at 9.5%. On the other hand, the large current account deficit and the insufficient fiscal tightening in the course of 2004 have reduced the scope for monetary easing in the view of the MNB. The expected decline in inflation and government promises for fiscal tightening have led to general market expectations of further rate cuts at the beginning of 2005.

Table 12

Monetary Developments

	1999	2000	2001	2002	2003	Q1 2004	Q2 2004
<i>Nominal year-on-year change of the annual average stock in %</i>							
Broad money (including foreign currency deposits)	17.4	17.7	16.3	10.1	14.2	12.3	11.4
<i>Contributions to the nominal year-on-year change of broad money in percentage points</i>							
Net foreign assets of the banking system	10.3	10.3	9.2	2.2	-1.0	-0.5	-2.0
Domestic credit (net) of the banking system	6.0	6.0	10.7	12.3	22.4	20.1	18.9
<i>of which: claims on the private sector</i>	8.8	16.2	17.2	15.4	18.7	25.9	24.0
<i>claims on households</i>	1.6	2.7	4.2	6.3	10.6	11.5	10.8
<i>claims on enterprises</i>	7.1	13.4	13.0	9.1	8.1	14.4	13.3
<i>net claims on the public sector</i>	-2.7	-10.2	-6.5	-3.1	3.7	-5.8	-5.1
Other domestic assets (net) of the banking system	1.1	-5.8	-3.6	-4.5	-7.2	-7.3	-5.4

Source: National central bank, OeNB.

The government failed anew to deliver its fiscal promises in 2004, and the budget deficit is estimated at around 5.1% to 5.3% of GDP, compared to the original target of 3.8% in the 2003 Preaccession Economic Program, which had been raised to 4.6% in the March 2004 fiscal notification. However, due to a larger than expected surplus in December, the preliminary deficit matched the government's forecast of September 2004. In its recommendation of July 2004 under the excessive deficit procedure, the Ecofin Council invited the Hungarian authorities to take effective action to reach the deficit targets laid down in the Convergence Program of May 2004 (deficit reduction from 4.6% of GDP in 2004 to 4.1% in 2005 and 2.7% in 2008). By contrast, the Convergence Program of December 2004 targets a deficit reduction to 4.7% in 2005, and also the targets for the remaining program horizon have been adjusted upward. Thus, the Ecofin Council in January 2005 formally decided that Hungary had taken no effective action in response to the Council recommendation of July 5, 2004, within the period laid down in that recommendation. Moreover, both the MNB and the European Commission forecast a deficit ratio for 2005 above the target ratio in the December 2004 program (5.5% and 5.2% of GDP, respectively). Apart from economic risk factors (e.g. higher interest expenditures, lower VAT revenues, higher deficit outside the central government), the political cycle (national and regional elections in 2006) may also negatively affect fiscal developments.³

Table 13

Government Budget							
	1999	2000	2001	2002	2003	2004	2005
	% of GDP						
General government							
Revenues	..	0.0	44.3	43.4	43.6	0.0	42.5
Expenditures	..	47.6	48.7	52.6	49.8	48.7	47.6
of which: interest payments	..	5.6	4.8	4.1	..	..	..
Balance	..	-3.0	-4.4	-9.2	-6.2	-5.5	-5.2
Primary balance	..	2.6	0.4	-5.1	-2.1	-1.1	-1.2
Gross public debt	60.9	55.4	53.5	57.2	59.1	59.7	59.5

Source: European Commission.

The worsening trend in the current account has not ended yet. During the first nine months of 2004 the deficit amounted to 9.1% of GDP, up from 8.8% in the same period of 2003. While the trade balance improved year on year (by 1.9% of GDP), the deterioration on the other balances (services, incomes and transfers) outweighed this effect. In part linked to EU transfers, the capital account balance improved by 0.5% of GDP compared to the first nine months of 2003, leading to a modest improvement in the country's overall external financing requirement (current plus capital account). Net FDI inflows intensified during the first nine months of 2004 and covered nearly 40% of the current account deficit.

³ All the deficit and debt figures in this paragraph are based on a classification which excludes the funded pension pillar from the government sector. Classifying it as belonging to the government sector would imply a downward revision of the deficit and debt figures, with the deficit in 2004 and 2005 decreasing by about 1.0 percentage point of GDP.

Table 14

Balance of Payments							
	1999	2000	2001	2002	2003	H1 2003	H1 2004
	<i>EUR million</i>						
Merchandise exports	24,059	31,278	34,697	36,821	38,161	18,164	21,296
Merchandise exports:							
year-on-year change in %	14.3	30.0	10.9	6.1	3.6	-2.2	17.2
Merchandise imports	26,102	34,457	37,193	39,024	41,132	19,737	22,327
Merchandise imports:							
year-on-year change in %	14.8	32.0	7.9	4.9	5.4	2.4	13.1
Trade balance	-2,044	-3,180	-2,496	-2,203	-2,971	-1,573	-1,031
% of GDP	-4.5	-6.3	-4.3	-3.2	-4.1	-4.4	-2.7
Services balance	816	1,207	1,625	591	-170	4	-371
Income balance							
(factor services balance)	-2,713	-2,792	-3,192	-3,835	-3,930	-2,065	-2,281
Current transfers	408	385	450	547	583	349	100
Current account balance	-3,531	-4,380	-3,613	-4,900	-6,488	-3,285	-3,583
% of GDP	-7.8	-8.7	-6.2	-7.1	-8.9	-9.3	-9.5
Direct investment flows (net)	2,872	2,334	3,992	2,734	775	181	840
% of GDP	6.4	4.6	6.9	4.0	1.1	0.5	2.2

Source: Eurostat, national central bank, OeNB.

Nevertheless, the country's net foreign debt continued to increase until mid-2004 before falling back slightly to 31.7% of (rolling four-quarter) GDP at the end of September 2004.

Table 15

Gross Official Reserves and Gross External Debt						
	1999	2000	2001	2002	2003	Q2 2004
	<i>End of period, EUR million</i>					
Gross official reserves (excluding gold)	10,722	12,038	12,164	9,887	10,108	10,517
Gross external debt	29,231	32,572	37,387	38,559	46,504	50,134
	<i>% of GDP¹</i>					
Gross official reserves (excluding gold)	23.8	23.8	21.0	14.3	13.8	13.9
Gross external debt	64.9	64.4	64.5	55.9	63.5	66.3
	<i>Import months of goods and services</i>					
Gross official reserves (excluding gold)	4.3	3.7	3.4	2.6	2.5	2.4

Source: Eurostat, national central bank, OeNB, wiw.

¹ Q2 2004: As a percentage of rolling four-quarter GDP.

4 Poland: Strong Currency as a Challenge

GDP growth accelerated to 5.9% year on year in the first three quarters of 2004, against 3.8% in the full year 2003. However, annual growth decreased from 6.9% in the first quarter to 4.8% in the third quarter. In the first three quarters of 2004, private consumption grew at 3.7% year on year, only moderately more strongly than in the full year 2003 (3.1%) and still clearly less than GDP. The main contribution to the acceleration of GDP growth stemmed from gross fixed capital formation, which expanded (at a rate of 3.8%) for the first time after three years of contraction. At 16%, real export growth slightly exceeded the high level of 2003, with the third quarter witnessing a remarkable acceleration of annual growth to 20.4% from 11.3% in the second quarter. However, real import growth accelerated even more strongly both in the first three quarters of 2004 (compared to growth in 2003) and in the third quarter

(compared to annual growth in the second quarter), while still remaining below export growth. EU entry effects as well as more powerful foreign demand (combined with the impact of export production on imports) increased export and import growth. The fact that domestic demand speeded up faster than foreign demand explains why import growth exceeded export growth acceleration. While net exports still improved further in the first three quarters of 2004, benefiting from the weaker average exchange rate level in year-on-year terms, their contribution to GDP growth (0.8 percentage point) was smaller than in 2003 (1.3 percentage points). In the third quarter, the contribution of net exports was equal to zero, probably reflecting also the recent currency appreciation.

Table 16

Gross Domestic Product and Its Demand Components							
	1999	2000	2001	2002	2003	Q1 2004	Q2 2004
<i>Real year-on-year change in %</i>							
Gross domestic product	4.0	4.0	1.0	1.4	3.8	6.9	6.1
Private consumption	5.3	2.8	2.1	3.3	3.1	3.9	3.8
Public consumption	1.0	1.1	0.6	0.6	0.4	1.3	2.5
Gross fixed capital formation	9.2	2.7	-8.8	-5.8	-0.9	3.5	3.6
Exports of goods and services	-3.2	23.2	3.1	4.8	14.7	16.0	11.3
Imports of goods and services	1.1	15.6	-5.3	2.6	9.3	11.3	8.3
<i>Contribution to GDP growth in percentage points</i>							
Domestic demand	5.4	-0.1	-1.7	0.8	2.5	5.4	4.7
Exports	-1.0	9.7	0.9	1.3	4.4	5.0	3.8
Net exports	-1.4	4.2	2.7	0.5	1.3	1.3	0.9

Source: Eurostat, national statistical office, OeNB, wiiv.

Coming to 19.1%, the unemployment rate (ILO definition) was slightly lower in the second quarter than a year earlier (19.4%). Similarly, the registered unemployment rate decreased to 19.1% in the third quarter from 19.5% a year earlier, reflecting stronger economic growth. Correspondingly, in the first three quarters of 2004, labor shedding in industry nearly came to a halt (-0.5% year on year) and labor productivity growth (15.6%) exceeded the slightly rising nominal wage growth (5.3%) by far, implying an even more pronounced fall in nominal industrial unit wage costs (8.9%) than in 2003. However, industrial producer price inflation rose to 7.3% year on year in that period from 2.7% in 2003, inter alia because of higher oil prices and the zloty's 10% depreciation against the euro from August 2003 to February 2004. After a peak in May (9.6% year on year), industrial producer price inflation fell to 6.7% in November, supported by the zloty's reappreciation by 14% against the euro from February to November. Inflation (HICP) rose from a low of 0.7% year on year in August 2003 to 4.9% in August 2004. This was mainly a result of higher energy prices and an increase in food prices (which was partly EU accession-related), while the increase of other manufactured goods prices still remained nearly negligible, despite the increase in industrial producer prices. By November 2004, HICP inflation had declined to 4.5% year on year. In an effort to contain the surge of inflationary expectations and to achieve the target corridor of 1.5% to 3.5%, the Monetary Policy Council raised the key interest rate (two-week rate on central bank bills) by a total of 1.25 percentage points to 6.5% in three steps between the end of June and the end of August, after it had stood at 5.25%

Table 17

Productivity, Wages, Prices, Exchange Rate and Key Interest Rate

	1999	2000	2001	2002	2003	Q1 2004	Q2 2004
<i>Year-on-year change of period average levels in %</i>							
Gross production of industry (real)	4.7	7.8	0.6	1.4	8.6	18.7	16.6
Labor productivity of industry (real)	9.6	17.9	6.1	7.4	11.4	19.6	17.0
Gross average wage of industry (nominal)	34.1	10.9	6.9	3.7	3.0	6.6	4.8
Unit labor cost of industry (nominal)	22.3	-5.9	0.8	-3.4	-7.5	-10.9	-10.5
Producer price index (PPI) of industry	5.7	7.8	1.7	1.1	2.7	4.4	8.9
Consumer price index (here: HICP)	7.2	10.1	5.3	1.9	0.7	1.8	3.4
Exchange rate (nominal):							
PLN ¹ per 1 EUR, + = EUR appreciation	8.0	-5.2	-8.4	5.0	14.1	14.0	7.6
EUR per 1 PLN, + = PLN appreciation	-7.4	5.5	9.2	-4.7	-12.4	-12.3	-7.1
<i>Period average levels</i>							
Unemployment rate (ILO definition, %)	..	16.1	18.3	19.9	19.6	20.7	19.1
Key interest rate per annum (%)	13.7	17.9	16.0	8.8	5.6	5.3	5.3
Exchange rate (nominal):							
PLN ¹ per 1 EUR	4.23	4.01	3.67	3.85	4.40	4.78	4.69
EUR per 1 PLN	0.2365	0.2495	0.2725	0.2595	0.2274	0.2094	0.2133

Source: Bloomberg, Eurostat, national statistical office, national central bank, OeNB, wiw.

¹ PLN: Polish zloty.

for about a year. Taking into account the zloty's strong appreciation, there were no further interest rate hikes in 2004.

After the real key interest rate (12-month moving average) had fallen continuously from 4.3% in December 2003 to 0.5% in August 2004, it increased to 1.2% in November 2004.⁴ While the decline of real interest rates eased monetary conditions, the real appreciation by 10.8% (CPI-deflated) and 11.6% (PPI-deflated) during the 12-month period up to November had a tightening effect. In the first half of 2004, annual real money growth remained below GDP growth. While lending to households made the largest contribution to money growth, bank lending to enterprises stagnated in nominal terms and declined

Table 18

Monetary Developments

	1999	2000	2001	2002	2003	Q1 2004	Q2 2004
<i>Nominal year-on-year change of the annual average stock in %</i>							
Broad money (including foreign currency deposits)	24.7	15.4	12.1	2.0	1.5	5.3	7.1
<i>Contributions to the nominal year-on-year change of broad money in percentage points</i>							
Net foreign assets of the banking system	7.8	7.0	4.5	0.9	0.0	2.8	5.3
Domestic credit (net) of the banking system	25.1	13.5	7.2	7.1	5.2	6.2	4.6
<i>of which: claims on the private sector</i>	18.5	15.7	8.3	3.4	3.8	4.9	4.4
<i>claims on households</i>	6.2	7.0	4.2	2.8	2.5	3.9	4.7
<i>claims on enterprises</i>	12.3	8.7	4.1	0.5	1.3	1.0	-0.2
<i>net claims on the public sector</i>	6.7	-2.1	-1.1	3.7	1.4	1.3	0.2
Other domestic assets (net) of the banking system	-8.3	-5.1	0.4	-6.0	-3.8	-3.7	-2.8

Source: National central bank, OeNB.

⁴ Ex post real key rate per annum as measured by the real (CPI-deflated) key rates per month compounded over the past twelve months. The similarly measured PPI-deflated key rate per annum declined from 2.1% in December 2003 to -3.8% in May, before recovering to -0.9% by November.

in real terms. Without the increase of net foreign assets real money would have stagnated, and this increase stemmed only from the statistical effect of the year-on-year depreciation of the zloty in that period.

The December 2004 update of the government's convergence program expects a deficit of 5.4% of GDP in 2004 (based on real GDP growth of 5.7%) against a deficit ratio of 5.7% anticipated in the May 2004 program (based on assumed real GDP growth of 5.0%). A substantial part of the deficit widening from 2003 to 2004 resulted from the fiscal impact of EU accession. The December program expects the public debt-to-GDP ratio to have risen from 45.4% at end-2003 to 45.9% (against 49.0% in the May program) at end-2004. According to the Ecofin recommendation under the excessive deficit procedure in July 2004, Poland should take effective action to achieve the 2005 deficit target set in May and reach a deficit of below 3% by 2007. In line with the draft national budget, the December program sets the deficit target for 2005 at 3.9% of GDP against 4.2% in the May program and the European Commission's autumn forecast of 4.1%. It expects the debt-to-GDP ratio to rise to 47.6% at end-2005.⁵

Table 19

Government Budget							
	1999	2000	2001	2002	2003	2004	2005
	% of GDP						
General government							
Revenues	44.9	42.5	43.8	43.9	43.7	45.6	45.7
Expenditures	47.0	44.2	47.7	48.1	47.6	51.3	49.9
of which: interest payments	2.0	2.1	3.0	2.9	3.1	3.1	3.1
Balance	-1.4	-0.7	-3.8	-3.6	-3.9	-5.6	-4.1
Primary balance	0.6	1.4	-0.8	-0.7	-0.8	-2.5	-1.0
Gross public debt	40.1	36.8	36.7	41.1	45.4	47.7	49.8

Source: European Commission.

Corresponding to further improving real net exports, the deficit in the goods and services balance in the balance of payments shrank further to 1.6% of GDP in the first three quarters of 2004 from 2.7% a year earlier. This can be attributed inter alia to the substantially weaker level of the real (unit wage cost-deflated) exchange rate in the first three quarters of 2004, owing to both the depreciation of the average nominal exchange rate by 6.5% year on year (despite the appreciation since the end of February) and the nominal fall of industrial unit wage costs by 9% year on year. The current account deficit, which shrank in parallel, declining to 1.5% of GDP from 2.5% a year earlier, was fully covered by net direct investment inflows at 1.6% of GDP.

Significant portfolio net inflows outpaced net other investment outflows and led to an increase in gross official reserves. However, the rise in the ratio to GDP (in percentage points) of both reserves and gross external debt in the first half of 2004 was not only due to increased absolute levels; about half of the rise was the result of the depreciation of the average nominal year-on-year exchange rate in that period.

⁵ All deficit and debt figures in this paragraph are based on classifying the defined contribution pension schemes (open pension funds) inside the government sector. According to Eurostat rulings in 2004, a reclassification has to be implemented by 2007, which would imply an upward revision of the deficit and debt figures (permanent deficit increase by about 1.5 percentage points of GDP).

Table 20

Balance of Payments

	1999	2000	2001	2002	2003	H1 2003	H1 2004
	<i>EUR million</i>						
Merchandise exports	28,215	39,028	46,487	49,324	53,813	25,215	31,392
Merchandise exports: year-on-year change in %	-2.5	38.3	19.1	6.1	9.1	6.8	24.5
Merchandise imports	42,361	52,359	55,075	57,036	58,890	27,836	33,729
Merchandise imports: year-on-year change in %	4.9	23.6	5.2	3.6	3.3	0.1	21.2
Trade balance	-14,146	-13,331	-8,588	-7,712	-5,077	-2,621	-2,337
% of GDP	-9.2	-7.4	-4.1	-3.8	-2.7	-2.9	-2.6
Services balance	1,297	1,551	905	861	434	-76	380
Income balance							
(factor services balance)	-948	-1,609	-1,585	-1,993	-3,191	-1,793	-1,718
Current transfers	2,078	2,595	3,226	3,434	3,724	1,661	1,785
Current account balance	-11,719	-10,794	-6,042	-5,410	-4,110	-2,829	-1,890
% of GDP	-7.6	-6.0	-2.9	-2.7	-2.2	-3.1	-2.1
Direct investment flows (net)	6,795	10,253	6,457	4,144	3,499	1,917	1,844
% of GDP	4.4	5.7	3.1	2.0	1.9	2.1	2.1

Source: Eurostat, national central bank, OeNB.

Table 21

Gross Official Reserves and Gross External Debt

	1999	2000	2001	2002	2003	Q2 2004
	<i>End of period, EUR million</i>					
Gross official reserves (excluding gold)	26,224	28,555	29,031	27,367	26,000	28,871
Gross external debt	65,121	74,671	81,461	81,045	83,939	92,607
	<i>% of GDP¹</i>					
Gross official reserves (excluding gold)	17.0	15.8	14.0	13.5	14.0	15.8
Gross external debt	42.2	41.3	39.3	40.0	45.4	50.6
	<i>Import months of goods and services</i>					
Gross official reserves (excluding gold)	6.4	5.5	5.4	4.9	4.6	4.6

Source: Eurostat, national central bank, OeNB, wiiv.

¹ Q2 2004: As a percentage of rolling four-quarter GDP.**5 Slovak Republic: Positive Developments after the Tax Reform**

In the first three quarters of 2004 the Slovak economy boomed, with GDP growth coming to 5.4% year on year, after 4.2% in the full year 2003. Foreign demand was partially replaced by domestic demand, which may reflect first positive effects of the tax reform of January 2004. Private consumption grew by 3.2% (after a decline by 0.6% in 2003) and gross fixed capital formation confirmed the turnaround (+3.4%) after two years of decline. Public consumption continued to grow moderately at 1.8%. Despite the revival of domestic demand, real import growth (12.9%) was slightly lower than in 2003, as export growth slowed down from the high rate of 22.5% in 2003 to 16.1% year on year in the first half of 2004 and to 12.2% in the first three quarters of 2004. In the third quarter, the year-on-year export growth was relatively low (5%), which was mainly due to new production upgrades at Volkswagen Bratislava. However, trade data according to customs statistics show a continuation of fast export

growth after July, which indicates that the full-year figure should improve again. In contrast to previous years, net exports deteriorated in the first three quarters of 2004, implying a slightly negative contribution to annual GDP growth.

Table 22

Gross Domestic Product and Its Demand Components							
	1999	2000	2001	2002	2003	Q1 2004	Q2 2004
<i>Real year-on-year change in %</i>							
Gross domestic product	1.5	2.0	3.8	4.6	4.5	5.4	5.5
Private consumption	3.2	-0.8	4.7	5.5	-0.6	3.1	2.9
Public consumption	-7.1	1.6	4.6	4.9	2.7	-2.6	4.7
Gross fixed capital formation	-19.6	-7.2	13.9	-0.6	-1.5	0.9	3.5
Exports of goods and services	5.0	13.7	6.3	5.6	22.5	15.8	16.4
Imports of goods and services	-6.7	10.5	11.0	5.5	13.6	12.0	17.0
<i>Contribution to GDP growth in percentage points</i>							
Domestic demand	-7.0	0.1	7.5	4.7	-2.1	1.8	5.5
Exports	3.3	9.4	4.8	4.3	17.7	13.8	14.8
Net exports	8.4	1.9	-3.7	-0.1	6.5	3.5	0.0

Source: Eurostat, national statistical office, OeNB.

Despite high economic growth, the unemployment rate (ILO definition) increased to 19.1% in the first half of 2004, from 17.8% a year earlier, and industrial employment declined by 0.6% year on year. As a result, industrial labor productivity growth increased to 6.7%, from 4.7% in 2003. While industrial wage growth accelerated more strongly, reaching 9.5%, the implied further rise of unit wage costs remained below producer price inflation. Higher wage growth in combination with moderate disinflation led to a real wage growth of 1.3% (after a decline in 2003) and supported private consumption.

Following the tax reform of January 2004, which inter alia comprised the increase of lower VAT rates for some goods at the uniform level of 19%, and owing to a further liberalization of administered prices, inflation (HICP) declined only modestly from 9.3% in December 2003 to 8.3% year on year

Table 23

Productivity, Wages, Prices, Exchange Rate and Key Interest Rate							
	1999	2000	2001	2002	2003	Q1 2004	Q2 2004
<i>Year-on-year change of period average levels in %</i>							
Gross production of industry (real)	-2.0	8.3	7.6	6.7	5.5	6.5	5.7
Labor productivity of industry (real)	1.0	11.8	6.6	6.5	4.9	7.5	5.9
Gross average wage of industry (nominal)	7.9	9.1	10.2	7.3	7.3	10.8	8.3
Unit labor cost of industry (nominal)	6.8	-2.4	3.4	0.7	2.3	3.1	2.2
Producer price index (PPI) of industry	3.9	10.8	6.5	2.0	8.3	2.9	2.8
Consumer price index (here: HICP)	10.4	12.2	7.2	3.5	8.5	8.2	8.0
<i>Exchange rate (nominal):</i>							
SKK ¹ per 1 EUR, + = EUR appreciation	11.7	-3.4	1.6	-1.4	-2.8	-2.9	-2.8
EUR per 1 SKK, + = SKK appreciation	-10.5	3.6	-1.6	1.4	2.9	3.0	2.9
<i>Period average levels</i>							
Unemployment rate (ILO definition, %)	16.3	18.8	19.3	18.7	17.6	19.5	18.6
Key interest rate per annum (%)	..	..	8.8	7.9	6.4	5.9	5.0
<i>Exchange rate (nominal):</i>							
SKK ¹ per 1 EUR	44.12	42.60	43.30	42.68	41.49	40.56	40.08
EUR per 1 SKK	0.0227	0.0235	0.0231	0.0234	0.0241	0.0247	0.0250

Source: Bloomberg, Eurostat, national statistical office, national central bank, OeNB, wiiv.

¹ SKK: Slovak koruna.

in July 2004. However, inflation went down to 6.0% in November, as inflation expectations remained under control, indicated by the fact that core inflation was relatively stable during the whole period, coming to 2.0% year on year in November.

The monetary policy strategy of Národná banka Slovenska (NBS) is based on inflation and monetary indicators, but also takes account of exchange rate developments (managed floats). To contain the appreciation of the Slovak koruna against the euro, the NBS cut the key interest rate (two-week repo tender limit rate) four times (in March, April, June and November) by a total of 2.0 percentage points to 4.0%, and it intervened on the foreign exchange market. As a result, the nominal appreciation against the euro could be limited to below 4% year on year in November, with the real (PPI-deflated) appreciation being about 0.5 percentage point higher. In the first three quarters, real money growth was slightly negative, as net foreign assets declined (partly owing to the valuation effect of the appreciation) and the growth of lending to the corporate sector decreased. By contrast, growth of both lending to households and net government credit markedly accelerated.

Table 24

Monetary Developments							
	1999	2000	2001	2002	2003	Q1 2004	Q2 2004
<i>Nominal year-on-year change of the annual average stock in %</i>							
Broad money (including foreign currency deposits)	8.1	14.1	12.7	8.7	5.5	4.4	2.5
<i>Contributions to the nominal year-on-year change of broad money in percentage points</i>							
Net foreign assets of the banking system	-4.9	6.6	2.7	13.5	7.7	-3.8	-2.4
Domestic credit (net) of the banking system	13.6	3.7	12.2	0.4	-1.9	13.8	10.9
<i>of which: claims on the private sector</i>	4.9	2.2	-13.9	-1.0	4.9	6.1	6.5
<i>claims on households</i>	1.7	2.0	1.2	1.4	2.2	3.5	4.0
<i>claims on enterprises</i>	3.2	0.2	-15.1	-2.3	2.7	2.6	2.5
<i>net claims on the public sector</i>	8.7	1.5	26.1	1.4	-6.7	7.7	4.4
Other domestic assets (net) of the banking system	-0.5	3.8	-2.2	-5.2	-0.4	-5.7	-6.1

Source: National central bank, OeNB.

Note: Data after deduction of bad claims written off during bank consolidation.

In January 2004 a far-reaching tax reform was implemented, comprising the introduction of a flat income tax rate at a uniform level of 19% and the unification of the VAT rate at 19%. Simultaneously, the system of social benefits was reformed. The December 2004 update of the government's convergence program expects a deficit of 3.8% of GDP in 2004 (based on real GDP growth of 5.0%) against a deficit ratio of 4.0% expected in the May 2004 program (based on assumed real GDP growth of 4.1%). This fiscal performance, which was better than expected, is attributable to tax revenues being above the target after the tax reform. This is particularly true for personal and corporate income tax. Budgetary expenditures, however, were roughly at the target level, largely due to lower transfers to the EU budget than expected. The December program expects the public debt-to-GDP ratio to have risen from 42.8% at end-2003 to 43.0% at end-2004 (against 45.1% in the May program). According to the Ecofin recommendation under the excessive deficit procedure in July 2004,

Slovakia should take effective action to achieve the 2005 deficit target set in May and reach a deficit below 3% by 2007. In line with the national budget law, the December program sets the deficit target for 2005 at 3.8% of GDP as compared to 3.9% in the May program and the European Commission's autumn forecast of 4.0%. It expects the debt-to-GDP ratio to rise to 44.2% at end-2005.⁶

Table 25

Government Budget							
	1999	2000	2001	2002	2003	2004	2005
	% of GDP						
General government							
Revenues	49.8	47.6	45.5	45.2	35.6	34.6	34.5
Expenditures	56.9	59.9	51.5	50.9	39.2	38.3	38.3
of which: interest payments	3.4	4.1	4.0	3.6	2.5	2.3	2.4
Balance	-7.1	-12.3	-6.0	-5.7	-3.7	-3.9	-4.0
Primary balance	-3.8	-8.2	-2.0	-2.1	-1.2	-1.6	-1.6
Gross public debt	47.2	49.9	48.7	43.3	42.6	44.2	45.2

Source: European Commission.

As a result of recovering domestic demand, the trade balance and current account deficits increased to 2.5% and 2.9% of GDP, respectively, in the first three quarters of 2004, against deficits of 1.7% and 0.8% of GDP, respectively, a year earlier. However, net capital inflows increased as well. New greenfield investment (especially Hyundai) led to net FDI inflows of 3.5% of GDP in the first three quarters of 2004, against 2.0% a year earlier. At the same time, portfolio investment showed net inflows of 3.7% of GDP, against net outflows of 1.8% a year earlier.

Table 26

Balance of Payments							
	1999	2000	2001	2002	2003	H1 2003	H1 2004
	EUR million						
Merchandise exports	9,607	12,866	14,119	15,281	19,365	9,044	10,861
Merchandise exports: year-on-year change in %	0.5	33.9	9.7	8.2	26.7	25.5	20.1
Merchandise imports	10,633	13,838	16,494	17,539	19,934	9,281	11,192
Merchandise imports: year-on-year change in %	-8.8	30.1	19.2	6.3	13.7	13.5	20.6
Trade balance	-1,027	-971	-2,376	-2,259	-569	-237	-331
% of GDP	-5.4	-4.4	-10.2	-8.8	-2.0	-1.7	-2.1
Services balance	208	476	536	483	210	56	107
Income balance (factor services balance)	-281	-382	-350	-485	-107	-127	-316
Current transfers	184	128	237	206	217	126	23
Current account balance	-916	-750	-1,953	-2,054	-249	-182	-516
% of GDP	-4.8	-3.4	-8.4	-8.0	-0.9	-1.3	-3.3
Direct investment flows (net)	737	2,048	1,726	4,272	488	487	777
% of GDP	3.9	9.3	7.4	16.6	1.7	3.5	4.9

Source: Eurostat, national central bank, OeNB.

⁶ The deficit and debt figures for 2005 are based on a classification which excludes the funded pension pillar introduced in 2005 from the government sector. Classifying it as belonging to the government sector would imply a downward revision of the deficit and debt figures, with the 2005 deficit decreasing by 0.4 percentage point of GDP.

The country's gross foreign debt increased slightly from 49.5% of GDP at the end of 2003 to 49.7% of annual (rolling four-quarter) GDP at end-June 2004.

Table 27

Gross Official Reserves and Gross External Debt

	1999	2000	2001	2002	2003	Q2 2004
<i>End of period, EUR million</i>						
Gross official reserves (including gold)	3,410	4,391	4,748	8,824	9,717	10,165
Gross external debt	..	..	..	12,576	14,323	15,394
<i>% of GDP¹</i>						
Gross official reserves (including gold)	17.8	20.0	20.4	34.3	33.5	32.8
Gross external debt	..	..	..	48.9	49.5	49.7
<i>Import months of goods and services</i>						
Gross official reserves (including gold)	3.3	3.3	3.0	5.3	5.2	4.9

Source: Eurostat, national central bank, OeNB, wiw.

¹ Q2 2004: As a percentage of rolling four-quarter GDP.

6 Slovenia: Falling Inflation Supported by a Stable Exchange Rate

GDP growth in Slovenia amounted to 4.5% year on year during the first nine months of 2004, with the growth rate gradually increasing in the course of the year. Within domestic demand, the expansion of gross fixed capital formation was the most dynamic (+6.9%), despite a gradual deceleration. Supported by the acceleration of public consumption growth, domestic consumption strengthened in the course of 2004, growing by 3.0% during the first nine months. Following a slowdown in the second quarter, private consumption growth picked up in the third quarter and reached 3.8% year on year, supported by a similar development of wages. During the first nine months of 2004, exports and imports grew at the same pace (+11.6%). As a result, the negative contribution of net exports to GDP growth diminished to 0.3% during the period from January to September 2004, after having stood at 2.2% for both the same period of 2003 and the full year 2003. In fact, net exports added 0.9 percentage points to the GDP growth rate in the third quarter.

Table 28

Gross Domestic Product and Its Demand Components

	1999	2000	2001	2002	2003	Q1 2004	Q2 2004
<i>Real year-on-year change in %</i>							
Gross domestic product	5.6	3.9	2.7	3.3	2.5	3.9	4.7
Private consumption	5.9	0.4	2.3	0.3	2.7	3.8	3.1
Public consumption	2.9	2.3	3.9	1.7	2.6	0.2	1.6
Gross fixed capital formation	21.0	0.6	4.1	3.1	6.3	7.9	6.5
Exports of goods and services	1.6	13.0	6.3	6.7	3.2	9.1	13.7
Imports of goods and services	8.0	7.6	3.0	4.9	6.8	10.2	14.5
<i>Contribution to GDP growth in percentage points</i>							
Domestic demand	9.4	1.5	1.0	2.3	4.7	4.7	5.6
Exports	0.9	7.1	3.5	3.9	1.9	5.5	8.2
Net exports	-3.9	2.4	1.7	1.0	-2.2	-0.8	-0.9

Source: Eurostat, national statistical office, OeNB.

Strengthening economic activity was also reflected by a decline in the unemployment rate to 6% in the third quarter of 2004 from 6.6% a year earlier. At the same time, the employment rate rose from 52.6% to 56.7%. Tightening labor market conditions were reflected in the slight increase in nominal wage growth rates between the first and third quarters of 2004 (from 5.7% to 5.9% year on year, while inflation marginally declined (from 3.7% to 3.6%). However, productivity gains largely compensated for the wage increases, and unit wage costs in the industry in fact stagnated during the first half of 2004 (+0.4% year on year), compared to an increase by 4.4% in 2003.

The inflation rate (HICP) bottomed out in March 2004 at 3.5% year on year. After this point, inflation was rather volatile. Owing to administered price increases and rising oil prices, price growth accelerated until mid-year to 3.9% before falling back to 3.4% in October. In November inflation picked up again, reaching 3.8% on the back of higher food and energy prices. The increase in inflation was anticipated by Banka Slovenije, which had raised its inflation forecast for the fourth quarter to 3.5% in October 2004 (from 3.2%). The Slovenian central bank expects disinflation to resume in 2005, with the rate falling to 2.5% in the last quarter. According to Banka Slovenije, disinflation should be supported by weaker growth in administered prices (including the impact of excise tax changes on fuel), a favorable composition of GDP growth, exchange rate stability and wage increases lagging behind productivity gains.

Table 29

	1999	2000	2001	2002	2003	Q1 2004	Q2 2004
Productivity, Wages, Prices, Exchange Rate and Key Interest Rate							
<i>Year-on-year change of period average levels in %</i>							
Gross production of industry (real)	-0.5	6.3	3.1	2.5	1.4	4.0	7.4
Labor productivity of industry (real)	0.9	6.8	2.3	1.4	3.0	5.6	8.4
Gross average wage of industry (nominal)	9.3	11.7	10.8	9.9	7.6	8.0	6.6
Unit labor cost of industry (nominal)	8.3	4.6	8.4	8.3	4.4	2.3	-1.7
Producer price index (PPI) of industry	2.2	7.7	8.9	5.3	2.6	3.3	4.3
Consumer price index (here: HICP)	6.1	8.9	8.6	7.5	5.7	3.7	3.8
<i>Exchange rate (nominal):</i>							
SIT ¹ per 1 EUR, + = EUR appreciation	4.6	6.3	5.5	3.6	3.5	2.8	2.5
EUR per 1 SIT, + = SIT appreciation	-4.4	-5.9	-5.2	-3.5	-3.4	-2.7	-2.5
<i>Period average levels</i>							
Unemployment rate (ILO definition, %)	7.4	6.7	6.2	6.3	6.7	6.8	6.8
Key interest rate per annum (%)	7.2	8.1	10.5	8.4	7.0	5.6	4.6
<i>Exchange rate (nominal):</i>							
SIT ¹ per 1 EUR	194.43	206.63	217.98	225.93	233.82	237.65	238.86
EUR per 1 SIT	0.00514	0.00484	0.00459	0.00443	0.00428	0.00421	0.00419

Source: Bloomberg, Eurostat, national statistical office, national central bank, OeNB, wiiv.

¹ SIT: Slovenian tolar.

Since Slovenia entered ERM II on June 28, 2004, the exchange rate of the tolar against the euro has fluctuated in a very narrow range of between 0.03% and 0.17% on the weak side of the fluctuation band. Apart from some foreign exchange intervention between June 28 and July 1, 2004, intended to signal that the trend depreciation was over, Banka Slovenije intervened only once on the foreign exchange market at the end of July. The Slovenian central bank left its key policy rates unchanged from the point Slovenia joined ERM II until mid-December 2004. On December 23, however, it increased two of its rates

(buy/sell foreign exchange swap rate and main refinancing rate) by 25 basis points, while leaving the interest rates on its money market-relevant tolar-denominated bills unchanged. Correspondingly, money market rates have been stable at around 4% since late June 2004. While the current interest rate level helps to discourage speculative capital inflow, backward-looking real interest rates are low at around 0.5% as measured by the differential between the 12-month interbank rate and the year-on-year CPI rate. The growth of credit to the private sector gathered pace in the course of 2004, reaching nearly 15% in CPI-deflated terms in October (December 2003: 10.7%).

Table 30

Monetary Developments							
	1999	2000	2001	2002	2003	Q1 2004	Q2 2004
<i>Nominal year-on-year change of the annual average stock in %</i>							
Broad money (including foreign currency deposits)	..	13.7	19.2	22.8	12.7	5.8	5.8
<i>Contributions to the nominal year-on-year change of broad money in percentage points</i>							
Net foreign assets of the banking system	..	3.1	9.1	11.0	3.3	-5.3	-7.1
Domestic credit (net) of the banking system	..	15.1	14.4	12.2	10.4	15.7	14.1
<i>of which: claims on the private sector</i>	..	15.1	12.6	9.1	8.0	10.4	11.3
<i>claims on households</i>	..	4.4	2.0	1.6	1.5	2.0	2.4
<i>claims on enterprises</i>	..	10.7	10.6	7.5	6.5	8.4	8.9
<i>net claims on the public sector</i>	..	0.0	1.7	3.2	2.4	5.3	2.8
Other domestic assets (net) of the banking system	..	-4.4	-4.2	-0.4	-1.0	-4.6	-1.3

Source: National central bank, OeNB.

Despite the upward revision of the 2004 budget deficit projection (due to methodological changes and subdued VAT revenues), fiscal policy in Slovenia continues to be relatively well contained. The European Commission expects a deficit of around 2% of GDP in 2005 and 2006. At slightly below 31% of GDP, the public debt ratio is well within the Maastricht limit.

Table 31

Government Budget							
	1999	2000	2001	2002	2003	2004	2005
<i>% of GDP</i>							
General government							
Revenues	..	44.7	45.1	45.7	46.2	45.2	44.6
Expenditures	..	48.2	47.9	48.1	48.2	47.5	46.8
<i>of which: interest payments</i>	..	2.4	2.4	2.3	2.1	2.0	1.9
Balance	..	-3.5	-2.8	-2.4	-2.0	-2.3	-2.2
Primary balance	..	-1.0	-0.4	0.0	0.1	-0.3	-0.2
Gross public debt	24.9	27.4	28.1	29.5	29.4	30.9	30.8

Source: European Commission.

During the first nine months of 2004, Slovenia registered a current account deficit of 0.1% of GDP, practically unchanged as compared to the period of January to September 2003. The increase in the trade deficit could be compensated by a larger services balance surplus and a smaller income balance deficit. Both the volume of FDI inflows and outflows increased modestly, but net FDI registered an outflow of 0.6% of GDP, unchanged from the first nine months of 2003.

Table 32

Balance of Payments							
	1999	2000	2001	2002	2003	H1 2003	H1 2004
	EUR million						
Merchandise exports	8,103	9,574	10,454	11,082	11,414	5,643	6,177
Merchandise exports: year-on-year change in %	0.2	18.2	9.2	6.0	3.0	2.2	9.5
Merchandise imports	9,267	10,801	11,139	11,351	11,960	5,927	6,561
Merchandise imports: year-on-year change in %	5.4	16.6	3.1	1.9	5.4	4.9	10.7
Trade balance	-1,164	-1,227	-684	-269	-546	-284	-383
% of GDP	-5.8	-6.0	-3.1	-1.1	-2.2	-2.4	-3.0
Services balance	330	489	536	617	538	307	335
Income balance (factor services balance)	58	29	43	-154	-178	-125	-79
Current transfers	112	126	144	142	94	28	59
Current account balance	-664	-583	38	335	-91	-75	-68
% of GDP	-3.3	-2.8	0.2	1.4	-0.4	-0.6	-0.5
Direct investment flows (net)	55	77	251	1,582	-115	-22	-88
% of GDP	0.3	0.4	1.2	6.7	-0.5	-0.2	-0.7

Source: Eurostat, national central bank, OeNB.

Owing to the small deficit on the current account, the deficit on the capital account (0.6% of GDP) and net FDI outflow, net foreign debt continued to rise, but still reached only 4.3% of GDP in September 2004.

Table 33

Gross Official Reserves and Gross External Debt						
	1999	2000	2001	2002	2003	Q2 2004
	End of period, EUR million					
Gross official reserves (excluding gold)	3,159	3,436	4,908	6,702	6,798	6,476
Gross external debt	8,012	9,491	10,403	11,483	13,305	14,349
	% of GDP ¹					
Gross official reserves (excluding gold)	15.9	16.7	22.5	28.5	27.7	25.7
Gross external debt	40.2	46.1	47.6	48.8	54.1	56.9
	Import months of goods and services					
Gross official reserves (excluding gold)	3.5	3.3	4.6	6.1	5.9	5.2

Source: Eurostat, national central bank, OeNB, wiiv.

¹ Q2 2004: As a percentage of rolling four-quarter GDP.

7 Bulgaria: More Balanced Credit Activity in the Country? When?

In the first three quarters of 2004, real GDP in Bulgaria grew by 5.7% year on year, up from 4.3% in the full year 2003. Annual growth in the third quarter was 5.8%. At the same time, the structure of growth became less imbalanced, as domestic consumption growth continuously decreased to 4.3% year on year in the first three quarters against 6.5% in the full year 2003 due to higher inflation and the resulting stagnation in real (CPI-deflated) wages. By contrast, high gross fixed capital formation growth at 12.4% year on year in the first three quarters of 2004 was only slightly lower than in the full year 2003 (13.8%). Given the investment boom in sectors such as tourism, textiles, machinery, transport and vehicles, real annual import growth remained high (albeit declin-

ing from quarter to quarter) at 13.6% in the first three quarters of 2004, after having come to 14.8% in the full year 2003. As real annual export growth continuously increased to 12% in the first three quarters of 2004 (full-year 2003: 7.9%), the deterioration in net exports was less pronounced than in 2003, resulting in a negative contribution to GDP growth of 3.9 percentage points (full-year 2003: 7.2 percentage points).

Table 34

Gross Domestic Product and Its Demand Components							
	1999	2000	2001	2002	2003	Q1 2004	Q2 2004
<i>Real year-on-year change in %</i>							
Gross domestic product	2.4	5.4	4.1	4.9	4.3	5.3	6.0
Private consumption	9.6	4.3	5.2	3.5	6.4	5.5	4.9
Public consumption	6.3	18.8	0.3	4.4	7.3	2.9	0.3
Gross fixed capital formation	20.8	15.4	23.3	8.5	13.8	21.4	6.3
Exports of goods and services	-4.6	16.6	9.9	7.2	7.9	8.0	10.9
Imports of goods and services	9.3	18.7	14.8	4.9	14.8	17.7	11.3
<i>Contribution to GDP growth in percentage points</i>							
Domestic demand	11.0	8.7	9.2	4.3	11.5	16.8	9.9
Exports	-2.7	9.3	6.1	4.7	5.3	5.7	8.1
Net exports	-8.6	-3.3	-5.1	0.6	-7.2	-11.6	-4.0

Source: Eurostat, OeNB, wiiv.

Corresponding to high growth, the unemployment rate (ILO definition) decreased to 12% in the second quarter of 2004 from 13.7% in the same period of 2003; the registered unemployment rate was 11.9% in November 2004 compared to 13.2% in November 2003. Very high industrial output growth in the first half of 2004 and only slightly higher industrial employment implied labor productivity advances far above wage growth. Thus, in the first half of 2004, nominal industrial unit wage costs decreased by 9% year on year, while producer prices increased by 4.5% year on year. After a peak in producer price inflation of 8.1% year on year in July, caused by climbing oil prices and raw

Table 35

Productivity, Wages, Prices, Exchange Rate and Key Interest Rate							
	1999	2000	2001	2002	2003	Q1 2004	Q2 2004
<i>Year-on-year change of period average levels in %</i>							
Gross production of industry (real)	-9.6	5.3	2.5	4.7	15.3	16.2	19.0
Labor productivity of industry (real)	1.2	10.0	7.6	2.2	12.0	15.8	18.0
Gross average wage of industry (nominal)	8.0	6.6	7.4	3.7	4.5	5.9	6.6
Unit labor cost of industry (nominal)	6.7	-3.1	-0.2	1.4	-6.7	-8.5	-9.6
Producer price index (PPI) of industry	3.2	17.0	3.8	1.4	5.0	1.9	7.1
Consumer price index (here: HICP)	2.6	10.3	7.4	5.8	2.3	6.4	6.7
Exchange rate (nominal):							
BGN ¹ per 1 EUR, += EUR appreciation	-0.7	-0.2	-0.2	0.1	0.0	-0.1	0.1
EUR per 1 BGN, += BGN appreciation	0.7	0.2	0.2	-0.1	0.0	0.1	-0.1
<i>Period average levels</i>							
Unemployment rate (ILO definition, %)	..	16.9	20.3	18.2	13.7	13.4	12.0
Key interest rate per annum (%)	4.7	3.9	4.5	4.0	2.7	2.5	3.0
Exchange rate (nominal):							
BGN ¹ per 1 EUR	1.956	1.952	1.948	1.949	1.949	1.949	1.952
EUR per 1 BGN	0.5113	0.5123	0.5133	0.5130	0.5131	0.5124	0.5130

Source: Bloomberg, Eurostat, national statistical office, national central bank, OeNB, wiiv.

¹ BGN: Bulgarian lev.

material prices, the producer price increase moderated to 7.3% year on year in November 2004. In parallel, CPI inflation accelerated from 5.6% year on year in December 2003 to 7.6% in July and then fell to 4.5% year on year in November. In addition to higher oil and industrial producer prices, the acceleration of inflation from 2.3% in 2003 to 6.6% year on year in the first three quarters of 2004 was also driven by the rise in food prices (8.2% year on year) and the adjustments to regulated prices (electricity, natural gas, heating costs).

Money growth was driven primarily by credit growth to households and companies, while the increase of net foreign assets played a minor role and net credit to government decreased. Compared to the peak of annual growth rates in the first quarter of 2004 (household credit: 83%, corporate sector credit: 43%), credit expansion slowed down slightly to annual growth rates of 76% and 38%, respectively, in October, perhaps as a result of a number of measures taken to contain credit growth: First, the Bulgarian National Bank (BNB) required even small (mostly consumer) loans to be registered with the BNB; second, the Ministry of Finance transferred fiscal reserves from commercial banks to the BNB; third, recommended by the IMF, the BNB extended the coverage of minimum reserve requirements to include deposits with a maturity of over two years, albeit at the reduced rate of 4% (against the standard rate of 8%). However, credit growth to the nongovernment sector was still higher in October at a rate of 40% year on year in real (CPI-deflated) terms than the growth rate of 30% to 35% recommended by the IMF. Thus, the BNB introduced new minimum reserve requirements as of December 6, 2004. First, banks have to set aside 8% of all funds attracted, and second, banks' cash will be fully excluded when calculating the amount of the minimum reserve to be maintained with the central bank.

Table 36

Monetary Developments							
	1999	2000	2001	2002	2003	Q1 2004	Q2 2004
<i>Nominal year-on-year change of the annual average stock in %</i>							
Broad money (including foreign currency deposits)	7.9	27.4	27.8	18.3	16.3	21.3	24.5
<i>Contributions to the nominal year-on-year change of broad money in percentage points</i>							
Net foreign assets of the banking system	-0.2	26.1	13.5	7.7	5.4	2.7	4.1
Domestic credit (net) of the banking system	2.0	6.8	15.0	12.1	14.5	20.6	23.3
<i>of which: claims on the private sector</i>	9.5	8.7	8.1	13.6	19.9	24.4	26.3
<i>claims on households</i>	2.6	1.1	2.4	3.3	5.9	8.5	9.8
<i>claims on enterprises</i>	6.9	7.7	5.7	10.3	14.0	15.8	16.6
<i>net claims on the public sector</i>	-7.4	-2.0	6.9	-1.5	-5.4	-3.8	-3.1
Other domestic assets (net) of the banking system	6.0	-5.5	-0.7	-1.5	-3.6	-1.9	-2.9

Source: National central bank, OeNB.

After the budget was balanced in 2003, a surplus in the consolidated budget (national definition) of 4.7% of GDP was achieved in the first three quarters of 2004, against 3.4% in the same period of 2003; this result is attributable to an increase in the revenue ratio by 0.6 percentage points to 42% and a decrease in the expenditure ratio by 0.7 percentage points to 37.3% of GDP. The European Commission's autumn forecast expects a fiscal balance surplus of 0.5% of GDP

for the full year 2004 and a deficit of 1.0% of GDP for 2005, while the government plans a deficit of 0.5% of GDP, taking into account the 2005 tax reform. This reform comprises a cut in the corporate tax rate from 19.5% to 15%, a reduction in the income tax rate in each tax bracket by 2% (and 5% in the highest tax bracket) and an increase in the tax-exempt income from 120 lev to 130 lev. In addition, part of the package is to raise excise taxes on alcohol and tobacco products to counter the resulting revenue shortfall.

Table 37

Government Budget							
	1999	2000	2001	2002	2003	2004	2005
	% of GDP						
General government							
Revenues	56.6	58.2	53.5	..	..	..	..
Expenditures	56.2	58.7	53.3	..	..	..	..
of which: interest payments	3.8	4.0	3.7	..	..	..	..
Balance	0.4	-0.5	0.2	-0.8	-0.1	0.5	-1.0
Primary balance	4.1	3.6	3.9	1.4	2.0	2.6	1.0
Gross public debt	79.3	73.6	66.2	53.2	46.2	38.1	35.3

Source: European Commission.

Note: Gross debt excluding social security and local government debt.

In the first three quarters of 2004, the current account deficit was lower at 3.9% of GDP than in the same period of 2003 (5.5% of GDP). While the trade deficit deteriorated to 12.4% of GDP over that period from 10.9% a year earlier, the improvement in all the other current account subbalances fully compensated for this deterioration. In particular, the balance of services posted a higher surplus of 5.9% of GDP against 4.8% a year earlier, caused by rising tourism revenues. Besides, net FDI inflows decreased to 2.9% of GDP in the first three quarters of 2004, covering about 74% of the current account deficit, against 7.2% of GDP covering about 123% of the current account deficit a year earlier.

Table 38

Balance of Payments							
	1999	2000	2001	2002	2003	H1 2003	H1 2004
	EUR million						
Merchandise exports	3,734	5,253	5,714	6,063	6,668	3,252	3,618
Merchandise exports: year-on-year change in %	-0.3	40.7	8.8	6.1	10.0	15.0	11.3
Merchandise imports	4,742	6,533	7,493	7,755	8,868	4,192	4,918
Merchandise imports: year-on-year change in %	16.3	37.8	14.7	3.5	14.4	17.3	17.3
Trade balance	-1,008	-1,280	-1,779	-1,692	-2,200	-941	-1,300
% of GDP	-8.3	-9.3	-11.7	-10.2	-12.5	-12.0	-15.0
Services balance	305	547	454	486	523	81	177
Income balance (factor services balance)	-167	-345	-340	-285	-441	-320	-200
Current transfers	282	316	562	566	613	258	355
Current account balance	-587	-762	-1,102	-926	-1,505	-922	-968
% of GDP	-4.8	-5.6	-7.2	-5.6	-8.5	-11.8	-11.2
Direct investment flows (net)	759	1,100	893	951	1,235	645	1,004
% of GDP	6.2	8.0	5.9	5.7	7.0	8.2	11.6

Source: Eurostat, national central bank, OeNB.

At end-September 2004, Bulgaria's gross external debt came to 63.4% of rolling four-quarter GDP, which was 15.3% higher in absolute terms than at the end of 2003 (59.3% of GDP). During that period, gross official reserves increased from 28% of GDP to 31% of rolling four-quarter GDP, or 5.6 import months of goods and services.

Table 39

Gross Official Reserves and Gross External Debt						
	1999	2000	2001	2002	2003	Q2 2004
<i>End of period, EUR million</i>						
Gross official reserves (excluding gold)	2,879	3,391	3,734	4,247	4,981	5,784
Gross external debt	10,864	12,038	12,046	10,769	10,476	11,937
<i>% of GDP¹</i>						
Gross official reserves (excluding gold)	23.7	24.7	24.5	25.6	28.2	31.3
Gross external debt	89.3	87.8	79.0	64.9	59.3	64.5
<i>Import months of goods and services</i>						
Gross official reserves (excluding gold)	5.6	4.9	4.8	5.2	5.4	5.7

Source: Eurostat, national central bank, OeNB, wiiv.
¹ Q2 2004: As a percentage of rolling four-quarter GDP.

8 Croatia: Toward the Stabilization of External Debt?

After expanding by 4.3% year on year in 2003, GDP in Croatia rose by 3.9% during the first nine months of 2004. Domestic demand was the major contributor to growth. Private consumption grew by 3.9% (after 4.1% in 2003) and added 2.3 percentage points to the GDP growth rate. Gross fixed capital formation growth slowed down markedly from 16.8% in 2003 to 5.5% in the period from January to September 2004, and its growth even came to a standstill in the third quarter (+0.5% year on year). Export and import growth rates roughly halved in the period from January to September (compared to the full year 2003) to reach 5.2% and 4.7% year on year, respectively. As a result, the contribution of net exports to GDP growth was roughly balanced (−0.1 percentage point), compared to a negative contribution of 1.5 percentage points in 2003, which was reflected also in the improvement of the current account balance.

Table 40

Gross Domestic Product and Its Demand Components							
	1999	2000	2001	2002	2003	Q1 2004	Q2 2004
<i>Real year-on-year change in %</i>							
Gross domestic product	−0.9	2.9	4.4	5.2	4.3	4.2	3.8
Private consumption	−2.9	4.2	4.5	7.5	4.1	3.9	3.8
Public consumption	2.8	−1.5	−6.2	−1.8	−0.3	−1.6	0.7
Gross fixed capital formation	−3.9	−3.8	7.1	12.0	16.8	8.9	7.7
Exports of goods and services	0.7	12.0	8.1	1.3	10.1	6.4	3.9
Imports of goods and services	−3.5	3.7	9.8	8.8	10.9	5.9	5.4
<i>Contribution to GDP growth in percentage points</i>							
Domestic demand	−3.0	−0.3	5.8	9.4	5.8	5.1	5.4
Exports	0.3	5.1	3.7	0.6	4.6	2.4	1.7
Net exports	2.1	3.2	−1.4	−4.2	−1.5	−0.9	−1.5

Source: National statistical office, OeNB.

The European Commission expects the unemployment rate to have increased slightly to 14.7% (of the civilian labor force) from 14.5% in 2003, in line with the modest weakening of output growth. Wages in the industry grew at a broadly unchanged rate of around 5.5% during the first half of 2004. Nevertheless, as productivity growth accelerated, industrial unit wage costs were lower year on year during the first quarter of 2004 and increased only slightly in the second quarter.

Inflation remains well contained in Croatia. Average inflation for the first nine months of 2004 stood at 2.1% year on year, unchanged from 2003. The stability of the exchange rate, favorable unit labor cost developments and the moderation of domestic consumption growth are the major factors behind this development. On the other hand, higher prices for housing, energy and transport exerted upward pressure on inflation during 2004. The European Commission expects a modest increase in inflation to 2.7% in 2005 and to 2.8% in 2006 on the back of administrative price adjustments, higher indirect taxes and price increases in the services sector.

Table 41

Productivity, Wages, Prices, Exchange Rate and Key Interest Rate

	1999	2000	2001	2002	2003	Q1 2004	Q2 2004
<i>Year-on-year change of period average levels in %</i>							
Gross production of industry (real)	-1.5	1.8	6.1	5.5	4.1	5.4	2.3
Labor productivity of industry (real)	1.6	4.4	7.8	7.8	3.5	7.8	4.5
Gross average wage of industry (nominal)	5.6	6.1	8.2	6.9	5.4	5.5	5.3
Unit labor cost of industry (nominal)	3.8	1.6	0.4	-0.8	1.8	-2.1	0.7
Producer price index (PPI) of industry	2.5	9.5	3.4	-0.5	1.9	0.1	3.2
Consumer price index (CPI) ¹	4.3	6.4	5.0	1.7	1.8	1.9	2.3
<i>Exchange rate (nominal):</i>							
HRK ² per 1 EUR, + = EUR appreciation	6.2	0.7	-2.2	-0.8	2.1	0.4	-1.4
EUR per 1 HRK, + = HRK appreciation	-5.8	-0.7	2.2	0.9	-2.1	-0.4	1.4
<i>Period average levels</i>							
Unemployment rate (registered unemployed, %)	19.1	21.1	22.0	22.3	19.5	19.1	18.0
Key interest rate per annum (%)	7.5	6.5	5.9	5.6	4.5	4.5	4.5
<i>Exchange rate (nominal):</i>							
HRK ² per 1 EUR	7.580	7.635	7.471	7.407	7.563	7.614	7.437
EUR per 1 HRK	0.1319	0.1310	0.1339	0.1350	0.1322	0.1313	0.1345

Source: Bloomberg, Eurostat, national statistical office, national central bank, OeNB, wiiv.

¹ Retail price index until 2001, CPI since 2002.

² HRK: Croatian kuna.

Hrvatska narodna banka's exchange rate regime is a managed float regime, with the central bank intervening if it deems intervention necessary. During the last three quarters of 2004, the Croatian kuna was stronger against the euro by about 1% to 1.5% year on year in nominal terms. This development came on top of the usual seasonal strengthening of the exchange rate caused by net inflows from tourism in spring and summer.

The general government is expected to have posted a deficit of 4.5% of GDP in 2004, following 6.3% in 2003. According to the European Commission, this improvement was brought about by one-off measures on the revenue side (dividend payments from a partially state-owned company). The European Commission expects fiscal consolidation to continue in the next two years, with the deficit falling to 3.9% of GDP in 2005 and to 3.6% in 2006. The adjustment

Table 42

Monetary Developments							
	1999	2000	2001	2002	2003	Q1 2004	Q2 2004
<i>Nominal year-on-year change of the annual average stock in %</i>							
Broad money (including foreign currency deposits)	2.6	14.0	30.9	32.4	11.3	9.3	7.5
<i>Contributions to the nominal year-on-year change of broad money in percentage points</i>							
Net foreign assets of the banking system	-3.7	20.3	13.4	9.8	-7.7	-1.3	-0.5
Domestic credit (net) of the banking system	9.8	-1.2	21.1	23.2	19.5	10.8	8.3
<i>of which: claims on the private sector</i>	5.9	-2.0	17.0	21.5	17.7	10.4	9.6
<i>claims on households</i>	..	..	..	..	..	..	..
<i>claims on enterprises</i>	..	..	..	..	..	..	..
<i>net claims on the public sector</i>	3.9	0.9	4.1	1.7	1.8	0.4	-1.3
Other domestic assets (net) of the banking system	-3.4	-5.1	-3.6	-0.5	-0.5	-0.1	-0.3

Source: National central bank, OeNB.

is expected to come primarily from measures on the expenditure side, such as savings in health insurance, the reduction in public employment and an enhanced financial discipline of public enterprises.

Table 43

Government Budget							
	1999	2000	2001	2002	2003	2004	2005
<i>% of GDP</i>							
General government							
Revenues
Expenditures
<i>of which: interest payments</i>
Balance	-5.0	-6.3	-4.5	-3.9
Primary balance	-2.9	-4.2	-2.3	-1.7
Gross public debt	50.4	51.6	52.8	52.4

Source: European Commission.

The external imbalance continues to be the major risk factor for the Croatian economy. However, the current account deficit fell to 1.5% of GDP during the first nine months of 2004, from 2.6% in the same period of 2003. Nevertheless, due to seasonal factors, the full-year deficit is expected to be significantly above the figure of the first three quarters and is estimated by the central bank at around 5% of GDP (2003: 6.8%). During the first three quarters of 2004, the improvement stemmed from the trade balance, supported by weakening domestic demand, and also from a decline in the income deficit. By contrast, the surpluses on the services balance (mainly in tourism) and on transfers were smaller than in the period from January to September 2003. Although net FDI was only at a moderate level (3.1% of GDP), it more than covered the current account deficit in the first nine months of 2004.

The relatively high current account deficit and the rise in external debt until mid-2004 are also crucial for Croatia's relations with the IMF. Stabilizing and subsequently reducing overall external debt represents a cornerstone of the Stand-by Agreement, which was concluded in August 2004. For this purpose, in July 2004 Hrvatska narodna banka introduced a 24% unremunerated reserve

Table 44

Balance of Payments

	1999	2000	2001	2002	2003	H1 2003	H1 2004
	<i>EUR million</i>						
Merchandise exports	4,205	4,976	5,341	5,212	5,483	2,702	3,121
Merchandise exports: year-on-year change in %	3.6	18.3	7.3	-2.4	5.2	7.6	15.5
Merchandise imports	7,374	8,477	9,961	11,084	12,337	5,864	6,522
Merchandise imports: year-on-year change in %	-3.8	15.0	17.5	11.3	11.3	10.9	11.2
Trade balance	-3,168	-3,502	-4,620	-5,872	-6,854	-3,163	-3,401
% of GDP	-17.0	-17.5	-20.8	-24.2	-26.8	-26.1	-26.0
Services balance	1,556	2,543	3,254	3,236	4,965	1,192	1,127
Income balance							
(factor services balance)	-340	-441	-587	-572	-1,060	-906	-478
Current transfers	605	963	1,086	1,125	1,215	625	586
Current account balance	-1,348	-436	-866	-2,082	-1,734	-2,252	-2,166
% of GDP	-7.2	-2.2	-3.9	-8.6	-6.8	-18.6	-16.6
Direct investment flows (net)	1,385	1,159	1,575	618	1,604	857	421
% of GDP	7.4	5.8	7.1	2.5	6.3	7.1	3.2

Source: Eurostat, national central bank, OeNB.

requirement for new foreign borrowing by commercial banks (compared to the level of foreign liabilities over June 2004). In fact, gross external debt declined to 78.2% of GDP by September 2004, from 79.0% in June. By contrast, in response to the moderation of lending growth to households and enterprises and in order to ensure the smooth replacement of maturing foreign government bonds by domestically issued ones, the central bank reduced the reserve requirement rate from 19% to 18% in October 2004. In this respect, however, it should be borne in mind that the sharp deceleration in growth of lending to households and enterprises during 2003 in part probably reflected financial disintegration in response to the central bank's imposition of credit ceilings in early 2003. In addition, the growth of lending to households and enterprises has not further decreased during 2004 (remaining broadly stable over the first ten months of 2004 at about 11.5% year on year), and it may increase once the base effect falls out of the index in early 2005.

Table 45

Gross Official Reserves and Gross External Debt

	1999	2000	2001	2002	2003	Q2 2004
	<i>End of period, EUR million</i>					
Gross official reserves (excluding gold)	3,013	3,783	5,334	5,651	6,554	6,389
Gross external debt	9,932	11,880	12,838	14,694	18,645	20,936
	<i>% of GDP¹</i>					
Gross official reserves (excluding gold)	16.1	18.9	24.0	23.3	25.7	24.1
Gross external debt	53.2	59.4	57.8	60.7	73.0	79.0
	<i>Import months of goods and services</i>					
Gross official reserves (excluding gold)	3.9	4.3	5.3	5.0	5.3	4.9

Source: Eurostat, national central bank, OeNB, wiw.

¹ Q2 2004: As a percentage of rolling four-quarter GDP.

9 Romania: Boosting Tax Competition in (Central and Eastern) Europe

GDP growth in Romania accelerated strongly to 8.1% year on year in the first three quarters of 2004 (full-year 2003: 4.9%), with annual real GDP growth increasing from 6.1% in the first quarter to 10.0% in the third quarter of 2004. This acceleration was driven by domestic demand, as domestic consumption growth increased to 9.4% in the first three quarters of 2004 (full-year 2003: 6.9%) and gross fixed capital formation boomed at a growth rate of 13.7% (after a rise of 9.2% in the full year 2003), with annual growth rising from 7.3% in the first quarter to 17.4% in the third quarter of 2004. After both export and import growth had jumped in year-on-year terms in the second quarter of 2004, export growth fell back while import growth remained high in the third quarter. Thus, in the first three quarters of 2004, export growth of 16.2% year on year was clearly lower than import growth of 20.2% year on year. The resulting further deterioration in net exports implied a negative contribution to GDP growth of about 3 percentage points, similar to that in the full year 2003.

Table 46

Gross Domestic Product and Its Demand Components							
	1999	2000	2001	2002	2003	Q1 2004 ¹	Q2 2004 ¹
<i>Real year-on-year change in %</i>							
Gross domestic product	-1.2	2.1	5.7	5.0	4.9	6.1	7.0
Private consumption	-1.1	-0.8	6.9	5.2	7.3	8.4	9.5
Public consumption	..	..	3.9	-9.4	5.0	4.1	7.5
Gross fixed capital formation	-4.8	5.5	10.1	8.2	9.2	7.3	12.9
Exports of goods and services	..	23.4	12.1	17.6	11.1	10.2	24.5
Imports of goods and services	..	27.1	18.4	12.0	16.3	12.4	25.8
<i>Contribution to GDP growth in percentage points</i>							
Domestic demand	..	..	8.8	4.1	7.7	7.7	10.1
Exports	..	..	4.0	5.9	3.9	4.8	9.6
Net exports	..	..	-3.1	0.9	-2.8	-1.6	-3.1

Source: National statistical office, Eurostat, OeNB, *wiiv*.

¹ In this column, public consumption covers only collective consumption.

Private consumption in this column additionally includes the difference between public and collective consumption.

Both participation and total employment rates fell, while the unemployment rate (ILO definition) increased in the first half of 2004 year on year, despite strong economic growth. However, the rate of registered unemployment was 6.1% at the end of the third quarter of 2004 against 6.9% a year earlier. In the first three quarters of 2004, industrial production went up by 4.5%, while industrial employment fell by 2%. The resulting increase in labor productivity by about 6.5% lagged behind industrial wage growth, which came to around 23%. Thus, nominal industrial unit wage costs increased by 15.7% year on year, which, however, was lower than the rise in industrial producer prices (19.5%). The producer price inflation rate remained nearly unchanged compared to 2003, although nominal depreciation against the euro declined from 16.8% in 2003 to 9.6% year on year in the first three quarters of 2004, which resulted in a significant real appreciation. However, consumer price inflation decelerated from an annual average of 15.3% in 2003 to 12.6% year on year in that period. In November 2004, for the first time since the start of the

Table 47

Productivity, Wages, Prices, Exchange Rate and Key Interest Rate

	1999	2000	2001	2002	2003	Q1 2004	Q2 2004
<i>Year-on-year change of period average levels in %</i>							
Gross production of industry (real)	-7.9	6.2	8.3	4.4	3.2	5.7	3.0
Labor productivity of industry (real)	7.2	12.5	11.6	5.4	5.2	8.4	5.5
Gross average wage of industry (nominal)	44.0	41.7	51.1	23.6	19.5	24.0	23.2
Unit labor cost of industry (nominal)	34.3	25.9	35.4	17.2	13.6	14.4	16.8
Producer price index (PPI) of industry	41.6	53.8	38.7	23.2	19.6	18.0	19.4
Consumer price index (CPI)	45.8	45.7	34.5	22.5	15.3	13.6	12.3
Exchange rate (nominal):							
ROL ¹ per 1 EUR, + = EUR appreciation	63.8	22.0	30.5	20.1	20.2	13.9	8.6
EUR per 1 ROL, + = ROL appreciation	-39.0	-18.1	-23.4	-16.8	-16.8	-12.2	-7.9
<i>Period average levels</i>							
Unemployment rate (ILO definition, %)	6.9	7.2	6.7	8.4	7.1	8.9	7.7
Key interest rate per annum (%)	35.0	35.0	35.0	29.6	18.8	21.1	21.3
Exchange rate (nominal):							
ROL ¹ per 1 EUR	16,326.8	19,926.0	26,000.3	31,234.8	37,543.0	40,550.0	40,664.0
EUR per 100 ROL	0.00612	0.00502	0.00385	0.00320	0.00266	0.00247	0.00246

Source: Bloomberg, Eurostat, national statistical office, national central bank, OeNB, wiw.

¹ ROL: Romanian leu.

transition process, the inflation rate came down to a single-digit figure (9.9% year on year).

Against the background of the continuing disinflation process, the central bank lowered the reference rate by 50 basis points to 20.75% in June. This decision was followed by six further reductions of the reference rate, with the last rate cut taking place on January 17, 2005, when the rate was reduced by 0.5 percentage point to 16.5%. By contrast, growth in domestic lending to the private sector remained very high (60% year on year in the first three quarters against 58% in the full year 2003), and annual growth in net foreign assets accelerated throughout the year so that annual money growth came to 30% year on year in that period, fueling domestic demand. For several years, the authorities have been following a managed float strategy in their exchange rate policy, with a focus on both the external balance and disinflation. In July

Table 48

Monetary Developments

	1999	2000	2001	2002	2003	Q1 2004	Q2 2004
<i>Nominal year-on-year change of the annual average stock in %</i>							
Broad money (including foreign currency deposits)	52.0	40.4	42.5	40.9	31.2	26.2	28.9
<i>Contributions to the nominal year-on-year change of broad money in percentage points</i>							
Net foreign assets of the banking system	10.8	38.4	44.9	31.8	15.5	6.1	11.8
Domestic credit (net) of the banking system	42.3	14.0	10.2	18.7	23.9	28.4	26.3
of which: claims on the private sector	24.3	3.6	18.3	24.1	28.2	34.5	33.3
claims on households	..	..	..	..	..	..	..
claims on enterprises	..	..	..	..	..	..	..
net claims on the public sector	17.9	10.3	-8.1	-5.3	-4.3	-6.1	-7.0
Other domestic assets (net) of the banking system	-1.0	-12.0	-12.6	-9.6	-8.3	-8.2	-9.2

Source: National central bank, OeNB.

2005, the Romanian leu will be redenominated by slashing four zeros off the currency.

After the general government deficit came to 2.1% of GDP in 2003, the official projections for the budget deficit 2004 were revised downward from 2.1% to 1.6% in August 2004, mainly because of a better-than-expected revenue collection as a result of strong economic activity and, as the IMF remarks, improvements in tax administration and in avoiding tax evasion. At the end of December 2004, the new coalition government, which was formed in December 2004, under the newly elected President Traian Basescu introduced a flat 16% income tax rate (replacing the personal income tax with rates ranging from 18% to 40%) and a 16% corporate tax rate (previously 25%), both effective from January 1, 2005. The government named the following official aims of these tax rate cuts: to boost economic activity, to attract FDI and to reduce the shadow economy. The official deficit target for 2005 is 1.5% of GDP, the European Commission's autumn forecast expects a deficit of 1.7%.

Table 49

Government Budget							
	1999	2000	2001	2002	2003	2004	2005
	% of GDP						
General government							
Revenues
Expenditures
<i>of which: interest payments</i>
Balance	..	-4.4	-3.5	-2.0	-2.0	-1.6	-1.7
Primary balance	1.0	0.2	0.0	-0.1
Gross public debt	..	23.9	23.2	23.3	21.8	21.8	22.2

Source: European Commission.

In the first three quarters of 2004, the current account deficit stood at 5.9% of GDP against 4.8% a year earlier. This deterioration is attributable to a higher trade deficit (8.2% of GDP in the first three quarters of 2004 against 7% a year earlier), as a result of strong demand for capital goods and consumer durables. Over this period, net FDI inflows increased from 3.2% to 4.1% of GDP, or almost EUR 1.6 billion, covering 70% of the current account deficit in the first three quarters of 2004.

Table 50

Balance of Payments

	1999	2000	2001	2002	2003	H1 2003	H1 2004
	<i>EUR million</i>						
Merchandise exports	7,984	11,279	12,719	14,644	15,614	7,501	9,014
Merchandise exports:							
year-on-year change in %	7.7	41.3	12.8	15.1	6.6	8.5	20.2
Merchandise imports	9,169	13,150	16,045	17,392	19,569	9,058	11,052
Merchandise imports:							
year-on-year change in %	-5.9	43.4	22.0	8.4	12.5	10.7	22.0
Trade balance	-1,185	-1,871	-3,326	-2,748	-3,955	-1,557	-2,038
% of GDP	-3.6	-4.7	-7.5	-5.7	-7.9	-7.7	-9.1
Services balance	-372	-260	-127	6	62	-38	-82
Income balance							
(factor services balance)	-388	-304	-316	-490	-623	-416	-411
Current transfers	589	937	1,280	1,614	1,639	721	914
Current account balance	-1,356	-1,498	-2,489	-1,618	-2,877	-1,290	-1,617
% of GDP	-4.1	-3.8	-5.6	-3.4	-5.8	-6.4	-7.2
Direct investment flows (net)	948	1,161	1,315	1,193	1,591	785	1,156
% of GDP	2.9	2.9	3.0	2.5	3.2	3.9	5.2

Source: National central bank, OeNB.

The strong inflow of foreign (portfolio) capital increased gross official reserves from 3.7 import months of goods and services at the end of the second quarter to 4.5 at the end of the third quarter, amounting to 17.7% of rolling four-quarter GDP. Medium- and long-term gross external debt increased to 32% of GDP at the end of the third quarter.

Table 51

Gross Official Reserves and Gross External Debt

	1999	2000	2001	2002	2003	Q2 2004
	<i>End of period, EUR million</i>					
Gross official reserves (excluding gold)	1,520	2,655	4,445	5,877	6,374	7,746
Gross external debt (medium- and long-term)	8,757	11,113	13,507	14,691	15,684	16,515
	<i>% of GDP¹</i>					
Gross official reserves (excluding gold)	4.6	6.7	10.0	12.3	12.7	14.8
Gross external debt (medium- and long-term)	26.6	27.9	30.4	30.7	31.4	31.7
	<i>Import months of goods and services</i>					
Gross official reserves (excluding gold)	1.7	2.1	2.9	3.6	3.4	3.7

Source: Eurostat, national central bank, OeNB, wiiw.

¹ Q2 2004: As a percentage of rolling four-quarter GDP.

10 Russia: Slowdown of Growth amid Uncertainty over Economic Policy

Real GDP growth in Russia came to 7.0% year on year in the first three quarters of 2004, after 7.3% in the full year 2003. Following annual GDP growth rates of 7.5% in the first quarter and 7.4% in the second quarter, growth slowed to 6.4% in the third quarter. The expansion of the aggregate production index of five base sectors of the Russian economy (industry, construction, transportation, agriculture and retail sales) slowed to 6.6% in the first eleven months of

the year, from 7.3% in the full year 2003. The slowdown in the first three quarters of 2004 as compared to the full year 2003 reflected weaker export volume and stronger import volume growth, resulting in a deterioration of net exports that implied a negative contribution to GDP growth of nearly 2 percentage points in the first three quarters of 2004 after positive contributions in 2002 to 2003. Moreover, investment growth lost some momentum in the third quarter (10.6% year on year), while private consumption, buoyed by real (CPI-deflated) wage rises of 12% year on year, continued to steam ahead (13.1% year on year). While the still robust GDP expansion benefited from persistently high and even rising oil and raw material prices, the slowdown may have been brought about by uncertainties about the direction of government policies in the resource sector in connection with the escalation of the Yukos affair, more general questions relating to overall structural reform policies, which seem to have lost momentum in recent months, and repercussions of the bank alert of the summer of 2004, which gave rise to temporary credit bottlenecks. Deposit and loan growth resumed in the fall of the year, but the events left their trace in a somewhat dampened expansion of banking activities.

Table 52

Gross Domestic Product and Its Demand Components							
	1999	2000	2001	2002	2003	Q1 2004	Q2 2004
<i>Real year-on-year change in %</i>							
Gross domestic product	6.3	9.0	5.1	4.7	7.3	7.5	7.3
Private consumption	-2.9	6.0	9.3	8.7	7.8	11.8	12.4
Public consumption	3.1	4.8	-0.8	2.6	2.2	2.5	2.6
Gross fixed capital formation	6.3	31.1	10.3	3.0	12.9	14.1	12.5
Exports of goods and services	11.3	9.6	4.2	9.6	13.7	12.6	8.5
Imports of goods and services	-17.1	30.5	18.7	14.6	19.5	24.1	20.0
<i>Contribution to GDP growth in percentage points</i>							
Domestic demand	-2.0	11.6	7.3	4.1	6.8	8.3	9.4
Exports	4.7	4.2	1.9	4.2	6.3	6.3	4.2
Net exports	9.1	-1.9	-2.6	0.3	0.5	-0.9	-2.4

Source: Eurostat, national statistical office, OeNB.

Despite the slowdown of investment expansion in recent months, industrial restructuring and modernization are continuing, being reflected in industrial output growth coupled with industrial employment decline in year-on-year terms. Notwithstanding strong wage increases (24% year on year), the annual rise in nominal industrial unit wage costs of 9% remained far below that of producer prices of 21.5% in the first half of 2004. The unemployment rate (ILO definition) declined to 7.5% in October 2004 from 8.3% a year earlier. Average inflation (CPI) declined from 13.6% in 2003 to 10.7% year on year in the first three quarters of 2004. However, since June 2004 the monthly annual inflation rate has been picking up again from 10.2% to 11.7% in November. The recent inflation pick-up may be explained by the considerable increase of industrial producer prices, by strong real wage and private consumption growth, and by periodic adjustments of regulated prices and tariffs. Moreover, broad money has been expanding at a very high real rate.

Table 53

Productivity, Wages, Prices, Exchange Rate and Key Interest Rate

	1999	2000	2001	2002	2003	Q1 2004	Q2 2004
<i>Year-on-year change of period average levels in %</i>							
Gross production of industry (real)	11.6	12.0	4.9	3.7	7.0	7.6	7.1
Labor productivity of industry (real)	10.6	14.6	5.7	7.5	13.9	14.2	13.3
Gross average wage of industry (nominal)	46.7	42.1	52.0	27.2	25.4	24.9	23.1
Unit labor cost of industry (nominal)	32.6	24.0	43.8	18.3	10.1	9.3	8.6
Producer price index (PPI) of industry	59.1	46.5	19.1	11.7	15.6	19.0	24.2
Consumer price index (CPI)	85.7	20.8	21.6	16.0	13.6	10.8	10.3
<i>Exchange rate (nominal):</i>							
RUB ¹ per 1 EUR, + = EUR appreciation	137.2	-0.8	0.4	13.5	16.5	5.4	-0.6
EUR per 1 RUB, + = RUB appreciation	-57.8	0.8	-0.4	-11.9	-14.2	-5.2	0.6
<i>Period average levels</i>							
Unemployment rate (ILO definition, %)	12.6	10.5	9.0	8.0	8.7	9.3	7.9
Key interest rate per annum (%)	57.2	33.1	25.0	22.7	17.3	14.3	13.8
<i>Exchange rate (nominal):</i>							
RUB ¹ per 1 EUR	26.24	26.03	26.13	29.65	34.55	35.83	34.85
EUR per 1 RUB	0.0381	0.0384	0.0383	0.0337	0.0289	0.0279	0.0287

Source: Bloomberg, Datastream, national statistical office, national central bank, OeNB, wiiw.

¹ RUB: Russian ruble.

High money growth has been fueled by both credit growth to the non-government sector and a net foreign assets increase. However, nongovernment credit growth has been continuously declining from 46% year on year in April to 35% year on year in November, while net foreign assets have been rising from 29% year on year in March to 58% year on year in November. As a result of the unrelenting buildup of gross official reserves (based on the high current account surplus) and the limited sterilization instruments of the monetary authorities, there is a lot of liquidity in the banking sector. The effectiveness of the central bank's policy of curbing inflation is being persistently counteracted by the impact of its policy of stemming nominal appreciation tendencies of the ruble in order to stave off Dutch disease. In real terms, the ruble was 5% stronger in September than a year earlier against a basket of currencies of Russia's main trading partners.

Table 54

Monetary Developments

	1999	2000	2001	2002	2003	Q1 2004	Q2 2004
<i>Nominal year-on-year change of the annual average stock in %</i>							
Broad money (including foreign currency deposits)	63.6	60.0	44.2	31.2	39.2	39.9	38.4
<i>Contributions to the nominal year-on-year change of broad money in percentage points</i>							
Net foreign assets of the banking system	7.5	58.5	44.3	19.8	21.3	18.0	19.2
Domestic credit (net) of the banking system	120.4	30.5	22.8	30.4	29.6	25.8	24.5
of which: claims on the private sector	43.5	36.7	35.2	28.9	29.5	32.1	32.9
claims on households	..	..	..	..	..	..	..
claims on enterprises	..	..	..	..	..	..	..
net claims on the public sector	76.9	-6.2	-12.4	1.5	0.2	-6.4	-8.4
Other domestic assets (net) of the banking system	-64.4	-29.1	-22.9	-19.1	-11.7	-3.9	-5.2

Source: National central bank, OeNB.

On the back of high oil prices and economic growth, Russia witnessed a further widening of its twin surpluses in the first three quarters of 2004, with the budget in the black for the fifth year in a row. The federal government budget is estimated to have posted a surplus of 4.9% of GDP in the period from January to September and of 3.8% in the period from January to October. The general government budget is projected to reach a surplus of over 3% of GDP in 2004. The budgetary situation also reflects a prudent fiscal stance and successful tax reforms since 2001. Moreover, approximately EUR 14 billion have already been transferred to the Budgetary Stabilization Fund, into which oil-related budget revenues flow when the price of Urals grade crude fetches over USD 20/barrel. Given their liquidity drainage function, the budget and the Stabilization Fund constitute critical elements of stabilization policy.

Table 55

Government Budget							
	1999	2000	2001	2002	2003	2004	2005
	% of GDP						
Federal government							
Revenues	12.5	15.4	17.8	20.3	19.4	20.1	17.8
Expenditures	13.8	13.2	14.8	18.5	17.7	17.0	16.3
of which: interest payments	3.4	2.4	2.6	2.1	1.7	..	1.4
Balance	-1.3	2.2	3.0	1.8	1.7	3.1	1.5
Primary balance	2.1	4.6	5.6	3.9	3.4	..	2.9
General government							
Revenues	33.6	36.8	37.2	37.6	36.6	37.0	35.3
Expenditures	36.7	33.7	34.5	37.0	35.5	33.9	33.6
of which: interest payments	..	..	2.7	2.1	1.7	1.3	1.4
Balance	-3.1	3.1	2.7	0.6	1.1	3.1	1.7
Primary balance	..	..	5.4	2.7	2.8	4.4	3.1
Gross public debt	86.4	56.1	42.4	36.2	26.8	..	..

Source: National ministry of finance, Economic Expert Group, IMF.

Note: Federal government: Data on cash basis. Data for 2004–05 according to budget law.

General government: Data on commitment basis.

The Russian current account surplus came to EUR 29.3 billion, or over 9% of GDP, in the first three quarters of 2004 (against EUR 24.4 billion or 8.3% of GDP in the same period of 2003). Given the rather difficult business climate for foreign investors, FDI inflows are much lower than the country's enormous economic potential would suggest. Net FDI inflows dwindled to only EUR 120 million in the first three quarters of 2004. (They had come to EUR 840 million in the corresponding period of 2003.) Foreign investors' reluctance has been heightened by the authorities' unrelenting pursuit of the country's largest private oil firm, Yukos (which now faces liquidation), and of its founder, and by what is seen by many international observers as an arbitrary enforcement of the rule of law. This is bound to weaken property rights and undermine confidence.

Table 56

Balance of Payments

	1999	2000	2001	2002	2003	H1 2003	H1 2004
	<i>EUR million</i>						
Merchandise exports	71,210	114,379	113,843	113,201	120,040	56,881	65,691
Merchandise exports:							
year-on-year change in %	7.1	60.6	-0.5	-0.6	6.0	6.2	15.5
Merchandise imports	37,168	48,934	60,138	64,278	66,508	30,673	34,575
Merchandise imports:							
year-on-year change in %	-28.8	31.7	22.9	6.9	3.5	1.7	12.7
Trade balance	34,042	65,444	53,705	48,923	53,532	26,208	31,116
% of GDP	18.6	23.1	15.7	13.4	13.9	15.1	14.6
Services balance	-4,034	-7,254	-10,227	-10,439	-9,773	-3,865	-4,572
Income balance							
(factor services balance)	-7,291	-7,353	-4,756	-6,856	-11,543	-4,182	-5,074
Current transfers	578	65	-912	-808	-352	-206	-217
Current account balance	23,295	50,903	37,810	30,821	31,864	17,955	21,252
% of GDP	12.7	18.0	11.0	8.5	8.3	10.3	9.9
Direct investment flows (net)	1,042	-500	250	-49	-1,414	1,475	1,324
% of GDP	0.6	-0.2	0.1	0.0	-0.4	0.8	0.6

Source: National central bank, OeNB.

Russia's gross external debt slightly increased to EUR 158.0 billion at the end of June 2004, but declined to 37.2% relative to GDP. Meanwhile, the monetary authorities' gross official reserves topped EUR 86 billion at end-November 2004, a new record level which corresponds to more than a year of imports of goods and services.

Table 57

Gross Official Reserves and Gross External Debt

	1999	2000	2001	2002	2003	Q2 2004
	<i>End of period, EUR million</i>					
Gross official reserves (excluding gold)	8,387	26,139	37,026	42,291	58,531	69,471
Gross external debt	..	156,232	159,072	143,490	148,290	157,960
	<i>% of GDP¹</i>					
Gross official reserves (excluding gold)	4.6	9.2	10.8	11.6	15.2	16.4
Gross external debt	..	55.1	46.5	39.4	38.6	37.2
	<i>Import months of goods and services</i>					
Gross official reserves (excluding gold)	2.0	4.7	5.3	5.7	7.8	9.0

Source: National central bank, OeNB, wiiw.

¹ Q2 2004: As a percentage of rolling four-quarter GDP.

Whereas structural reforms had already slowed down in the run-up to parliamentary and presidential elections, only few new reform initiatives have emerged, unfortunately, since the re-election of President Putin in March 2004. This fact may be partly connected to a degree of complacency on the part of the government, given the overall favorable economic environment. In the political sphere, a general tendency toward the centralization of power in the hands of the executive branch can be discerned. Regional governors will no longer be elected by the population, but appointed by the president. Further enterprise privatization has become more difficult since a number of large state-owned firms have been declared strategic enterprises that can only be privatized by presidential permission. In the summer of 2004 the authorities

passed a social reform measure by providing for the replacement of in-kind social benefits with monetary compensation from the beginning of 2005. In December a new housing code was enacted which aims at facilitating the further privatization of apartments and the formation of a mortgage market.

Cutoff date for data: January 7, 2005.

SPECIAL FOCUS:
MONETARY POLICY IN
SOUTHEASTERN EUROPE

Central Bank Independence in Southeastern Europe with a View to Future EU Accession

Sandra Dvorsky¹

The paper provides a qualitative overview on current central bank legislation in Southeastern Europe (SEE), namely Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Macedonia, Romania, and Serbia and Montenegro, and assesses the degree of central bank independence (CBI) already achieved, using the Maastricht Treaty requirements as a yardstick. The following aspects of legal CBI are examined: first, the definition of statutory objectives in central bank laws (functional independence); second, the central banks' independence in the formulation and implementation of monetary policy (institutional independence); third, the legal status of the central bank governor and other members of the highest decision-making body (personal independence). Fourth, the paper examines two aspects of financial independence, namely the budgetary independence of the central bank itself and the prohibition of monetary financing. Fifth, the paper briefly deals with central bank accountability issues. Moreover, selected aspects of actual CBI are analyzed. The paper concludes that the central bank laws already comply with Treaty requirements in some areas, while a considerable number of weaknesses remain. With a view to future EU accession, a further strengthening of both legal and actual CBI will be necessary for the countries to fulfill the requirements of the Maastricht Treaty.

1 Introduction

In the past decades, the degree of central bank independence (CBI) has increased worldwide. This tendency was even more prevalent in transition economies, where ambitious central bank reforms were enacted, endowing the central banks with a high degree of legal independence.

This overall tendency toward more CBI was mainly motivated by two reasons: First, the mainstream of academic literature agrees that a relatively high degree of CBI is generally desirable. Empirical studies, such as calculations by Cukierman (1992), suggest that at least for industrial countries, there is a negative correlation between CBI and inflation performance. A brief literature survey on the economic rationale for CBI can be found, for instance, in Maliszewski (2000) or in earlier own work (Radzyner and Riesinger,² 1997). Second, the main driving force for increasing the degree of CBI in Europe was the creation of Economic and Monetary Union (EMU). The preparation of Stage Three of EMU entailed numerous and far-reaching adjustments of central bank legislation for the incumbent EU Member States, as national central bank statutes had to be adapted to the requirements set out in the Maastricht Treaty³ and the Statute⁴. The European Monetary Institute (EMI), the predecessor of the European Central Bank (ECB), identified a number of provisions in the national central bank statutes that were not in line with Treaty requirements and in its first convergence report (EMI, 1996) called for adaptations prior to the beginning of Stage Three. Those EU Member States which joined the EU on May 1, 2004, participate in EMU from the date of their accession as “Member

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² The author published this earlier study jointly with Olga Radzyner under the name Riesinger in 1997.

³ Treaty on European Union, referred to as “the Treaty” or “the Maastricht Treaty” (1992) hereinafter.

⁴ Protocol on the Statute of the European System of Central Banks and of the European Central Bank (1992), referred to as “the Statute” hereinafter.

States with a derogation.” Therefore, Maastricht Treaty requirements in the area of CBI constituted part of the *acquis communautaire*.⁵

The main purpose of this paper is to compare current central bank legislation in Southeastern Europe⁶ (SEE), namely Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Macedonia, Romania, and Serbia and Montenegro⁷. Like most transition countries, the SEE countries have implemented comprehensive central bank reforms in the past years; four countries enacted new central bank laws only between 2001 and 2004, while the other laws date back to 1997. All the countries under consideration are either official EU candidate countries or are regarded as potential candidates with a prospect of future EU membership.⁸ While Bulgaria and Romania made substantial progress in their accession negotiations and are preparing to join the EU in January 2007, Croatia⁹ was granted candidate status in June 2004; the start of accession negotiations is envisaged for early 2005 (Council of the European Union, 2004). Macedonia submitted a formal application for EU membership in March 2004, and a Stabilisation and Association Agreement¹⁰ (SAA) entered into force on April 1, 2004. Negotiations on an SAA between the EU and Albania were launched in early 2003 and are still underway. Bosnia and Herzegovina is working on implementing the priority areas identified in the Commission’s Feasibility Report of November 2003. Serbia and Montenegro has made progress toward a closer relationship with the EU through the adoption of the Constitutional Charter and an internal market and trade action plan (European Commission, 2004a, p. 8).

As the principle of equal treatment will be applied to all new Member States, the SEE countries will join the EU as “Member States with a derogation” and, consequently, will have to bring in line their central bank legislation with Treaty requirements prior to or upon accession. The purpose of this paper is to provide a qualitative overview on current central bank legislation in the SEE countries and to assess the degree of CBI already achieved, using the Treaty requirements as a yardstick.

⁵ *If all Member States ratify the Constitutional Treaty of August 2004, regulations on CBI will broadly remain unchanged in substance, but will be even more strongly protected than presently: While the independence of the ECB will be explicitly enshrined in the Constitution in Article I-30, the status of the NCBs will be regulated in Part III, Articles III-185 to III-191 (see Conference of the Representatives of the Governments of the Member States, 2004a). Furthermore, the Protocol on the Statute of the ESCB and the ECB is annexed as part and parcel of the Constitutional Treaty.*

⁶ *The countries are given in alphabetical order.*

⁷ *Since February 2003, Serbia and Montenegro have temporarily formed a state union, replacing the earlier Federal Republic of Yugoslavia. According to Article 14 of the Constitutional Charter (2003), Serbia and Montenegro are a single legal person in international law and one member of international organizations. Furthermore, Article 13 of the Law on the Implementation of the Constitutional Charter (2003) stipulates that Narodna banka Srbije (the National Bank of Serbia; this designation will be used hereinafter) is the legal successor of the National Bank of Yugoslavia and continues to operate on the territory of Serbia, with the Serbian dinar as the official currency. Therefore, this paper will deal with the independence of the National Bank of Serbia and refrain from treating the status of Centralna banka Crne Gore (the Central Bank of Montenegro; this designation will be used hereinafter) separately. Montenegro has unilaterally adopted the euro.*

⁸ *This objective was endorsed by the European Council in Feira and reconfirmed by the European Council in Thessaloniki in June 2003 (European Commission, 2004b).*

⁹ *Croatia signed a Stabilisation and Association Agreement with the EU in October 2001; the ratification process has not yet been completed.*

¹⁰ *This was the first Stabilisation and Association Agreement to enter into force in the Western Balkans.*

The paper is organized as follows: Section 2 provides a brief literature overview on CBI in transition countries. Section 3 compares current central bank legislation in SEE. Section 4 examines selected aspects of actual CBI. Section 5 concludes.

2 Brief Literature Overview

While only selected aspects of CBI in transition countries had been analyzed for a limited number of countries until 1997, an increasing number of authors published both theoretical and empirical work in the years to follow. A survey of early CBI literature on transition countries can be found in Radzyner and Riesinger (1997). More recent literature, published between 1997 and 2000, is surveyed in Dvorsky (2000).

Recent literature on CBI in transition economies seems to have focused largely on measurement issues. Based on Cukierman's pioneering work (1992), Cukierman et al. (2000) presented extensive new data, measuring the degree of legal CBI in 26 transition countries. For the sake of comparability, the authors use the index of legal CBI developed earlier and find that central bank reforms implemented by the transition countries in the 1990s were very ambitious, with levels of legal CBI even higher than those of developed economies during the 1980s. While five out of seven SEE countries are included in the country sample analyzed by Cukierman et al. (2000), none of the five central bank laws currently in force was examined. In a similar vein, Maliszewski (2000) presents data on 20 Central and Eastern European (CEE) transition countries. The author constructs two indices of legal CBI, which cover political and economic aspects, drawing heavily on the methodology developed earlier by Grilli et al. (1992). Maliszewski examines the relationship between inflation and CBI and concludes that changes in central bank laws are highly significant in explaining inflation rates. Maliszewski's paper covers four of the seven SEE countries, but measurement is made on legislation not in force anymore. Dvorsky (2000) measures the degree of legal and actual CBI in five CEE transition economies, namely the Czech Republic, Hungary, Poland, Slovenia and Slovakia (CEEC-5), by applying the two most widely used indices, namely the Cukierman and the Grilli-Masciandaro-Tabellini (GMT) index. The paper compares own findings with those of other authors and earlier calculations and critically reviews the indices on legal and actual CBI themselves, in particular against the background of the Maastricht Treaty requirements. Ilieva et al. (2001) take an interesting approach and construct a new CBI index, which takes into account legislative and behavioral aspects of CBI. Results from surveys of central bank officials are compared to those of independent academic institutions. Not surprisingly, the results show that CBI is higher in transition economies planning early EU accession than in others. Freytag (2003) analyzes the state of legal CBI in selected transition countries by constructing an index of "monetary commitment" and comparing results to earlier measurement by Cukierman et al. (2000), Maliszewski (2000) and Dvorsky (2000). The author concludes that the degree of CBI in the countries examined is quite high.

3 Comparing Legal Central Bank Independence in Southeastern Europe

Apart from empirical literature on CBI issues, central bank legislation in the SEE countries is and will be subject to an “institutionalized assessment” to be carried out regularly by the European Commission and, at a later stage, also by the ECB.¹¹ For Albania, Bosnia and Herzegovina, Macedonia, and Serbia and Montenegro, the Annual Report on the Stabilisation and Association process for South East Europe by the European Commission provides the only “institutionalized assessment” which examines the countries’ readiness to move closer to the EU in a very general manner (European Commission, 2004a). This report does not touch separately upon the issue of CBI. On Croatia, the European Commission produced an Opinion on the country’s application to join the EU in April 2004, which deals with the most important aspects of CBI in chapter 11 and examines the country’s ability to fulfill the requirements of the *acquis* in the field of EMU in the medium term (European Commission, 2004b). For official candidate countries, the European Commission publishes so-called Progress Reports every year. These reports, which were first published in 1998 on the ten candidate countries at the time, provide an annual update of the Commission’s assessment on the candidate countries’ preparedness to fulfill the Copenhagen criteria, thus following up on the first-time judgment presented in the respective Opinion. Consequently, the structure of the Progress Reports is very similar to that of the Opinion on each country, treating the issue of legal CBI in chapter 11 on the EMU *acquis*. A detailed analysis of the first Progress Reports with respect to central banking issues can be found in Dvorsky et al. (1998). While the 2004 Progress Reports cover only two of the SEE countries, namely Bulgaria and Romania (European Commission, 2004c, 2004d), Croatia will be included as of next year. After EU accession, national central bank statutes will be examined every second year in the ECB’s and the European Commission’s convergence reports, an important part of which analyzes in detail the current state of national central bank legislation in Member States with a derogation (ECB, 1998, 2000, 2002, 2004 and European Commission 1998, 2000, 2002, 2004e).

According to Article 109 of the Treaty, new Member States have to adjust their national legislation in the area of CBI in a way that ensures its compatibility with the *acquis* by the date of accession. This provision relates in particular to the independent status of the national central bank (NCB), i.e. the freedom from instructions, a legislated minimum term of five years for the central bank’s top officials, the prohibition of monetary financing and the prohibition of privileged access to financial institutions (see Häde, 2002, p. 1373). However, Article 122 (3) of the Treaty stipulates that some Articles of the Treaty do not apply to Member States with a derogation.¹² This provision refers to statutory requirements relating to the full legal integration of an NCB into the Euro-system, regulating for instance the adjustment of monetary policy instruments, which need only enter into force at the date on which the Member State adopts the single currency.

¹¹ Moreover, the Article IV consultations carried out by the International Monetary Fund typically contain a small section on CBI.

¹² By analogy, Article 43.1 of the Statute lists Articles which do not apply to Member States with a derogation.

For comparing and analyzing current central bank legislation in the SEE countries, the four-tier classification introduced by the EMI will be applied. In its first convergence report, the EMI established a list of features of CBI (EMI, 1996, pp. 100–103), which was elaborated further by the ECB¹³ in the subsequent years and which still provides the analytical framework for the examination of CBI in the current convergence reports. Therefore, the structure of this paper will be broadly based on the EMI's classification and incorporate some considerations from an earlier article (Radzyner and Riesinger, 1997). Thus, the following aspects of CBI are discerned: First, the definition of statutory objectives in central bank laws will be examined, which largely corresponds to the concept of functional independence according to the EMI methodology. Second, the paper deals with institutional independence in a very broad sense, covering inter alia the central banks' independence in the formulation and implementation of monetary policy. Third, the issue of personal independence will be analyzed. This aspect relates to the legal status of the central bank governor and other members of the highest decision-making body and corresponds to the EMI definition. Fourth, financial independence will be examined, comprising two aspects, namely the budgetary independence of the central bank itself and, going beyond the definition of financial independence used by the EMI, the prohibition of monetary financing. Interestingly, neither the EMI (nor its successor, the ECB) nor the European Commission have analyzed the prohibition of monetary financing in their past convergence reports.¹⁴ Given the importance of this issue for CBI, it will be included in the definition of financial independence in this paper.

3.1 Statutory Objectives – Functional Independence

There is agreement that independent central banks must have a single, rather narrowly defined policy objective which focuses on the stability of the domestic currency. This postulate is related to the need for the transparency and credibility of monetary policy.¹⁵ However, having a single policy goal does not mean that the central bank can ignore other macroeconomic goals. Therefore, numerous central bank laws as well as the Statute (1992) contain a secondary objective, namely the support of general economic policies, provided that it does not jeopardize the achievement of the primary objective.

The EMI's concept of functional independence is based on Article 105 (1) of the Maastricht Treaty and Article 2 of the Statute, according to which the “primary objective of the ESCB shall be to maintain price stability.” And, further, on the secondary objective: “Without prejudice to the objective of price stability, it shall support the general economic policies in the Community.” While it cannot be doubted that the primary objective of price stability is binding for all euro area Member States, this is not unambiguously clear for Member States with

¹³ In particular, the ECB has the right to deliver opinions on draft laws, based on Article 105 (4) of the Treaty, the first indent of Article 4(a) of the Statute and the third indent of Article 2 (1) of Council Decision 415/98/EC of 29 June 1998 on the consultation of the European Central Bank by national authorities regarding draft legislative provisions. In the field of CBI, the ECB has made use of this possibility on numerous occasions.

See <http://www.ecb.int/ecb/legal/1341/1345/html/index.en.html>, retrieved on October 14, 2004.

¹⁴ However, the European Commission's Opinions and Regular Reports on candidate countries do treat this issue when analyzing their ability to join EMU.

¹⁵ On the rationale of the formulation of central bank policy objectives, see Radzyner and Riesinger (1997, p. 61).

a derogation.¹⁶ In its latest convergence report (2004), the ECB takes the view that also the statutes of NCBs of the new Member States should have price stability as the primary objective from the date of their EU accession (ECB, 2004, p. 32).

Table 1

Statutory Objectives and Formulation and Implementation of Monetary Policy

Central bank	Statutory objectives	Formulation and implementation of monetary policy
Bank of Albania	"... to achieve and maintain price stability." (Article 3.1)	"... formulate, adopt and execute the monetary policy" (Article 3.4a) "... formulate, adopt and execute ... the exchange rate policy" (Article 3.4b)
Central Bank of Bosnia and Herzegovina	"... to achieve and maintain stability of the domestic currency..." by applying a currency board arrangement (Article 2.1)	"... to formulate, adopt and control monetary policy by issuing domestic currency at the exchange rate determined in Article 32" (Article 2.3a)
Bulgarian National Bank	"... to contribute to the maintenance of the stability of the national currency..." (Article 2.1)	* detailed definition of currency board regime (Article 28) * fixed exchange rate (Article 29)
Croatian National Bank	"... to achieve and to maintain price stability" (Article 3.1) "... without prejudice to its primary objective, the Bank shall support economic policies..." (Article 3.2)	"... establish and implement the monetary and foreign exchange policies" (Article 8.1)
National Bank of the Republic of Macedonia	"... to maintain price stability" (Article 3) The Bank shall support economic policy without jeopardizing the main objective (Article 3)	"... establish and conduct the monetary policy" (Article 10) "... determine exchange rate policy" (Article 20)
National Bank of Romania	"... to ensure and maintain price stability" (Article 2.1) "Without prejudice to its primary objective, the NBR shall support general economic policy" (Article 2.3)	"... to define and implement the monetary policy and exchange rate policy" (Article 2.2a) "... define and implement exchange rate policy" (Article 9.1)
National Bank of Serbia	"... achieving and maintaining price stability" (Article 3) "... in addition, ... striving for financial stability" (Article 3) "Without prejudice to its primary objective, the Bank shall support economic policy" (Article 3)	"... determine and implement monetary policy" (Article 4.1) "... determine exchange rate regime with the consent of the government" (Article 4.2)

Sources: Law No. 312 on the Statute of the National Bank of Romania. 2004. June 28.

Law No. 8269 on the Bank of Albania. 1997. December 23.

Law on the Bulgarian National Bank. 1997. June 10.

Law on the Central Bank of Bosnia and Herzegovina. 1997. June 28.

Law on the National Bank of the Republic of Macedonia. 2002.

Law on the National Bank of Serbia. 2003. July 19.

Law on the Croatian National Bank. 2001. April 5.

Compiled by author.

Note: The central banks are referred to by their English designation hereinafter.

In the SEE countries analyzed, most central bank laws contain a clearly defined policy objective for the central bank. Five out of seven laws explicitly refer to "price stability" as the primary objective (see table 1). The central bank laws of Bosnia and Herzegovina and of Bulgaria make reference to the "stability of the domestic/national currency." While the term "currency stability" is generally interpreted as implying the objective of price stability, the EMI argues – in a very strict sense – that this wording does not unambiguously reflect the primacy of maintaining price stability (EMI, 1996, p. 134, on the Austrian central bank statute). Four of the seven SEE central bank laws under consideration provide for a secondary policy objective and contain a stipulation on the support of the general economic policy of the government, without prejudice to the primacy of price stability. In addition to this secondary objective, the Serbian central bank law stipulates that the central bank shall strive for maintaining financial stability. This formulation may carry a potential of conflicting goals for monetary policy, in particular because the primacy of price stability over

¹⁶ The Convergence Report 2004 identifies an inconsistency in the Treaty: While, according to Article 122 (3) of the Treaty, Article 105 (1) of the Treaty does not apply to Member States with a derogation, Article 2 of the Statute does apply to such Member States.

this additional objective is not made clear. To sum it up, the statutory objectives as formulated in the central bank laws of Croatia, Macedonia and Romania seem to be largely in line with Treaty requirements, while adaptations will be needed in the other laws.

3.2 Formulation and Implementation of Monetary Policy – Institutional Independence

The concept of institutional independence is used differently in the literature: The EMI applied a very narrow definition of institutional independence, based on Article 108 of the Treaty and Article 7 of the Statute (EMI, 1996, p. 100). These regulations prohibit the ECB, the NCBs and the members of their decision-making bodies to take or seek instructions from Community institutions or bodies, from any government of a Member State or from any other body. Smits (1997, p. 155) presents a somewhat broader concept, which comprises freedom from instructions and the legal personality of the central bank, which must be an institution separate from other government bodies. This section will compare regulations governing the relationship between the central banks and their respective governments, thus covering inter alia institutional independence according to the EMI's narrow and Smits' somewhat broader definition. Furthermore, this paper takes an even broader approach and examines whether the seven SEE central bank laws under consideration endow their central banks with the necessary competences to formulate and implement monetary policy in order to achieve the primary objective independently.

As to institutional independence in the narrow sense defined by the EMI, the freedom from instructions for the central bank is stipulated in all SEE central bank laws under consideration (see table 4, first column). However, the prohibition of external influence on the central bank as understood by the EMI covers all possible sources of influence, both at the national level (governments, parliament) and at the EU level (Community institutions or bodies) and different forms of influence (the right to give instructions, the right to approve, suspend, annul, defer or censor decisions). Therefore, all SEE central bank laws will have to be adapted in order to fully comply with Maastricht criteria in this area.

The need to provide the central bank with legal personality relates to the fact that the monetary authority is a separate body and not part and parcel of the government administration (Smits, 1997, p. 162). For the ECB, this element of institutional independence is laid down in Article 107 (2) of the Treaty. It is worth noting that all SEE central banks under consideration are defined as legal entities according to the respective central bank laws.¹⁷ In this context, the issue of “statutory independence,” i.e. an explicit reference to the “independent” status of the central bank in the wording of the central bank law, deserves a closer look. Although “statutory independence” is generally not seen as a necessary precondition to achieving a high degree of legal CBI, it is interesting that – with

¹⁷ See Article 1.2 of Law No. 8269 on the Bank of Albania (1997), Article 1.2 of the Law on the Central Bank of Bosnia and Herzegovina (1997), Article 1.1 of the Law on the Bulgarian National Bank (1997), Article 2.3 of the Law on the Croatian National Bank (2001), Article 5 of the Law on the National Bank of the Republic of Macedonia (2002), Article 1.1 of Law No. 312 on the Statute of the National Bank of Romania (2004) and Article 5 of the Law on the National Bank of Serbia (2003).

the exception of Bulgaria – all central bank laws under consideration do contain such a stipulation.¹⁸

According to Article 105 (2) of the Maastricht Treaty and Article 3.1 of the Statute, the basic task of the ESCB is the definition and implementation of the monetary policy of the Community. Five of the seven SEE central banks are provided with the formal responsibility to design and implement monetary policy in their countries (see table 1). In Bulgaria and in Bosnia and Herzegovina, the design of monetary policy is determined by the currency board arrangements operated in these countries, which naturally leaves no room for the central banks to independently design the monetary policy regime.

Whether the choice of the exchange rate regime is to be the sole competence of the central bank or is to be jointly decided by the central bank and the government is not answered unambiguously by the economic literature. As a minimum requirement for effective CBI, a close involvement of the central bank in decisions on the choice of the exchange rate regime is generally seen as desirable (see, e.g., Swinburne and Castello-Branco, 1991, p. 40). While the central banks of Albania, Croatia, Macedonia and Romania have the sole competence for determining the exchange rate regime, the National Bank of Serbia has to take these decisions jointly with the government.¹⁹ For Bosnia and Herzegovina and for Bulgaria, this choice is determined by the currency board arrangement (see table 1).

3.3 Personal Independence

The definition of personal independence is largely undisputed and relates to arrangements on the role, status and composition of the central banks' highest decision-making bodies. This includes appointment procedures, rules for dismissal, the length of the term of office and the possibility of a renewal of mandate, requirements for professional competence and incompatibility clauses.

While the governments typically have a primary role in the appointment of the members of the central banks' highest decision-making bodies, it is widely agreed that certain limitations on the governments' appointment powers increase the degree of CBI. Such limitations may include, for example, a proportion of nongovernment appointments or the right to nominate candidates, e.g. by the state president or by the parliament (Swinburne et al., 1991, p. 31). Another safeguard is to split the responsibility of appointing and that of nominating between, for instance, the government and the state president. These requirements are, *inter alia*, reflected in the construction of different models to measure CBI (Cukierman, 1992; Grilli et al., 1991). While the Treaty and the Statute contain appointment procedures for the members of the ECB's Executive Board, these provisions are not comparable to the appointment of NCB officials and therefore, the convergence reports remain silent on national appointment procedures. In the SEE countries, the most common procedure to appoint the central bank governor is the election by parliament, on proposal of

¹⁸ See Article 1.3 of Law No. 8269 on the Bank of Albania (1997), Article 3 of the Law on the Central Bank of Bosnia and Herzegovina (1997), Article 2.10 of the Law on the Croatian National Bank (2001), Article 4 of the Law on the National Bank of the Republic of Macedonia (2002), Article 1.2 of Law No. 312 on the Statute of the National Bank of Romania (2004) and Article 2 of the Law on the National Bank of Serbia (2003).

¹⁹ For a detailed analysis of the exchange rate regimes chosen in SEE, see Barisitz in this issue.

parliamentary committees (Bulgaria, Croatia, Macedonia, Romania and Serbia; see table 2). In this respect, Bosnia and Herzegovina is a special case, because the central bank governor is appointed by the International Monetary Fund

Table 2

Personal Independence of Central Banks in SEE						
Central bank	Governor		Highest decision-making body		Dismissal	Incompatibility clauses
	Term	Appointment	Composition; term	Appointment		
Bank of Albania	* 7 years, reappointment possible (Article 44.4)	* appointed by president of state, on proposal of prime minister (Article 44.2)	* Supervisory Council: Governor; 2 Deputy Governors, 6 other members (Article 44.1) * term: 7 years, reappointment possible (Article 44.4)	* appointed by parliament, 5 members proposed by parliament, 3 by council of ministers, 1 by Supervisory Council (Article 44.2)	* criminal act, bankruptcy, personal misconduct, political activities (Article 47.1) * absence from 2 Supervisory Council meetings, inability to perform, serious misconduct (Article 47.2)	Supervisory Council membership incompatible with appointment/election (Article 46): * president of state * parliament * government
Central Bank of Bosnia and Herzegovina	* 6 years, reappointment possible (Article 8.4)	* appointed by the IMF, after consultation with presidency (Article 8.1)	* Governing Board: Governor; 3 members (Article 8.1) * term: 6 years, reappointment possible (Article 8.4)	* 3 members appointed by the presidency (Article 8.1)	* violation of currency board arrangement rule, criminal act, bankruptcy, personal misconduct (Article 11.1) * inability to perform, absence from more than half of Governing Board meetings in previous year (Article 11.2)	Governing Board membership incompatible with appointment/election (Article 10): * presidency * parliament * Constitutional Court * government
Bulgarian National Bank	* 6 years (Article 12.4)	* elected by parliament (Article 12.1)	* Governing Council: Governor; 3 Deputy Governors, 3 other members (Article 11.1) * term: 6 years (Article 12.4)	* 3 Deputy Governors elected by parliament, through Governor's motion (Article 12.2) * other 3 members appointed by president of state (Article 12.3)	* inability, criminal act, bankruptcy (Article 14.1.2–4) * incompatibility * absence from 3 or more successive Governing Council meetings * serious misconduct (Article 14.2)	* Governor and Deputy Governor shall not perform any other remunerated activity (Article 12.5) * other 3 members: no other activity at the BNB or other banks, no activity in the executive branch (Article 12.6)
Croatian National Bank	* 6 years (Article 40.6)	* appointed by parliament, on proposal of parliamentary committees (Article 40.1)	* Council: Governor; Deputy Governor and Vice Governors, at most 8 external members (Article 38.1) * term: 6 years (Article 40.6)	* Deputy Governor and Vice Governors appointed by parliament on proposal of Governor (Article 40.3) * external members appointed by parliament (Article 40.4)	* incompatibility * criminal act * serious misconduct * inability to perform * false statements (Article 42)	Council membership incompatible with appointment/election (Article 41) i.a.: * parliament * government * position in commercial banks
National Bank of the Republic of Macedonia	* 7 years, one reappointment possible (Article 70)	* appointed by parliament, on proposal of state president (Article 70)	* National Bank Council: Governor; 2 Vice Governors, 6 members (Article 57) * term: 7 years (Article 60, Article 72)	* Vice Governors appointed by parliament on proposal of Governor; one reappointment possible (Article 72) * other members appointed by parliament on proposal of state president, no reappointment (Article 60)	* criminal act * ban on practicing profession * illness * inability (Article 70)	National Bank Council membership incompatible with (Article 58) i.a.: * position in commercial banks * trade union membership * net debtor of a bank status * criminal sentence (waiting time) * party membership
National Bank of Romania	* 5 years, reappointment possible (Article 33.4)	* appointed by parliament, on proposal of parliamentary committees (Article 33.3)	* Board: Governor; Senior Deputy Governor; 2 Deputy Governors, 5 external members (Article 33.2) * term: 5 years, reappointment possible (Article 33.4)	* appointed by parliament, on recommendation of parliamentary committees (Article 33.3)	* inability * serious misconduct (Article 33.6)	Board membership incompatible with appointment/election (Article 34) i.a.: * parliament * political affiliation * public administration
National Bank of Serbia	* 5 years, reappointment possible (Article 16)	* appointed by parliament, on proposal of parliamentary committee (Article 16)	* Monetary Board: Governor; 3 to 5 Vice Governors (Article 13, Article 19)	* Vice Governors appointed by the NBS Council, on proposal of Governor; reappointment possible (Article 19)	* criminal act * incompetence, mistakes * inability to perform functions * false statement (Article 30)	Monetary Board and Council membership incompatible with appointment/election (Article 28) i.a.: * parliament * government * local government * trade union membership * bank management

Sources: See table 1.

(IMF), a regulation which is based on the Dayton Agreement. For the other members of the highest decision-making bodies, in some cases the responsibility for proposing candidates and for appointing members is split (Albania, Bulgaria, Croatia, Macedonia).

Regarding the rules for removal from office, legislated reasons have to be unrelated to central bank policy and limited to exceptional circumstances clearly defined by law. According to Article 14.2 of the Statute, a national central bank governor may only be dismissed for the following reasons: if he no longer fulfills the conditions required for the performance of his duties or if he has been guilty of serious misconduct. The EMI argues that these rules for the security of tenure of office should also apply to the other members of the decision-making bodies of the NCBs (EMI, 1996, p. 102). In current SEE central bank legislation, a wide variety of reasons for dismissal can be found (see table 2): apart from the inability to perform functions and serious misconduct. The legislated reasons include criminal acts, personal bankruptcy, false statements, a ban on practicing the profession or incompetence. In a number of countries, the absence from a certain number of meetings of the highest decision-making body is defined as a reason for dismissal (Albania, Bosnia and Herzegovina, Bulgaria). At the current juncture, none of the SEE central bank laws seem to be compatible with the Treaty requirements in this area. This situation is reflected in the “institutionalized assessment” provided by the European Commission’s Progress Reports on Bulgaria and Romania and the Opinion on Croatia. The 2003 and 2004 Progress Reports on Bulgaria demand an alignment of the rules for dismissal and the introduction of provisions for judicial review of dismissal decisions (European Commission, 2003a, p. 70; European Commission, 2004c, p. 80). While the Romanian central bank law is the only SEE law which mostly complies with Treaty requirements, it is, however, criticized by the 2004 Progress Report, which demands an additional amendment in this field.²⁰

It is generally agreed that the legislated term of office of top central bank officials has to be clearly longer than the electoral cycle in order to limit political influence. This requirement is taken into account in Article 11.2 of the Statute, which sets the term of office for the members of the ECB Executive Board at eight years, which is definitely longer than any electoral cycle in Europe. Furthermore, the minimum term of office required for governors of NCBs is established as five years (Article 14.2 of the Statute).²¹ A related question is the issue of renewal of mandate: The possibility of reappointment of top officials is generally seen as decreasing the level of CBI. According to the Statute, members of the ECB Executive Board may not be reappointed, whereas it does not contain any rule on reappointment for NCB governors. Therefore, it is assumed that the possibility of renewal of mandate is compatible with the Statute (Smits, 1997, p. 165). With regard to the legislated length of tenure, all seven SEE central

²⁰ *The Progress Report on Romania demands that decisions on the dismissal of the central bank’s governor should be exclusively referred to the European Court of Justice upon Romania’s EU accession (European Commission, 2004d, p. 87). While Article 14.2 of the Statute stipulates that the dismissal of a Governor may be referred to the European Court of Justice, it could be argued that the European Court of Justice’s jurisdiction is not an exclusive one.*

²¹ *However, the European Commission’s Convergence Report 1998 defines two exceptional cases where the term may be shorter: first, appointment of new members for the remainder of the term of the predecessor and second, a staggered initial appointment (European Commission, 1998, p. 45).*

bank laws analyzed are in line with Treaty requirements (see table 2). Reappointment of central bank governors and, in some cases, even of other top officials, is possible in most SEE countries, while no explicit reference can be found in the central bank laws of Bulgaria and Croatia.

It is generally acknowledged that requirements concerning the professional qualifications of central bank top officials represent a certain safeguard for CBI, because this rules out persons chosen mainly for political reasons. Article 112 (2) (b) of the Treaty and Article 11.2 of the Statute require as appropriate candidates for membership in the ECB's Executive Board "persons of recognized standing and professional experience in monetary or banking matters." The Treaty and the Statute are silent on requirements for NCB governors. However, a number of SEE central bank laws state required personal and professional qualifications for a position in the central bank's highest decision-making body, such as personal integrity, academic degrees, professional experience in monetary and banking matters, experience in public administration.²²

Incompatibility clauses for central bank top officials are generally recommended to prevent potential conflicts of interest. While neither the Treaty nor the Statute provide for explicit incompatibility clauses for NCB top officials, Article 11.1 of the Statute contains an exclusivity clause for members of the ECB's Executive Board, according to which the members shall perform their duties on a full-time basis, and "no member shall engage in any occupation, whether gainful or not, unless exemption is exceptionally granted by the Governing Council." The EMI (1996, p. 102) derives the general principle that membership in a decision-making body involved in the performance of ESCB-related tasks is incompatible with the exercise of other functions which might create a conflict of interest. All seven central bank laws under consideration contain incompatibility rules, which apply to all members of the highest decision-making body (see table 2). Apart from rather common provisions, such as incompatibility with positions in government, parliament, as president of state or positions in commercial banks, the Macedonian central bank law contains a number of stipulations which seem to be in contradiction with the generally shared view that personal integrity is a necessary qualification: According to Article 58 of the Macedonian central bank law, persons convicted of a crime and sentenced to imprisonment may become members of the central bank's highest decision-making body, after a certain waiting time. The length of the waiting time depends on the length of preceding imprisonment.²³

Smits (1997, p. 164) criticizes that the Maastricht Treaty and the Statute do not provide for a "cooling-off period" after the term of office has expired that would prevent former members of the ECB's Executive Board from exercising functions with commercial enterprises for a certain period of time. Interestingly, four of the SEE central bank laws do contain such a stipulation.²⁴

²² See Article 44.3 of Law No. 8269 on the Bank of Albania (1997), Article 8.3 of the Law on the Central Bank of Bosnia and Herzegovina (1997), Article 11.3 of the Law on the Bulgarian National Bank (1997), Article 40.5 of the Law on the Croatian National Bank (2001), Article 58 of the Law on the National Bank of the Republic of Macedonia (2002) and Article 16 of the Law on the National Bank of Serbia (2003).

²³ The waiting time is set at five years for sentences of up to three years of imprisonment and at ten years for longer imprisonment.

²⁴ See Article 52 of Law No. 8269 on the Bank of Albania (1997), Article 19.2 of the Law on the Central Bank of Bosnia and Herzegovina (1997), Article 46.1 of the Law on the Croatian National Bank (2001) and Article 33 of the Law on the National Bank of Serbia (2003).

3.4 Financial Independence

Financial independence as defined by the EMI refers to the budgetary independence of the central bank itself, i.e. the question whether it has the appropriate means to fulfill its tasks properly. Budgetary independence comprises such issues as rules on the management of the central bank's budget, ownership issues, the allocation of central bank profits and the coverage of potential losses.

As mentioned earlier, this paper uses a broader definition and interprets the term "financial independence" as covering two aspects: first, budgetary independence as described above and, second, the prohibition of monetary financing. As will be shown below, these two aspects of financial independence are closely interrelated.

Table 3

Financial Independence of Central Banks in SEE					
Central bank	Limits to government lending			Budgetary independence	
	Direct credit	Indirect credit	Ownership, management of budget	Allocation of profit	Coverage of potential losses
Bank of Albania	* loans up to maturity of 6 months permitted (Article 30.2) * maximum: 5% of average budgetary revenues of past 3 years (Article 30.4), waiver: 8% of revenues (Article 30.5)	* purchases of government securities in the secondary market permitted (Article 32)	* capital owned by the state (Article 6.3) * budget determined by Supervisory Council (Article 43n)	* 25% of profits allocated to general reserve fund (Article 9) * repayment of previous loss coverage (Article 10.1) * residual profits paid to state budget (Article 10.2)	* net losses covered by Ministry of Finance (Article 7)
Central Bank of Bosnia and Herzegovina	* direct and indirect credit prohibited (Article 67.1)		* budget determined by Governing Board (Article 7j)	* profits allocated to capital account, general reserve and special reserve account (Article 27a to c) * residual paid to fiscal authorities (Article 27d)	* net losses covered by general reserve or to capital account (Article 28) * residual covered by Ministry for Budget (Article 29b)
Bulgarian National Bank	* direct and indirect credit prohibited (Article 45.1)		* approval of annual budget by Governing Council (Article 16.13)	* 25% of profits allocated to reserve fund (Article 8.2) * necessary amounts to be allocated to special funds (Article 8.3) * residual to state budget (Article 8.4)	* losses covered by reserve fund, special fund (Article 9.2) * residual covered by Ministry of Finance (Article 9.1)
Croatian National Bank	* prohibited (Article 36.1)	* purchases of government securities in the secondary market permitted (Article 36.3)	* capital held exclusively by state (Article 50.2) * Council adopts financial plan (Article 38.3b)	* profits allocated to general reserves within defined limits (Article 53.2) * residual to state budget (Article 53.3)	* losses covered by general reserves (Article 53.4) * residual covered by state budget (Article 53.5)
National Bank of the Republic of Macedonia	* prohibited (Article 51)	* purchases of government securities in the secondary market permitted (Article 89)	* sole state ownership (Article 5) * National Bank Council adopts financial plan (Article 64.4)	* 20% of net income allocated to general reserves (Article 86) * residual to state budget (Article 89)	* losses covered by general reserves * residual covered by state budget (Article 89)
National Bank of Romania	* prohibited (Article 6.1 and Article 29.1)	* purchases of government securities in the secondary market permitted (Article 6.3)	* capital owned by state (Article 38.1) * annual budget approved by the Board (Article 41)	* 80% of profit allocated to state budget (Article 43.1) * residual to statutory reserves, own financing sources and employees' profit-sharing scheme (Article 43.5)	* losses covered by special revaluation account and statutory reserves (Article 44)
National Bank of Serbia	* permitted to cover temporary illiquidity of the budget (Article 39.1) * maximum 5% of average budget revenue of past three years (Article 39.2)	* no provision	* Council adopts financial plan (Article 24.1) * Governor decides on use of special reserves (Article 78)	* maximum of 30% of surplus allocated to special reserves * residual to state budget (Article 77)	* losses covered by special reserves * residual covered by state budget (Article 77)

Sources: See table 1.

One of the crucial aspects of budgetary independence is the question whether the central bank is entitled to determine its expenses and revenues autonomously or whether the approval of a government body is needed. It is widely acknowledged that financial dependence of the central bank on government institutions may be detrimental to CBI. While the Treaty and the Statute do not contain explicit provisions on the NCBs' budgetary independence, the EMI (1996, p. 102–103) argues that a fully independent NCB should be able to avail itself autonomously of the appropriate economic means to fulfill its mandate. In particular, *ex ante* influence on an NCB's financial means by external bodies is regarded as jeopardizing the NCB's independence, while *ex post* reviews of an NCB's financial account may be seen as a reflection of accountability (EMI, 1996, p. 105). In all seven SEE central bank laws examined, the central bank's budget is managed by the bank's highest decision-making body independently from any government institution (see table 3). Those four SEE central banks where the issue of ownership is explicitly stated in the law (Albania, Croatia, Macedonia and Romania) are owned exclusively by the state. All SEE central bank laws contain detailed provisions regulating the allocation of profits and – this is a related question – the coverage of potential losses: In most cases, a proportion of the profits has to be allocated to one or more (general and/or special) reserve funds to create a cushion for potential losses and to provide for a range of other predefined purposes. The residual amount has to be transferred to the state budget. Only in Romania is the order of priority an inverse one, with 80% of the profit transferred directly to the state budget and the residual allocated to reserves (see table 3). While the provisions on profit allocation are largely unproblematic in terms of CBI, the stipulated mechanisms for covering central bank losses may potentially involve a form of monetary financing. In this context, the Progress Report on Bulgaria criticizes the system of loss coverage in the central bank law (European Commission, 2004c, p. 79): According to Article 9.1 of the Bulgarian central bank law, the Council of Ministers may issue interest-bearing securities, which may temporarily be transferred to the central bank in case of central bank losses. These securities have to be redeemed from the central bank's profit at a later point in time. This latter provision implies a financial flow from the central bank to the state budget, which is regarded as potentially conflicting with the prohibition of direct central bank credit. In a similar vein, the Opinion on Croatia criticizes the provisions on loss coverage through government debt securities (European Commission, 2004b, p. 82): Article 53.6 of the Croatian central bank law stipulates that part of central bank profit – after allocation to reserve funds – has to be used to repurchase such debt securities. Similar provisions on the coverage of losses, which by analogy are not compatible with Treaty requirements either, can be found in the central bank laws of Albania, Macedonia and Serbia.²⁵

One of the cornerstones of CBI is the prohibition of monetary financing. There is general consensus that direct central bank lending to the government, be it in securitized or nonsecuritized form (i.e. advances or purchases of government papers on the primary market, overdraft facilities) has to be prohibited

²⁵ See Article 7 of Law No. 8269 on the Bank of Albania (1997), Article 89 of the Law on the National Bank of the Republic of Macedonia (2002) and Article 77 of the Law on the National Bank of Serbia (2003).

by law. Indirect credit, however, such as the acquisition of government securities on the secondary market, is generally not regarded as infringing CBI. The main explanation behind the permission of indirect central bank credit is that on the secondary market, government papers are traded at market rates, thus making public and private sources of funding close substitutes (Radzyner and Riesinger, 1997, p. 69). Article 101 (1) of the Treaty, as restated in Article 21.1 of the Statute, stipulates that “overdrafts or any other type of credit facility with the ECB or with the NCBs in favour of Community institutions or bodies, central governments, regional, local or other public authorities, other bodies governed by public law, or public undertakings of Member States shall be prohibited, as shall the purchase directly from them by the ECB or NCBs of debt instruments.” Complementarily to the prohibition of direct central bank lending to the government, Article 102 (1) of the Treaty prohibits privileged access of public authorities²⁶ to financial institutions. The rationale of this provision is to prevent distortions of market economy principles (Häde, 2002, p. 1311). The Treaty does not contain a prohibition of indirect central bank credit.

Five of the SEE central bank laws analyzed explicitly prohibit direct central bank lending (see table 3). While in the two currency board countries (Bosnia and Herzegovina, Bulgaria) this prohibition also pertains to indirect central bank lending, legislation in Croatia, Macedonia and Romania explicitly allows for purchases of government securities on the secondary market. A peculiarity of the Albanian central bank law has to be noted: Article 30.1 stipulates a general prohibition of direct and indirect central bank financing. This general rule is followed by a number of exceptions and limitations. According to Article 30.4 central bank loans with a maturity of at most six months are permitted up to a maximum amount of 5% of the average budgetary revenues of the past three years.²⁷ Furthermore, the Albanian central bank law provides for a “temporary waiver” according to which this limit may even be increased to 8% of average budgetary revenues. Moreover, Article 32 permits indirect central bank credit. The Law on the National Bank of Serbia also allows for direct central bank credit to the government to alleviate “temporary illiquidity of the budget” and – like the Albanian law – specifies a maximum amount (see table 3). While the central bank legislation of Albania and Serbia requires major adaptations in the field of prohibition of budgetary financing by the central bank, the five other SEE central bank laws seem to be largely compatible with Maastricht Treaty requirements, with a number of details still to be adjusted to achieve full compatibility. The Progress Report on Romania, for example, finds that certain safeguards might be needed in respect of possible “lending of last resort” operations by the central bank in order to bring the central bank law fully in line with Article 101 of the Treaty (European Commission, 2004d, p. 87).²⁸ The Progress Report on Bulgaria criticizes Article 45.1 of the central bank law, according to which the central bank may extend direct credit to the government for the pur-

²⁶ According to Article 102 (2), this prohibition pertains to Community institutions or bodies, central governments, regional, local or other public authorities, other bodies governed by public law, or public undertakings of Member States.

²⁷ This definition of a maximum amount of central bank lending to the government very much resembles the central bank legislation in Central and Eastern Europe analyzed in Radzyner and Riesinger (1997).

²⁸ In addition, the Commission requires alignment of capital market legislation to prevent privileged access of public authorities to financial institutions (European Commission, 2004d).

pose of purchasing Special Drawing Rights (SDRs) from the IMF. The Commission demands a safeguard clause which limits this possibility to “obligations” vis-à-vis the IMF (European Commission, 2004c, p. 79).²⁹ On Croatia, the European Commission’s criticism mainly refers to the provisions on loss coverage discussed earlier in this section (European Commission, 2004b, p. 82).³⁰

3.5 Central Bank Accountability

It is widely agreed that central banks, though endowed with a high degree of independence, have to be held accountable – in one way or another – for achieving the legislated objectives of monetary policy (see e.g. Bini Smaghi, 1998). Central bank accountability, as defined by the ECB, is the legal and political obligation of an independent central bank to justify and explain its decisions to the citizens and their elected representatives (see ECB, 2002b, p. 45). While there is ample literature on theory and on evidence of central bank accountability (as a case in point, see Eijffinger and Hoeberichts, 2000), an in-depth analysis of accountability issues in SEE would go beyond the scope of this paper and leaves room for further studies. In order to complement the picture of current central bank legislation in SEE, the paper will touch upon the most important elements of accountability, namely mutual participation in meetings, appearances before parliament, reporting requirements and the publication of minutes.

It is generally acknowledged that an efficient conduct of monetary policy should not be done in isolation, but should be coordinated in some way with the economic policies pursued by the government. In a number of SEE central bank laws (Albania, Croatia, Serbia), a general notion can be found on the cooperation between the central bank and executive and legislative powers (see table 4). However, the forms and intensity of regulating this cooperation in the respective central bank laws differ widely. A rather loose form of cooperation is the mutual information of central bank officials and politicians. Looking at SEE central bank legislation, only Albanian, Bulgarian and Romanian central bank laws provide for mutual information between the central bank and the government. A slightly more intense form of cooperation is mutual consultation on selected issues, which is stipulated in the central bank law of Bosnia and Herzegovina. An even closer form of cooperation is the mutual participation of central bank officials and politicians in meetings of decision-making bodies: As a case in point, Article 113 (1) of the Treaty stipulates that the “President of the Council and a member of the Commission may participate, without having the right to vote, in meetings of the Governing Council of the ECB.”³¹ Conversely, Article 113 (2) provides for participation of the ECB president in Council meetings when the Council discusses “matters relating to the objectives and tasks of the ESCB.” Four SEE central bank laws (Albania, Macedonia, Romania, Serbia) provide for the participation of the finance minister in the meetings of the highest decision-making body without a right to vote. Interestingly, the Law

²⁹ Furthermore, in the area of prohibition of privileged access for public authorities to financial institutions, the Progress Reports demand amendments of the Law on Public Offering of Securities and the Law on Insurance (European Commission, 2004c).

³⁰ Furthermore, in the area of prohibition of privileged access for public authorities to financial institutions, the Opinion calls for adaptations of the Insurance Act and the Act on Mandatory and Voluntary Pension Funds (European Commission, 2004b).

³¹ In practice, it is the Ecofin Council President and the Commissioner for Economic and Monetary Affairs who participate in the ECB Governing Council’s meetings from time to time.

Table 4

Central Bank Accountability in SEE				
Central bank	Forms of cooperation with government	Relationship with parliament	Reporting requirements	Publication of minutes
Bank of Albania	<ul style="list-style-type: none"> * freedom from instruction (Article 1.3) * the Bank shall cooperate with legislative and executive branches of the Republic (Article 24.1) * the Bank shall be consulted on normative acts (Article 24.2) * mutual information (Article 24.4) * Minister of Finance may attend meetings of Supervisory Council, but no right to vote (Article 49.9) 	* the Bank is accountable to parliament (Article 2.1)	<ul style="list-style-type: none"> * policy statement on monetary policy to be delivered to government and parliament every six months (Article 2.2) * the Bank shall prepare and publish periodical analyses on economic and monetary matters (Article 24.3) 	* proceedings of Supervisory Council meetings are confidential, publication on decision of Supervisory Council possible (Article 50.1)
Central Bank of Bosnia and Herzegovina	<ul style="list-style-type: none"> * freedom from instruction (Article 3) * mutual consultation (Articles 52.2, 52.3, 53) * consultation on draft legal acts (Article 65) * the Bank receives information on request (Article 56) 	no provision		* proceedings of Governing Board meetings are confidential, publication on decision of Governing Board possible (Article 15.1)
Bulgarian National Bank	<ul style="list-style-type: none"> * freedom from instruction (Article 44) * mutual information (Article 3) 	the Bank shall report its activities before parliament (Article 1.2)	<ul style="list-style-type: none"> * weekly publication of balance sheet (Article 49.1) * monthly publication of balance sheet (Article 49.2) * the Bank submits two reports a year to parliament (Article 50) * annual report plus financial statement submitted to parliament (Article 51) 	no provision
Croatian National Bank	<ul style="list-style-type: none"> * freedom from instruction (Article 2.10) * cooperation with government in pursuing tasks (Article 5.1) * mutual agreement on planned borrowing between Minister of Finance and central bank (Article 34) * the Bank may express its views on draft decrees and draft laws related to central bank (Article 5.2) * the Bank may propose legal acts to parliament (Article 35) 	<ul style="list-style-type: none"> * Governor has the right to comment on proposed legislation before parliament (Article 35.2) * the Bank shall submit financial statement and information on monetary policy once a year (Article 58.1) 	<ul style="list-style-type: none"> * monthly submission of balance sheet to Ministry of Finance (Article 58.2) * the Bank may publish annually on monetary policy (Article 59.1) * the Bank shall inform the public regularly (Article 59.2) 	no provision
National Bank of the Republic of Macedonia	<ul style="list-style-type: none"> * freedom from instruction (Article 4) * Minister of Finance may attend meetings of National Bank Council, but has no right to vote (Article 63) 	<ul style="list-style-type: none"> * National Bank Council is responsible to parliament (Articles 61, 74) * parliamentary committees meet with Governor at least once every six months (Article 55a) * decision on monetary policy objectives has to be submitted to parliament (Article 54) 	* semiannual and annual reports to parliament on operations, supervision and foreign reserve management (Article 55)	no provision
National Bank of Romania	<ul style="list-style-type: none"> * freedom from instruction (Article 3.1) * central bank may give opinion on draft legal acts (Article 3.2) * central bank cooperates with Ministry of Finance in setting macroeconomic indicators for drafting budget (Article 3.3) * mutual information with public authorities (Article 3.17) * Minister of Finance may participate in meetings of the Bank's Board without a voting right (Article 33.10) 	no provision	* annual report to be submitted to parliament (Article 35.4)	no provision
National Bank of Serbia	<ul style="list-style-type: none"> * freedom from instruction (Article 2) * the Bank shall cooperate with the government ... performing its tasks ... (Article 10) * mutual participation in meetings (Articles 15, 72) * the Bank may give opinion on draft legal acts (Article 72) 	<ul style="list-style-type: none"> * the Bank shall be accountable to parliament (Article 2) * monetary policy program to parliament (Article 71) 	* annual report on operations, monetary policy, banking sector to be submitted to parliament (Article 71)	no provision

Sources: See table 1.

on the National Bank of Serbia (2003) is the only law that also allows for a participation of the central bank governor in meetings held by the government. Furthermore, the central banks of Albania, Croatia, Romania and Serbia are consulted on draft legal acts relating to the central bank's competences. The

Law on the Croatian National Bank (2001) goes even further and gives the central bank the right to propose legal acts to parliament within its field of competence. Article 67 of the Macedonian central bank law deserves a comment: While the competence for establishing and implementing monetary policy lies in principle with the central bank's highest decision-making body, the National Bank Council, parliament has a final say if the National Bank Council cannot achieve the necessary majority for decision-making. This stipulation can be regarded as infringing CBI rather than as reflecting the central bank's accountability.³² A more common approach to deal with situations of a tie in the highest decision-making body is to assign a casting vote to the governor.³³

Provisions on the appearance of the central bank governor before parliament are considered very important, because these open the possibility of a dialogue between the central bank and elected representatives of the people. Article 113 (3) of the Treaty stipulates that the ECB president and other ECB executive board members can be heard by the European Parliament, at the request of the parliament, or on the initiative of the relevant parliamentary committees. Looking at central bank laws in SEE countries, regulations on the relationship between the central bank and parliament largely differ (see table 4). Three laws (Albania, Macedonia, Serbia) contain a general statement that the central bank has a "statutory accountability" to parliament; the Bulgarian law mentions that the central bank "reports to parliament." Only the central bank laws of Croatia, Macedonia and Serbia provide for appearances of the central bank governor before parliament: The Croatian central bank governor has a rather strong role, as he is entitled to comment and explain proposed legislation within the central bank's field of competence. The Macedonian legislation requires the central bank governor to appear before parliament at least twice a year. Furthermore, the central bank has to submit the monetary policy objectives to parliament annually for the next year. This means a very strong ex ante coordination of monetary policy with parliament, which may jeopardize CBI. Similarly, the Law on the National Bank of Serbia prescribes ex ante coordination on the monetary policy program between the central bank and parliament.

The publication of regular reports enables the central bank to explain its policies and objectives and to review past performance. The fact that these reports are typically made available to interested parties free of charge³⁴ makes them easily accessible to the public (Smits, 1997, p. 175). The reporting requirements of the ECB are regulated by Article 113 (3) of the Treaty and Article 15.3 of the Statute, according to which "the ECB shall address an annual report on the activities of the ESCB and on the monetary policy of both the previous and the current year to the European Parliament, the Council and the Commission and also to the European Council." This report has to be presented by the ECB President. Furthermore, the Statute contains additional reporting requirements,

³² Article 67 of the Macedonian central bank law is particularly interesting, because the required majority for the most important decisions, namely those on monetary policy objectives, is set at "more than two-thirds of all members," with an additional presence quorum of six members, including the Governor or Vice Governor. Consequently, it could well be that the National Bank Council fails to reach agreement, so that in practice, parliament gets the final say.

³³ See Article 49.6 of Law No. 8269 on the Bank of Albania (1997), Article 14.7 of the Law on the Central Bank of Bosnia and Herzegovina (1997), Article 39.4 of the Law on the Croatian National Bank (2001), Article 15 of the Law on the National Bank of Serbia (2003).

³⁴ According to Article 15.4 of the Statute, the ECB's publications have to be offered free of charge.

obliging the ECB to report at least quarterly on its activities (Article 15.1) and to publish a consolidated financial statement every week (Article 15.2). In the SEE central bank laws, a broad variety of legislated reporting requirements can be found (see table 4): While the Bulgarian, Croatian and Macedonian legislation contain very detailed provisions in this area, the laws of Romania and Serbia oblige the central bank to submit at least an annual report to parliament. The wording of the Albanian central bank law is somewhat unclear on the timing and frequency of required reporting. Only the legislation of Bosnia and Herzegovina remains silent in this area.

The question whether just the outcome or the detailed minutes of the meetings of the highest decision-making body are published is related to the issue of individual versus collective accountability (Bini Smaghi, 1998). In the case of the ECB, the ECB Governing Council is held accountable collectively: According to Article 10.4 of the Statute, the proceedings of the ECB Governing Council meetings are confidential. The Governing Council, however, may decide to make the outcome of the deliberations public. Five of the seven SEE central bank laws contain no provision on a possible publication of the minutes of the highest decision-making body. Interestingly, the laws of Albania and of Bosnia and Herzegovina largely resemble the stipulation of the Statute in this area (see table 4).

4 Selected Aspects of Actual Central Bank Independence in Southeastern Europe

While the legal status of a central bank provides an important yardstick to assess CBI in a particular country, this is not the only element determining the level of independence of the central bank. There is wide agreement that the implementation of central bank legislation in practice, referred to as “actual CBI,” plays an equally important role (see, e.g., Cukierman, 1992, pp. 383–391). In fact, actual CBI may differ substantially from legal CBI, as on the one hand, a number of factors reduce the degree of independence as compared to legal CBI, but on the other hand, there are also examples where actual CBI is higher than legal independence (see below).

While the Maastricht Treaty requirements constitute a set of comparatively clearly defined criteria for the assessment of legal CBI, it is more difficult to provide a systematic judgment of actual CBI in a particular country. Hence, Radzyner and Riesinger (1997, pp. 75–84) used indicators such as the turnover rate of governors, political vulnerability, overriding of the central bank law by budget laws to assess the degree of actual CBI in the CEEC-5. In this section, three aspects of actual CBI which turned out to be the most informative ones for an overall assessment in earlier analysis will be examined: first, the issue of political vulnerability of CBI, second, the turnover rate of central bank governors, and third, the practical implementation of financial independence. However, it is important to emphasize that – unlike the previous sections of this paper – information on actual CBI is based on anecdotal evidence rather than on a systematic monitoring exercise.

4.1 Political Vulnerability

As the central bank law can be changed by a simple majority in parliament in most, if not all countries worldwide, CBI is potentially vulnerable to changes in the political thinking on the independent status of the central bank. Therefore, the frequency of political changes in parliament and, more importantly, the political readiness to reduce CBI by changing the law more or less frequently are very important determinants of CBI in practice.

An illustrative example is the enactment of the new Serbian central bank law, which led to the resignation of central bank governor Mladan Dinkic in July 2003. After protracted political differences with the government, Dinkic had criticized the new central bank legislation for reducing the central bank's independence, for instance by permitting direct central bank credit within certain limits (see section 3.4).³⁵ Another example in this context is the adoption of the Bulgarian central bank law establishing the currency board regime in 1997, which had to be postponed several times due to a heated parliamentary debate. Only one year earlier, the Bulgarian parliament had passed a highly controversial amendment of the central bank act, which substantially modified the appointment procedures of top central bank officials.

With a view to protecting central banks against this form of political vulnerability, it has been proposed to write the central bank law into the country's constitution (see e.g. Neumann, 1991). However, the mere mentioning of an independent central bank in the constitution is clearly not sufficient to protect the central bank against political vulnerability. A more successful approach to protect CBI is to write the main pillars of CBI into the constitution. At the European Union level, this will be achieved through the ratification of the European draft constitution, which rewrites the provisions on CBI of the Maastricht Treaty and the Statute.³⁶ Another case in point is the Polish Constitution, which was enacted in 1997 and entailed, with its enactment, fundamental changes in central bank legislation (for details, see Radzyner and Riesinger, 1997, p. 76).

4.2 Turnover Rate of Governors

Although a number of different models to measure legal CBI have been developed up to now (see section 2), it is very difficult to quantify the degree of actual CBI. The best-known approach in this area was taken by Cukierman (1992, p. 383), who introduced the turnover rate of governors as a proxy for actual CBI. The turnover rate of governors is defined as the average term of office of central bank governors in different countries and is calculated by dividing the number of governors within a given period of time by the length of this reference period (expressed in years or fractions of years). In particular for less

³⁵ Furthermore, the incompatibility clauses stipulated in the new law prohibit the central bank governor from engaging in party politics. As the deputy head of the G17 Plus political party, which challenges the governing Democratic Party, Mladan Dinkic was forced to make a choice (World Markets Research Centre Limited, July 21, 2003).

³⁶ Amendments of these constitutional provisions require a highly complex procedure and are not easy to achieve in practice: While Part I of the Constitutional Treaty is subject to the regular amendment procedure, which requires an intergovernmental conference plus ratification by all Member States, Part III Title III of the Constitutional Treaty, and thus also the provisions on monetary union, may be amended according to the simplified amendment procedure. Even this "simplified" procedure calls for a unanimous decision of the European Council (heads of government) after consultation of the European Parliament and the Commission and, in the monetary area, the ECB. Furthermore, such a European decision has to be approved by the Member States in accordance with their respective constitutional requirements.

developed countries, the turnover rate of governors measured by Cukierman (1992, p. 384) proved to be a reasonably good proxy for actual CBI. However, when calculating turnover rates for Central and Eastern European transition economies, results have to be interpreted with great caution: As compared to Cukierman's calculation, which covered almost 40 years, the reference period for this group of countries is extremely short, with a maximum duration of 14 years. Consequently, the results are highly sensitive to changes of both the numerator (i.e. the number of governors) and the denominator (i.e. the length of the observation period). Moreover, the results are critically dependent on whether to include episodes with "acting governors" in the total number of governors counted, and on the definition of the starting point of the observation period.

Table 5

Turnover Rate of Central Bank Governors in Southeastern Europe

	Governors	Reference period	Turnover rate
Albania	* Ilir Hoti , May 1992 to September 1993 * Dylber Vrioni , September 1993 to December 1994 * Kristaq Luniku , December 1994 to April 1997 * Qamil Tusha , April 1997 to August 1997 * Shkëlqim Cani , August 1997 to September 2004 * Ardian Fullani , since October 2004	May 1992 to October 2004	0.48
Bosnia and Herzegovina	* Peter Nicholl , since August 1997	August 1997 to October 2004	0.14
Bulgaria	* Todor Valchev , January 1991 to January 1996 * Lyubomir Filipov , January 1996 to June 1997 * Svetoslav Gavriiski , June 1997 to October 2003 * Ivan Iskrov , since October 2003	January 1991 to October 2004	0.29
Croatia	* Ante Cicin-Sain , January 1992 to October 1993 * Pero Jurkovic , October 1993 to April 1996 * Marko Skreb , April 1996 to July 2000 * Zeljko Rohatinski , since July 2000	January 1992 to October 2004	0.31
Former Yugoslav Republic of Macedonia	* Borko Stanoevski , December 1993 to May 1997 * Ljube Trpeski , May 1997 to May 2004 * Petar Gosev , since May 2004	December 1993 to October 2004	0.27
Romania	* Mugur Isărescu , appointed in December 1990 * reappointed in September 1998 * reappointed in September 2004	December 1990 to October 2004	0.07
Serbia and Montenegro	* Mladjan Dinkic , November 2000 to July 2003 * Kori Udovicki , July 2003 to February 2004 * Radovan Jelasic , since February 2004	November 2000 to October 2004	0.75

Note: The cutoff date is October 31, 2004.

Notwithstanding the above-mentioned caveats, table 5 provides an overview of the central bank governors appointed in the SEE countries and presents calculated turnover rates. At the outset, a few methodological remarks are in order: To ensure comparability of results to earlier calculations, approaches taken in Radzyner and Riesinger (1997) and Dvorsky (2000) will be largely retained. First, "acting" governors – typically vice governors who serve as governors for an interim period without being formally appointed to this position – will not be counted in the total number of governors. Second, governors reappointed for a second or third term will be counted once. Third, due to the very specific political situation and the short history of independence of some SEE countries, a departure from earlier definitions of the reference period was necessary: While Dvorsky (2000, p.18) uses the date of enactment of the first Western-type central bank law as a starting point, this paper takes a more pragmatic approach to arrive at a reasonable duration of reference periods.

Taking into account the particular history of Bosnia and Herzegovina, Croatia, Macedonia, and Serbia, the start of operations of the – newly established – central bank is defined as the starting point of the respective reference period. For the remaining three countries, which look back on a much longer tradition of state sovereignty, the date of transformation from a monobank to a two-tier banking system was chosen as the starting point. Consequently, the length of the observation period varies between almost 14 years in the case of Romania and only 4 years in Serbia, thus reflecting the differences in recent political history.

It is interesting to note that Cukierman (1992, p. 385) defined an upper threshold for the turnover rate of 0.2 to 0.24, which corresponds to one governor every four to five years, a period that is equal to the length of the electoral cycle in most countries. Only two of the seven SEE countries examined would have met this requirement. However, in order to better understand and interpret the results found for the transition countries, the reasons for premature termination of a central bank governor's term have to be carefully questioned in every case before this step can be judged as politically motivated: Did the governor resign voluntarily for solely personal reasons (e.g. health) or was there a fundamental political disagreement with the (new) ruling party? Was the governor forced to leave, e.g. by an amendment of the central bank act, or was he dismissed?

Looking at computed results in the SEE countries, Romania records by far the lowest turnover rate, with Mugur Isărescu having been reappointed a second time in September 2004. He is meanwhile serving the longest term among central bank governors in Central and Eastern Europe. However, a closer look reveals that Mugur Isărescu left his position for more than one year in 2000 to become the country's Prime Minister. Although Isărescu formally remained central bank governor during this episode, he had handed over his duties to an interim governor. If interim governors were included in the counting, the calculated turnover rate for Romania would have tripled. Bosnia and Herzegovina, where Peter Nicholl has served an uninterrupted term since the establishment of the central bank in 1997, shows a score similar to that of Romania, the higher result being due only to the much shorter observation period. However, Peter Nicholl's legislated term of six years would have expired in July 2003 and, as a citizen of New Zealand, he would not have been eligible for reappointment, because the constitution required a Bosnian for this position. So parliament granted citizenship to Peter Nicholl to keep him on the job somewhat longer.³⁷ This is a most interesting example for actual CBI being even higher than legal CBI, due to the personality of the central bank governor. Comparing computed turnover rates, Bulgaria, Croatia and Macedonia record rather similar numerical results. In Bulgaria, after the – voluntary – resignation of Todor Valchev, Lyubomir Filipov served a relatively short term until the introduction of the currency board system, which entailed a restructuring of the central bank's internal organization, including the replacement of the governor.³⁸ Although

³⁷ Nicholl announced that he would step down at the end of 2004 and be replaced by his deputy, Kemal Kozaric (see Dow Jones International News, October 4, 2004).

³⁸ In addition, Filipov had come under political pressure, as an audit report on the central bank's budget had revealed some criminal irregularities (see BBC Monitoring Service, June 12, 1997).

his successor, Svetoslav Gavriiski, applied for reappointment after his first six-year term, he was replaced by Ivan Iskrov in October 2003, who had been proposed by the ruling political party. Croatia's first central bank governor, Ante Cicin-Sain, was replaced after somewhat more than one year, after he had come under political pressure for opposing the government's efforts to obtain direct central bank credit (see section 4.3). His successor, Pero Jurkovic, had to resign for health reasons, while Marko Skreb was called on by parliament to step down in the wake of the collapse of several of the country's banks. In Macedonia, the premature termination of the first governor's term was connected with a financial scandal: Borko Stanoevski was believed to be one of the major culprits of the pyramid saving scheme scandal in 1997 and was forced to withdraw after the Social Democrats decided that the report on the scandal could be discussed only together with his resignation (see BBC Monitoring Service, May 26, 1997). Since then, however, the situation of CBI in Macedonia has improved substantially: Stanoevski's successor as central bank governor, Ljube Trpeski, served a full seven-year term and would have been eligible for reappointment, but had little chance to be elected, because he reportedly was out of favor with the ruling coalition (see South East Europe Newswire, May 21, 2004). Albania's calculated turnover rate is substantially higher, which can be mainly explained by the political turmoils in 1997: The first central bank governor, Ilir Hoti, had to resign after a financial scandal. Dylber Vrioni left the central bank to become finance minister in December 1994 and was replaced by Kristaq Luniku. The "roughest" year in Albania's recent history of central banking was 1997, which saw three different central bank governors: In April, the political riots in Albania compelled Kristaq Luniku to leave for the U.S.A.³⁹ Quamil Thusha replaced him for several months and had to resign in August, following the collapse of the Berisha regime. In the subsequent years, however, the situation in Albania improved considerably: Central bank governor Shkëlqim Cani served an uninterrupted seven-year term. After the expiration of his mandate in August 2004, he reportedly submitted candidacy for a second term but was replaced by Ardian Fullani (see South East Europe Newswire, October 30, 2004). Serbia records by far the highest turnover rate of governors, which is largely due to the very short observation period. However, Mladan Dinkic's replacement as a central bank governor was a consequence of his dispute with the parliament on the adoption of a new central bank law (see section 4.1). His successor, Kori Udovicki, was replaced after only a few months, due to irregularities in her appointment (see Agence France Press, February 25, 2004).

4.3 Financial Independence in Practice

While direct central bank credit is prohibited by law in five of the seven SEE countries and only permitted under certain conditions in the other two countries analyzed (see table 3), it is worth taking a closer look at the implementation of these legal provisions in practice. Earlier work on the CEEC-5 countries provided evidence that in the early years of transition central bank

³⁹ *Reportedly, Kristaq Luniku accused former state leaders of interference in the affairs of the central bank (see BBC Monitoring Service, September 3, 1997).*

laws were overruled by budget laws in some cases, e.g. in Poland and Hungary (see Radzyner and Riesinger, 1997, p. 82).

In the SEE countries, evidence on fiscal financing by the central bank in practice could be found for Albania, Bulgaria, Croatia and Serbia. In Albania, parliament made use of the legislated possibility for direct central bank credit (see, e.g., Albanian Telegraphic Agency, September 25, 2004). Similarly, Bulgaria made use of the – at that time legally permitted – possibility to extend central bank credit to the government in the early years of transition. While Bulgarian central bank legislation had defined an upper limit for direct central bank loans of 5% of the revenue target set in each year, this limit was exceeded by overruling the central bank law in 1993 (see Reuters, December 2, 1993). In 1996, the situation escalated, after the general government deficit had increased to over 10% of GDP within one year. The largest part of the budget deficit was covered by an emergency credit extended by the central bank in December 1996 (see Barisitz, 2001, p. 93). The Serbian budget deficit of 2002 was partly financed by credits from the central bank, which was no breach of the applicable legislation, either (see Reuters, December 2, 2001). In 1992, the Croatian central bank governor came under strong government pressure, because the government had demanded a loan with a maturity of ten years and an interest rate below that of the inflation rate (see Vreme News Digest Agency No. 26, March 23, 1992).⁴⁰ Although Romanian legislation in force until June 2004 allowed for direct central bank credit with a maximum amount of 7% of the government's budget deficit in any given year, this provision was never applied (see South East Europe Newswire, June 9, 2004).

To sum it up, some SEE governments financed part of their budget deficits from direct central bank loans in the past. In most cases, the governments made use of a legally permitted possibility.

5 Conclusions

Reviewing central bank legislation in SEE countries, one can conclude that the central bank laws already comply with Treaty requirements in some areas, while a considerable number of weaknesses remain. This judgment is also reflected in the European Commission's institutionalized assessment.

In the field of functional independence, legislated primary objectives are largely in line with Treaty requirements in Croatia, Macedonia and Romania, while adaptations to the other laws will be needed. As regards institutional independence, all seven SEE central bank laws stipulate freedom from instructions. While most of the central banks are provided with the formal responsibility to design and implement monetary policy, the Macedonian and the Serbian legislation prescribes ex ante coordination of monetary policy with the government, which may jeopardize CBI. In the area of personal independence, the legislated length of terms is compatible with Treaty requirements in all seven countries examined. The main weakness, however, can be found in the provisions on the reasons for dismissal of central bank top officials. As to financial independence, all seven central bank laws provide that the central bank's budget is managed by the bank independently from any government institution. Furthermore,

⁴⁰ No information was available on whether this central bank loan was ever extended.

direct central bank credit is prohibited in five of the seven SEE countries. Major adjustments are necessary in Albania and Serbia, where direct central bank credit is still permitted under certain conditions. Moreover, adaptations will be required for provisions on loss coverage, an issue which is closely linked to the prohibition of direct central bank credit for a number of countries (Albania, Bulgaria, Croatia, Macedonia and Serbia). In addition, adjustments will be needed in the field of prohibition of privileged access to financial institutions.

As regards actual CBI, the paper shows that although the legal status of the SEE central banks is comparatively well protected, the banks are not free from political interference in practice. A closer look at the history of actual appointments and terminations of office of central bank governors confirms this impression. However, examining cases of budgetary financing by the central bank in practice, it turns out that in most cases, the governments merely made use of legally permitted possibilities.

With a view to future EU accession, a further strengthening of both legal and actual CBI will be necessary for these countries to fulfill the requirements of the Maastricht Treaty.

Cutoff date: October 31, 2004.

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A Meta-Analysis of Business Cycle Correlations between the Euro Area, CEECs and SEECs – What Do We Know?

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We review the literature on business cycle correlation between the euro area, eight new EU Member States (the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia and Slovenia), and two Southeastern European candidate countries (Bulgaria and Romania) which are expected to join the EU in 2007. Our meta-analysis suggests that several new Member States have already achieved a comparably high degree of synchronization with the euro area business cycle. We also find that estimation methodologies can have a significant effect on correlation coefficients. Finally, we show that Bulgaria and Romania also display a lower but still positive correlation of business cycles with Europe, although these countries have been increasingly disregarded in most recent publications.

1 Introduction

In the following discussion, we take stock of the growing literature on business cycle correlation between the euro area and Central and Eastern European countries (CEECs), i.e. the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia and Slovenia, as well as selected Southeastern European countries (SEECs), i.e. Bulgaria and Romania. Thus, the analyzed set of countries includes eight new Member States (NMS), which joined the EU in May 2004, and two candidate countries in Southeastern Europe (Bulgaria and Romania), which are expected to follow in 2007.³ After accession to the EU, these countries are supposed to prepare for euro adoption. Therefore, business cycle correlation has gained increased attention recently as the NMS have started to prepare for full participation in monetary union.

The optimum currency area (OCA) theory suggests business cycle synchronization to be an important criterion for participation in a monetary union. The business cycle correlation criterion is generally applied to questions related to euro adoption and exchange rate regimes of the NMS, but it also is considered for other countries with extensive trade and economic relations with the EU. A variety of methodologies has been applied in recent business cycle studies of the CEECs.

The economic analyses applied to the CEECs inherently suffer from significant data problems. Generally speaking, reliable time series are available only from the beginning of the 1990s, and data comparisons of several sources often reveal significant differences. Moreover, frequent data revisions make replications of analyses difficult. As a result, the robustness of results for any particular study should always be questioned.

Of course, such data problems are fairly common in the natural and social sciences. Thus, meta-analyses of existing studies offer a potentially fruitful way to gain more robust results (Lipsey and Wilson, 2000). Meta-analysis typically summarizes published results on a particular topic. In addition to a more precise aggregate view, meta-analysis permits analysis of factors that may influence the results e.g. for data definition and the time period. More recently, meta-analysis

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³ The remaining NMS (Cyprus and Malta) and candidate countries (Croatia) are not included here because the majority of the reviewed analyses does not refer to them.

has become a popular research tool in economics (e.g. Stanley, 2001; De Grauwe and Storti, 2004; Rose, 2004). Meta-analysis extends the analysis beyond standard literature surveys.

Applying meta-analysis to the increasing body of OCA literature on the euro area and CEECs, we show that results of individual studies differ quite significantly, which in itself may have economic policy implications. In any case, taken together, some general elements emerge. First, the business cycle correlations of Hungary, Poland and Slovenia are highest, irrespective of the indicator used. These countries show business cycle correlation with the euro area comparable with those of the core participants in European Economic and Monetary Union (EMU). Indeed, several of the smaller euro area countries have lower business cycle correlation than these CEECs.

Second, although some NMS (e.g. the Czech Republic) show low synchronization of business cycles with the euro area, they are nevertheless synchronized with the overall euro area business cycle to the same extent as the EU peripheral countries Greece, Ireland and Portugal. Third, business cycles in the Baltic countries (except Estonia) and some Balkan countries generally display the lowest correlation with the euro area. Recognizing this, we define a relative ranking of business cycle similarity between the new EU countries and the euro area. Fourth, we find that the estimation methodology can have a significant effect on the correlation coefficients. For example, using supply and demand shocks to determine the correlation of business cycles results in significantly lower correlations.

Finally, we look at the position of Bulgaria and Romania, which started the transition process and accession negotiations with the EU jointly with the NMS. However, Bulgaria and Romania faced much more severe structural problems than other countries on their path to the EU. Furthermore, the implementation of economic reforms was also more difficult for a large variety of reasons. Nevertheless, these countries received a new impetus to implement economic reforms after the recent enlargement of the EU. As a result, these countries are likely to join the EU in 2007.

The paper is structured as follows: The next section reviews the OCA theory from the point of view of the NMS. Based on this evidence, section 3 presents a meta-analysis of nearly 30 publications with nearly 350 point estimates of business cycle correlation between the CEECs and the euro area. The last section concludes. The achieved degree of business cycle coordination implies that some new EU member countries would probably not have asymmetric business cycles with the euro area – or at least no more so than some small member countries. Of course, the new EU members must ensure that their economic policies are sustainable and in line with the requirements of monetary union.

2 The Business Cycle and the Optimum Currency Area Theory

The OCA theory originates with Mundell (1961), who proposed that a country would find it more advantageous to peg the external value of its currency when the business cycles of two countries are highly correlated.⁴ In practice, such correlation is never perfect, but the problem of asymmetric shocks is alleviated as long as factors of production are free to move between countries and regions. Fiscal policy and flexible labor markets may also replace traditional adjustment channels. With the breakdown of the Bretton Woods system, OCA analysis became a regular tool for assessing the desirability of a fixed exchange rate for a particular country. OCA analysis quickly revealed that labor movement between countries or regions in Europe was extremely low, which in itself was sufficient reason to abandon fixed exchange rate regimes (see McKinnon, 2002).

A revival in the empirical testing of OCA theory preceded the introduction of EMU. These empirical studies typically assess the correlations between the business cycles of Germany⁵ and other potential members of a monetary union. The influential contribution of Bayoumi and Eichengreen (1993) recovers the underlying supply and demand shocks in the prospective members of monetary union using a technique developed by Blanchard and Quah (1989). Their basic assumption is that an economy can be hit by either demand or supply shocks. Such shocks are identified with the help of the restriction that the long-term impact of demand shocks on output is zero and the assumption that only supply shocks have a permanent effect on output. In addition, Bayoumi and Eichengreen designate an “overidentifying” restriction, which says that the accumulated effects of supply and demand shocks on prices are negative and positive, respectively. As this condition is not imposed on the model, its fulfillment can be used to check the consistency of the results.

Bayoumi and Eichengreen’s approach can be justified within a neo-Keynesian model of aggregate supply and demand curves (McKinnon, 2000). The framework is based on sticky wages, which make the adjustment process to a new equilibrium gradual when the economy is hit by demand or supply shocks. The neo-Keynesian model distinguishes between short- and long-run equilibria for the economy. Thus, economic policy can reduce the adjustment costs, for example, through the selection of an appropriate exchange rate regime (i.e. floating exchange rate, fixed exchange rate or participation in a monetary union).

All new EU members are required to participate in monetary union.⁶ They have flexibility, however, in determining when they enter the exchange rate mechanism (ERM II), as fulfillment of the Maastricht convergence criteria is required ahead of the introduction of the euro. A key issue here is the timing

⁴ However, risk insurance mechanisms within a monetary union could potentially reverse the results. Demanyk and Volosovych (2004) conclude that those countries facing most asymmetric business cycles may gain most from risk sharing. This idea goes back to Kalemli-Ozcan et al. (2001) and originally to Mundell (1973). See also MacKinnon (2002) for a more general discussion of risk-sharing implications for OCA theory.

⁵ However, Germany was increasingly viewed as a less suitable proxy for the euro area, which was caused by Germany’s worse growth performance since the second half of the 1990s. Therefore, the recent analyses predominantly use euro area data.

⁶ Newcomers have no option to opt out of monetary union.

of membership in monetary union and the optimal interim exchange rate arrangement. If the business cycle of the NMS is correlated to a significant degree with that of the euro area, the cost of giving up monetary independence may be quite reasonable for the new member.

In this section, we survey the literature related to testing the OCA criteria in the NMS and accession countries (Bulgaria and Romania). Using a variety of methods, most studies find that the business cycles in a few of the NMS are already as synchronized with those of the euro area as are some of the euro area's peripheral members' cycles. However, these papers also often express uncertainty as to the robustness of their results.

Table 1

Surveyed Studies

Authors	Countries	Method	Frequency	Reference country
Boone, Maurel (1998)	CZ, HU, PL, SI	HP filter (UR and IP)	monthly	Germany
Frenkel (1999)	CE5, BG, EE, LV	supply and demand shocks	quarterly	Germany
Horvath (2000)	CE5, B3	supply and demand shocks	quarterly	Germany
Korhonen (2001, 2003)	CE5, B3, RO	VAR (correlation of IRF)	monthly	euro area
Fidrmuc, Korhonen (2001, 2003)	CE10	supply and demand shocks	quarterly	euro area
Fidrmuc (2001, 2004)	CE10	correlation (GDP and IP)	quarterly	Germany
IMF (2000)	CE10	correlation (GDP and inflation)	annually	Germany
Borowski (2001)	PL	correlation of IP growth rates	monthly	Germany
Frenkel, Nickel (2002)	CE5, BG, EE, LV	supply and demand shocks	quarterly	euro area
Babetski et al. (2002, 2004)	CE5, EE, LV, RO	supply and demand shocks (Kalman filter)	quarterly	EU
Buiter, Grafe (2002)	CZ, EE, HU, PL, SI	correlation of inventory changes	annually	Germany
Boreiko (2002)	CE10	HP filter (IP)	monthly	Germany
Csajbók, Csermely (2002)	CE4	supply and demand shocks	quarterly	euro area
Luikmel, Randveer (2003)	EE	HP filter (GDP)	quarterly	euro area
Süppel (2003)	CE5, B3	supply and demand shocks	quarterly	EU
Horniková (2003)	CZ	SVAR (IP, inflation, money)	monthly	euro area
Backé et al. (2003)	CE10	HP filter (inflation)	monthly	euro area
Horvath, Ratfai (2004)	CE5, B3	supply and demand shocks	quarterly	Germany
Fidrmuc, Korhonen (2004)	CE10	supply and demand shocks	quarterly	euro area
Backé et al. (2004)	CE5, B3	supply and demand shocks	quarterly	euro area
Babetski (2004)	CE5, EE, LV, RO	supply and demand shocks (Kalman filter)	quarterly	EU
Hagara, Fidrmuc (2004)	CE5, B3, BG	supply and demand shocks	quarterly	euro area
Ramos, Suriñach (2004)	CE5, B3	supply, demand, monetary shocks	quarterly	euro area
Artis et al. (2004)	CE5, B3	BP filter (IP)	monthly	euro area
Demanyk, Volosovych (2004)	CE5, B3	correlation of GDP growth rates	quarterly	EU-25
Barrell, Holland (2004)	CZ, HU, PL	macro model	quarterly	Germany
Darvas, Szapáry (2004)	CE5, B3	HP and BP filter (GDP)	quarterly	euro area

Source: Authors' compilations.

Notes: CE4 = Czech Republic, Hungary, Poland and Slovakia; CE5 = CE4 plus Slovenia; B3 = Estonia, Latvia and Lithuania; BG = Bulgaria; CZ = Czech Republic; EE = Estonia; HU = Hungary; LV = Latvia; LT = Lithuania; PL = Poland; RO = Romania; SI = Slovenia; CE10 = all countries. UR = unemployment rate; IP = industrial production; HP = Hodrick-Prescott filter; BP = Band-Pass filter; VAR = vector autoregression model; IRF = impulse response function; SVAR = structural vector autoregression model.

Table 1 lists papers that assess the correlation of CEECs' business cycles with the euro area business cycle (or some proxy thereof). In this format, it is immediately apparent that this topic has been approached from several angles. A few contributions utilize a structural VAR (vector autoregressive) approach, while most papers take the much simpler approach of merely looking at the cyclical variation around an estimated trend (usually the trend of industrial production). Availability of data places some obvious limits on testing options.

A frequent criticism of meta-analysis in summarizing results on any given topic is that all papers are given equal weights in determining the outcome. However, it would be hard to rank the studies on quality. Some papers were published in refereed journals (which probably assures a certain level of qual-

ity), but since this subfield is so new, many papers we mention are still in the midst of the refereeing process. Several studies, including the most influential ones, do not specify the number of observations (which could be useful in weighting the results). Following the convention of other meta-analyses in the field (Égert and Halpern, 2004), therefore, we weight all estimates equally.

In summarizing study results, we identify three major strands of the literature on business cycle coordination between the euro area and the CEECs. The first strand of papers looks at a simple correlation of an indicator of aggregated output. Those belonging to the second strand use a statistical approach geared to the properties of CEECs' business cycle indicators. Business cycle coordination is analyzed mainly from the perspective of the international transmission of business cycles, and various filters (including the Hodrick-Prescott filter and the Band-Pass filter) or time series models are used. In the third strand, structural VARs are used to recover underlying shocks with properties derived from economic theory. While the first approach prevailed in early analysis (and in papers using business cycle synchronization in further analysis), the latter two directions dominate the current discussion.

2.1 Early Analysis

Analysis of simple correlations prevailed in the first stage of research on the issue. For example, the IMF (2000) notes a relatively high degree of business cycle synchronization between Germany and the CEECs. Similarly, Buiters and Grafe (2002) suggest correlations of inventory changes as a more appropriate indicator of business cycle correlation than aggregate GDP.

The majority of papers with sophisticated statistical tests start with a short look at the properties of the raw data. We suggest in Fidrmuc and Korhonen (2003) that this picture may be misleading. There are generally high correlations among several country groups; in particular, EU countries correlate strongly with the U.S.A. One possible interpretation, in contradiction to previous results (see Artis and Zhang, 1997), is that there is no independent European cycle. As a result, the increased degree of business cycle synchronization within the EU (and possibly between the euro area and the NMS) is consistent with globalization rather than Europeanization. This result is confirmed for various statistical filters (see Artis, 2003a). By contrast, structural VARs reveal greater differences between Europe and the U.S.A. in underlying shocks (Fidrmuc and Korhonen, 2003).

Some authors use simple correlations of business cycles for further analysis. Fidrmuc (2001) and Maurel (2002) rely on the endogeneity hypothesis of OCA criteria laid down in Frankel and Rose (1998). Fidrmuc shows that the convergence of business cycles relates to intraindustry trade, but finds no significant relation between business cycles and bilateral trade intensity. Furthermore, the business cycle (defined as detrended industrial production) strongly correlates with the German cycle in Hungary, Slovenia and, to a lesser extent, Poland. Moreover, due to the high degree of intraindustry trade, it is possible to identify a significant potential for increasing the correlation between business cycles in the EU and the NMS (Hungary, Slovenia, Poland, the Czech Republic and Slovakia). Maurel (2002) also finds evidence that intraindustry trade increases the symmetry of business cycles, which is important for those who

take the view that higher per capita GDP in the NMS is associated with greater intraindustry trade.

Boreiko (2002) takes the correlation of business cycles as one of several indicators for fuzzy cluster analysis (the other indicators describe the fulfillment of the individual Maastricht criteria). He compares the simple correlation of growth rates for industrial production and for the Hodrick-Prescott trend. Both methods produce comparable results, although the latter yields slightly higher values (preferred estimates).

2.2 Statistical Approach

Another group of studies uses different measures of correlation between business cycles in the euro area (or EU) and the CEECs. Boone and Maurel (1998) calculate correlation coefficients between the cyclical components of industrial production and unemployment rates for selected CEECs (the Baltic states are excluded) against Germany and the EU. The cyclical component of the business cycle indicators is derived with the help of a Hodrick-Prescott filter. They generally find a relatively high degree of business cycle correlation for the CEECs with Germany (and higher than that of either Portugal or Greece). This implies relatively low costs for giving up monetary sovereignty and entering a monetary union with Germany.

Boone and Maurel (1999) abandon the methodology used in their earlier work to assess the similarity between business cycles in selected CEECs (the Czech Republic, Hungary, Poland and Slovakia) against Germany and the EU. They fit a time series model for the unemployment rate in an accession country using EU (German) unemployment shocks derived in a separate regression. Under this framework, they ask: What share of the variation in the unemployment rate can be attributed to German or EU-wide shocks? Afterward they look at correlations in the propagation of the shock. Boone and Maurel find that the share of variation explained by the German shocks is fairly high for all analyzed countries, and highest for Hungary and Slovakia. The countries with the highest correlations of responses to a German shock are Poland⁷ and Slovakia. Boone and Maurel conclude that the business cycles in these countries are sufficiently close to the German cycle that participation in monetary union would bring net benefits.

Barrell and Holland (2004) compare residuals of estimated employment in a large-scale macroeconomic model of the world economy (including the Czech Republic, Hungary and Poland). A positive correlation is interpreted as coordination of economic activities between countries. From 1993 to 2002, only Hungary has a high degree of correlation with Germany; the Czech Republic and Poland are negatively correlated.

Korhonen (2003) examines monthly indicators of industrial production in the euro area and nine CEECs. The issue of correlation is assessed with the help of separate VARs for the first difference of euro area production and production in each of the analyzed countries. The correlation of impulse responses to a euro area shock is taken as evidence of symmetry of the business cycles. Korhonen observes that some CEECs (especially Hungary) exhibit a high correlation with

⁷ This result may reflect the high degree of trade intensity between Germany and Poland.

the euro area business cycle. Moreover, correlation seems to be at least as high as in the smaller EMU members, Portugal and Greece.

Artis et al. (2004) and Darvas and Szapáry (2004) describe the CEECs' business cycles. These papers prefer the Band-Pass filter to structural VARs for robustness reasons. Artis et al. (2004) focus on identifying individual business cycles. They find that Hungarian and Polish business cycles are generally the most similar to the euro area cycle. Darvas and Szapáry (2004) differ from most other contributions insofar as they investigate the behavior of several expenditure and sectoral components of GDP. They find that GDP, industrial production and exports in Hungary, Poland and Slovenia have achieved a reasonably high degree of correlation with the euro area. However, private consumption and services are not correlated even in these three countries. In other new EU member countries, the level of correlation is clearly lower. Darvas and Szapáry also assess whether the correlation of CEECs with the euro area has increased over time. Again, the results are somewhat inconclusive. The correlation of the GDP cycle increased in approximately half of the countries while decreasing in the other half.

A few studies attempt to test whether the correlation of business cycles has changed over time. Babetski et al. (2002 and 2004) use a Kalman filter to estimate time-varying correlation coefficients for supply and demand shocks in the CEECs vis-à-vis shocks in the EU and Germany. They find that the correlation of demand shocks increased during the 1990s, whereas the correlation of the supply shocks did not increase to the same degree. Korhonen (2003) estimates the correlation of impulse response functions from two-variable VARs for two separate subperiods (1992–95 and 1996–2000) and finds that the correlation of business cycles increased clearly in the second half of the 1990s in the Czech Republic, Hungary and Slovenia. These results suggest that the growing integration of the CEECs with the EU has increased business cycle correlation and may continue to do so in the future. Artis et al. (2004) look at the overall correlation as well as the moving correlation of business cycles computed as deviations from Band-Pass cycles, where the moving window of approximately three years gives lower weights to observations more distant from time t .

2.3 Structural VAR

Frenkel et al. (1999), Frenkel and Nickel (2002), Fidrmuc and Korhonen (2003 and 2004), Süppel (2003), Backé et al. (2004), and Fidrmuc and Hagara (2004) use an approach similar to that of Bayoumi and Eichengreen to recover quarterly supply and demand shocks for various countries, including most CEECs.

Frenkel et al. (1999) find that the correlation between shocks in the euro area and in the nonparticipating EU Member States is as high as it is for the remaining EFTA countries. The correlation of shocks is quite different between the euro area (proxied by Germany and France) and the CEECs. Unfortunately, there are difficulties in interpreting the results. Perhaps the most serious caveat relates to the data used for estimation. Frenkel et al. use quarterly data from the first quarter of 1992 to the second quarter of 1998. The time period is obviously short (an unavoidable problem with such studies), but more importantly, the first two or three years in the sample belong to the period of transformational recession for some CEECs, i.e. output losses relate to the change in the eco-

conomic system. This can make the interpretation of economic shocks problematic. Frenkel and Nickel (2002) use a longer sample, although for a smaller set of comparative countries.

Csajbók and Csermely (2002) estimate supply and demand shocks for a fairly long period (1992 to 2000). Furthermore, the comparative EU benchmark is derived from the principal component analysis. This may possibly cause deviations between their results and those of other studies. The Czech Republic notably displays the highest correlation of both demand and supply shocks, while the previous studies show zero or even negative correlation of both types of shocks.

More recently, Ramos and Suriñach (2004) introduce monetary shocks as a complement to structural VAR models.⁸ The authors suggest two possible ways to include monetary shocks – real interest rates, following Artis (2003b), or the real effective exchange rate, in line with Clarida and Gali (1994) – to the structural VAR model of the previous variables (growth and inflation). For data reasons, the second model could be estimated only for four NMS (the Czech Republic, Hungary, Poland and Slovakia). Surprisingly, the monetary shocks implied by Artis' decomposition are very similar in the CEECs and the euro area. Correlation coefficients (computing for three two-year windows) reach up to 0.78 in the case of Hungary (2001–02). But the Czech Republic and Poland also display high positive correlations (above 0.5 in both cases) in the floating period (1998–2000). Actually, no CEECs show negative correlations between 1998 and 2002. This counterintuitive result is contradicted by the alternative decomposition for the four Visegrad countries, which implies a very low or even negative correlation of monetary shocks with the euro area between 1998 and 2002.

2.4 Related Literature

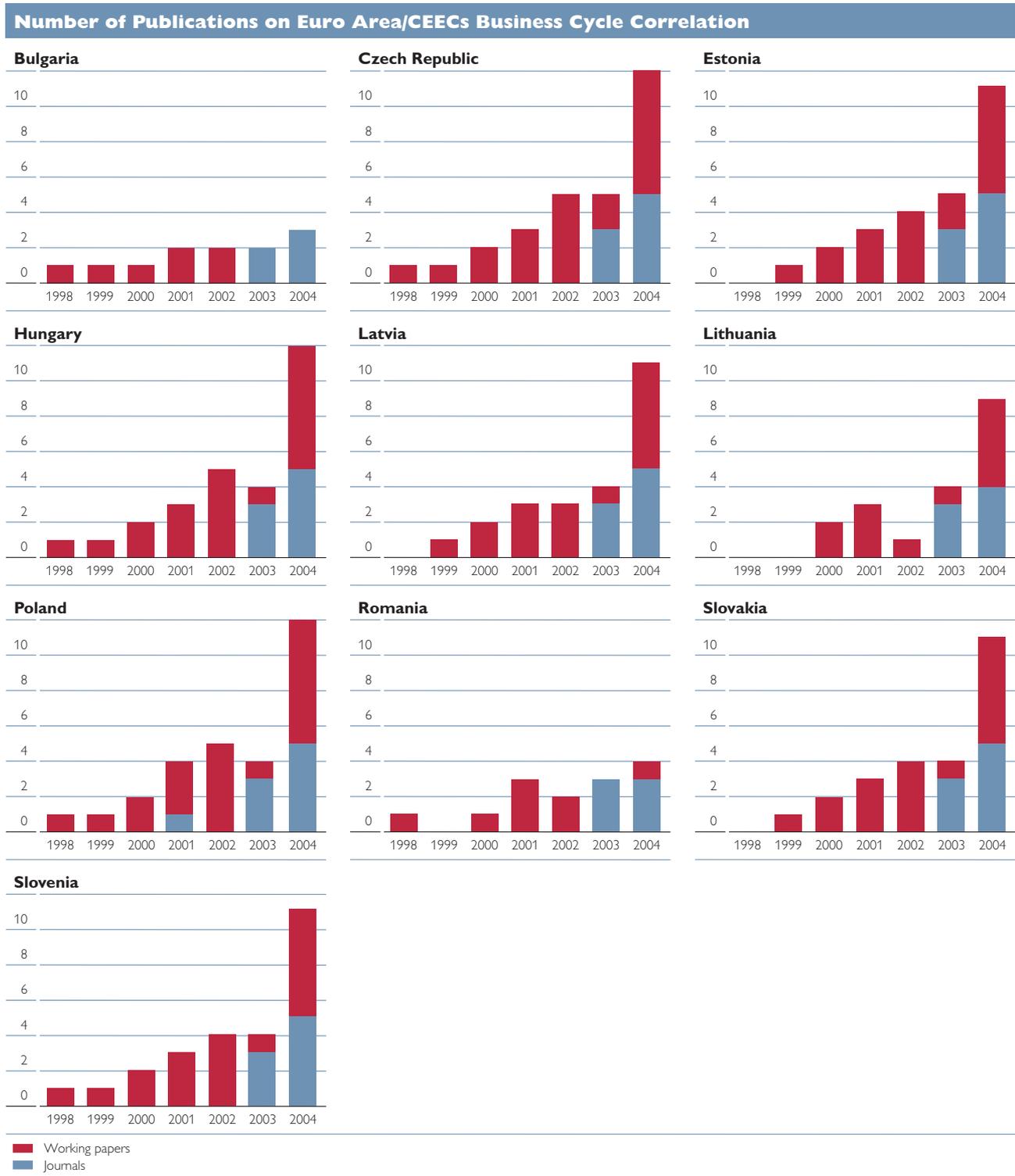
A related strand of literature looks at the convergence of the level of economic activity and prices between the CEECs and the EU. Although business cycle correlation is probably more important in formulating monetary policy, long-term convergence (or a lack thereof) can also impact the functioning of a monetary union. The level of GDP in the CEECs during the period of centrally planned systems grew slowly in relation to Western Europe. Thus, the divergence between Western and Eastern Europe grew in the 1970s and 1980s, and this increasing welfare gap between market and centrally planned economies in Europe was a major reason for the introduction of early reforms in some CEECs.

Estrin and Urga (1997) find only limited evidence of convergence in the former Soviet Union and within various groups of Central European command economies. More surprisingly, Fidrmuc et al. (1999) conclude that the Czech Republic and Slovakia did not converge between 1950 and 1990 or within a subsample from 1970 to 1990. In contrast, Kočenda (2001) and Kutan and Yigit (2004) find increasing convergence between the CEECs and the EU.

⁸ Also Borghijs and Kuijs (2004) estimate three-variable structural VARs for the Czech Republic, Hungary, Poland, Slovakia and Slovenia, although they are not concerned with the correlation of shocks vis-à-vis the euro area. In the estimated VARs, they use monthly data for industrial production, inflation and the real exchange rate against the euro. They then derive supply, real demand and money shocks from these estimations and conclude that nominal exchange rates have been fairly useless shock buffers in the five CEECs, and, in fact, have amplified the effects of money shocks.

A META-ANALYSIS OF BUSINESS CYCLE CORRELATIONS
 BETWEEN THE EURO AREA, CEECs AND SEECs –
 WHAT DO WE KNOW?

Chart 1



3 Results of the Meta-Analysis

3.1 A Hot New Field?

We are presently aware of 27 independent studies⁹ that altogether provide nearly 400 estimations of business cycle correlation between the euro area (or some proxy) and the individual CEECs. To our knowledge, the earliest two papers on the topic were published in 1998, and publishing on the topic took off in 2002 (see chart 1). The number of working papers basically exploded as soon as the details of EU enlargement were announced. Refereed journals published the first contributions in 2003. 12 studies were published in the first half of 2004, reflecting a conference (EABCN meeting in Vienna) and the dedication of an entire issue of the *Journal of Comparative Economics* to the topic. Unfortunately, nearly all these studies concentrate on the new EU member countries and overlook Bulgaria and Romania.

In general, academic institutions in the EU-15 countries (i.e. the EU members before May 2004) initially dominated the discussion. Contributions from Eurosystem central banks and the CEECs have also begun to increase recently. A somewhat surprising feature of the discussion to date is the near absence of interaction between academia and central banks, and between researchers located in the CEECs and in the EU-15.

A decisive feature of the literature is its relatively broad cross-country focus. We found only three papers that focused on a single country. The majority of the studies include all ten CEECs (although Bulgaria and Romania are increasingly omitted in recent contributions). Correspondingly, the average number of countries covered is relatively high (7.5). Many studies also estimate business cycle correlations for a number of EU-15 countries, which are then used as benchmarks for the NMS.

Table 2

Metastatistics										
	CZ	HU	PL	SK	SI	EE	LV	LT	BG	RO
Observations	43	42	43	39	39	38	36	32	17	13
Mean	0.167	0.381	0.267	0.04	0.256	0.141	0.108	-0.059	0.075	0.077
Median	0.152	0.35	0.29	0.01	0.31	0.135	0.095	-0.135	0.03	0.02
Maximum	0.84	0.93	0.88	0.9	0.98	0.98	0.96	0.92	0.48	0.86
Minimum	-0.39	-0.4	-0.69	-0.618	-0.46	-0.57	-0.49	-0.66	-0.593	-0.193
Standard deviation	0.283	0.304	0.352	0.332	0.367	0.343	0.324	0.419	0.269	0.295
Skewness	0.322	-0.199	-0.832	0.639	-0.239	0.217	0.299	0.785	-0.595	1.621
Kurtosis	2.648	2.876	3.783	3.329	2.37	2.777	3.176	2.842	3.343	4.894
Jarque-Bera	0.965	0.304	6.060**	2.834	1.015	0.376	0.584	3.323	1.088	7.634**
t-statistic	3.873***	8.130***	4.971***	0.756	4.358***	2.535**	2.002*	-0.792	1.152	0.945

Source: Authors' calculations.

Note: *, ** and *** denote significance at the 10%, 5% and 1% level.

3.2 Metastatistics

The largest number of correlation estimates¹⁰ (43) is reported for the Czech Republic and Hungary, but a sufficient number of estimates has been reported for all Central European countries and the Baltic states (see table 2 and chart 1). By contrast, only few available estimates are reported for Bulgaria (13) and

⁹ Several papers have been published in working-paper and journal versions. Table 1 includes both the most influential working-paper version and the possible journal version. Unless the journal version is clearly updated in a comparison to the previous working paper, we only use the journal version for further meta-analysis.

¹⁰ Note that several publications report more than one correlation estimate.

Romania (17), respectively. It should be noted that we are able to compare estimates across studies directly. Whatever the methodology, all studies arrive at a single statistic, i.e. the correlation coefficient.

On average, the highest average estimates of business cycle correlation with the euro area are reported for Hungary, followed by Poland and Slovenia. The studies report on average a negative correlation of the business cycle only for Lithuania. For nearly all countries, the mean is slightly higher than median, which may imply that some outliers are influential. The skewness statistic, which is positive on average for all ten CEECs, also indicates that the distribution of reported results is asymmetric with a long right tail. Furthermore, the kurtosis statistic shows that the distribution of reported results is flat relative to the normal distribution. Nevertheless, the null of normal distribution of the results can be rejected only for Poland and Romania.¹¹ In summary, there is no obvious consensus regarding the extent of business cycle correlation.

Somewhat surprisingly, the variance of reported results is quite similar between countries. Countries with relatively low average correlation (Bulgaria, the Czech Republic and Romania) also have relatively low standard deviations of reported results. A *t*-test rejects that the mean of reported results equals zero only for half of the CEECs (the Czech Republic, Estonia, Hungary, Poland and Slovenia).

Similar *t*-tests of equal means (reported in table 3) between the CEECs reveal further insights. The results for Hungary clearly differ from other results (with the possible exception of Poland), reinforcing the view that Hungary's business cycle has the highest correlation with the euro area cycle of any new EU member country. On the other hand, the business cycle correlations in Slovenia are not statistically different from Polish correlations (and the average correlations in both countries are almost the same). The Czech Republic, Estonia and Latvia appear to form a group with reasonably similar correlation patterns. Finally, Slovakia and Lithuania are quite different from the other countries (and from each other). Slovakia's correlation is positive, but small, while Lithuania, as already mentioned, is the only country in the sample with a negative average correlation.

Table 3

Test of Correlation Equality between the CEECs							
	CZ	HU	PL	SK	SI	EE	LV
HU	0.0008***						
PL	0.0247**	0.1286					
SK	0.0415**	0.0000***	0.0005***				
SI	0.0577*	0.0955*	0.4023	0.0020***			
EE	0.3638	0.0008***	0.0184**	0.1031	0.0413**		
LV	0.2925	0.0004***	0.0113**	0.1339	0.0278**	0.4308	
LT	0.0107**	0.0000***	0.0002***	0.1929	0.0006***	0.0280**	0.0370**

Source: Authors' calculations.
 Note: We report p-values of *t*-tests of equal means. *, **, and *** denote significance at the 10%, 5% and 1% level.

¹¹ We cannot reject the normality of the reported results if we pool the data for all countries.

3.3 Who Are the Forerunners?

As the estimation methods often differ considerably from one study to another, we assess the relative ranking of business cycle correlation in the CEECs next to shed additional light on the robustness of the estimated correlations.

As the geographical focus of papers reviewed here varies quite a bit from one to the other, we first concentrate on studies that include all new EU member countries from the CEECs (i.e. the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia and Slovenia). Our database contains a total of 50 estimates of business cycle synchronization (several papers report multiple estimates). Of these, 32 estimate correlations for all eight new EU members from the CEECs.



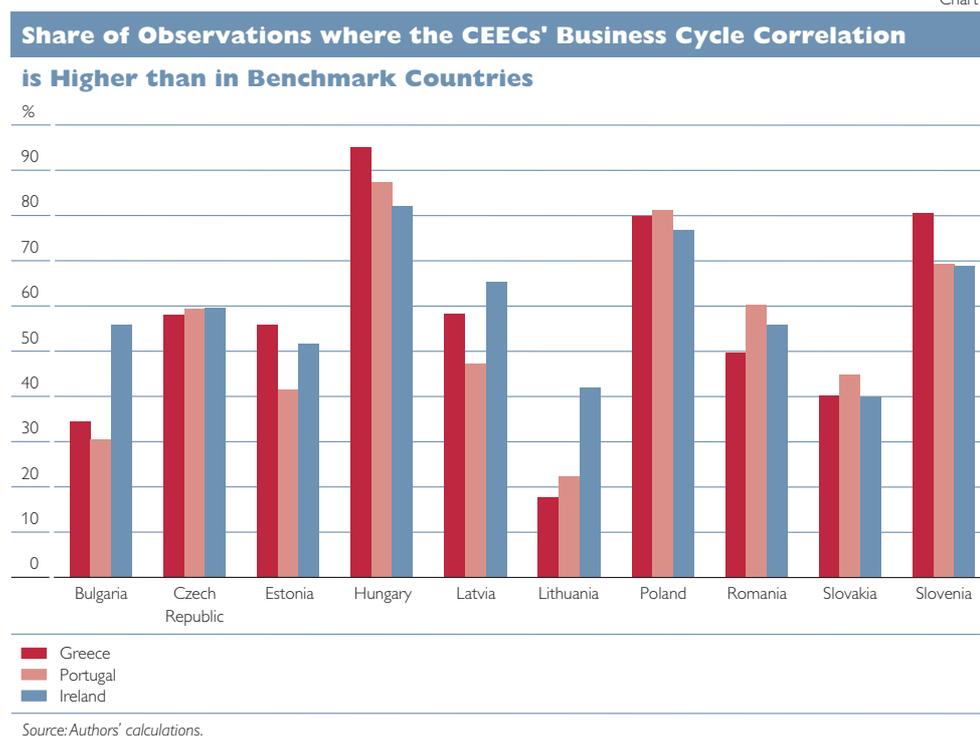
Chart 2 shows the average ranking of various countries in the studies as well as the standard deviation of the rankings. Hungary has the lowest ranking in the studies (i.e. the highest correlation), followed by Poland and Slovenia. The average rankings for Estonia, Latvia and the Czech Republic are almost identical, while Slovakia and especially Lithuania trail behind the other countries. Thus, we obtain a rough order among the new EU member countries when it comes to the correlation of business cycles (the standard deviations of rankings are fairly large).

Looking at Pearson rank correlations among the 35 papers under scrutiny here reveals that rankings change from paper to paper, sometimes quite drastically. The average of all 595 rank correlations (given by $(35 \cdot 35 - 35) / 2$) is 0.23. Calculating averages of rank correlations for all individual papers, it turns out that four papers have a negative average correlation with the other papers: Korhonen (2003) with a rank correlation of -0.10 , Horvath and Ratfai (2004) -0.26 , Horvath (2000) -0.31 and IMF (2000) -0.16 . Approximately ten papers have average rank correlations of between 0.4 and 0.5, and the rest lie between 0.0 and 0.4. Most papers are approximately in agreement with each other as to the relative ranking of the new EU member countries.

3.4 Are the New Member States More Closely Correlated with the Euro Area than the Current Euro Periphery?

In addition to the previous analyses, we consider how the CEECs perform in comparison with some current members on the periphery of the euro area. Most studies include at least some current euro area countries in their data samples, and many reviewed here also include some peripheral countries (e.g. Greece, Ireland or Portugal) in their data sample. It is natural to compare the estimated correlations in the CEECs with correlations of small peripheral euro area members. Comparison with the correlation of the new Member States' business cycles with the euro area cycle helps us to gauge how far the new Member States have advanced in business cycle correlation. If business cycle correlation in an NMS is higher than in, say, Ireland and Portugal, one could be more confident that the new EU country has progressed far enough in fulfilling this OCA criterion. Correspondingly, chart 3 shows the share of studies in which CEECs had higher business cycle correlations with the euro area than Greece, Ireland or Portugal.

Chart 3



Most new member countries do quite well in this regard. Results are more or less in line with the relative rankings surveyed earlier. Hungary has a higher business cycle correlation than three peripheral euro area members in nearly all cases, and Poland and Slovenia are only slightly behind. Even Latvia, which generally ranks quite low among the new member countries, has a higher correlation than the three peripheral euro area countries in approximately half of the cases. These results would imply that even though the degree of correlation in the new member countries is far from perfect, there is no significant difference in this respect to Greece, Ireland and Portugal. However, Lithuania, Bulgaria, and Slovakia show a lower degree of business cycle synchronization

than Greece and Portugal. Nevertheless, also these countries are largely comparable to Ireland.

3.5 MetaRegression Analysis

The metastatistics presented in section 3.2 show that, on average, the available estimates of business cycle correlation provide a fairly consistent ranking of the CEECs. However, the presented metastatistics also reveal a relatively high degree of variance among studies. It is generally argued that a substantial part of this variance can be attributed to the specifics of presented studies (especially data definition and selected time periods).

Metaregression analysis provides an appropriate tool to adjust for these effects. A metaregression relates our summary statistics to a set of characteristics of reviewed studies. However, the correlation coefficient has some undesirable properties that may be important for regression results, e.g. the correlation coefficient is defined between -1 and 1 . Therefore, Lipsey and Willson (2001) recommend Fisher's transformation, which removes this restriction.¹² The metaregression may thus be stated as

$$\frac{1}{2} \log \left(\frac{1 + \rho_{ij}}{1 - \rho_{ij}} \right) = \tilde{\rho}_i + \sum_{k=1}^K \beta_{ijk} D_{ijk} + \varepsilon_{ij}, \quad (1)$$

where parameters ρ_{ij} represent correlation estimates reported by the source j for country i , D_{ij} represent K characteristics of reported summary statistics (some characteristics, e.g. sample periods, may be different between countries also according to the same source), and ε is the error term with standard statistical properties.

This specification assumes that the characteristics of the reviewed studies have the same effects for all reported countries (i.e. no country-specific bias in the individual studies). We are mainly interested in the country effect, $\tilde{\rho}_i$. After the transformation back to the standard correlation, we obtain the estimate of degree of business cycle synchronization with the euro area.

We start by replication of average country estimates without covering additional characteristics,¹³ which basically replicates the computation of metastatistics above (we use Fisher's transformation of the correlation coefficient here). This confirms the significance of business cycle correlation with the euro area in the Czech Republic, Estonia, Hungary, Poland and Slovenia (see table 4), although the size effects are again different. Next, we add several sets of indicators that characterize reviewed estimates of business correlation reported in table 4. Quarterly data (QUARTER) lead to a lower reported correlation of business cycles between the countries than monthly or annual data, while the use of industrial production has no significant effects. The number of observations (OBS) has a negative, but insignificant, effect.¹⁴ The application of time series models (TSERIES), statistical filters (HP) and structural vector autoregressions (SVAR) has negative effects comparable to simple correlation coeffi-

¹² For a correlation index sufficiently distant from the limit values, Fisher's transformation is approximately equal to the original values. However, the index converges to ∞ and $-\infty$ as the correlation approaches 1 and -1 , respectively.

¹³ This approach reflects the fact that some explanatory variables may be correlated. We try to reflect this feature of our data set in the final specification as well.

¹⁴ We get the same results if we take the lengths of time period in months.

Table 4

Metaregressions of Euro Area / CEEC Business Cycle Correlations							
	Basic estimation	Data frequency	Method of estimation	Applied variables	Publication features	All variables	Preferred estimation
CZ	0.192 (3.749)	0.645 (4.712)	0.511 (5.856)	0.289 (4.482)	0.208 (4.075)	0.379 (3.385)	0.435 (6.405)
HU	0.473 (6.892)	0.924 (6.520)	0.792 (8.774)	0.571 (8.020)	0.489 (6.547)	0.655 (5.663)	0.716 (8.552)
PL	0.307 (4.599)	0.751 (5.525)	0.619 (7.079)	0.398 (5.306)	0.323 (4.472)	0.482 (4.223)	0.544 (7.241)
SK	0.064 (0.963)	0.529 (3.729)	0.394 (4.255)	0.169 (2.255)	0.085 (1.256)	0.252 (2.201)	0.318 (4.369)
SI	0.331 (3.920)	0.782 (4.886)	0.643 (6.123)	0.423 (5.686)	0.349 (4.099)	0.505 (4.050)	0.568 (6.734)
EE	0.194 (2.367)	0.643 (4.130)	0.503 (4.543)	0.290 (3.546)	0.221 (2.643)	0.357 (2.824)	0.432 (5.015)
LV	0.145 (1.948)	0.602 (4.038)	0.471 (4.792)	0.245 (3.355)	0.174 (2.301)	0.319 (2.689)	0.397 (5.483)
LT	-0.030 (-0.307)	0.410 (2.621)	0.280 (2.420)	0.051 (0.548)	0.013 (0.136)	0.142 (1.134)	0.213 (2.241)
BG	0.077 (1.095)	0.521 (3.671)	0.385 (4.371)	0.153 (1.563)	0.086 (1.091)	0.216 (1.585)	0.274 (2.811)
RO	0.113 (1.046)	0.505 (3.143)	0.351 (2.747)	0.088 (0.793)	0.144 (1.341)	0.196 (1.443)	0.236 (2.367)
MONTH		0.031 (0.136)				-0.254 (-0.871)	
QUARTER		-0.416 (-3.297)				0.047 (0.383)	
OBS		-0.004 (-1.685)				0.002 (0.647)	
TSERIES			-0.307 (-2.891)			-0.248 (-2.401)	-0.204 (-2.207)
SVAR			-0.461 (-5.988)			-0.094 (-0.859)	
HP			-0.208 (-2.306)			-0.223 (-1.795)	-0.254 (-2.820)
Q				0.057 (0.744)		0.147 (1.738)	
SUPPLY				-0.236 (-4.569)		-0.284 (-2.870)	-0.378 (-6.472)
DEMAND				-0.269 (-4.581)		-0.352 (-3.289)	-0.424 (-6.466)
CPI				0.525 (2.779)		0.600 (3.285)	0.463 (2.881)
YEAR					-0.035 (-2.027)	-0.032 (-2.132)	-0.035 (-2.706)
JP					-0.062 (-1.312)	-0.083 (-1.508)	
Observations	341	341	341	341	341	341	341
Adjusted R ²	0.072	0.18	0.223	0.254	0.095	0.302	0.294

Source: Authors' calculations.
 Note: t-statistics in parentheses.

icients of growth rates. It may be that simple growth rate correlations do not adequately reflect the underlying business cycle correlation. Synchronization of business cycles as measured by supply (SUPPLY) and demand shocks (DEMAND) goes in the same direction (again negative as implied by the coefficient on the SVAR dummy variable) by approximately the same amount, while the correlation of inflation (CPI) provides larger business cycle correlation than summary statistics based on GDP or industrial production (Q).

Furthermore, we look at the general properties of the publications in the field. First, we find a negative trend (YEAR, measured by demeaned year of publication), which indicates that there was some degree of overestimation of business cycle synchronization in the early analysis. The year of publication seems to work better than comparable indicators on the applied time period (starting and final year of the sample in surveyed publications). We can also see that journal publications (JP) are slightly more conservative, but this characteristic is not significant.

Finally, we include all characteristics in a single equation. This shows that characteristics describing the variables used have the most robust influence on results. By contrast, the variables pointing at publication properties are no longer significant. If we drop insignificant variables, we get our preferred metaregression, which involves a dummy for time series models, the application of statistical filters, supply and demand shocks, a dummy for inflation used as a variable measuring the business cycles, and the year of publication. In this specification (as in the majority of specifications), we find a positive and significant correlation of business cycles with the euro area for all CEECs, ranging between 0.210 for Lithuania and 0.615 for Hungary. We also estimate positive and significant correlations of business cycles in the euro area and in Bulgaria and Romania; however, it is lower than in nearly all NMS. Consequently, the differences between the CEECs appear even larger than in the original studies, but the ranking of CEECs confirms the results of the previous section.

4 Conclusions

In summary, empirical evidence seems to indicate that economic cycles in several CEECs are highly correlated with the euro area cycle. Judging from the spate of recent papers, interest in this topic is common. This seems to be especially true for Hungary, Poland and Slovenia. Although the Baltic countries were not always included in the aforementioned studies, there is evidence that Estonia has also achieved a certain degree of convergence with the euro area cycle. Indeed, correlation of business cycles in several CEECs apparently matches or exceeds the convergence of several of the smaller, peripheral monetary union participants. By contrast, there is a much smaller interest in the business cycle properties of the SEECs.

Our meta-analysis of the studies dealing with business cycle correlation confirmed relatively high correlations for many new EU member countries. In addition, we found that characteristics of individual studies have had a clear impact on the estimated correlations. For example, studies using quarterly data on average report lower correlations than those utilizing monthly data.

Furthermore, we show that several smaller current members of the euro area seem to have a lower business cycle correlation than the new Member States of the EU. However, we have to keep in mind that business cycle correlation is only one criterion for successful participation in a monetary union. Economic policies also need to be congruent with the demands of the monetary union. Finally, our results indicate that Bulgaria and Romania have also achieved a positive degree of business cycle synchronization with the euro area, although this level is lower than in the NMS.

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Exchange Rate Arrangements and Monetary Policy in Southeastern Europe and Turkey: Some Stylized Facts

Stephan Barisitz¹

This paper offers an analytical overview of exchange rate regimes and monetary policy frameworks in the countries of Southeastern Europe and Turkey. The following ten countries/nonsovereign territories are analyzed here: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Kosovo,² the Former Yugoslav Republic of Macedonia (FYROM), Montenegro, Romania, Serbia and Turkey. Hard pegs and nominal exchange rate anchors feature in four cases, managed floats and money growth targeting in three cases, unilaterally euroized regimes in two cases, and a managed float and real exchange rate anchor in one case. The paper deals with the institutional importance as well as the unofficial role of the euro in Southeastern Europe. Furthermore, individual countries'/territories' economic developments in recent years (2001–04) and current monetary and exchange rate policies, instruments, issues and outcomes are explored in more detail. Inflation is found to have been on a declining and monetization on a rising trend across the region. In a number of cases, inflation performance can be explained by the stabilizing influence of the exchange rate as an external anchor. But some countries with money growth targeting strategies and loosely managed floats have also boasted low price rises. Overall monetary and economic policy credibility and perseverance may be the key to success here. The paper concludes with a brief outlook focusing on the euro as a stable anchor and point of convergence.

1 Introduction

The following article attempts to give an analytical overview of exchange rate regimes and monetary policy frameworks in the countries of Southeastern Europe and Turkey. Since Serbia and Montenegro (as a subject of international law) comprises three separately managed currency areas, namely the republics of Serbia and of Montenegro and the province of Kosovo, these three political entities will be dealt with separately in the following study, notwithstanding the fact that none of the three constitute a sovereign country. Accordingly, the following ten countries/nonsovereign territories are analyzed here: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Kosovo, the Former Yugoslav Republic of Macedonia (FYROM), Montenegro, Romania, Serbia and Turkey.

Section 2 provides a general overview of the demographic and economic sizes and per capita incomes of the ten quite heterogeneous countries/territories of the region. Section 3 presents a global descriptive outline of the paper's topic and also sketches the institutional importance of the euro as an economic factor or anchor for these countries. Section 4 focuses on the unofficial role of the euro in Southeastern Europe, euro legacy currencies circulating inside and outside banking sectors (up to end-2001), the effect of the euro cash changeover (of end-2001) and euro-denominated deposits (up to end-2002). Individual countries'/territories' economic developments in recent years (2001 to September 2004) and current monetary and exchange rate policies, instruments, issues and outcomes are dealt with in somewhat more detail in section 5. Section 6 gives a summarizing comparison of major results of the preceding section and draws some overall conclusions.

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² In this study, the term Kosovo denotes Kosovo/Kosova.

2 Basic Traits of the Region's Countries and Territories

Compared to the European Union, the Southeastern European countries are economically small to miniscule players. As can be seen from table 1, Southeastern Europe – without Turkey – comprises a territory of about 15% the size of the EU-25's territory; its population comes to 12% of that of the EU-25, and its GDP equals just 1.2% of the GDP³ of the EU-25. The largest former socialist country of the region, Romania, has an economy whose size corresponds to roughly 0.5% percent of that of the EU-25. The smallest (nonsovereign) republic, Montenegro, accounts for 0.012% of the EU-25's GDP. Average per capita GDP in Southeastern Europe without Turkey comes to about a tenth of the average level of the European Union.

Adding Turkey changes the equation quite a bit. Not only in terms of territory, but also with respect to population and economic power does Turkey outweigh all other Southeastern European countries taken together. Turkey's GDP per capita is somewhat higher than Southeastern Europe's average. Including Turkey, the region's territory comes to 35% of that of the EU-25; its population would reach 27%, but again, the size of its economy would remain relatively modest – slightly above 3% of that of the EU-25.⁴

Table 1

Southeastern European Countries' and Territories'

Basic Characteristics

Country	Territory (km ²)	Population (2002, million)	GDP (2002, EUR billion)	GDP per capita (2002, EUR)
Albania	28,700	3.15	5.13	1,630
Bosnia and Herzegovina	51,100	4.11	5.94	1,445
Bulgaria	111,000	7.97	16.43	2,060
Croatia	56,500	4.47	23.80	5,325
Kosovo (Serbia)	10,900	1.96	1.40 ¹	715 ¹
FYROM	25,700	2.02	4.02	2,000
Montenegro	13,800	0.65	1.20 ¹	1,850 ¹
Romania	238,400	21.75	48.52	2,230
Serbia (without Kosovo)	77,500	7.52	14.00 ¹	1,860 ¹
Southeastern Europe without Turkey	613,000	53.60	120.44¹	2,245¹
Turkey	779,500	69.63	194.87	2,800
Southeastern Europe with Turkey	1,393,100	123.2	315.3¹	2,560¹
EU-15	3,234,500	379.7	9,234.3	24,320
New Member States	738,600	74.5	438.1	5,880
EU-25 ²	3,973,100	454.2	9,672.4	21,295

Source: Fischer Weltalmanach 2005, IMF and author's own estimates.

¹ Estimate.

² EU-25 refers to all old and new EU Member States after the enlargement of May 1, 2004.

3 Exchange Rate Regimes and Monetary Policy Frameworks in the Region

The euro plays an important official and/or unofficial⁵ role for the economies and economic policies of Southeastern European countries. Five of the ten analyzed countries – namely successor countries/territories to the former Socialist Federal Republic of Yugoslavia – changed their currencies in the 1990s. Seven of

³ The GDP ratio is calculated on the basis of exchange rates. If purchasing power parities were used, the ratio might be two to four times as large. See also Gligorov, 2004, p. 52.

⁴ The size of Southeastern Europe's plus Turkey's economy would likely exceed 6% of that of the EU-25 if purchasing power parities were taken into account.

⁵ See section 4.

Table 2

Southeastern European Countries' and Territories' Monetary Characteristics				
Country	Current currency; previous currency	Current exchange rate regime; previous regime	Convertibility	Current monetary policy framework; previous framework
Albania	Albanian lek (ALL)	Loosely managed float (since the early 1990s), major reference currencies: EUR (up to January 1, 1999; DEM), USD	Not yet unrestricted current account convertibility (IMF Article XIV status)	Informal inflation targeting through money growth targeting (since 1998)
Bosnia and Herzegovina	Konvertibilna marka (BAM, since June 1998); YUD and HRK (used regionally), DEM (country-wide) (until December 1999); YUD (until the early 1990s)	Currency board, peg to EUR (up to January 1, 1999; DEM) (formally introduced: August 1997, de facto since mid-1998); multiple currencies	Full (or almost full) convertibility	Nominal exchange rate anchor EUR (DEM) (since August 1997)
Bulgaria	Bulgarian lev (BGL)	Currency board, peg to EUR (up to January 1, 1999; DEM) (since July 1997); managed float	Full (or almost full) convertibility (IMF Article VIII acceptance: September 1998)	Nominal exchange rate anchor EUR (DEM) (since July 1997); money growth targeting
Croatia	Croatian kuna (HRK) (since May 1994); Croatian dinar (transitionally); YUD	Tightly managed float, reference currency: EUR (up to January 1, 1999; DEM) (since October 1993)	Almost full convertibility (IMF Article VIII acceptance: May 1995, capital flows, except short-term, liberalized)	Nominal exchange rate anchor EUR (DEM) (since October 1993)
Kosovo (Serbia)	All foreign currencies legalized for transactions, EUR (DEM) predominant, YUD used regionally (since September 1999); YUD	All foreign currencies legalized for transactions, EUR (DEM) predominant, YUD used regionally (since September 1999); YUD	Full (or almost full) convertibility	EUR legal tender (since September 1999)
Former Yugoslav Republic of Macedonia	Macedonian denar (since April 1992); YUD	Peg to EUR (up to January 1, 1999; DEM) (since the early 1990s)	Current account convertibility (IMF Article VIII acceptance: June 1998)	Nominal exchange rate anchor EUR (since the early 1990s)
Montenegro	Unilaterally euroized/EUR (since November 2000); November 1999–2000: EUR (DEM) parallel currency to YUD; previously: YUD	Unilaterally euroized/EUR (since November 2000); November 1999–2000: EUR (DEM) parallel currency to YUD; previously: YUD	Full (or almost full) convertibility	EUR legal tender (since November 1999/2000)
Romania	Romanian leu (ROL)	Managed float (since 1991), reference basket: EUR (75%), USD (25%) (since early 2004), EUR (60%), USD (40%) (since early 2002); previously: reference currency: USD	Current account convertibility (IMF Article VIII acceptance: March 1998)	Money growth targeting (since the early 1990s)
Serbia (without Kosovo)	(Yugoslav) dinar (YUD)	Managed float (since January 2003); previously: tightly managed float, reference currency: EUR (as of December 2000); peg to EUR (DEM)	Current account convertibility (IMF Article VIII acceptance: May 2002)	Real exchange rate anchor (since January 2003); previously: nominal anchor EUR (DEM) (as of 1994)
Turkey	Turkish lira (TRL)	Loosely managed float (since February 2001); crawling peg, reference basket: USD (56%), EUR (44%) (as of December 1999); previously: managed float (as of early 1998)	Full (or almost full) convertibility (IMF Article VIII acceptance: March 1990)	Money growth targeting, informal inflation targeting (since February 2001); exchange rate anchor (USD/EUR basket); monetary targeting

Source: Author's own compilations.

the ten countries have tied their monetary policy to an external anchor. This external anchor is – without exception – the euro, as shown in table 2. Two of these seven countries (Bosnia and Herzegovina, and Bulgaria) operate under currency board arrangements, and two (nonsovereign) territories (Montenegro and Kosovo) have adopted the euro as their legal tender. Macedonia has pegged its currency to the euro, Croatia and Serbia have conducted tightly managed floats (with the euro as the reference currency). In early 2003, Serbia

somewhat loosened its stance and can now be characterized as pursuing a real exchange rate anchor.⁶

Three countries (Albania, Romania and Turkey) have practiced managed or loosely managed floats, coupled with money growth targeting (table 2). Romania uses a reference basket for its float in which the euro has the largest weight. The three countries are aiming for inflation targeting at a future stage. The currencies of six countries/territories (Bosnia and Herzegovina, Bulgaria, Croatia, Kosovo, Montenegro as well as Turkey) are fully (or almost fully) convertible. Three other countries' currencies (Macedonia, Romania and Serbia) are convertible for current account transactions. The Albanian currency does not yet feature unrestricted current account convertibility (IMF, 2003, pp. 24–28).

4 Unofficial Euroization in Southeastern Europe

Southeastern European countries are among the transition countries where the levels of foreign currency held by residents are highest. According to recent estimates (Feige, 2002), the share of foreign currency holdings in broad money amounts to about 75% in Croatia, 55% in Bulgaria, more than 40% in Turkey and over 35% in Romania. The foreign currencies held in the region primarily include the euro and to a smaller extent U.S. dollars, Swiss francs, etc. In this sense one can also speak of euroization, more precisely of unofficial euroization – as opposed to official or unilateral euroization, which is the reality for the Republic of Montenegro, or as opposed to the official introduction of the euro as a dominant legal tender in the province of Kosovo. The latter can be regarded as a de facto unilateral euroization, even if the decision-making body in this case was the UN provisional administration.

The EUR 36 billion of euro banknotes shipped by banks to destinations outside the euro area between December 2001 and June 2003 provide another approximate indicator of the amount of euro banknotes circulating abroad. These account for around 10% of the total volume of euro in circulation. To give some details on the implications and effects of the cash changeover, Turkey and Croatia ranked above (in absolute terms) all of the EU's other eastern and southern neighbors as regards euro-denominated bank accounts at end-2001. In Turkey they amounted to over EUR 12 billion, in Croatia to around EUR 8 billion. In Croatia the share of euro-denominated deposits in total deposits rose from 56% in December 2000 to 62% in December 2001, then declined to 57% at end-2002. In Bosnia the respective share expanded from 38% to 50%, then receded to 46%; in Bulgaria it moved from 12% via 18% to 16% and in Turkey from 12% via 15% to 16%. In Kosovo and Montenegro, the share was, of course, (almost) 100%, and in Serbia it was also very high (81% at end-2002) (ECB, 2003, pp. 50–52).

This change implies that the sum of cash euros in circulation in the region has decreased. Banks have benefited from the surge of euro deposits, which also bears witness to the enhanced trust the public of various countries has in the banking sector. Given that the majority owners of most Southeastern European

⁶ For more information on the – quite eventful – historical background of economic developments in the countries of the Western Balkans see Barisitz, 1999.

countries' banking sectors are financial institutions of euro area countries, it is also likely that financial links between banks of the EU's neighboring regions and of the euro area have further strengthened.

Outside bank accounts, on the whole about EUR 19 billion of euro legacy currencies were exchanged for euro cash in connection with the cash change-over. Up to EUR 10 billion of legacy currencies, by contrast, may have been exchanged for other international currencies, mainly the U.S. dollar, implying a switch from currency substitution based on the euro to currency substitution based on other international currencies. But since 2002 and the euro's appreciation against the U.S. dollar, the common European currency seems to have gained ground and popularity in the region. According to surveys commissioned by the Oesterreichische Nationalbank and undertaken by the Gallup Institute in Croatia, Slovenia and Central European countries in late 2002, mid-2003 and late 2003, the euro is perceived as more stable than the American currency. This view is also likely to be held in other parts of South-eastern Europe and Turkey. Experts estimate euro cash in circulation (outside banks) to come to EUR 1.6 billion in Croatia, EUR 440 million in Kosovo and EUR 250 million in Montenegro.

5 Individual Countries' and Territories' Economic Developments and Current Monetary Policy Issues

5.1 Albania

Albania has witnessed robust growth in recent years, although the country remains saddled with serious structural shortcomings, particularly in the area of governance and rule of law. Administrative barriers to investment and business creation remain massive and so does the scale of the informal economy. Albania's macroeconomic weakness is reflected by its sizeable twin deficits (general government budget and current account), even after (declining) official grants are accounted for. In 2002 and 2003, net FDI inflows covered around half of the current account shortfall. In 2004, this share is likely to be higher. Notwithstanding the external disequilibrium, foreign liabilities are relatively low.

Table 3

Albania: Key Macroeconomic and Monetary Policy Indicators

	2001	2002	2003 ¹	2004 ²
GDP growth (real, %)	6.5	4.7	6.0	6.3
General government budget balance (% of GDP)				
before grants	-8.2	-6.7	-4.7	-6.2
after grants	-7.6	-6.1	-4.1	-5.7
Trade balance (% of GDP)	-24.2	-23.8	-21.9	-21.5
Current account balance (% of GDP)				
before grants	-6.2	-9.0	-7.6	-7.8
after grants	-3.2	-6.5	-5.1	-6.0
Net FDI inflows (% of GDP)	4.8	2.8	2.9	4.5
Gross foreign debt (end-year; % of GDP)	28.0	24.2	23.0	21.5
Gross central bank reserves (excluding gold, end-year; % of GDP)	17.8	17.8	16.5	15.0
Repo rate (end-year; %)	7.0	8.5	6.5	..
Broad money growth (nominal, end-year over preceding end-year; %)	20. Feb	5.7	7.7	11.0
CPI inflation (end-year; %)	3.5	2.1	3.3	3.3
Average exchange rate: ALL/EUR	128.5	132.4	137.5	135
Average exchange rate: ALL/USD	143.5	140.2	121.9	..
Unemployment rate (registered, end-year; %)	16.4	15.8	15.2	14.5

Source: National statistics, Bank of Albania, IMF, European Commission, EBRD, BIS.

¹ Preliminary data or estimates.

² Forecasts.

The Albanian central bank's cautious monetary policy has contributed to keeping inflation at low single-digit levels in recent years. The central bank has conducted a policy of informal inflation targeting and in 2002 and 2003 successfully committed to holding CPI end-year inflation within a band of 2% to 4%. To achieve this, the monetary aggregate M3 and interest rates have been targeted. The monetary authorities intervene by varying their net domestic assets and net international reserves, by changing repo (repurchase agreement) rates as well as reverse repo rates and by conducting open market operations. Albania's money growth targeting is complemented by its flexible exchange rate regime (loosely managed float). The central bank buys and sells on the foreign exchange market to smooth out speculation or sudden movements (relative to the euro and the U.S. dollar). However, the exchange rate can also become a (secondary) policy objective, but only if inflation remains comfortably within the set band.

The fragility of Albania's banking system was exposed by bank runs and massive deposit withdrawals in the spring of 2002. These runs had been triggered by the failed attempt to privatize the largest Albanian credit institution, the state-owned Savings Bank, and by public misunderstanding and confusion over the parliamentary discussion of the draft law on deposit insurance, coupled with heightened political instability in the shadow of the memory of the pyramid scheme collapse of 1997. The Albanian central bank addressed the crisis by granting liquidity assistance to some large distressed credit institutions and by strongly increasing the repo rate.

Credit institutions' liquidity problems were overcome in the second half of 2002; deposits returned and over the course of 2003 the repo rate was reduced again in successive stages to beyond its pre-crisis level. Contrary to 2002, 2003 and early 2004 saw the lek come under appreciation pressure, which was countered by central bank interventions and further interest rate cuts. The purchases on the foreign exchange market were not fully sterilized to give room for money demand to recover. Still, by mid-2004, the real effective exchange rate of the lek was about 10% higher than a year earlier, which put pressure on the competitiveness of Albanian exports. In April 2004, after painful restructuring measures, the country's largest bank, the Savings Bank (representing over half of total bank deposits), was finally and successfully privatized and sold to a foreign strategic investor, i.e. the Austrian Raiffeisen Zentralbank. This should contribute to improving confidence. Although Albania is still underbanked – even compared to other Southeastern European countries – lending is now in a process of dynamic expansion.

5.2 Bosnia and Herzegovina

Since the end of the war of 1992–95, Bosnia and Herzegovina has received considerable, if declining, international reconstruction assistance (roughly EUR 6 billion so far). Despite this assistance, the country has not yet been able to develop viable and competitive export-oriented capacities. The state's political structure remains strongly decentralized, fragile and segmented in the two ethnically defined entities – the Muslim-Croat Federation (Federation of Bosnia and Herzegovina) and the Republika Srpska. However, initiatives aimed at selective centralization in some areas, including military control, customs

Table 4

Bosnia and Herzegovina:

Key Macroeconomic and Monetary Policy Indicators

	2001	2002	2003 ¹	2004 ²
GDP growth (real, %)	4.4	5.5	3.5	4.6
General government budget balance (% of GDP)				
before grants	-10.4	-7.3	-3.0	-3.4
after grants	-3.3	-2.2	0.4	-0.1
Trade balance (% of GDP)	-32.8	-36.8	-34.5	-30.3
Current account balance (% of GDP)				
before grants	-23.3	-23.8	-21.3	..
after grants	-16.2	-18.5	-17.4	-15.8
Net FDI inflows (% of GDP)	2.6	4.1	4.5	4.8
Gross foreign debt (end-year, % of GDP)	49.8	41.3	34.7	33.0
Gross central bank reserves (excluding gold, end-year, % of GDP)	24.6	21.5	22.8	23.2
Broad money growth (nominal, end-year over preceding end-year, %)	89.3	8.6	8.3	..
CPI inflation (annual average, %)	3.2	0.3	0.1	0.9
Federation of Bosnia and Herzegovina	1.9	-0.2	-0.5	0.8
Republika Srpska	7.0	1.7	1.9	1.4
Average exchange rate: BAM/EUR	1.96	1.96	1.96	1.96
Average exchange rate: BAM/USD	2.19	2.08	1.73	..
Unemployment rate (registered, end-year, %)	40.3	40.9	42.0	..

Source: National statistics, Centralna banka Bosne i Hercegovine, IMF, European Commission, EBRD, BIS.

¹ Preliminary data or estimates.

² Forecasts.

administration and indirect taxation, have recently proven successful. The gradual reduction of external assistance has been accompanied by lower economic growth in recent years.

Attempts to dismantle bureaucratic barriers and to improve the business environment contributed to a doubling of FDI inflows in 2002, but the latter remain far from matching the huge and persistent current account shortfalls. Fiscal as well as monetary policies have been prudent in recent years, though; in particular the currency board regime has become a stabilizing anchor for the economy. Foreign debt has been on the decline. But the authorities have recently come under mounting pressure to step up spending on pensions, war veterans' benefits and other domestic claims.

Centralna banka Bosne i Hercegovine has functioned as a currency board since 1998, irrevocably fixing the exchange rate of the konvertibilna marka to the Deutsche mark (later: euro) and backing up unlimited convertibility of the domestic currency to the reserve currency by an adequate amount of foreign exchange reserves. No independent monetary policy is conducted; the central bank can neither grant credits to the government, nor act as a lender of last resort to banks. The monetary authorities can neither change the exchange rate, nor are they in control of the quantity of money. Managing reserve requirements is the only monetary policy tool currently at the disposal of the central bank. The latter has been quite successful in contributing to keeping inflation at low levels. The overall price level hardly increased in 2002 and 2003 – which even implied slight deflation in the Federation. In recent years, price level changes have also been on a converging tendency between the Federation and the Republika Srpska, whose economic structures are quite different. This may be a sign of increasing domestic economic integration. The monetary authorities seem to perceive the currency board also as a kind of “structural whip” which puts pressure on the corporate sector to modernize.

Still, the level of unofficial euroization in Bosnia and Herzegovina is among the highest in the region. In the wake of bank privatization and in connection with the euro changeover, bank deposits soared, and bank loans to households more than doubled in 2002 (albeit from a low base). This pushed up imports and called for intervention by the central bank, which reformed and raised reserve requirements, thereby tightening its monetary stance. The tightening is estimated to have slowed down credit growth and to have slightly reduced the external disequilibrium in 2003. New, more restrictive bank capital requirements were preannounced to take effect at end-2003. The banking sector is one of the few areas in which substantial progress in structural reform has been achieved. The official unemployment rate amounted to around 40% in 2002 and 2003, but owing to the large number of people in the informal economy, unofficial estimates put the actual rate at around 20%. The extensive joblessness renders thorough restructuring efforts and layoffs quite difficult.

5.3 Bulgaria

Following a deep financial and economic crisis in 1996–97, Bulgaria has since July 1997 strictly adhered to a Deutsche mark/euro-based currency board regime. In recent years, the Bulgarian economy has witnessed overall favorable macroeconomic developments. GDP has on average expanded by 4% to 5% annually. The current account deficit has been consistently high and increased further in 2003, but FDI inflows have also been substantial and covered most of the shortfall, although the gap has widened just recently and has given rise to concern. Triggered by sizeable modernization investments, competitiveness has been sustained. Foreign debt, which used to be at unsustainably high levels, has contracted as a share of GDP. Currency reserves have been on the rise. Inflation is modest, but accelerated somewhat in late 2003 and early 2004 due to food price rises in the wake of an exceptionally poor harvest, oil price hikes, excise tax adjustments and demand pressures. Fiscal policy is cautious; deficits have recently reached about half a percent of GDP, and in 2004 a surplus of the same magnitude is expected. Still, poverty and public dissatisfaction continue to be widespread.

Table 5

Bulgaria: Key Macroeconomic and Monetary Policy Indicators				
	2001	2002	2003 ¹	2004 ²
GDP growth (real, %)	4.1	4.9	4.3	5.2
General government budget balance (% of GDP)	-0.9	-0.6	-0.3	0.5
Trade balance (% of GDP)	-11.7	-10.3	-12.5	-13.5
Current account balance (% of GDP)	-7.3	-5.6	-8.5	-8.6
Net FDI inflows (% of GDP)	5.9	5.5	7.0	7.7
Gross foreign debt (end-year; % of GDP)	79.4	65.1	59.1	56.4
Gross central bank reserves (excluding gold, end-year; % of GDP)	26.8	27.7	30.2	30.0
Base rate (end-year; %)	4.7	3.4	2.9	..
Broad money growth (nominal, end-year over preceding end-year; %)	25.8	11.7	19.6	21.0
CPI inflation (end-year; %)	4.8	3.8	5.6	4.7
Average exchange rate: BGL/EUR	1.96	1.96	1.96	1.96
Average exchange rate: BGL/USD	2.18	2.08	1.73	1.7
Unemployment rate (according to labor force survey, average, %)	19.7	17.8	13.7	13.1

Source: National statistics, Bulgarian National Bank, wiiv, IMF, EBRD, BIS.
¹ Preliminary data or estimates.
² Forecasts.

Monetization of the economy is increasing and financial intermediation by the banking sector, which has been very weak for years, is gaining momentum and reflecting a catching-up process. 2002 and 2003 even witnessed a credit boom – with growth in bank claims on enterprises and households accelerating from 31% in 2002 to 44% in 2003 and around 47% in the first half of 2004 (year on year in real terms) – which has entailed vigorous inflows of imports and contributed to the deterioration of the current account and to inflationary pressures. There are, however, indications of a slight slowdown for the summer of 2004. The credit boom was partly triggered by the increase of bank deposits linked to the euro changeover, partly by a repatriation of banks' lower-earning foreign assets, and partly by the overall favorable macroeconomic situation and strengthened confidence in the banking system. As of end-2003, the banking sector was fully privatized, with the overwhelming share of assets being held by foreign banks.

While prudential indicators have not yet shown signs of deterioration, the monetary authorities have strengthened supervisory oversight and standards to encourage prudent lending. In early 2004, capital adequacy requirements for credit institutions were tightened, which mandated banks to set aside larger provisions. Given the Bulgarian currency board regime, the monetary authorities do not have many instruments which allow them to directly intervene to cool down money demand. In April 2004 the government announced a package of measures to calm monetary pressures. One of these measures was the withdrawal of government funds (part of its fiscal reserve) deposited with credit institutions in order to reduce the level of liquidity in the banking system. At the beginning of July, the Bulgarian central bank broadened the coverage of reserve requirements. However, after rising in May, interbank money market rates declined again in the summer months. The authorities stand ready to resort to further liquidity tightening measures if necessary, including credit ceilings.

5.4 Croatia

The Croatian economy has steadily grown since the turn of the millenium. Inflation has almost without exception been in the low single digits for a decade now. But Croatia has suffered from twin deficits (budget and current account) in recent years. Net FDI inflows have been high, but not always sufficient to cover the current account gap. Gross foreign liabilities have swiftly expanded and are likely to surpass 75% of GDP in 2004, which is cause for concern. The largest part of the recent debt expansion stems from credit institutions' borrowing from parent banks abroad, followed by borrowing abroad by the state and companies. Gross foreign currency reserves, while sizeable and clearly exceeding money in circulation, have recently declined.

Notwithstanding the country's sustained low inflation performance, the extent of unofficial euroization in Croatia remains among the highest in the world. This restricts the degree of freedom for an independent monetary policy. Since the lion's share of Croatian banks' liabilities is made up of foreign currency, banks need to match their currency position by extending loans, mostly in foreign exchange. They may also offer foreign currency-indexed (mostly euro) kuna loans. In this way, they transfer most of the foreign exchange risk

Table 6

Croatia: Key Macroeconomic and Monetary Policy Indicators				
	2001	2002	2003 ¹	2004 ²
GDP growth (real, %)	4.4	5.2	4.3	3.6
General government budget balance (% of GDP)	-6.8	-5.0	-6.3	-4.5
Trade balance (% of GDP)	-20.9	-24.3	-27.0	-26.0
Current account balance (% of GDP)	-3.7	-8.5	-6.6	-5.7
Net FDI inflows (% of GDP)	7.2	4.4	5.3	3.5
Gross foreign debt (end-year; % of GDP)	57.9	60.9	73.3	76.5
Gross central bank reserves (excluding gold, end-year; % of GDP)	24.1	23.3	25.5	22.9
Discount rate (end-year; %)	5.9	4.5	4.5	..
Broad money growth (nominal, end-year over preceding end-year; %)	45.2	9.5	11.0	9.4
CPI inflation (end-year; %)	2.6	2.3	1.8	2.8
Average exchange rate: HRK/EUR	7.47	7.41	7.56	7.6
Average exchange rate: HRK/USD	8.34	7.86	6.70	..
Unemployment rate (according to labor force survey, average, %)	15.9	14.8	14.3	14.0

Source: National statistics, Hrvatska narodna banka, wiiw, IMF, European Commission, EBRD, BIS.

¹ Preliminary data or estimates.

² Forecasts.

to their often unhedged clients. Thus, the exchange rate risk becomes part of banks' credit risk. The stability of the banking sector may become dependent on the stability of the domestic currency.

Croatia practices a tightly managed float with the euro as an exchange rate anchor. In fact, for the last ten years (since October 1993) the exchange rate of the kuna has been fluctuating in a corridor of approximately $\pm 8\%$ around the euro. Monetary policy is predominantly carried out through foreign exchange market interventions. Given the dominance of capital inflows in recent years, interventions have increased liquidity, which subsequently had to be sterilized by selling central bank bills or treasury bills. At the beginning of 2003, foreign currency reserves came to approximately twice the value of base money and to one and a half times M1. But the central bank has not fixed the exchange rate. Thus, a limited degree of exchange rate flexibility has been retained so far, also to discourage one-sided bets of speculators.

Any substantial appreciation of the kuna would endanger Croatian enterprises' already fragile competitiveness, while a depreciation would increase real indebtedness and jeopardize banks' balance sheets. The Croatian central bank has not intensively used interest rate policy, but reserve requirements have been frequently applied, sometimes even as an instrument to sterilize local currency liquidity, support the exchange rate and break speculation. This has happened recently, with the goal of reining in strong credit expansion partly linked to the rise in bank deposits in connection with the euro changeover. The credit boom threatened to aggravate the current account imbalance and foreign indebtedness.

In response, monetary policy became increasingly restrictive: As of early 2003, banks were required to hold 20% of the reserve requirement on foreign currency in kuna. By December 2003, this ratio had successively been ratcheted up to 42%. An administrative measure introduced the compulsory purchase of central bank bills if a credit institution's loans expanded at a rate higher than 16% per annum. In the fourth quarter of 2003 the monetary authorities also repeatedly intervened on the foreign exchange market to support the kuna. As a consequence, nominal credit growth appears to have declined from 31% in 2002 to an estimated 11% in February 2004 (year on year). Especially in late

2003 and early 2004, private consumption and investment lost some steam. In the first months of 2004, upward pressures on the kuna reemerged, spurred by market need to adjust to the mentioned monetary policy measures. A substantial impact of the monetary tightening on foreign indebtedness has yet to materialize.

5.5 Kosovo (Serbia)

Kosovo's economic recovery from the war of 1999 was almost totally driven by foreign financial aid and remittances from the Kosovar diaspora. The decline of external donor assistance in 2002 and 2003 contributed to a sharp slowdown of GDP growth in these two years. Foreign grants have shrunk from over 100% to less than 50% of GDP. Workers' remittances equal around 40% to 45% of the size of the economy and have been essential to the survival of many Kosovar families. A viable export sector is not yet in sight. Per capita income is still among the lowest and the jobless rate among the highest in Europe. Given a weak business climate, insufficient rule of law, shaky security, sluggish privatization and structural reforms as well as uncertainty about the province's future status, foreign investors have been extremely reticent so far. Overall investment in productive structures has remained feeble.

Table 7

Kosovo: Key Macroeconomic and Monetary Policy Indicators

	2001	2002	2003 ¹
GDP growth (real, %)	11.0	7.0	4.6
Consolidated government ² budget balance (% of GDP)			
before grants	3.6	5.9	1.4
after grants	10.9	8.4	3.6
Trade balance (% of GDP)	-112.7	-88.8	-81.4
Current account balance (% of GDP)			
before grants	-110.2	-88.7	-70.1
after grants	-19.1	-30.8	-29.4
Net FDI inflows (% of GDP)	0.3	0.6	..
Gross central bank reserves (excluding gold, end-year, % of GDP)	18.7	20.5	..
Broad money growth (nominal, end-year over preceding end-year, %)	21.9	0.2	-18.3
CPI inflation (end-year, %)	11.7	3.6	1.5
Unemployment rate (%)		50-55 ¹	

Source: Banking and Payments Authority of Kosovo (BPK), European Commission, IMF.

¹ Preliminary data or estimates.

² Comprises central government and municipalities.

On a more positive note, the private service sector, although largely operating in the informal economy, is reported to be vibrant. Small-scale agricultural production has also rebounded. Prudent fiscal policy has even created budget surpluses. The UN administration of Kosovo, more precisely the EU-led Pillar IV (Reconstruction and Economic Development)⁷ has replaced the complex and distortionary tax regime inherited from former Yugoslavia by a simple system based on customs duties, excises and VAT. To some degree, however, fiscal success has merely resulted from applying customs duties to aid-financed imports.

⁷ The United Nations Interim Administration Mission in Kosovo (UNMIK), created in June 1999 by Security Council resolution 1244, consists of four pillars, namely Pillar I: Police and Justice, under the direct leadership of the UN; Pillar II: Civil Administration, under the direct leadership of the UN; Pillar III: Democratization and Institution Building, led by the OSCE; Pillar IV: Reconstruction and Economic Development, led by the EU.

Another bright spot is Kosovo's inflation performance, recently boasting low single digits. The province was de facto euroized in September 1999, when the UN administration, to be precise the EU-led Pillar IV, permitted the free use of foreign currencies beside the Yugoslav dinar. The administration pays its employees solely in euro, levies taxes and carries out its transactions in euro. Transactions in other currencies are subject to a processing fee. The euro has thus become the dominant legal tender. The dinar is still used in some areas, though. The Banking and Payments Authority of Kosovo (BPK) was set up in November 1999 to provide a system for domestic payments and to license and supervise credit institutions. Private banking has developed quickly and deposits and loan portfolios have expanded swiftly, albeit from a tiny base. The decelerating dynamics of broad money can be explained by the rising trend of deposits and by fluctuating but contracting cash in circulation.

5.6 Former Yugoslav Republic of Macedonia

The Macedonian economy has so far witnessed a rather hesitant recovery in the wake of the economic destabilization triggered by the ethnic and security crisis of 2001. Notwithstanding private and official transfers, the current account disequilibrium remains substantial. Apart from the spike of privatization proceeds linked to the sale of the national telecom operator in 2001, FDI has featured disappointingly low levels. This reflects continued high political risk, weak governance, slow structural adjustment and a difficult business climate. Macroeconomic policies have, however, been prudent in recent years: The budget deficit has been considerably reduced and a generally tight monetary stance has kept inflation under control.

Table 8

FYROM: Key Macroeconomic and Monetary Policy Indicators				
	2001	2002	2003 ¹	2004 ²
GDP growth (real, %)	-4.5	0.9	3.1	3.6
General government budget balance (% of GDP)	-7.2	-5.7	-1.6	-2.0
Trade balance (% of GDP)	-15.6	-23.7	-19.9	-19.6
Current account balance (% of GDP)				
before grants	-8.2	-11.3	-8.3	-8.9
after grants	-6.9	-8.5	-6.0	-7.6
Net FDI inflows (% of GDP)	12.8	2.0	2.0	2.3
Gross foreign debt (end-year; % of GDP)	39.8	40.2	36.1	36.5
Gross central bank reserves (excluding gold, end-year; % of GDP)	21.9	19.2	19.3	19.1
Basic interest rate of the central bank (end-year; %)	10.7	10.7	6.5	6.8
Broad money growth (nominal, end-year over preceding end-year; %)	64.0	-9.3	17.8	18.0
CPI inflation (end-year; %)	3.7	1.1	2.6	3.1
Average exchange rate: MKD/EUR	60.91	60.98	61.26	62.0
Average exchange rate: MKD/USD	68.04	64.73	54.90	..
Unemployment rate (average, % of labor force)	30.5	31.9	36.7	36.0

Source: National statistics, National Bank of the Republic of Macedonia, IMF, European Commission, wiw, EBRD.

¹ Preliminary data or estimates.

² Forecasts.

The monetary authorities pegged the Macedonian denar to the Deutsche mark in the early 1990s, and this peg has since been upheld despite a few devaluations that took place in the mid-1990s. During the crisis of 2001, the authorities successfully defended the parity with the euro. Given the continuing weakness of exports, the exchange rate of the denar remained under pressure during much of 2002. The Macedonian central bank countered this pressure by repeatedly intervening on the foreign exchange market, which triggered contractio-

nary effects on the money supply. After a new Stand-By Arrangement had been reached with the IMF in February 2003, the central bank eased the monetary reins to some degree. It lowered the discount rate, and the interest rate for central bank bills declined.

However, some downward pressure on the currency reemerged in late 2003, which triggered renewed central bank foreign exchange market interventions. In early 2004, policy rates were raised a bit again. Liquidity was withdrawn through auctions of central bank bills and through augmenting the government's denar deposits with the monetary authorities. In January, treasury bills were introduced to the Macedonian financial market. Meanwhile, the ULC-based real effective exchange rate does not appear to have appreciated in the last four years, suggesting that the nominal peg to the euro has, so far, not harmed competitiveness. Commercial banks' deposits and credits are steadily expanding, which reflects the fact that reintermediation is gathering momentum and that confidence in credit institutions is growing. But there is a mismatch between predominantly foreign currency-denominated deposits (almost two-thirds) and mostly denar-denominated loans (about 85%). The Macedonian jobless rate is one of the highest in the region and is continuing to increase.

5.7 Montenegro

Montenegro's recovery following the Kosovo war of 1999 has been feeble but may be somewhat underestimated by official statistics, since the gray economy is estimated to come to about a third of economic activities. In 2003, growth slightly picked up. Like other countries of the region, Montenegro is plagued by twin deficits (budget and current account) and declining foreign financial assistance. The overwhelming share of the republic's exports and about half of its GDP are made up of products of a big and somewhat antiquated aluminum plant (KAP) whose viability is doubtful. Save for a spike in 2002 (linked to the privatization of Jugopetrol and some hotels), FDI has been meager and insufficient to cover the current account gap. Political instability, bureaucracy and pervasive corruption contribute to this state of affairs.

Table 9

Montenegro: Key Macroeconomic and Monetary Policy Indicators

	2001	2002	2003 ¹
GDP growth (real, %)	1.0	0.8	2.3
Consolidated government budget balance (% of GDP)			
before grants	-4.7	-4.3	-5.3
after grants	-1.6	-2.1	-4.0
Trade balance (% of GDP)	-46.5	-34.9	-25.0
Current account balance (% of GDP)			
before transfers	-32.8	-21.1	..
after transfers	-18.6	-12.6	-10.0
Net FDI inflows (% of GDP)	0.9	7.1	3.2
Gross foreign debt (end-year, % of GDP)	..	42.0	40.5
Gross central bank reserves (excluding gold, end-year, % of GDP)	..	4.7	..
CPI inflation (end-year, %)	28.0	9.4	6.7
Unemployment rate (average, %)	24.8	23.3	21.0

Source: National statistics, Centralna banka Crne Gore, wiiw, IMF.

¹ Preliminary data or estimates.

In order to escape the inflationary policies of Belgrade and become more independent of the Milosevic regime, Podgorica introduced the Deutsche mark as a parallel currency to the dinar on Montenegrin territory in November 1999

and a year later fully withdrew the dinar. Thereby Montenegro was officially and unilaterally euroized. There is no common payment system for Serbia and Montenegro. The central bank of Montenegro started to function in early 2001. Its gross reserves are (still) very modest. Its major monetary policy instrument is the regulation of commercial banks' mandatory reserves, which were fixed at a high level at the beginning of 2002 and then gradually reduced. In 2003, bank loans expanded by over 50% in real terms (albeit from a low point of departure). The increase of loans was preceded by an improvement of the macroeconomic environment and positive developments in the banking sector including privatization.

While the monetary authorities have succeeded in breaking the very high inflation of the past, price levels are still increasing at a speed that is cause for concern for a euroized economy and jeopardizes Montenegro's modest competitiveness. Inflation is partly fueled by the high level of public expenditures and the attendant sizeable budget deficit. In this situation, barring substantial productivity-enhancing investments, the only way to increase competitiveness would be painful nominal adjustments of wages and prices.

5.8 Romania

After a protracted period of sluggish reforms and stagnation, followed by an economic and financial crisis (1997–99), Romania has experienced some robust growth since 2001. However, the country has so far been saddled with its twin deficit problem. While budget shortfalls have been on a downward trend recently, the current account gap sharply widened in 2003. This deterioration was driven by an acceleration of domestic consumption and investment stemming from rapid wage growth and the swift expansion of credit to the private sector. FDI, which in some years covered over two-thirds of the external disequilibrium and which has brought about some important gains in structural adjustment, productivity and competitiveness, made up for about half of the imbalance in 2003. Administration and courts still suffer from serious transparency and enforcement problems, and payments discipline remains unsatisfactory in a number of areas.

Table 10

Romania: Key Macroeconomic and Monetary Policy Indicators				
	2001	2002	2003 ¹	2004 ²
GDP growth (real, %)	5.7	5.0	4.9	5.8
General government budget balance (% of GDP)	-3.3	-2.5	-2.2	-1.8
Trade balance (% of GDP)	-7.4	-5.7	-7.9	-7.9
Current account balance (% of GDP)	-5.5	-3.3	-5.8	-5.5
Net FDI inflows (% of GDP)	2.9	2.4	3.0	3.4
Gross foreign debt (end-year, % of GDP)	31.2	30.8	30.9	33.5
Gross central bank reserves (excluding gold, end-year, % of GDP)	9.9	12.3	12.7	13.2
Discount rate (end-year, %)	35.0	29.0	20.4	19.0
Broad money growth (nominal, end-year over preceding end-year, %)	46.2	38.1	23.3	29.0
CPI inflation (end-year, %)	30.3	17.8	14.1	10.5
Average exchange rate: ROL/EUR	26,027	31,255	37,556	41,000
Average exchange rate: ROL/USD	29,061	33,056	33,200	..
Unemployment rate (according to labor force survey, average, %)	6.6	8.4	7.0	8.0

Source: National statistics, Banca Națională a României, wiiw, IMF, EBRD, BIS.

¹ Preliminary data or estimates.

² Forecasts.

The Romanian monetary authorities have conducted a managed float reflecting nominal depreciation tendencies of the leu throughout the last decade, which, on the whole, have resulted in a certain degree of stability of the real effective exchange rate. In the past the Romanian central bank's monetary policies were often subject to varying intense pressures from different sides, reflecting the overall fragile state of the economy. Although its general goal is to control inflation, the central bank has at times found itself compelled to accelerate the nominal devaluation of the leu to alleviate price competitiveness problems of industry, to ease liquidity constraints of the domestic financial market to make room for unforeseen deficit spending needs on the part of the fiscal authorities, or to fulfill its lender-of-last-resort function to preserve the banking system from collapse.

An overall tighter and steadier monetary policy stance finally emerged in 2000. Since early 2002, the reference unit for the managed float has been a euro/U.S. dollar currency basket (with EUR 60%/USD 40% weights), which was adjusted in early 2004 (to EUR 75%/USD 25%). The Romanian central bank's most important instruments have been reserve requirements, foreign exchange and open market interventions and interest rate policy. Throughout most of 2002 the Romanian currency was under appreciation pressure, which was partially countered by the buildup of foreign exchange reserves and sterilizing interventions (deposit-taking operations and transactions with government securities). Considerable amounts of liquidity were mopped up by open market operations. Inflation declined from 41% in 2000 to 14% in 2003 (end-year) and 12% in July 2004 (year on year), which is, however, still higher than in all of Romania's Southeastern European neighbors, not to speak of Central European transition countries. In response to the downward trend of inflation, the central bank lowered its interest rates substantially until early 2003.

2003 saw a sharp rise of minimum wages at the beginning of the year (by 25% in real terms) and a strong and accelerating expansion of credit (albeit from a low level of departure), favored by the improved macroeconomic situation, enhanced business confidence and lower interest rates. Driven primarily by consumer and mortgage credit, loans to the private sector expanded by 50% in real terms in the twelve months to January 2004 and contributed to aggravating the trade and current account balances, thereby reversing the situation and putting downward pressure on the leu. The surge of loans also rendered disinflation in 2003 more difficult. Given that a sizeable share of the credit volume consists of foreign exchange-denominated loans, there is a risk that unhedged borrowers could trigger financial problems for banks.

The Romanian central bank responded by hiking its reference rate repeatedly (from 17.4% in April to 21.3% in November 2003) and by intervening in the foreign exchange market to support the domestic currency. Banking supervisory procedures and regulations were strengthened, and further measures aiming at restricting consumer credit were introduced in February 2004. These efforts appear to have had an impact, since lending to the private sector decelerated markedly in the second quarter of 2004 and household borrowing stagnated in the first months of the year. Most recently, the current account gap has been narrowing somewhat again, and appreciation pressures

have reemerged. In June 2004 the reference rate was lowered by half a percentage point, followed by further cuts in August.

In 2005 the authorities intend to change their official policy from monetary to inflation targeting. As yet some prerequisites for the latter strategy do not appear to be fully in place. These would include further progress in eliminating fiscal constraints, better price predictability and the reduction of pressures stemming from external imbalances.

5.9 Serbia (without Kosovo)

Serbia's economic recovery from the 1999 war was stronger than Montenegro's, but arguably remained subdued in view of the depth to which the country had been pushed throughout the 1990s by a string of wars, international sanctions and political and economic mismanagement. Genuine reforms and recovery did not materialize until the regime change in late 2000. Like other countries of the region, Serbia suffers from twin deficits, particularly from a high current account shortfall. Some improvements have been registered lately with respect to the fiscal, the banking and the external economic spheres.

Table 11

Serbia: Key Macroeconomic and Monetary Policy Indicators				
	2001	2002	2003 ¹	2004 ²
GDP growth (real, %)	5.8	4.1	2.8	4.2
Republican government budget balance (% of GDP)				
before grants	-1.2	-4.6	-4.0	-3.7
after grants	-0.8	-3.6	-3.0	-2.5
Trade balance (% of GDP)	-26.6	-27.4	-25.5	-24.0
Current account balance (% of GDP)				
before grants	-11.6	-15.6	-12.7	-11.4
after grants	-6.1	-12.1	-10.2	-9.8
Net FDI inflows (% of GDP)	1.4	3.3	6.5	4.0
Gross foreign debt (end-year, % of GDP)	104.0	78.2	71.0	67.0
Gross central bank reserves (excluding gold, end-year, % of GDP)	9.4	15.2	18.7	16.0
Discount rate (end-year, %)	16.4	9.5	9.0	..
Broad money growth				
(M2, nominal, end-year over preceding end-year, %)	106.7	63.0	12.9	10.5
CPI inflation (end-year, %)	40.7	14.8	7.8	8.5
Average exchange rate: YUD/EUR	59.44	60.79	65.26	72.0
Average exchange rate: YUD/USD	66.84	64.19	57.44	..
Unemployment rate (average, % of labor force) ¹	12.9	13.8	14.0	15.5

Source: National statistics, Narodna banka Srbije, wiiw, IMF, OECD, European Commission, EBRD.

¹ Preliminary data or estimates.

² Forecasts.

Tax reforms strengthened fiscal administration, and FDI gathered some momentum in 2003, driven by a few large, successful privatizations. Numerous small firms were also privatized in 2003. The enhancement of the supervisory and regulatory frameworks has improved the financial performance of credit institutions. Restructuring has triggered some, at least transitory, output losses. Given the country's still very high foreign debt and its debt service obligations, which are scheduled to rise in the coming years, and the decade-long neglect of its industries and concomitant huge structural catching-up needs, it appears most important that the above-mentioned momentum in attracting FDI is upheld. Given renewed political instability and the continuing weak rule of law, this will not be easy.

The Serbian monetary authorities have contributed to improving the weak investment climate by breaking with the lax monetary policies and very high

inflation rates of the past. At end-2000 the central bank launched a tightly managed float of the dinar with reference to the Deutsche mark/euro as an external nominal anchor. This has sharply reduced inflationary expectations and engendered growing money demand and a remonetization of the economy. Although inflation has been brought down, the dinar appreciated by about 50% in real-effective terms in the two years until end-2002 (if from an undervalued base).

To better tackle the Serbian economy's external constraints and forestall a further deterioration of its price competitiveness, the central bank chose to somewhat loosen the dinar's float at the beginning of 2003. In the course of the year, the Serbian currency nominally depreciated by about 11% against the euro (and nominally appreciated by around 7% against the U.S. dollar), but the dinar's real effective exchange rate remained broadly unchanged. In the first four months of 2004, the dinar depreciated by 3% against the euro and by 2% in real effective terms. Thus, in striking a balance between inflation and external competitiveness, the monetary authorities have recently assigned somewhat more weight to the external objective.

The exchange rate should now be considered a real rather than a nominal anchor. When the loose union of Serbia and Montenegro replaced the Federal Republic of Yugoslavia in February 2003, Narodna banka Jugoslavije (NBj), which had already lost control of euroized Montenegro in 2000, was renamed Narodna banka Srbije (NBS). The most important monetary policy instruments of the central bank are reserve requirements, open market transactions with NBS bills and the discount rate as the NBS's key interest rate. Given a surplus of liquid assets in the banking system in 2002 and 2003, the monetary authorities' dominant form of open market intervention has been auction sales of its bills. Thereby the expansion of the money supply was reined in. With inflation on the decline, the central bank cut the discount rate several times (from 16.4% at the beginning of 2002 to 8.5% in January 2004).

However, in the first quarter of 2004 downward pressures on the dinar gathered momentum, prompting the central bank to intervene in the foreign exchange market and to raise NBS bill rates in order to support the domestic currency. Although foreign exchange reserves have remained at a relatively high level, the overall external position continues to be fragile. IMF and international donor support remain essential for Serbia. Since early 2004 its central bank has been developing new instruments and institutions, such as a formal interbank money market, repos and reverse repos.

5.10 Turkey

In the last decade the Turkish economy has been characterized by erratic bouts of rapid short-term growth which were followed by sharp recessions. The authorities did not really manage to get inflation under control. Fiscal profligacy was one of the major roots of monetary instability. Recently, there has been a succession of three stabilization programs, the latest of which has been most promising and has already yielded some unexpected results. Overall unstable developments in preceding years were followed by a disinflation program launched in early 1998, which relied on monetary targeting and hiking interest rates while floating the lira. But the program proved inadequate to reduce high fiscal deficits and to proceed with serious structural reforms.

Table 12

Turkey: Key Macroeconomic and Monetary Policy Indicators				
	2001	2002	2003 ¹	2004 ²
GNP growth (real, %)	-7.5	7.9	5.9	6.5
Consolidated budget balance (% of GNP)	-15.8	-14.2	-11.5	-10.0
primary balance	5.5	4.1	6.3	6.5
Trade balance (including shuttle trade, % of GNP)	-3.2	-4.6	-5.8	-6.9
Current account balance (including shuttle trade, % of GNP)	2.4	-0.8	-2.8	-3.9
Net FDI inflows (% of GNP)	1.9	0.5	0.4	0.5
Gross foreign debt (end-year, % of GNP)	79.0	72.1	61.8	53.2
Net public sector debt (end-year, % of GNP)	75.6	68.7	65.9	65.7
Gross central bank reserves (excluding gold, end-year, % of GNP)	13.7	15.4	14.8	12.1
One-year treasury bill rate (average, end-year, %)	71.9	55.7	31.5	22.6
Broad money growth (nominal, end-year over preceding end-year, %)	86.2	29.1	14.2	15.0
CPI inflation (end-year, %)	68.5	29.7	18.4	11.5
End-year exchange rate: TRL/EUR	1,290	1,734	1,763	1,850
End-year exchange rate: TRL/USD	1,450	1,655	1,393	1,520
Unemployment rate (according to labor force survey, %)	8.4	10.3	10.6	10.5

Source: National statistics, Türkiye Cumhuriyet Merkez Bankası, IMF, OECD.

¹ Preliminary data or estimates.

² Forecasts.

At end-1999 the country embarked on a new ambitious strategy relying on a crawling peg exchange rate anchor (with a reference basket consisting of the U.S. dollar and the euro). The program contributed to a strong recovery in 2000. But the vulnerability of the banking sector, weak governance and management practices, sensitivity of foreign confidence to a widening current account deficit and the generally feeble structural environment set the stage for the eruption of a severe banking and then currency crisis in late 2000 and early 2001, which triggered the collapse of the exchange rate-based program.

The lira was floated in February 2001. The exchange rate of the Turkish currency immediately fell by about one-third, and ultimately by almost two-thirds against both the U.S. dollar and the euro before eventually recovering. A new program was elaborated in the course of 2001 and drew IMF support in the fall of the year. The IMF has remained financially committed to Turkey so far (September 2004). The new program has focused more deeply than previous ones on public sector, fiscal and tax reforms and on shaping up the banking sector. Monetary policy reverted to money growth targeting, while a loosely managed float of the lira was maintained.

Some success has already been achieved. The macroeconomic situation has stabilized more quickly than expected. In 2002 the economy almost fully made up for the sharp slump it had suffered in 2001 and continued its brisk expansion in 2003 and 2004. The main driving forces were private sector consumption and investment. Capital formation accelerated in the first half of 2004, which contributed to a depreciating trend of the ULC-based real effective exchange rate over the past three years. Notwithstanding sizeable primary surpluses, budget deficits have traditionally been huge in Turkey, given very high interest and debt service payments (in the order of 15% to 20% of annual GNP in recent years). The latter derive from a legacy of high public indebtedness and high interest rates.

After its crisis-driven peak in 2001, the fiscal imbalance somewhat receded through 2003. But there still remains considerable room for improvement. Despite its expansion in the same year, the current account shortfall has remained in relatively modest bounds. The quite low level of FDI inflows seems

to be more problematic. It may reflect a less than satisfactory pace of privatization of state-owned enterprises as well as too much bureaucracy, an inefficient judicial system and limited hospitality toward foreign investors. While bank rehabilitation and resolution have made considerable progress and supervisory practices have been tightened, further work needs to be done, particularly with respect to bank privatization and legal reform.

One of the main factors that contributed to the swift stabilization and the restoration of confidence was the impressive adjustment of inflation and the reestablishment of trust in the lira. CPI inflation descended to 9% in June 2004 before slightly increasing to 10% in August 2004 (year on year), the latter uptick being triggered by oil price rises. Still, this is the lowest inflation level Turkey has seen since the early 1970s. Inflationary expectations have been reduced, money demand has recovered and remonetization has gained momentum. This was achieved while at the same time large fiscal costs were incurred and total financial means of around USD 30 billion (i.e. 15% of GNP) were earmarked for the banking sector cleanup. The Turkish central bank adhered to restrictive base money targets while intensively engaging in open market operations to absorb excess liquidity injected to stabilize the sector.

After rising sharply in late 2001, interest rates have steadily come down. Given the encouraging inflation environment, the central bank twice cut its intervention rate (overnight deposit rate) by 200 basis points to 22% in March 2004 and then again by the same amount to 20% in September 2004. The decline of interest rates and payments decisively assisted in the decrease of fiscal deficits. But inflation might not have come down as much as it did had the lira not substantially appreciated against the U.S. dollar in the final months of 2003 and in early 2004 (or vice versa, had the U.S. dollar not declined). In the meantime, banking activities have been recovering and the expansion of credit to the private sector accelerated from 10% in December 2002 (year on year) to 45% in December 2003. However, the rapid growth of credit and domestic demand appear to have made monetary targets somewhat more difficult to reach.

Although the central bank plans to move to inflation targeting, for the time being it appears reluctant to initiate such a shift, at least until the government has established a longer track record of fiscal discipline and until a more supportive environment is in place (lower volatility of the exchange rate, further reduction of inflationary expectations, stronger banking system). Still, the central bank is making some technical preparations in the area of inflation research, information and communication.

6 Comparative Overview and Conclusions

In the admittedly short time span observed (2001–04) most of the analyzed countries and territories exhibit some remarkable similarities, at least in the macroeconomic sphere. Notwithstanding weaknesses in data measurement, economic expansion has been relatively strong (GDP growth on average over 4% per annum) in most countries and seems likely to gain further strength in 2004. It has been less dynamic in the Former Yugoslav Republic of Macedonia (FYROM) and Montenegro. On the whole, the Southeastern European economic expansion outstrips that of Central Europe, not to speak of that of the

western part of our continent. Southeastern Europe, of course, has the most catching-up to do. While first relying on export-led growth, economic expansion in many countries of the region has been driven by private demand in recent years. Rising capital formation has contributed to some (initial) retooling or restructuring of industries.

All analyzed countries/territories except Bulgaria, Kosovo, Macedonia and Romania have high budget deficits (over 3% of GDP, before grants). Although it has improved, Turkey's budget remains most deeply in the red. Turkey's current account shortfall, however, has been relatively modest – in contrast to substantial external imbalances in all other countries. Albania, Bosnia and Herzegovina, Kosovo, Macedonia, Montenegro, Serbia and Turkey are still dependent on foreign grants and financial assistance to cover or at least reduce budget and/or current account gaps. But this support is on a declining trend. On the whole, most countries remain saddled with twin deficits.

FDI is weak in most parts of the region, save Albania, Bulgaria, Croatia and Romania, where it covers more than half of current account shortfalls. It is surprisingly weak in Turkey. Gross foreign indebtedness is not generally high in Southeastern Europe and seems to be declining (as a percentage of GDP) in most countries. The most striking exception is Croatia, where foreign debt is high and rising. In Serbia it is high and subject to restructuring negotiations; in Bulgaria and Turkey it is high, but falling. Except in Romania, joblessness is in double digits all over region. It appears to be particularly high (above 30%) in Bosnia and Herzegovina, Kosovo, and Macedonia. On top of that, a turnaround, unfortunately, does not yet appear to be in sight in most countries. Serious restructuring still has a considerable way to go before a breakthrough may be reached on the labor market.

In contrast, inflation has been on a falling trend across the region, although a slight uptick is being registered in some countries for 2004. In 2003 single digits were reached everywhere, except in Romania and Turkey. Falling inflation appears to be linked to an overall reduction or slowdown of money growth, which enabled interest rates to be cut or to decline. Money supply has been controlled by foreign exchange and open market interventions, interest rate changes and/or by adjusting reserve requirements. In a number of cases, inflation performance can be explained by the stabilizing influence of the exchange rate as an external nominal anchor (whether referring to a currency board, a peg or a tightly managed float). Indeed, all countries with hard pegs have witnessed single digits lately. In Serbia, the loosening of the tightly managed float in 2003 contributed to interrupting the downward tendency of dinar inflation in 2004.

On the other hand, Albania, a country with a loosely managed float, has also boasted low price increases. Turkey as well has been successful in bringing down high inflation in a short time with a similar regime. Therefore, the confidence- and stability-enhancing effect of hard pegs appears to have been confirmed in most analyzed countries, but this does not exclude other monetary strategies (notably money growth targeting and a loose float) applied in a minority of countries from also being effective. Overall, monetary and economic policy credibility and perseverance may be the key to success here. Some countries are planning to move to formal inflation targeting soon; however, this requires

a reasonably stable macroeconomic environment and a strong institutional framework.

Owing to the progress and track record on the route to price stability, confidence in domestic currencies and monetary policies – despite occasional setbacks – has been on the rise and is reflected in expanding monetization in most economies, which facilitates monetary policy. At the same time, unofficial euroization and the attachment of the population to foreign currencies, particularly the euro, remains high and is boosted by the increasing density of trade and economic relations of the region with the euro area and the EU. Foreign investment, notably from the euro area and EU countries, has contributed to structural change and modernizing Southeastern European banking sectors and financial intermediation, although from quite humble points of departure.

Banking activities have also benefited from the improving macroeconomic environment and from the euro changeover of 2001–02, which provided a sizeable net injection of liquidity into the sector and thus reflected increased confidence of the public in credit institutions. Given a hitherto untapped catching-up potential in investment and consumption, the sharp rise in deposits and the improvement of the overall situation contributed to credit booms in all countries of the region, without exception, even if it is appropriate to speak of “mini-booms” in some cases. Reflecting the prudence of monetary authorities, the booms were often accompanied by steps to enhance banking supervision. Credit expansion pushed up imports and put pressure on current accounts. Central banks reacted with monetary tightening, which was in most cases duly followed by a slowdown of credit growth.

Let us finally attempt a brief look into the future: Barring any major political setback, it is highly probable that the bonds of economic and institutional integration between the Southeastern European countries and the European Union will further strengthen. Romania and Bulgaria are already accession countries, Croatia’s application has been accepted and accession negotiations are to commence in early 2005, Macedonia’s application is being processed and Turkey is a candidate. Stabilisation and Association Agreements (SAA) have been signed with Croatia and Macedonia. Such a treaty is currently under negotiation with Albania, and Feasibility Studies on the opening of SAA negotiations with Bosnia and Herzegovina and with Serbia and Montenegro have been or are being drawn up by the European Commission. All countries have expressed their willingness to join the EU sooner or later. This certainly constitutes a major, if not the principal, external political anchor or lever for reforms in the region.

Upon joining the EU, new Member States commit themselves to adopting the euro after all the preconditions, in particular the Maastricht criteria, have been met. There are a number of exchange rate and monetary policy strategies that are compatible with the “Maastricht route.” Even currency boards, judged on a case-by-case basis, may be compatible (see the Estonian and Bulgarian examples). But formal or de facto euroizations are considered inconsistent with the Maastricht Treaty. What would happen to the monetary regimes in Kosovo and Montenegro if these territories joined the European Union and were still euroized remains to be seen and decided. Taking into account the very small economic size of both territories and the fact that euroization took place in

exceptional historical situations (aftermath of the Kosovo war, conflict with the Milosevic regime and its inflationary policies), perhaps pragmatic solutions could be found – without setting a precedent.

Cutoff date: September 30, 2004.

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Exchange Rate Developments and Fundamentals in Four EU Accession and Candidate Countries: Bulgaria, Croatia, Romania and Turkey

This paper deals with exchange rate challenges in the four potential EU Member States Bulgaria, Croatia, Romania and Turkey. For the two countries with freely floating currencies, Romania and Turkey, we evaluate possible exchange rate misalignments based on a monetary model of exchange rate determination. In the case of Bulgaria and Croatia, two countries with currency board and narrow-band peg arrangements against the euro, we discuss possible exit strategies. We argue that a continuation of their current exchange rate regimes is likely to represent an optimal strategy for these countries in the run-up to both EU membership and the eventual adoption of the euro.

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1 Introduction

On May 1, 2004, ten countries became new Member States of the European Union, thus raising the EU's population by 20%. After this successful enlargement, a major objective of European integration policies will be the further enlargement of the EU. In principle, there is a relatively wide range of countries that may potentially have a chance of joining the EU in the remote future, but there are four countries that are already one step ahead, as they have already submitted their membership applications: Bulgaria, Croatia, Romania and Turkey. Bulgaria and Romania have already started accession negotiations with 2007 being a prospective entry date, and therefore have the status of accession countries. Negotiations with Bulgaria were preliminarily closed on June 15, 2004. Croatia and Turkey by contrast have so far only submitted their application for EU membership, and they will start accession negotiations in March and October 2005, respectively.

In this paper we will focus on exchange rate issues in these four accession and candidate countries. In addition to the monetary and fiscal policy challenges on the way to EU membership, exchange rate policies and the driving forces of exchange rate movements are of special interest for these countries. They all have to decide on the optimal exchange rate strategy in the run-up to EU membership with the aim of paving the way toward a later adoption of the euro.

Countries preparing for EU membership may in principle choose any exchange rate regime suitable for their current economic policy mix. There are, however, several good reasons why such countries should already adopt an exchange rate policy which is oriented toward the euro during the process of EU accession. First, exchange rate stability supports economic relations with the EU (see Rose, 2000), which is the most important trading partner of and foreign investor in all potential EU Member States. Second, a fixed exchange rate system represents a direct commitment to stabilizing the economy and establishes closer links with the EU.

Finally, all new Member States are supposed to treat exchange rate policies as a matter of common interest from the first day of EU membership on and to eventually adopt the euro after the fulfillment of the Maastricht convergence criteria.

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This paper aims at assessing the suitability of exchange rate strategies and identifying possible currency misalignments since the beginning of the 1990s. An exchange rate is regarded as misaligned if its realized values continually deviate from its equilibrium trend. Strong and persistent exchange rate misalignment may be a hindering factor in the period prior to and during exchange rate mechanism II (ERM II) participation and bears the risk of speculative attacks. Because of the substantial differences in the economic and historical backgrounds of selected countries, we will follow two different approaches when assessing the appropriateness of exchange rate policies. For the countries with more or less freely floating currencies (Romania and Turkey), we will follow the monetary model of the exchange rate to estimate the long-run elasticity of the exchange rate with respect to changes in the fundamentals. Based on these parameter estimates, we will calculate the implied equilibrium exchange rate (defined as the long-run relationship found in the data between the nominal exchange rate and macroeconomic fundamentals) and the corresponding exchange rate misalignments.⁴

For the countries which had fixed or narrow-band exchange rate pegs (currency boards⁵) during most of the 1990s (Bulgaria and Croatia), the monetary model of the exchange rate is inappropriate. However, the countries in this group may consider whether they should introduce a higher flexibility of exchange rates for the following reasons. First, relatively flexible exchange rate regimes may be more appropriate for these countries after financial stabilization has been achieved. Second, early (voluntary) exits from fully fixed exchange rates are generally recommended. Ghosh et al. (2002) and Frankel (2003) argue that fixed exchange rate regimes have been subject to increased vulnerability under the increased capital mobility since the beginning of the 1990s. As a result, a relaxation of exchange rate policies may be part of capital account liberalization or a reaction to an increased integration of these two countries into international financial markets. Finally, voluntary exits from currency boards or comparable fixed exchange rates may prevent possible exchange rate misalignments and their adverse effects on competitiveness.

Therefore, we will follow an indirect approach in order to evaluate whether the currency board in Bulgaria and the unofficial narrow-band peg in Croatia are appropriate monetary policy arrangements. Using a panel including six Central and Eastern European countries (the Czech Republic, Hungary, Poland, Romania, Slovenia, and Slovakia; CEECs) and Turkey, we will estimate the monetary model of the exchange rate. These panel parameter estimates will then be used to study the dynamics of “hypothetical” equilibrium exchange rates against the euro as derived from the macroeconomic fundamentals in Bulgaria and Croatia for the peg period. Under the assumption that the exchange rate was in equilibrium when the peg was introduced, we will be able to assess the relative undervaluation or overvaluation that has taken place since the exchange rate regime changed.

⁴ For a literature survey on equilibrium exchange rate estimation with a focus on the new EU Member States, see e.g. Égert (2003).

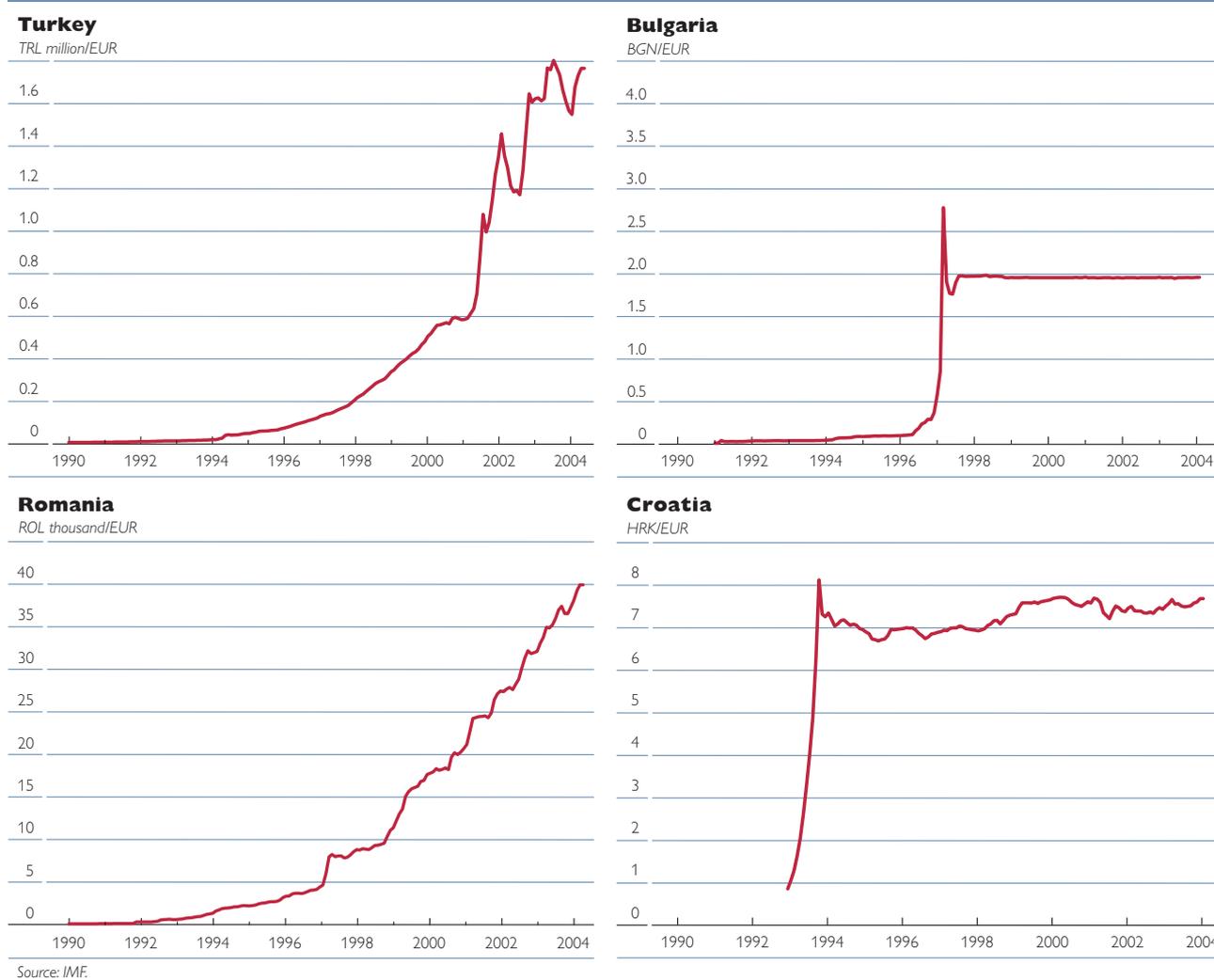
⁵ Under a currency board, a fixed conversion rate is set between the local and a foreign currency, and the domestic monetary base is fully backed by low-risk assets denominated in the foreign currency. The currency board has no right to issue central bank money against any domestic assets.

2 Bulgaria, Croatia, Romania and Turkey: Economic Policy and Exchange Rate Strategies

The following section reviews the major economic and exchange rate developments of the four countries discussed. While the focus is on exchange rate developments, we also provide a short summary of integration policy steps to give a comprehensive overview of the overall situation. Chart 1 shows exchange rate developments of the national currencies against the euro since 1990. The order of the discussed countries is chronological according to their EU membership application dates.

Chart 1

Exchange Rate Developments in Turkey, Bulgaria, Romania and Croatia, 1990 to 2003



2.1 Turkey

Turkey's efforts to move closer to the European Union have a long history. In 1963, Turkey and the European Economic Community (EEC) signed an Association Agreement with the prospect of future full membership. Following the military putsch in Turkey in 1980, relations were broken off and only reestablished after the Turkish army had retreated. In 1987, Turkey submitted its

application for European Community membership, which was rejected temporarily in 1990. Nevertheless, Turkey continued its rapprochement policy. In 1996, Turkey and the EU formed a customs union and at the 1999 European Council meeting in Helsinki, Turkey was officially recognized as a candidate for EU membership. The country has made serious progress with the fulfillment of the political criteria of Copenhagen, but the sustainability of the process remains a challenge. On December 17, 2004, the European Council decided that the EU will start the so-called “open-end” negotiations with Turkey in October 2005.

Turkey has a tradition in exchange rate pegs. Since the 1930s, it has experienced pegs to the pound sterling, the French franc, the U.S. dollar, the Deutsche mark and the euro. During most of the 1980s and 1990s, the Turkish exchange rate system was a managed float. Turkey introduced convertibility of the lira in early 1990. In retrospect, this step can be regarded as premature, as it was not preceded by the necessary structural reforms and adjustments in the macrofundamentals. The following years saw a rapid increase in public debt and an extreme short-term orientation of debt management, widening trade deficits, high real interest rates and high inflation. The increased degree of dollarization was accompanied by real exchange rate appreciation. This unsustainable policy mix led to a foreign exchange crisis in early 1994, which entailed a sharp exchange rate correction. Inflation subsequently reached levels of more than 120%.

A first stabilization program in 1994, which included fiscal adjustment, monetary tightening and structural reforms, brought limited success. A second disinflation program adopted at end-1999 aimed at reducing inflation to below 10% by end-2002. It relied on monetary control and a depreciation of the currency according to a preannounced schedule (exchange rate basket: USD 1 + EUR 0.77). This formal crawling peg regime initially had no fluctuation margins, although the introduction of bands was originally intended to take effect as of February 2001. Against the background of unsustainable short-term indebtedness, widening current account deficits and serious weaknesses in the banking sector, the program proved to be unsustainable, as it pushed the economy into recession and led to the abandonment of the pegged exchange rate system in February 2001. The following months brought a sharp depreciation of the currency, with the real effective exchange rate dropping by 20%.

Since then, macroeconomic stabilization and fiscal tightening in Turkey have progressed steadily. The country has experienced stronger growth than before the crisis, with growth rates close to or above potential (5%). In May 2004, Turkey saw single-digit inflation rates for the first time since 1972, which makes it appear realistic that the country could reach its goal of an annual inflation rate of 12% in 2004. Macroeconomic progress and political stability have led to a substantial reduction of currency substitution by the U.S. dollar and the euro, which has brought about a gradual appreciation of the lira. The success of this last stabilization program stems from the broader base of Turkey’s structural reforms, which included a reform of the banking sector. Despite this remarkable progress, the serious imbalances in the economy still discourage foreign direct investment (FDI).

2.2 Bulgaria and Romania

In Bulgaria and Romania the main steps toward European integration ran in parallel. Romania was the first country of Central and Eastern Europe to have official relations with the European Community, having already entered into first agreements in the 1970s. The Europe Agreement⁶ with Romania entered into force in February 1995. Romania submitted its application for EU membership on June 22, 1995. Bulgaria presented its application for EU membership on December 14, 1995. Accession negotiations with both countries started on February 15, 2000. On June 15, 2004, the accession negotiations with Bulgaria were preliminarily closed. The year 2007 has been set as the prospective entry date. At the same time the EU has left open the option of a one-year delay in case Bulgaria fails to fulfill its commitments.

More than other transition economies, Bulgaria and Romania have been affected by the decade-long Yugoslav crisis, which obstructed transport links and trade and impeded FDI inflows. In both countries the particularly difficult initial conditions for transition were reinforced by inconsistent macroeconomic policies, political instability and sluggish structural reforms. This accumulation of problems led to banking crises in both countries in the second half of the 1990s.⁷

Bulgaria suffered at least three financial crises during the 1990s. In 1996 the strong depreciation of the lev led prices to explode and was followed by mass bank runs. The Bulgarian economy dropped into a downturn. Initial measures failed to restore confidence, the exchange rate collapsed and led to full-fledged hyperinflation in the first two months of 1997. GDP dropped by almost 10% in 1996 and by more than 5% in 1997. The large-scale depreciation of the exchange rate led to an irreversible process of currency substitution, which further limited the Bulgarian central bank's ability to control inflation.

In 1997 a new government was formed that committed to structural reform and responsible fiscal planning. On July 1, 1997, Bulgaria moved from a free- or managed-float system to a currency board arrangement (first based on the Deutsche mark, then on the euro). Confidence was immediately restored after the announcement of the regime shift, even before its implementation. Inflation quickly fell and reached single-digit levels by mid-1997. Since this major restructuring, Bulgaria has experienced macroeconomic stability and strong growth despite adverse external shocks (Russian crisis, global financial crisis, Kosovo conflict). Average growth rates since 2000 have reached almost 5%. Despite the currency board arrangement, inflation remained high, with average inflation coming to more than 6% since 2000. This appears to be related to external factors such as oil prices, the U.S. dollar exchange rate or the adjustment of administered prices and does not seem to signal a serious competitiveness problem, given that unit labor cost developments have remained moderate. The most pressing problem is the continuously high unemployment rate of around 15%, which is largely attributable to restructuring-related labor shedding.

⁶ During the 1990s, the European Community and its Member States progressively concluded Association Agreements, the so-called "Europe Agreements," with ten countries of Central and Eastern Europe. The Europe Agreements provided the legal basis for bilateral relations between these countries and the EU.

⁷ For a more detailed analysis of the banking crises in Bulgaria and Romania, see Barisitz, 2001.

Romania's banking crisis lasted longer than Bulgaria's, but was less severe. The new government that came to power in 1996 launched a structural reform program, which included the tightening of monetary policy, the liberalization of the official exchange rate and the acceleration of privatizations. These measures actually revealed problems that had previously been alleviated by an accommodating monetary policy. Real GDP fell by around 5% in 1996 and 1997, and inflation reached 150% in 1997. In mid-1999, Romania faced major difficulties with the repayment of foreign debt. A partial default could be avoided, however, and the country's financial situation improved. After three years of deep recession, Romania recovered in 2000, mainly because of the strong demand in EU export markets. Since 2001, GDP growth has amounted to around 5%, primarily driven by domestic demand. Inflation remains at high two-digit levels, which is attributable to several special factors, but also to the depreciation of the domestic currency and to strong wage growth, which in turn is partly related to poor fiscal discipline. The annual inflation targets have mostly been missed in recent years. For the coming years, the Romanian government has announced ambitious privatization and restructuring plans as well as a continuation of fiscal consolidation and disinflation. Romania's major weaknesses are still widespread corruption and red tape, which discourage foreign direct investment.

Although a foreign exchange market was already created in 1992, administrative controls over the official exchange rate were maintained until the end of 1996. In January 1997, the three main exchange rates were unified. Since then Romania's leu has officially remained a freely floating currency, although central bank interventions exceed what is considered normal in a managed-float regime. The exchange rate regime since early 2001 has consequently been classified as a *de facto* crawling bandwith a bandwidth of $\pm 5\%$ in Reinhart and Rogoff (2004).⁸

2.3 Croatia

Croatia declared its independence from Yugoslavia in 1991, but it took four years before the majority of the occupying Serb troops had left the country. Croatia signed a Stabilisation and Association Agreement with the European Union in October 2001. On February 21, 2003, Croatia applied for EU membership. On June 18, 2004, the European Council officially granted Croatia candidate status, thereby opening the way for accession negotiations in March 2005. Croatia hopes to catch up with Bulgaria and Romania and to enter the European Union in 2007, but this may prove difficult to achieve.

The situation in Croatia is usually cited as a classical example of the fear of floating.⁹

The Croatian economy is highly euroized with widespread asset substitution and an indexation of prices to the exchange rate. The high degree of euroization had its origin in the war period of the early 1990s, when foreign currencies were

⁸ The new classification of exchange rate arrangements in Reinhart and Rogoff (2004, extended working paper version with country-specific information 2002) makes considerable adjustments to the IMF's official classification by focusing on *de facto* exchange rate policies instead of official announcements.

⁹ The term "fear of floating" was coined by Calvo and Reinhart (2002) for economies that are confronted with a restricted choice set of exchange rate strategies because of their high degree of economic integration.

also used as a means of payment. While Croatia's economy is considered an intermediate case in terms of openness, the average ratio of imports to GDP reached no more than 53% between 1991 and 2000, and 73% of Croatia's trade in 2003 was carried out in euro.

This high degree of euroization implies that Croatia's economic policy strongly focuses on exchange rate stability. When exchange rate movements directly feed into the domestic price level and the exchange rate therefore does not function as a shock absorber, the benefits of a freely floating currency are severely limited. Since the end of the war of the early 1990s, monetary policy has thus been characterized by a very low tolerance of exchange rate movements (from October 1994 to January 1, 1999, vis-à-vis the Deutsche mark, since then vis-à-vis the euro) and a pronounced activism of the Croatian central bank on foreign currency markets. This strategy initially proved very successful in ending hyperinflation and in stabilizing the economy in the aftermath of the Croatian war, but the exchange rate anchor remained in place even after successful stabilization in the mid-1990s. The new classification presented in Reinhart and Rogoff (2004) characterizes Croatia's exchange rate policy as a de facto band of the kuna around the Deutsche mark and the euro with a bandwidth of only $\pm 2\%$, respectively. This de facto fixed peg stands in contrast to the official managed-float classification.

3 Fundamentals and the Exchange Rate: A Simple Monetary Model of Exchange Rate Determination

The institutional settings of the exchange rate market (with a view to exchange rate regimes) differ strongly for the countries under observation. In order to empirically assess the importance of fundamentals in exchange rate developments and consequently to evaluate possible exchange rate misalignments, we will apply two different methodologies, depending on whether or not the country enjoyed sufficient flexibility in the exchange rate regime to be modeled using a classical flexible-price monetary model.

For Romania and Turkey we will use a fully specified monetary model with purchasing power parity (PPP) in tradable prices in order to assess the exchange rate's long-run elasticity vis-à-vis the fundamentals. This will allow us to evaluate possible exchange rate misalignments in these countries. The low exchange rate volatility in the fixed-peg or narrow-band settings in Bulgaria and Croatia, however, does not allow for an explicit estimation of the long-run elasticities of the exchange rate vis-à-vis the fundamentals. We will therefore assume that the parameter estimates drawn from a panel of seven former and future accession countries based on a similar monetary model also hold for Bulgaria and Croatia. This indirect approach will allow us to simulate exchange rate movements in the absence of fixed exchange rate regimes and to evaluate possible misalignments of the currencies.

We have to keep in mind that our indirect method relies on strong assumptions concerning the homogeneity of the panel's parameter estimates for Bulgaria and Croatia. There is no doubt that projections with estimates obtained from economies under a flexible exchange rate regime, and thus with exchange rate policies that differ from those being studied, may not be directly applicable to countries with a fixed exchange rate regime. It should be noted, however,

that we do not aim at interpreting the projected trajectories in a purely quantitative manner. The “hypothetical” exchange rate developments obtained from the panel estimates when using Bulgarian and Croatian data will be interpreted as overall over- or undervaluation pressures and potential competitiveness problems, and not directly as quantifications of misalignments. However, this approach may become more relevant if currency board countries decide to adopt more flexible exchange rate regimes. In this sense we can use our estimations to evaluate the risks associated with a regime shift. Actually, several CEECs included in our panel moved from relatively fixed exchange rate regimes toward managed or free-floating regimes during economic transition. This feature of our panel as well as similar long-run targets of current monetary policies (that is, preparing for the future adoption of the euro) provide some economic rationale for this method.

The general model used in all four cases is a simple monetary model of exchange rate determination, where PPP holds exclusively in tradable prices. This assumption, proposed by Clements and Frenkel (1980), implies that the Balassa-Samuelson effect may play a role in the determination of nominal exchange rates. It has recently been used for analyzing exchange rates in transition countries by Crespo-Cuaresma et al. (2004). We apply this model to the countries under review (denoted as domestic economies) and the euro area (representing the foreign economy). Following the literature, we assume log-linear money demand functions in the domestic and foreign economy, with similar income and interest rate elasticities,

$$m_t - p_t = \alpha y_t - \beta i_t, \quad (1)$$

$$m_t^* - p_t^* = \alpha y_t^* - \beta i_t^*, \quad (2)$$

where m_t denotes money demand, p_t denotes the price level, y_t denotes output (all in logs) and i_t is the interest rate in the domestic economy. Variables with asterisks refer to the foreign economy. Assume that PPP in tradable goods approximately holds, so that

$$e_t = (p_t^T - p_t^{T*}) + \varepsilon_t, \quad (3)$$

where e_t is the nominal exchange rate (in logs), p_t^T is the (log) price of tradable goods and ε_t is an *iid* error. Assume further that the overall price levels, p_t and p_t^* , are weighted averages of the price of traded (p_t^T) and nontraded goods (p_t^{NT}) with equal weights (θ and $1-\theta$) across countries,

$$p_t = \theta p_t^T + (1-\theta)p_t^{NT}, \quad (4)$$

$$p_t^* = \theta p_t^{T*} + (1-\theta)p_t^{NT*}. \quad (5)$$

Using (1), (2), (3), (4) and (5), we arrive at the following expression for the nominal exchange rate,

$$e_t = \frac{1}{\theta}(m_t - m_t^*) - \frac{\alpha}{\theta}(y_t - y_t^*) + \frac{\beta}{\theta}(i_t - i_t^*) - \frac{(1-\theta)}{\theta}(p_t^{NT} - p_t^{NT*}) + \varepsilon_t. \quad (6)$$

If the uncovered interest rate parity (UIP) is assumed to hold, then

$$i_t - i_t^* = \mathbf{E}_t(e_{t+1}) - e_t, \quad (7)$$

where $\mathbf{E}_t(\cdot)$ refers to the conditional expectation operator using information up to period t . Using (7) in (6) and assuming rational expectations, recursive

forward substitution results in

$$e_t = \frac{1}{\theta}(m_t - m_t^*) - \frac{\alpha}{\theta}(y_t - y_t^*) - \frac{(1 - \theta)}{\theta}(p_t^{NT} - p_t^{NT*}) + \frac{1}{1 + \beta/\theta} \varepsilon_t, \quad (8)$$

which will be our baseline specification for the estimation of the long-run relationship between the exchange rate and the fundamentals implied by the monetary model. In the empirical implementation we will not impose the parameter restrictions implied by (8) explicitly, but instead estimate the unconstrained model

$$e_t = \gamma_0 + \gamma_1(m_t - m_t^*) + \gamma_2(y_t - y_t^*) + \gamma_3(p_t^{NT} - p_t^{NT*}) + \varepsilon_t. \quad (9)$$

This parametrization allows for point estimates of the structural parameter, which corresponds to the weight of tradable goods in the consumer price index (CPI). In such a case PPP in tradable prices does not hold continuously, but the adjustment to PPP is slow and partial. The parameter estimates will then be used to estimate the exchange rate that corresponds to the development of money supply, real growth of industrial production and price developments. This estimated exchange rate trend can then be confronted with realized movements to detect periods of under- or overvaluation of the currency. Longer intervals of sustained deviations could indicate serious external imbalances and a potential loss of international competitiveness.

4 Estimation of the Monetary Model: The Case of Romania and Turkey

The data used to estimate the model described above for the Romanian leu and the Turkish lira against the euro stem from the IMF's International Financial Statistics, the Vienna Institute for International Economic Studies' Database on Eastern Europe, and Eurostat.¹⁰ The production variable used is the industrial production index, the monetary aggregate is M2 and the variable reflecting the price of non-tradables will be proxied by the ratio of the CPI to the producer price index (PPI).¹¹ The variables used in model (9) present nonstationary features, thus (9) can be interpreted as the long-run equilibrium acting as an attractor in the $(e_t, (m_t - m_t^*), (y_t - y_t^*), (p_t^{NT} - p_t^{NT*}))$ plane. This implies that cointegration methods will be used to estimate the underlying parameters in the specification proposed. The first two columns of table 1 present the parameter estimates for Romania and Turkey. As a standard least squares estimator does not correct for the potential serial correlation of the error term and endogeneity of the regressors, Stock and Watson (1993) propose to correct the estimates of the long-run parameters by applying dynamic OLS (DOLS). This approach augments the OLS specification by adding leads and lags of the first differences of the regressors.

The estimates of the long-run elasticities have the correct signs and are highly significant for both countries. The estimated parameters corresponding to money supply differentials are in line with those reported in the empirical literature on the monetary model of exchange rate determination for both cases. While the estimate of γ_1 for Turkey is not significantly different from

¹⁰ The close trade links of these countries with the euro area suggest that exchange rate movements against the euro are of higher relevance for exchange rate considerations than the fluctuations against other currencies, in particular the U.S. dollar.

¹¹ See Égert and Lommatzsch (2004) and Crespo-Cuaresma et al. (2004) for a discussion on the use of the CPI-to-PPI ratio as a proxy of the Balassa-Samuelson effect in Central and Eastern European economies.

Table 1

Generalized Monetary Model Estimates			
of Local Currencies against the Euro			
	Romania	Turkey	CEE Panel
γ_1	0.854 * (0.011)	0.996 * (0.014)	0.887 * (0.010)
γ_2	-1.299 * (0.125)	-0.88 * (0.189)	-0.352 * (0.043)
γ_3	-0.980 * (0.191) -4.919 *	-2.033 * (0.309) -4.488 *	-1.598 * (0.093) -12.249 * a)

Source: Authors' calculations.

Notes: Standard errors in parentheses. The CEE panel includes the Czech Republic, Hungary, Poland, Romania, Slovakia, Slovenia and Turkey.

* indicates significance at the 1% level, a) indicates panel ADF test.

one, the estimate for Romania is relatively lower, indicating some degree of sluggishness in the adjustment to PPP. The estimates of the long-run income elasticities implied by the exchange rate model for the ROL/EUR exchange rate are in the range of values obtained using pooled estimates reported in Crespo-Cuaresma et al. (2004) for a panel of six CEECs including Romania, with a relatively high elasticity for industrial production and a relatively low elasticity to price developments as compared to the panel results and to the results for Turkey. The point estimate of the output elasticity, γ_2 , is lower in absolute value for Turkey than for Romania. In turn, the estimate of γ_3 for Turkey is higher in absolute value than that obtained for Romania and the estimates reported in Crespo-Cuaresma et al. (2004) for the CEECs, indicating a higher sensitivity of the exchange rate to relative price developments in Turkey.

Using the cointegration relationships implied by the estimates in table 1, we constructed deviations from the exchange rate against the euro implied by fundamentals for Romania and Turkey. The log deviations are plotted in charts 2 and 3. For both currencies, the volatility of the deviations around the exchange rate implied by fundamentals is visibly higher in the first part of the sample. For Romania, less volatile deviations are observable as of 1999, while in Turkey, deviations stabilize already around the beginning of 1998. The deviations from the estimated equilibrium in Romania tend to show an overall undervaluation of the currency for the period reviewed, except for the second half of 1998. The Turkish lira was mostly undervalued until the beginning of 1998. Since 1998 the lira has remained closer to equilibrium than in previous periods, with clear undervaluation pressures at the beginning of 1998 (reflecting the negative effects of the Russian crisis) and in the aftermath of the currency crisis and the abandonment of the disinflation program in 2001. The most recent estimates do not seem to indicate persistent exchange rate over- or undervaluations.¹²

¹² For a recent assessment of exchange rate misalignments of the Turkish lira against the U.S. dollar, see e.g. Ozlale and Yeldan (2004).

Chart 2

Romania: Deviations of the Actual Exchange Rate from the Estimated Exchange Rate, January 1993 to July 2002



Source: Authors' calculations.

Chart 3

Turkey: Deviations of the Actual Exchange Rate from the Estimated Exchange Rate, January 1993 to October 2003



Source: Authors' calculations.

Notes: The area between the vertical lines indicates the period which a crawling peg regime was applied.

5 Fundamentals and Fixed Exchange Rates: The Case of Bulgaria and Croatia

Under the policy of fully fixed exchange rates (currency boards or comparably credible fixed exchange rate regimes), money supply is endogenous. In the benchmark case of a currency board, the monetary base is fully covered by foreign exchange reserves. Furthermore, the change in money supply is determined by international transactions (trade and capital flows). This ensures the sustainability of currency boards (Ghosh et al., 2000), because capital flights automatically reduce the monetary base, which strengthens the exchange rate.

Under currency boards and comparably fixed exchange rate regimes (de facto currency boards), demand for domestic money directly determines money supply, while the exchange rate remains exogenous. Correspondingly, the monetary approach to the exchange rate is not appropriate in this case. However, fundamentals still have a crucial importance for those countries. On the one hand, exchange rate-based stabilization may trigger rapid consumption growth

as a result of lower interest rates and banking sector improvement. This economic environment makes it more difficult for a country that implements a currency board to reach the levels of inflation prevailing in the anchor economy (i.e. the euro area in the case of Bulgaria and Croatia). As a result, the exchange rate may deviate increasingly from its hypothetical fundamental levels prevailing under a free-floating regime. Thus, these countries may face growing competitiveness problems, even though output growth and capital inflows ensure the sustainability of policies. Possibly, the deterioration of competitiveness is reversed in later stages of reform after structural reform comes fully into effect.

On the other hand, fixed exchange rate regimes (but less so credible currency boards) are generally seen as more vulnerable to capital flights or sudden stops of capital inflows (see Milesi-Ferretti and Razin, 1999). Ghosh et al. (2002) recommend voluntary early exits from fixed exchange rate regimes after having achieved the aims of financial stabilization, sufficient disinflation and credible national monetary policy. However, optimal timing is crucial for the success of this strategy. A country has to preannounce its monetary strategy and prove the credibility of its monetary policy during this process. In general, this means that exchange rate policy should avoid exchange rate misalignments before exchange rate liberalization.

Bulgaria and, to a lesser degree, also Croatia face specific monetary policy challenges. Both countries have the prospect of becoming EU Member States relatively fast and of eventually adopting the euro. Therefore, they may circumvent the problem of how to choose the optimal timing for their exit from fixed exchange rate regimes by defining a long-term strategy toward euro adoption. As part of this policy, countries can avoid exchange rate flexibilization. For example, Estonia and Lithuania have opted for continuing their policy of fixed exchange rates with zero fluctuation bands in ERM II.¹³ Insofar as the macroeconomic policy mix ensures financial sustainability, possible exchange rate misalignments (overvaluation) are to some degree less important in this very specific case, because the Balassa-Samuelson effect results in a continuous appreciation of the exchange rate.

In addition to the previous arguments, we have to keep in mind that both Bulgaria and Croatia show a history of low (zero or nearly zero) exchange rate volatility. In the case of Croatia, the de facto peg of the Croatian kuna to the euro with a bandwidth of about $\pm 2\%$ is motivated by the high degree of dollarization of the Croatian economy. Bulgaria, by contrast, was unsuccessful with inflation stabilization until 1997, so that the implementation of a currency board arrangement was basically the only way to quickly stabilize inflation and inflation expectations. In both cases, exchange rate movements are not flexible enough to directly estimate a monetary model.

Our approach is therefore to estimate the monetary model derived in section 3 for a panel of seven former and current candidate countries (the Czech Republic, Hungary, Poland, Romania, Slovakia, Slovenia and Turkey).¹⁴ The

¹³ After a careful assessment of appropriateness and sustainability of the currency boards in Estonia and Lithuania, both countries joined ERM II on June 27, 2004, with their existing currency board arrangements based on the euro in place. This move imposes unilateral commitments on these countries, while entailing no obligations for the ECB.

¹⁴ Alternatively, Égert (2004) estimates various models of the real exchange rates in Bulgaria and Romania, which are not directly comparable to our approach.

panel specification is similar to equation (9),

$$e_{it} = \gamma_0 + \gamma_1(m_{it} - m_t^*) + \gamma_2(y_{it} - y_t^*) + \gamma_3(p_{it}^{NT} - p_t^{NT*}) + \varepsilon_{it}, \quad (10)$$

where the variables have the same notation as above, but the error term ε_{it} is assumed to be composed of a fixed country effect and a white noise error. Panel unit root tests carried out for the variables of the model provide evidence that the specification given by (10) should be estimated using panel cointegration methods. We then use the estimated coefficient to simulate a relative “hypothetical” path of the equilibrium exchange rate against the euro (driven by relative developments in macroeconomic fundamentals in these countries as compared to the euro area) for Bulgaria and Croatia during the peg period.

The last column of table 1 presents the estimates for a balanced panel between January 1994 and May 2003. Similarly to the previous section, we estimate the monetary model of exchange rates by DOLS, which is also recommended by Kao and Chiang (2000). We also report the test statistics for the ADF test for panel cointegration proposed by Kao (1999). The results of panel estimations are comparable to the previous results for Romania and Turkey. The panel estimates, especially the estimated coefficient for the industrial production differential, are relatively close to generally reported results (see Groen 1998 and 2002).

In order to create the “hypothetical” path of the fundamentals-driven exchange rate, we will use the parameter estimates obtained by DOLS for the CEE panel and the corresponding fundamentals for Bulgaria and Croatia.¹⁵ Given that the parameter estimates are obtained using a panel with fixed effects, in which the countries of interest were not included, a decision has to be taken as to how to normalize the level of the implied equilibrium exchange rate. In the case of Bulgaria this normalization is set by assuming that the exchange rate level corresponded to the value implied by the fundamentals, on average, in the second half of 1998. For Croatia we will assume that the exchange rate corresponded to the one implied by the fundamentals in October 1994, when the peg was introduced. Charts 4 and 5 present the evolution of the actual exchange rate and the “hypothetical” fundamentals-driven exchange rate for the two economies. Fixed effects implied by this procedure are of appropriate size according to the criteria proposed by Maeso-Fernandez et al. (2004). In particular, fixed effects derived for Bulgaria are slightly higher than fixed effects estimated in the original sample, while they are much more similar to those in other CEECs in the case of Croatia. This observation corresponds broadly to the similarities between the analyzed countries. Thus, the fixed effects used here for Bulgaria and Croatia effectively adjust for the structural characteristics of the individual countries.

¹⁵ When interpreting the results, we should keep in mind that exchange rate misalignments estimated on the basis of panel data tend to show greater volatility than those directly based on the individual time series (see e.g. Égert and Halpern, 2004).

Chart 4

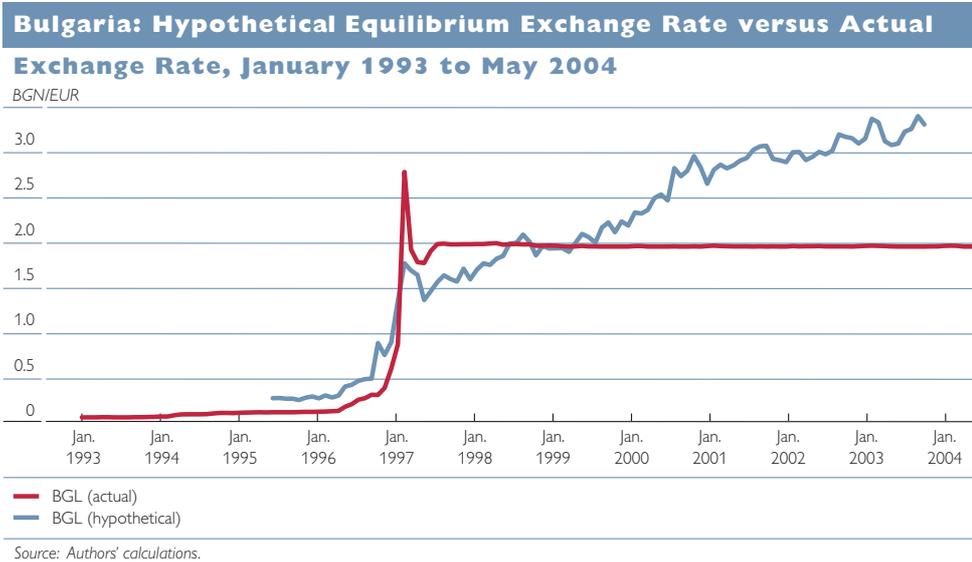
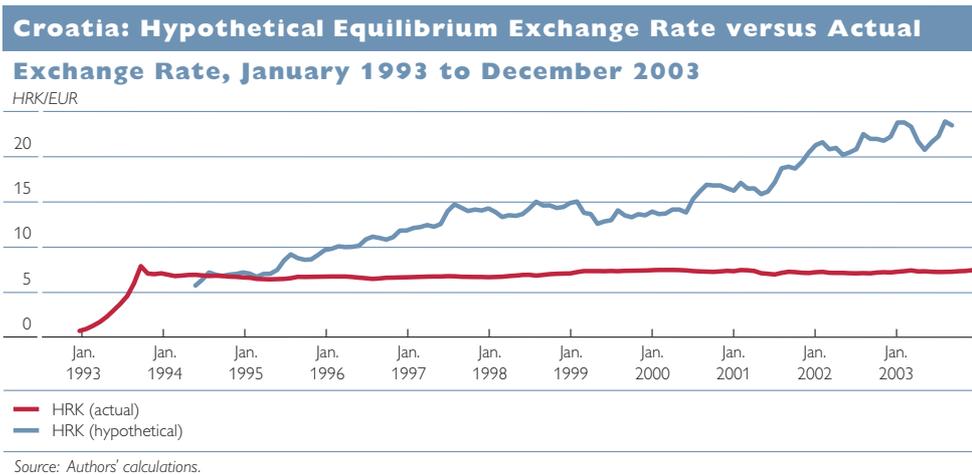


Chart 5



5.1 Bulgaria

Some interesting features can be observed in the case of Bulgaria. Prior to the 1997 crisis, the exchange rate was significantly overvalued¹⁶ as compared to the exchange rate implied by macroeconomic fundamentals. Furthermore, the degree of depreciation during hyperinflation roughly corresponds to that implied by the fundamentals-driven exchange rate. We can see a dampened overshooting behavior of the implied monetary exchange rate, which is mainly attributable to the movements of the interest rate differential. Since the introduction of the currency board, the “hypothetical” exchange rate has followed a depreciating path. On the one hand, this development may imply that the Bulgarian currency is overvalued again in the last part of the sample. This behavior pattern follows the so-called exchange rate-based stabilization syndrome

¹⁶ This conclusion is, however, sensitive to the specification of the constant term in the simulation, which was discussed above. By contrast, alternative derivations of the constant term would result in a confusing behavior of the exchange rate especially during the currency crisis in 1997.

(see Ghosh et al., 2002). On the other hand, we can see that the “hypothetical” exchange rate stabilized in 2001, which indicates that the Bulgarian economy adjusted to a new exchange rate regime under the currency board. Actually, the deviations between the “hypothetical” and the actual exchange rates are more difficult to interpret in this case because of statistical changes and a currency revaluation after the 1997 currency crisis.

Inflation remained relatively high in Bulgaria (above 5% at the end of 2003). Under fixed exchange rates, a persistent inflation differential with respect to the anchor country may lead to an overvaluation of the real exchange rate and, accordingly, to a fall in the competitive position of the economy. One way to assess this risk is to analyze the current account position. The Bulgarian current account deficit widened sharply from 0.5% of GDP in 1998 to 8.3% in 2003. This was the result of strong growth in consumer goods imports, but mainly also of the increase in imports of investment goods. The gap is, however, largely covered by FDI inflows and official financing. While initially most of this financing came through privatization revenues, Bulgaria also managed to draw substantial funds from nonprivatization direct investment after the privatization process slowed down. The fiscal account, by contrast, was close to balance in recent years and did therefore not increase the current account deficit further. Overall, this picture suggests that the overvaluation does not pose a substantial risk to the Bulgarian economy.

To evaluate the evolution of competitiveness in the Bulgarian economy in view of a possible exchange rate overvaluation, it is useful to examine unit labor cost developments. From 2000 to 2002, the annual change of unit labor costs was only around 2.5%, despite an average inflation rate of almost 8% in these three years. The reason was a rapid productivity increase. The Bulgarian economy is in a comparatively early stage of development, and thus still provides sufficient margins for productivity gains. These favorable labor cost developments helped sustain the favorable competitive position of the economy in spite of a possible overvaluation of the currency. The IMF shares the view that price and wage indicators do not indicate a loss in competitiveness, suggesting that the real exchange rate appreciation since mid-1997 has to a large extent been attributable to the Balassa-Samuelson effect and to price liberalization (see e.g. IMF, 2000). The most recent data for the year 2003 may, however, point to potential risks, with unit labor costs increasing by more than 7%.

5.2 Croatia

Chart 5 shows the dynamics of the simulated equilibrium exchange rate against the actual exchange rate for Croatia. In the light of the developments of the fundamentals-driven exchange rate, the level of the peg appears extremely (and increasingly) overvalued. To assess whether a sustained and widening overvaluation of the currency poses a risk to competitiveness, we again examine balance of payment developments. Since 1998, the current account deficit has been at around 6% of GDP on average. Behind this figure stands a huge trade deficit of around 20% of GDP, resulting from the failure to adjust the export structure to new demand. This high trade deficit is counterbalanced by a positive service balance as a result of income from tourism as well as by the inflows of funds from expatriates. From 1998 to 2003, the current account deficit was entirely

financed by FDI inflows, which have also amounted to 6% of GDP on average since 1998. This suggests that the high current account deficit is nevertheless sustainable. But the most recent developments may point to a certain risk. The current account deficit has widened in recent years, from 2.5% of GDP in 2000 to almost 7% in 2003, while FDI inflows have remained relatively stable.¹⁷ If the current account deficit continues to widen and this development is not matched by increasing FDI inflows, this may point to increasing difficulties with the overvaluation of the Croatian currency.

A second factor to keep in mind, especially when evaluating the competitive position of the Croatian economy, is the development of unit labor costs. These do not seem to indicate an unsustainable situation, as both inflation and the increase in unit labor costs showed rates of below 2% in 2003.

A highly relevant aspect for the feasibility of exchange rate relaxation is the cost associated with such a policy shift. One argument put forward by the supporters of the current regime is the high degree of euroization in the economy. If asset and commodity prices as well as wages are set in euro, a devaluation of the exchange rate directly feeds into the domestic price level, leading to higher inflation and a redistribution within the economy. Billmeier and Bonato (2002) argue that euroization is mostly limited to financial assets (asset substitution, savings in foreign currency and foreign currency-denominated or indexed loans), while retail prices are hardly affected by exchange rate movements. Strict exchange rate targeting may therefore not be necessary. The authors suggest a gradual shift away from the past policy of exchange rate targeting.

Furthermore, chart 5 may overestimate the actual degree of overvaluation because the use of foreign currencies in the Croatian economy lost importance during the period analyzed. Stix (2003) reports that the share of Croatian respondents holding foreign currencies declined from almost 60% in 1997 to about 20% in 2001. Even though these figures cannot be translated directly into standard monetary aggregates, they show that a significant part of M2 growth has actually been offset by corresponding declines of unreported foreign currency holdings (see also Barisitz, 2004).

While these results seem to downgrade the cost of a change in the exchange rate regime on the grounds of inflation considerations, they ignore the potentially high costs of financial stability. If an important part of liabilities is denominated in foreign currency, exchange rate movements have direct consequences on the level and sustainability of debt and the stability of the banking system. Exchange rate fluctuations may therefore entail severe costs for the economy and may in extreme cases lead to a banking crisis. The confidence of the economy highly depends on financial sector stability. Certainly, these considerations significantly limit the set of options for future exchange rate policies.

¹⁷ It should be noted that the current account deficit in 2003 is biased to a certain extent by a one-off event in the same year. The patent transfer of the Croatian pharmaceutical company PLIVA d.d. to a branch in Hungary was not accompanied by a financial counterflow, and thus caused the current account deficit to deteriorate. According to the 2003 Annual Report of Hrvatska narodna banka, the current account deficit amounts to 6% of GDP when this factor is excluded.

6 Policy Implications and Conclusions

This paper focuses on the exchange rate challenges in the four countries that currently have declared their interest in becoming a member of the European Union in the near future: Bulgaria, Croatia, Romania and Turkey. While Romania is already in the midst of accession negotiations and Bulgaria preliminarily closed them on June 15, 2004, Croatia and Turkey will start negotiations in 2005. All of these countries share the challenge of choosing the appropriate exchange rate strategy in the run-up to EU membership and to an eventual adoption of the euro.

Given the substantial differences in past exchange rate policies, we adopt different approaches in assessing the appropriateness of exchange rate strategies and in studying the connections between exchange rates and other economic variables. For the countries with currently freely floating currencies, i.e. Romania and Turkey, we follow the monetary model in evaluating the importance of fundamentals for exchange rate fluctuations. A comparison of realized exchange rates with the equilibrium exchange rate (as derived from the estimated elasticities and the macroeconomic fundamentals) reveals no substantial over- or undervaluations of the currencies at the end of the sample. In both countries, deviations around the equilibrium exchange rate became less volatile over time.

Bulgaria and Croatia, by contrast, follow a fixed-peg or narrow-band exchange rate policy. In these cases, we use estimates of the monetary model of exchange rate determination obtained from a panel including six CEECs and Turkey. We address possible exit strategies from the current fixed exchange rate regimes which are presently discussed in the literature. In particular, we present the dynamics of “hypothetical” equilibrium exchange rates against the euro computed on the basis of macroeconomic fundamentals in Bulgaria and Croatia.

We find some deviation of this “hypothetical” exchange rate level, which can be explained partially by factors specific to these countries (the previously high degree of informal dollarization, structural changes, etc.). Furthermore, major economic variables in these economies confirm the sustainability of financial developments. Nevertheless, our results indicate possible depreciation trends if these countries exit the current currency board or narrow-peg strategy, respectively. From this perspective, a continuation of the current exchange rate regimes and a long-term preparation for euro adoption appears to be an optimal exchange rate strategy for Bulgaria and Croatia.

Cutoff date for data: December 31, 2004.

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Equilibrium Exchange Rates in Southeastern Europe, Russia, Ukraine and Turkey: Healthy or (Dutch) Diseased?

Balázs Égert¹

This paper investigates the equilibrium exchange rates of three Southeastern European countries, namely Bulgaria, Croatia and Romania, of two CIS economies, namely Russia and Ukraine, and of Turkey. A systematic approach in terms of different time horizons at which the equilibrium exchange rate is assessed is conducted, combined with a careful analysis of country-specific factors. The deviation from absolute purchasing power parity (PPP) and from the real exchange rate, which is given by relative productivity levels, is investigated. For Russia, a first look is taken at the Dutch disease phenomenon as a possible driving force behind equilibrium exchange rates. As a next step, a Behavioral Equilibrium Exchange Rate (BEER) model including productivity and net foreign assets is estimated using both time series and panel techniques. Control variables such as openness, public debt and public expenditures are also used to check for the robustness of the results. In a final stage, total real misalignment bands are computed for the countries under study.

1 Introduction

The prospect of joining the EU and the actual accession of eight countries from Central and Eastern Europe to the European Union in May 2004 have drawn much attention to these countries' equilibrium exchange rates. By contrast, equilibrium exchange rates of countries in Southeastern Europe and of the CIS have been less in focus and only a few papers have investigated this issue. A considerable number of the papers on this topic deal with these countries in a panel context, which may be insufficient for accounting for country-specific features.² Only very few studies analyze Bulgaria, Croatia, Romania and Russia.³

In this paper, we seek to fill this gap by investigating the equilibrium exchange rates of three Southeastern European countries, namely Bulgaria, Croatia and Romania, of two CIS economies, namely Russia and Ukraine, and of Turkey. These countries are of interest because Bulgaria, Romania and probably Croatia will join the EU in the foreseeable future, and Russia, Ukraine and Turkey are of utmost economic interest for the EU in the (South)eastern part of Europe. For this purpose we have proposed a systematic approach in terms of different time horizons at which the equilibrium exchange rate is assessed, combined with a careful analysis of country-specific factors. Questions related to equilibrium exchange rates in these countries as compared to those in the new Member States in Central and Eastern Europe can either be raised differently or are sometimes truly different. For instance, the issue of current account and foreign debt sustainability is of utmost importance for Croatia. Also, the real exchange rate in Russia may be driven not only by traditional channels but also by the Dutch disease phenomenon.

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² E.g. Halpern and Wyplosz (1997, 2001), Krajnyák and Zettelmeyer (1998), Begg et al. (1999), De Broeck and Slok (2001), Dobrinsky (2003) and Fischer (2004).

³ Chobanov and Sorsa (2004) analyze Bulgaria. Stapafora and Stavlev (2003), Sosunov and Zamulin (2004) and Rautava (2004) study the case of Russia. Crespo-Cuaresma et al. (2004) apply the monetary model to Bulgaria, Croatia, Romania and Russia.

First, we take a look at the deviation from absolute PPP. Subsequently, we investigate whether the real exchange rates in levels correspond to the underlying productivity levels. In a next step, the factors of real exchange rate movements are studied. First, the simple Balassa-Samuelson effect and the Dutch disease are put under the microscope. In a next step, the stock-flow approach is used to widen the horizon. Both time series and panel data are used to study deviations from the equilibrium exchange rate.

The remainder of the paper is structured as follows: Section 2 briefly addresses the deviation from absolute PPP. Section 3 investigates the relationship between the level real exchange rates and relative productivities. Section 4 analyzes factors behind a possible trend appreciation of the currencies. The Balassa-Samuelson effect is studied in great detail, and a first look is taken at the Dutch disease in Russia. A Behavioral Equilibrium Exchange Rate (BEER) model including productivity and net foreign assets is estimated using both time series and panel techniques. Control variables such as openness, public debt and public expenditures are also used to check for the robustness of our results. Finally, total real misalignment bands are computed for the countries under study. Section 5 presents some concluding remarks.

2 Undervaluation in Terms of Purchasing Power Parity

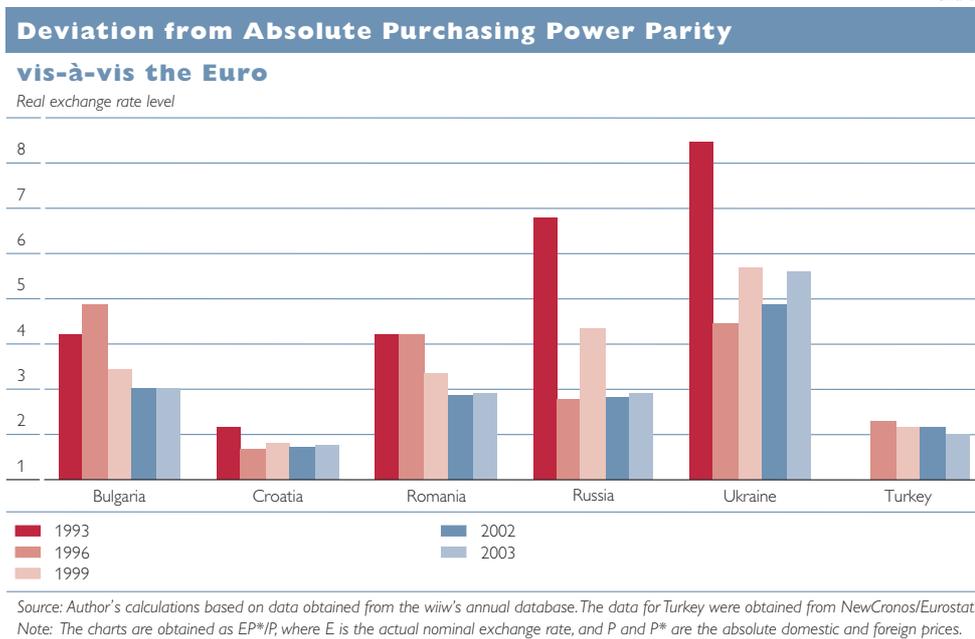
In the paper, we follow a bottom-up approach in that we start looking at approaches to the equilibrium exchange rate which are assumed to hold in the long run. We then move forward systematically toward shorter time horizons.

Let us now begin with the concept of PPP, which can be thought of as a very long-term approach for countries in the catching-up process. It is a well-understood fact that PPP is a poor tool, even in the long run, for measuring equilibrium exchange rates for transitional and developing economies because their currencies are undervalued in terms of PPP. According to PPP, the exchange rate given by the ratio of domestic and foreign absolute price levels should be equal to the nominal exchange rate which can be observed on the foreign exchange market. In other words, the real exchange rate, which is given as $E/(P/P^*) = EP^*/P$, should equal 1. With the exchange rate being defined as domestic currency units expressed in terms of one unit of foreign currency,⁴ a real exchange rate higher than 1 implies undervaluation, which can be clearly observed vis-à-vis the euro for all countries under study (see table 1). The largest undervaluation has been found in Ukraine, whereas the Croatian currency appears to be the least undervalued one among the countries. There are evident signs of a steady decrease in undervaluation for Bulgaria, Romania and perhaps for Russia. By contrast, the undervaluation appears pretty stable for Croatia and Turkey, and it fluctuates strongly for Ukraine.⁵

⁴ In the rest of the paper, an increase/decrease in the (real) exchange rate implies a depreciation/appreciation.

⁵ For Russia and Ukraine, some of the fluctuations may be due to changes in the euro/U.S. dollar exchange rate.

Chart 1



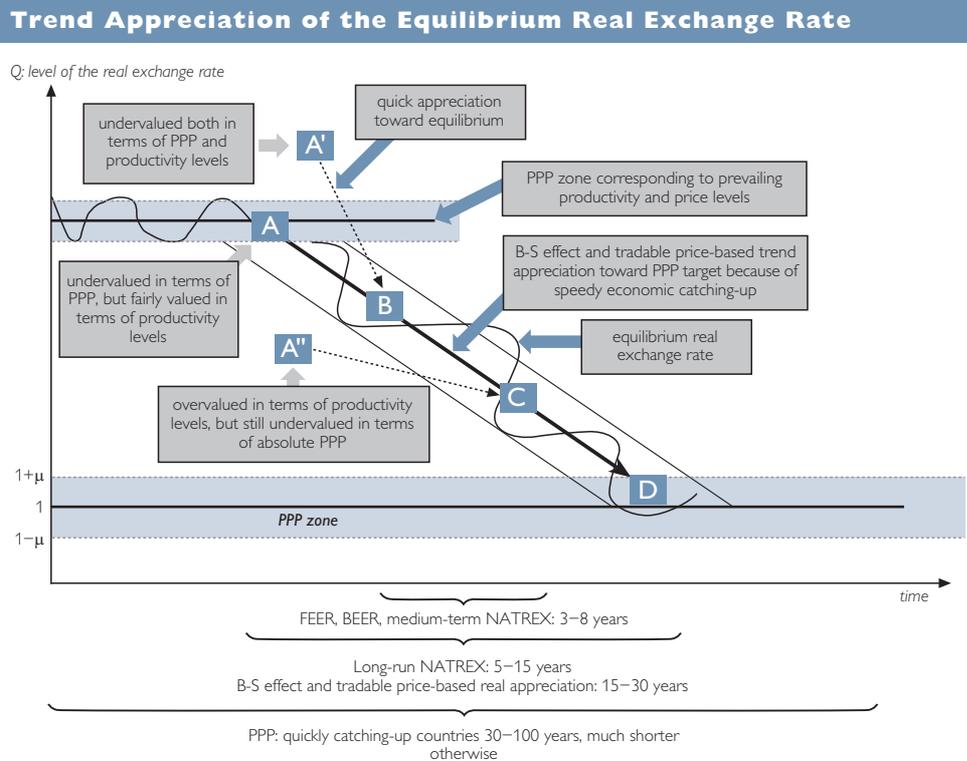
3 The Role of Productivity: A Cross-Sectional Perspective

According to the traditional Balassa-Samuelson argument, the less developed country is usually less productive in producing tradable goods. The price level in the open sector is given by the PPP condition. At the same time, the level of productivity in the open sector, which is usually lower in the less developed country, determines the price level in the closed sector through intersectoral wage linkages. Hence, the price level in the sheltered sector, and subsequently the overall price level, will be below that prevailing in the more developed country. As a result, the observed nominal exchange rate given by PPP in the open sector appears to be weaker (higher) than the exchange rate given by PPP.

Notice, however, that this undervaluation in PPP terms is an equilibrium undervaluation if it reflects a difference between productivity levels. By contrast, it may be the case that the price level does not fully reflect productivity levels. If prices are higher than what productivity levels would predict, the exchange rate can be viewed as overvalued in terms of productivity levels (although still undervalued in PPP terms). If prices are lower than what productivity levels would predict, the currency can be thought of as undervalued (not only in PPP terms). This is depicted in chart 1.

We now set out to analyze whether the exchange rates of the countries under consideration were undervalued or overvalued in terms of productivity levels. Put differently, we are interested in whether a given country is at point A, A' or A'' in chart 2. Such an analysis is best conducted using cross-sectional data. In such a framework, the real exchange rate in levels or the relative price level of the home country vis-à-vis a benchmark economy (the reciprocal of the real exchange rate in levels) is regressed on the relative productivity level of

Chart 2



Source: Égert, Halpern and MacDonald (2005), Égert (2003).

the home country to that in the foreign benchmark. In practice, however, GDP per capita or GDP per employment expressed in PPP terms, which is a broad proxy for productivity, is employed based on data (un)availability.

A number of studies have already investigated this relationship extensively. We make use of the regression results reported in these studies. We have selected all the equations which use the EU-15 as the foreign benchmark. The five retained equations from three papers, namely Čihák and Holub (2003), Coudert and Couharde (2003) and Maeso-Fernandez et al. (2004) are reported in table 1. The fitted values of the real exchange rates in level or relative price levels of the countries under study obtained from these equations are then compared to the actual real exchange rates or relative price levels for each country against the EU-15.

The three papers offer an interesting combination of country coverage. Coudert and Couharde (2003) include 120 developing and emerging economies, whose GDP per capita expressed using the purchasing power standard did not exceed the corresponding figure of the euro area. The sample also included all transition economies with a few exceptions. By contrast, the sample used in Maeso-Fernandez et al. (2004) is composed of 25 industrialized OECD countries, excluding all transition economies.⁶ Čihák and Holub (2003) keep to

⁶ The panel includes the EU-15 (without Luxembourg), Australia, Canada, New Zealand, the U.S.A., Norway, Iceland, Korea, Mexico and Turkey. OECD countries such as the Czech Republic, Hungary, Poland and Slovakia are excluded.

Table 1

Cross-Sectional Regressions					
	Countries		Year	Benchmark	R2
Maeso-Fernandez et al. (2004)	25 (OECD)	0.50	2002	EU-15	0.65
Coudert and Couharde (2003)	120 developing economies	0.25	2000	EU-15	0.24
Čihák and Holub (2003)	30 EU+CEE	0.90	1999	EU-15	0.90
Čihák and Holub (2003)	22 EU+CEE	0.86	2000	EU-15	0.86
Čihák and Holub (2003)	30 EU+CEE	0.94	1999	EU-15	0.89

Source: Maeso-Fernandez et al. (2004), Coudert and Couharde (2003), Čihák and Holub (2003).

Note: The coefficient is the slope coefficient from the regression. R2 stands for the goodness-of-fit of the regression. Coudert and Couharde as well as Maeso-Fernandez et al. regress the log level of the real exchange rate on the log level of relative GDP per capita, whereas Čihák and Holub regress relative price levels on relative per capita GDP levels.

the golden mean in that a number of EU-15 countries and transition economies are used together for their estimations.

These observations have interesting implications. First, the regression based on a large number of developing and emerging countries can be viewed as reflecting how the real exchange rate and per capita GDP may be linked, on average, in emerging and developing economies. Second, using a narrow sample of industrialized countries offers some perspectives regarding what this relationship looks like for higher GDP per capita levels. For the countries under study, such a relationship could be thought of as applying in the longer run (because the developing and emerging economies are expected to catch up with the industrialized economies in the long run). Third, taking a group of European transition and developed EU economies may tackle some heterogeneity problems in Coudert and Couharde (2003) and, at the same time, helps anticipate the long-term behavior given by the regression results in Maeso-Fernandez et al. (2004).

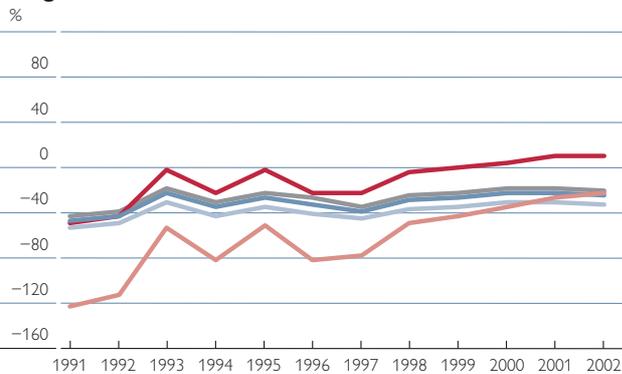
Chart 3 reports under- and overvaluations in terms of productivity levels for the period of 1991 to 2003.⁷ For Bulgaria and Romania, the real exchange rates seem to have been undervalued at the beginning of the 1990s. This is something which is labeled initial undervaluation by Halpern and Wyplosz (1997), and Krajnyák and Zettelmeyer (1998).⁸ Over time, the real exchange rate of Bulgaria has approached the level that would be in line with GDP per capita. For Romania, the adjustment process turns out to be slightly overshooting, and from the mid-1990s onward, the real exchange rate has even become overvalued. For Russia and Ukraine, the initial undervaluations, which were considerably larger than for Bulgaria and Romania, were corrected much more quickly, leading to an overvaluation in 1997 in Russia, which was corrected during the crisis in 1998. Regarding Croatia and Turkey, the level exchange rates are found to be steadily overvalued.

⁷ Čihák and Holub (2003) note that one should interpret the temporal development of data based on the International Price Comparison (IPC) program with care. The annual data are based on interpolation/extrapolation of actual price observations carried out once every three years. The error margin of such an interpolation/extrapolation may be as high as 6%. Notice also, however, that the data here are not used to derive precise misalignment figures but rather to provide some broader trends.

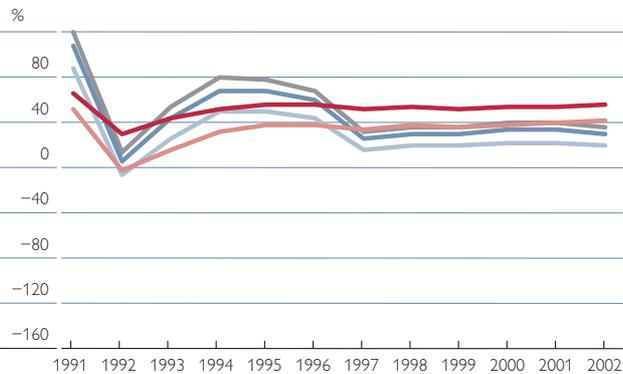
⁸ Halpern and Wyplosz (1997) and Krajnyák and Zettelmeyer (1998) use additional variables besides productivity to investigate initial undervaluations.

Under- and Overvaluations in Terms of Productivity Levels

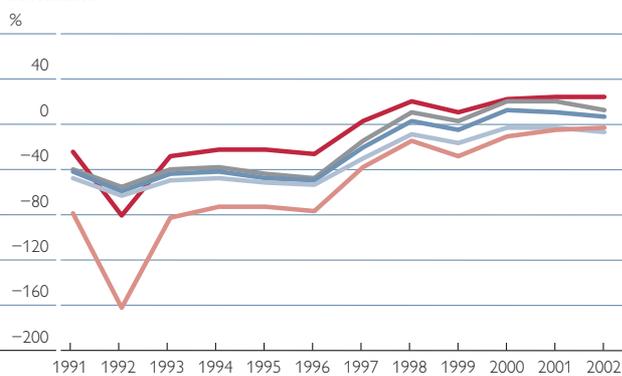
Bulgaria



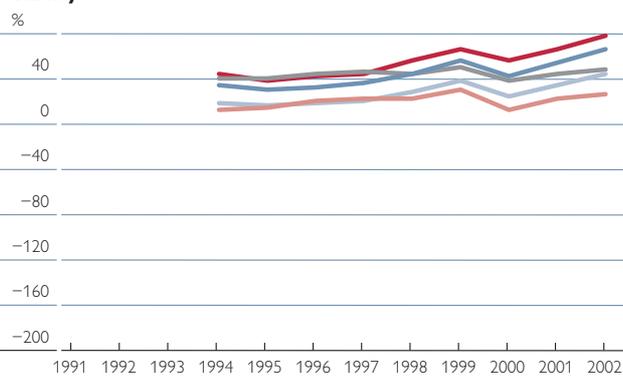
Croatia



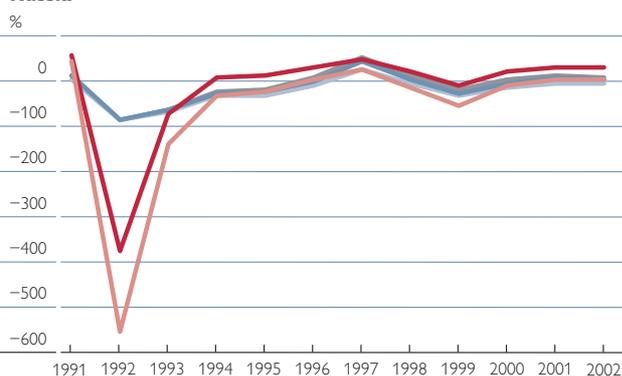
Romania



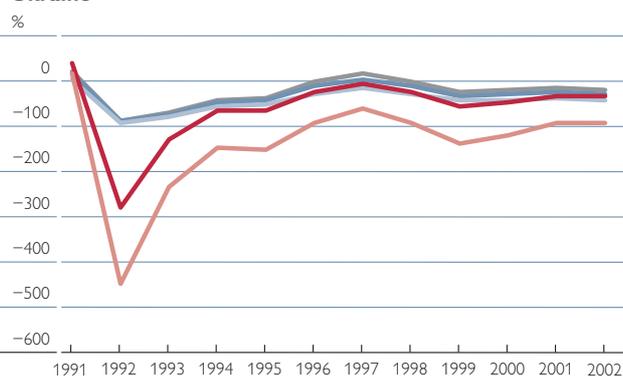
Turkey



Russia



Ukraine



— CC
— MFOs
— CH1
— CH2
— CH3

Source: Author's calculations.

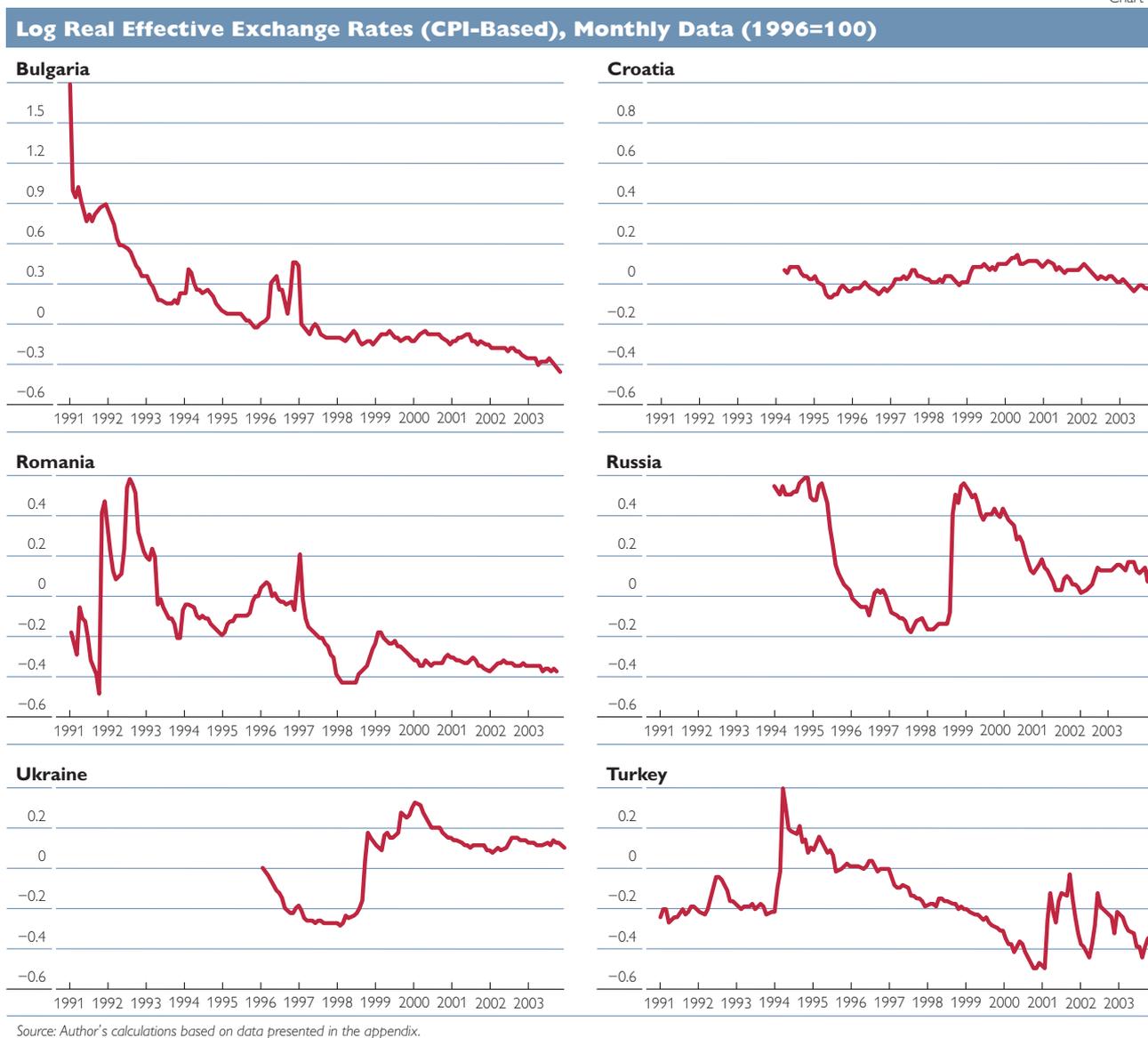
Note: Positive/negative values stand for overvaluation/undervaluation. CC denotes Coudert and Couharde (2003), MFOs is Maeso-Fernandez et al. (2004), and CH1, CH2 and CH3 are the three regressions taken from Čihák and Holub (2003).

4 Potential Sources of Real Appreciation

As shown earlier, the currencies of the countries under review are all undervalued in terms of PPP. At the same time, chart 1 and chart 4, plotting the real effective exchange rates of the countries on the basis of monthly data, reveal that the real exchange rate of some of the countries studied has, to a varying extent, undergone an appreciation during the last ten years.

Looking at the extent of the undervaluation of the level real exchange rate of different groups of goods and services for Bulgaria, Romania and Turkey may give us an idea regarding the potential sources of the real appreciation. The largest undervaluation can be observed for nontradable goods. The undervaluation of the real exchange rate of regulated services is considerably larger than that of market-based services. Also, goods, especially nondurable (mostly domestically produced and consumed) goods, turn out undervalued, though to a lesser extent (see chart 5). This is in line with Égert, Halpern and MacDonald (2004), who

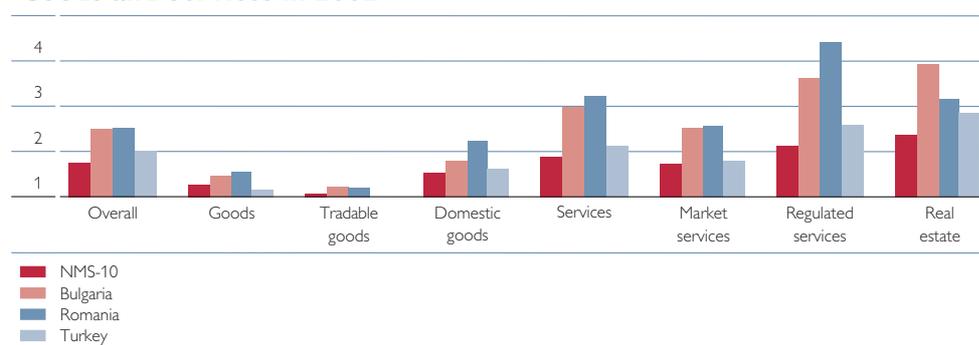
Chart 4



argue that an appreciation of the real exchange rate of transition economies has three sources: (1) the standard Balassa-Samuelson effect (market-based services), (2) the appreciation of the real exchange rate of the open sector, and (3) a trend increase of regulated prices. Such an appreciation can be viewed as an equilibrium phenomenon, as demonstrated in chart 2 by a movement from point A to point D. Of course, initial undervaluation can also explain large real exchange rate appreciation, merely reflecting adjustment to equilibrium.

Chart 5

The Real Exchange Rate in Levels for Different Groups of Goods and Services in 2002



Source: Author's calculations based on data drawn from NewCronos/Eurostat.
Note: NMS-10 denotes the ten new EU Member States.

4.1 The Balassa-Samuelson Hypothesis

The large undervaluation of market services reported in chart 4 may be explained by the absolute version of the Balassa-Samuelson (B-S) effect, which is generally thought to be a source of real appreciation in a successful catching-up process. According to the relative version of the B-S effect, an increase in productivity of the open sector exceeding that in the closed sector (dual productivity henceforth) may go in tandem with increases in real wages in the open sector without any loss in competitiveness given that relative PPP holds in the open sector ($\Delta(E \cdot P^*/P)$ is stable over time). Assuming wage equalization between the open and the market-based sheltered sectors, prices in the closed sector will increase. This productivity-driven inflation in market-based nontradables then results in higher overall inflation and a positive inflation differential, which in turn causes the real exchange rate to appreciate.

4.1.1 Basic Assumptions: First Glance Evidence from Yearly Data

We now proceed to evaluate the extent to which the B-S effect has contributed to the appreciation of the equilibrium exchange rate from the early 1990s. The first step is to investigate whether or not the four basic assumptions which are needed for the B-S effect to hold are verified:

1. Real wages are linked to productivity in the open sector.
2. Nominal wages tend to equalize across sectors.
3. Dual productivity is linked to the relative price of market-based nontradable goods.
4. PPP holds for the open sector.

The first three assumptions are first judged by applying ocular econometrics to annual data obtained from national accounts.⁹ For instance, Égert (2004) and Égert and Halpern (2004) have shown recently that how sectors are classified into open and closed sectors does affect the results. We follow a twofold rule for separating sectors into open and closed sectors in that we consider a sector open if (1) goods in this sector are potentially subject to good arbitrage leading to price equalization across countries, and if (2) it is governed by market forces. This yields a classification which is in contrast with MacDonald and Wójcik (2004) and Mihaljek and Klau (2004), who argued that tourism, trade and transportation can also be considered to belong to the open sector.¹⁰ This is the reason why we also check how sensitive the results are when classifying those sectors as open sectors.

Data available until the mid-1990s are usually based on old national accounts standards. From the mid-1990s on, national accounts data are available in the new NACE format. To cover the whole period, the NACE sectors are grouped so as to match sectors to the old standard. Exceptions are Romania and Russia. For Romania, NACE data are available for the entire period,¹¹ while for Russia, only data based on old national accounts standards are available.¹²

For the old SNA classification,¹³ three classifications for the open sector are used including (1) industry, (2) agriculture and industry, and (3) agriculture, industry, transport and telecommunications. The rest is considered as belonging to the closed sector, except for agriculture, which, if not included in the open sector, is once used as part of the open sector and once excluded because of the potential highly distorting effects of agricultural subsidies. This yields a total of six combinations of open and closed sectors (see appendix table 1).

For the new NACE classification,¹⁴ the following five measures are used for the open sector: (a) manufacturing, (b) industry, (c) industry and agriculture, (d) industry, transport and telecommunications, and hotels and restaurants, and finally (e) agriculture, industry, transport and telecommunications, and hotels and restaurants. Regarding the closed sector, five alternative measures are considered: (1) the remaining market-based sectors, (2) the remaining market-based sectors plus real estate, (1) and (2) augmented by agriculture if not used in the open sector, (3) market-based sectors and non-market-based sectors

⁹ Data are obtained from the annual database of the Vienna Institute for Comparative Economic Studies (wiiw). The database contains data broken down into five sectors for Bulgaria, Croatia, Russia and Ukraine from 1991 onward. For Bulgaria and Croatia, a 15-sector disaggregation is available from 1996, in accordance with the NACE classification. Such disaggregated data are available for Romania and Turkey for the whole period. For a detailed description of the data, see appendix 2.

¹⁰ However, these sectors cannot be viewed as open sectors because, notwithstanding the relatively high share of exports, prices are determined by domestic factors in these sectors.

¹¹ It should be noted that some doubt arises regarding the reliability of such data starting in 1991.

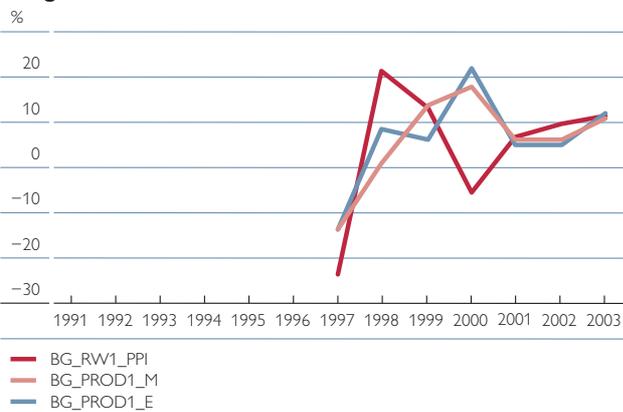
¹² For Romania, data in NACE format cover the period from 1991 to 2003. For Russia, data are available only in the old format, from 1991 to 2003. Data for Bulgaria, Croatia and Ukraine are available both in the old format and in NACE format: Bulgaria (old: 1991–96, NACE: 1996–2003); Croatia (old: 1991–95, NACE: 1995–2003); Ukraine (old: 1991–2000, NACE: 2001–03).

¹³ The old classification provides data on six sectors: (1) agriculture, (2) industry, (3) construction, (4) transport and telecommunications, (5) trade, (6) others.

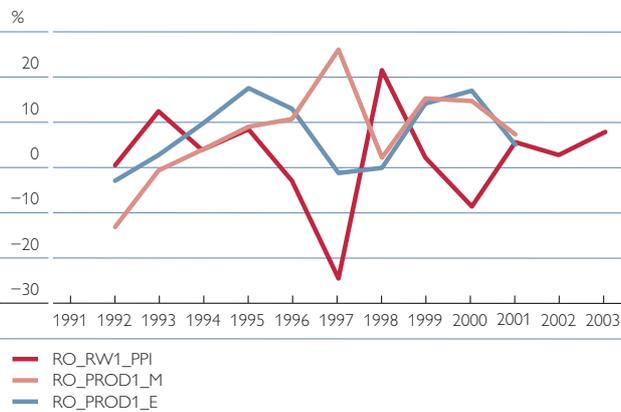
¹⁴ The NACE classification contains the following sectoral breakdown: (1) agriculture (including hunting, forestry and fishing), (2) mining and quarrying, (3) manufacturing, (4) electricity, gas and water supply, (5) construction, (6) wholesale and retail trade, (7) hotels and restaurants, (8) transport, storage and telecommunications, (9) financial intermediation, (10) real estate, renting and business activities, (11) public administration and defense and compulsory social security, (12) education, (13) health and social work, and (14) other community, social and personal services activities.

Real Wages and Productivity Growth in the Open Sector

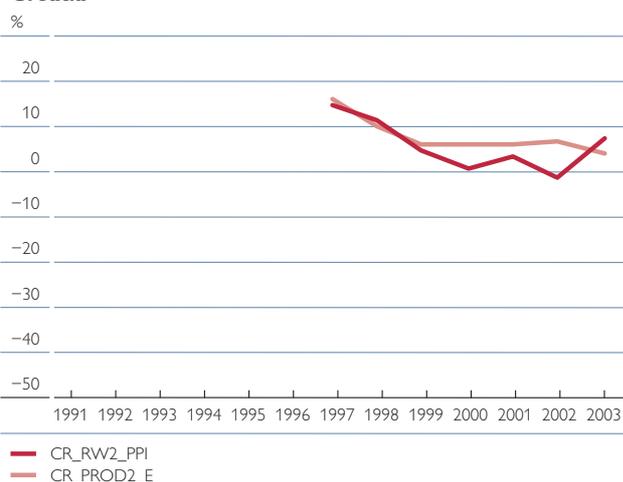
Bulgaria



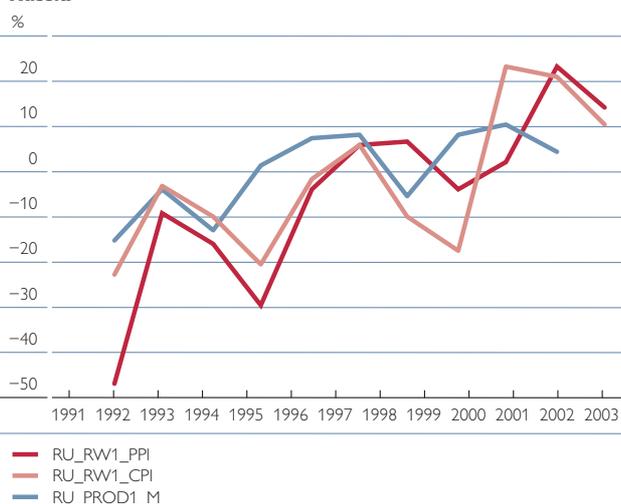
Romania



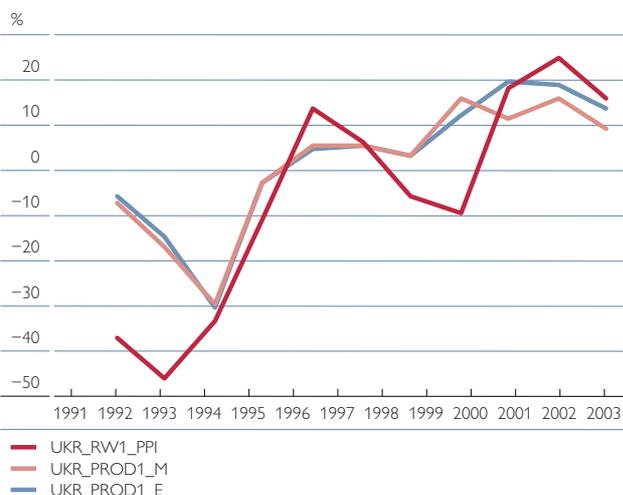
Croatia



Russia



Ukraine



Source: Author's calculations.

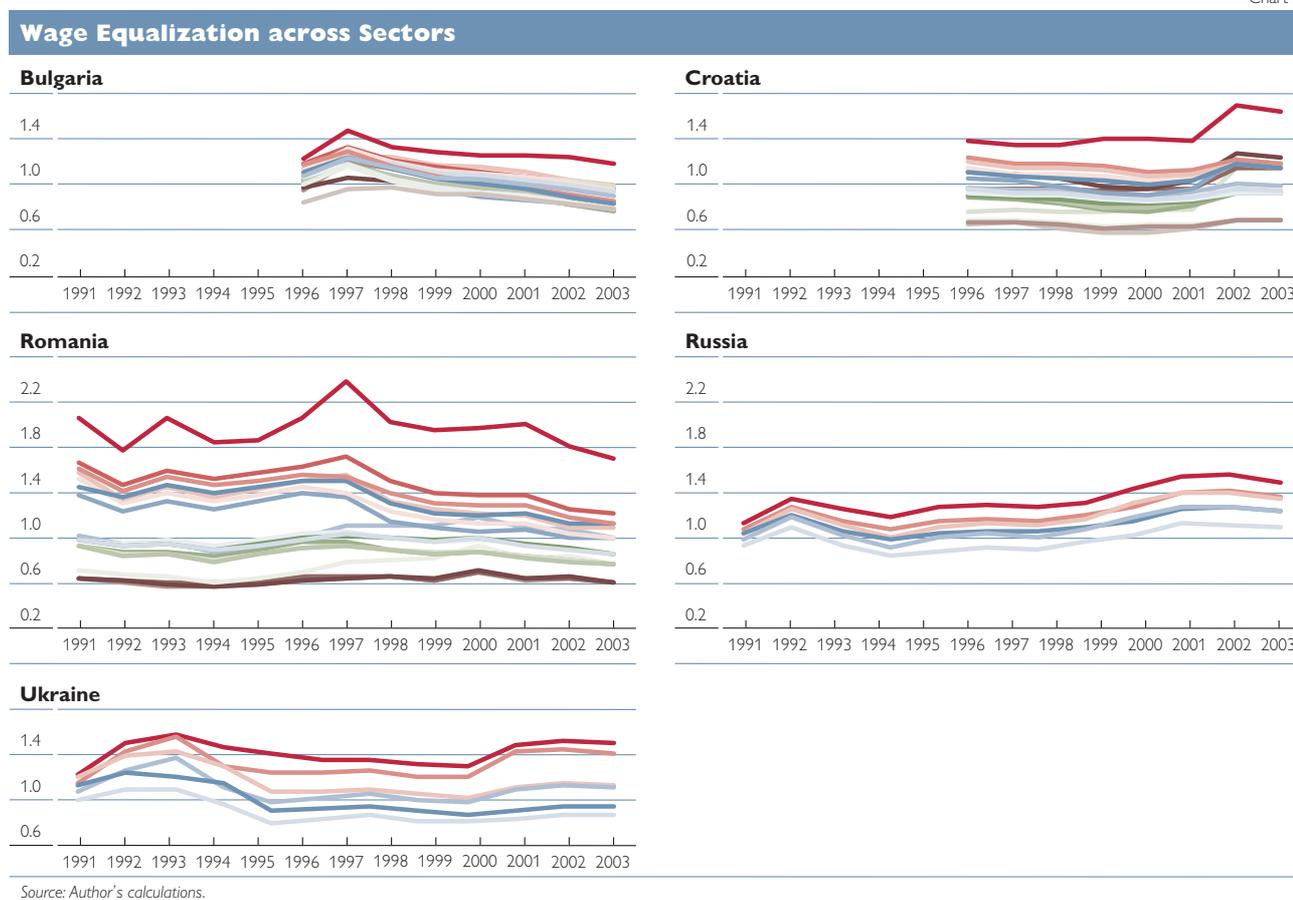
Note: RW1_PPI and RW1_CPI are the PPI- and CPI-deflated nominal wages in the open sector. PROD_M and PROD_E denote average labor productivity in the open sector using data on employment (M) and on employees (E). The open sector includes industry (PROD1) or industry and agriculture (PROD2).

(education, health, public administration and other communal services) and (4) a measure of (3) completed with agriculture. This yields a total of 18 combinations of open and closed sectors (see appendix table 2).

Growth rates of average labor productivity and real wages in the open sector are depicted in chart 6 above.¹⁵ Average labor productivity is obtained as sectoral real value added divided by employment (PROD_E) or the number of employees (PROD_M). Real wages are calculated as the nominal wage in the open sector divided by the producer price index (PPI). As the PPI is highly distorted by oil prices in the case of Russia, the consumer price index (CPI) is used additionally for this country. Generally speaking, productivity and real wages broadly grew hand in hand, perhaps with the exception of Romania. However, in Croatia wages rose more slowly than productivity from 2000 to 2002. In Bulgaria, Russia and Ukraine, we can observe periods during which productivity increased faster than real wages followed by periods when the opposite happened.

As far as wage equalization is concerned, the ratio of the nominal wage in the open sector to the nominal wage in the closed sector corresponding to the dual productivity differentials described above is shown in chart 7. For Bulgaria, the ratio decreased steadily over the period under study, which implies that nominal wages grew faster in the closed sector than in the open sector (amplification

Chart 7



¹⁵ Note that wage data based on national accounts are not available for Turkey.

of the B-S effect). The opposite can be observed for Russia where the ratio is on the rise (attenuation of the B-S effect). Regarding Croatia and Ukraine, jump-like changes can be observed in chart 6. Finally, the ratio is fairly stable for Romania, provided agriculture is excluded from the analysis.

4.1.2 Basic Assumptions: Econometric Evidence from Monthly Data

Using monthly data instead of annual data allows a more rigorous examination of the assumptions underlying the B-S model, which can be formulated econometrically as follows:

1. Productivity in the open sector is cointegrated with real wages in the open sector, with the estimated long-term coefficient being equal to 1.
2. The sectoral wage ratio is difference stationary.
3. Dual productivity is cointegrated with the relative price of market-based nontradable goods, with the estimated long-term coefficient being equal to 1.
4. The tradable price-based real exchange rate is difference stationary.

Average labor productivity is now based on industrial production and employment in industry. Real wages are obtained as gross or net monthly wages (depending on data availability) divided by the PPI (and by the CPI for Russia). Long-term cointegration relationships are estimated using three alternative cointegration techniques: the Engle and Granger (EG) method (Engle and Granger, 1987), the Dynamic OLS (DOLS) by Stock and Watson (1993) and the error correction representation of the Autoregressive Distributed Lags (ARDL) model of Pesaran et al. (2001).¹⁶ For the EG and DOLS techniques, residual-based cointegration tests are conducted, whereas the bounds-testing approach proposed by Pesaran et al. (2001) is used for the ARDL model. As an additional check to the standard cointegration tests, error correction terms are also reported for the EG and ARDL estimates. Note that we stick to this systematic assessment throughout the whole paper in order to check for the sensitivity of the results regarding different econometric specifications.

The results reported in table 2 show the existence of a long-run relationship between gross monthly real wages and productivity in the open sector for Bulgaria from 1991 to 2004. Notice that the coefficient estimates are very low, at 0.09 (EG and DOLS), and insignificant when using the ARDL approach. The estimated coefficients are somewhat higher (about 0.45), but still considerably below unity for the period following the financial crisis in 1997. For Croatia and Romania, both gross and net monthly wages are available for the period from 1994 to 2004. For Croatia, cointegration can be detected unambiguously only when the bounds-testing approach is used. For both gross and net wages, the estimated long-run coefficient is slightly higher than 1. As for Romania, the relationship between productivity and real wages is fairly weak because, notwithstanding the presence of a long-term relationship, the coefficient is near zero or insignificant for gross wages. For net wages, the estimated coefficient turns out to be negative, which is in sharp contrast with our expectations. Turning to Turkey, all three estimation techniques indicate the presence of cointegration. Except for ARDL, where the coefficient is not significant, the estimated coeffi-

¹⁶ These techniques were used in e.g. Égert (2004), where a more detailed description of the techniques can be found.

EQUILIBRIUM EXCHANGE RATES IN
SOUTHEASTERN EUROPE, RUSSIA, UKRAINE AND TURKEY:
HEALTHY OR (DUTCH) DISEASED?

Table 2

Cointegration Tests between Productivity and Real Wages, Monthly Data

Cointegrating vector $X = [RWAGE, PROD]$; $\beta' = [1, \beta_1]$; expected sign = [1, +]

	EG	DOLS	ARDL	EG	DOLS	ARDL
<i>Gross wages 1991 to 2004</i>				<i>Net wages 1998 to 2004</i>		
Bulgaria						
LAG		(0.0), S, A, H	(7.1), H		(6.1), A, H	(6.6), A
COINT	3.60** (7), A	3.67** (7), A, H	12.547**	3.3* (6), H, A	3.247* (0), S, A, H	4.951*
ECT	0.11***		0.149***	0.102*		0.144**
CONST	0.204***	0.201***	0.256***	0.108**	0.121**	0.163
β_1	0.091***	0.090***	0.008	0.444***	0.464***	0.551*
<i>Gross wages 1994 to 2004</i>				<i>Net wages 1994 to 2004</i>		
Croatia						
LAG			(4.0), S, H			(5.0), A
COINT	NO	NO	9.896**	NO	NO	9.003**
ECT	1.36***		0.108***	0.107***		0.076**
CONST	0.199***		0.502***	0.271***		0.741***
β_1	2.064***		1.16*	2.636***		1.242
<i>Gross wages 1994 to 2004</i>				<i>Net wages 1994 to 2004</i>		
Romania						
LAG		(0.0), S	(3.3), S, A, H		(6.0), S, H	(4.0), A, H
COINT	3.756** (3), A	3.767** (3), A, H	7.861**	3.626** (3), H	3.654** (4), A	10.426**
ECT	0.139**		0.185***	0.128**		0.208***
CONST	0.023	0.035	0.07	0.042	0.17***	0.176*
β_1	0.043*	0.050*	0.023	0.038	0.128***	0.129*
<i>Gross wages 1993 to 2004</i>						
Russia						
LAG		(1.2), S, A, H	(6.6)			
COINT	(12), 3.698**	(0), 3.288*	8.213**			
ECT	0.059***		0.125***			
CONST	0.33***	0.375***	0.388***			
β_1	1.058***	1.495***	1.417***			
DUMMY_98-04	0.182***	0.134***	0.087			
<i>Gross wages 1996 to 2004</i>						
Ukraine						
LAG		(5.6), S, A, H	(1.0), S, A, H			
COINT	NO	(1, all), 3.747**	5.997**			
ECT	0.095***		0.081**			
CONST	0.051***	0.103***	0.107*			
β_1	0.787***	0.724***	1.315***			
DUMMY_98-04	0.176***	0.117***	0.362***			
<i>Gross wages 1988 to 2004</i>						
Turkey						
LAG		(0.4)	(4.1)			
COINT	3.421** (1)	3.079* (1)	4.907*			
ECT	0.025*		0.028**			
CONST	0.157***	0.124***	0.183			
β_1	1.65***	1.953***	0.311			

Source: Author's calculations.

Note: EG, DOLS and ARDL denote the Engle-Granger, the Dynamic OLS and the Autoregressive Distributed Lags estimations. The raw LAG shows the lag structure of the DOLS and ARDL models. S, A and H indicate that the lag structure was chosen on the basis of the Schwartz, Akaike and Hannan-Quinn information criterion, respectively. The raw COINT contains residual-based cointegration tests for the EG and the DOLS approach (with the lag length in parentheses), and test statistics from the bounds-testing approach for ARDL. The error correction terms for EG and ARDL are reported in the raw ECT. *, ** and *** denote that the null hypothesis is rejected at the 10%, 5% and 1% levels, respectively. CONST is a constant term. NO: No cointegration could be found.

cients vary from 1.6 to 1.9. Robust cointegration for Russia can be found only when a dummy is used to capture the post-Russian crisis period from December 1998 until the end of the period, and for Ukraine when using DOLS and ARDL. For Russia, the estimated coefficient that links productivity to real wages is positive and is about 1.4. For Ukraine, the coefficient ranges from 0.7 to 1.3.

The sectoral wage ratio is defined as the ratio of nominal gross or net wages in industry to those in the whole economy. According to test results reported in table 3, the Augmented Dickey Fuller (ADF), the Phillips-Perron (PP) and the Elliott-Rothenberg-Stock (ERS) point optimal unit root tests are unable to reject the presence of a unit root, while the Kwiatowski-Phillips-Schmidt-Shin

(KPSS) test mostly rejects stationarity for the whole sample and for a shorter period, i.e. 1996 to 2004, used for the sake of comparability across countries. The only country for which there is some (mixed) evidence for difference stationarity is Russia. Note also that the wage ratios based on both gross and net monthly wages exhibit trend stationarity for the subperiod. In sum, with the exception of Russia, all series either have a unit root or are trend stationary, implying the first and/or second moments to be unstable over time.

Table 3

Unit Root Tests for the Sectoral Wage Ratio, Monthly Data

	Gross monthly wages					Net monthly wages			
	ADF	PP	KPSS	ERS		ADF	PP	KPSS	ERS
Bulgaria									
1991:01 to 2004:03	1.13 (5)	-2.23 (6)	0.39*** (10)	8.39 (5)					
1996:01 to 2004:03	-0.99 (4)	-1.42 (6)	1.13*** (7)	10.50 (4)					
Croatia									
1994:01 to 2004:03	-1.93 (2)	-2.27 (3)	0.71*** (9)	38.50 (2)	1993:01 to 2004:03	-2.65 (2)	-2.35 (6)	0.98*** (9)	5.84 (2)
1996:01 to 2004:03	-1.69 (2)	-2.14 (5)	0.39* (7)	53.30 (2)	1996:01 to 2004:03	-2.06 (3)	-2.52 (6)	0.44* (7)	23.15 (3)
Romania									
1993:01 to 2004:03	-1.72 (1)	-13.05	0.74** (9)	4.26 (1)	1991:04 to 2004:03	-3.01** (1)	-3.57** (4)	0.35* (9)	24.73 (1)
1996:01 to 2004:03	-1.25 (1)	-1.72 (4)	1.14*** (7)	7.13 (1)	1996:01 to 2004:03	-1.26 (1)	-1.93 (4)	1.08*** (7)	6.40 (1)
Russia									
1992:01 to 2004:03	-1.35 (12)	-4.88*** (7)	0.99*** (9)	13.37 (12)					
1996:01 to 2004:03	-5.21*** (2)	-5.17*** (4)	0.64** (7)	17.83 (2)					
Ukraine									
1996:01 to 2004:03	-1.21 (1)	-0.98 (3)	1.04*** (7)	79.59 (1)					

Source: Author's calculations.

Note: ADF, PP, KPSS and ERS are the Augmented Dickey-Fuller, the Phillips-Perron, the Kwiatkowski-Phillips-Schmidt-Shin and the Elliott-Rothenberg-Stock point optimal unit root tests, respectively, for the case including only a constant. In parentheses the lag length chosen using the Schwartz information criterion is given for the ADF and ERS tests, and the Newey West kernel estimator for the PP and KPSS tests. *, ** and *** denote the rejection of the null hypothesis. For the ADF, PP and ERS tests, the null hypothesis is the presence of a unit root, whereas for the KPSS tests, the null hypothesis is stationarity.

The relationship between dual productivity and the relative price of market nontradables is investigated using monthly data. Dual productivity is proxied by average labor productivity in industry or manufacturing.¹⁷ For the relative price of market nontradables, three measures are employed: (1) the ratio of services in the CPI to goods in the CPI, (2) the ratio of services in the CPI to the PPI, and (3) the CPI-to-PPI ratio. Time series for services and goods in the CPI are obtained from the Main Economic Database of the OECD. As the OECD has ceased to publish these series for Bulgaria, Croatia, Romania and Ukraine, the series for these countries end at the end of 2001 or 2002.

Turning now to the estimation results shown in tables 4a and 4b, we can observe the following pattern. On the one hand, productivity and relative prices based on service prices (SERVGOODS or SERVPPI) appear cointegrated in a reasonably robust manner with coefficients of around 1 for Bulgaria¹⁸ and Russia,

¹⁷ Productivity changes in the closed sector are set to zero because no data are available on a monthly basis.

¹⁸ Overall, our results are a little more encouraging for Bulgaria than those reported in Nenovsky and Dimitrova (2002), who argued that the B-S effect did not work in Bulgaria between 1997 and 2001 because of the nonfulfillment of the underlying assumptions.

Cointegration Tests between Productivity and Relative Prices,

Monthly Data

Cointegrating vector $X = [\text{SERVGOODS}/\text{SERVPPI}, \text{PROD}]$; $\beta' = [1, \beta_1]$; expected sign = $[1, +]$

	SERVGOODS			SERVPPI		
	EG	DOLS	ARDL	EG	DOLS	ARDL
Bulgaria						
1995:01 to 2002:09						
LAG			(5.0)		(1.6)	(4.1)
COINT	NO	NO	24.247**	3.203* (1)	3.325* (1)	6.102**
ECT	0.243***		0.209***	0.09**	2.559	0.159***
CONST	0.12***		0.336***	0.104***	0.061***	0.289***
DUMMY_97	0.451***		2.257***	0.349***	0.73***	0.942***
β_1	1.155***		0.973**	0.961***	1.033***	0.664**
1997:01 to 2002:09						
LAG			(6.6)			(6.6)
COINT	1.626 (0)	NO	5.705*	3.636** (11)	NO	4.515a)
ECT	0.072**		0.109**	0.063**		0.088**
CONST	0.021***		0.015	0.084***		0.089*
β_1	0.854***		1.37**	0.845***		1.357*
Romania						
1994:01 to 2002:08						
COINT	0	NO	NO	NO	NO	NO
ECT	0.005					
CONST	0.582***					
β_1	0.75***					
Russia						
1993:01 to 2004:03						
LAG		(0.0)	(4.3)		(0.0)	(12.12)
COINT	3.523*(1)	3.431** (1)	4.994*	3.32* (0)	3.351* (0)	13.365**
ECT	0.078**		0.129***	0.088**		0.16***
CONST	0.232***	0.234***	0.308***	0.07***	0.07***	0.045
DUMMY_1998	0.292***	0.288***	0.273***	0.469***	0.469***	0.442***
β_1	1.027***	1.05***	1.049***	0.745***	0.741***	0.839**
Turkey						
1994:01 to 2004:03						
LAG		(0.1)	(6.2)		(6.3)	(6.6)
COINT	2.187 (1)	2.228 (1)	8.863**	1.114 (12)	3.257* (0)	9.422**
ECT	0.156***		0.064	0.099**		0.101**
CONST	0.192***		0.608**	0.121***	0.274***	0.357*
β_1	0.412		8.378*	0.964**	4.373***	4.075
Ukraine						
1994:01 to 2001:12						
LAG			(5.3)		(0.0)	(3.0)
COINT	3.501** (12)	NO	7.316**	5.475** (1)	5.599** (1)	6.107**
ECT	0.06**		0.073**	0.098***		0.084***
CONST	0.126**		0.679***	0.107**	0.107**	0.621***
DUMMY_1998	0.466***		0.376	0.191**	0.191**	0.357**
β_1	0.083		0.211	0.231	0.226	0.281

Source: Author's calculations.

Note: EG, DOLS and ARDL denote the Engle-Granger, the Dynamic OLS and the Autoregressive Distributed Lags estimations. The raw LAG shows the lag structure of the DOLS and ARDL models. The raw COINT contains residual-based cointegration tests for the EG and the DOLS approach (with the lag length in parentheses), and test statistics from the bounds-testing approach for ARDL. The error correction terms for EG and ARDL are reported in the raw ECT. *, ** and *** denote that the null hypothesis is rejected at the 10%, 5% and 1% levels, respectively. CONST is a constant term. a) indicates ambiguity in the sense that the tests statistic lies in a range where there is no clear indication of the absence or existence of a cointegrating relationship (Pesaran et al., 2001). NO: No cointegration could be found.

and in a less robust manner with coefficients relatively close to 1 for Croatia. On the other hand, virtually no cointegration can be found for Romania, and the estimated coefficients are not significant for Ukraine. For Turkey, there is either no cointegration or the coefficient is fairly high, i.e. around 4. As for the

Table 4b

Cointegration Tests between Productivity and Relative Prices, Monthly Data

Cointegrating vector $X = [CPIPI, PROD]$; $\beta' = [1, \beta_1]$; expected sign = $[1, +]$

	EG	DOLS	ARDL		EG	DOLS	ARDL
Bulgaria 1991:12 to 2004:03				Russia 1993:01 to 2004:03			
LAG	(0.3)	(1.4)		LAG	(0.0)	(2.4)	
COINT	-3.734** (1)	-3.217* (1)	12.978**	COINT	-4.25** (0)	-5.028** (2)	7.895**
ECT	-0.063***		-0.073***	ECT	-0.202***		-0.263***
CONST	-0.187***	-0.206***	-0.032	CONST	-0.117***	-0.118***	-0.132***
DUMMY_97/98	0.208***	0.197***	0.899***	DUMMY_97/98	0.152***	0.154***	0.17***
β_1	0.49***	0.514***	0.068	β_1	-0.343***	-0.353***	-0.406***
Croatia 1992:01 to 2004:03				Ukraine 1994:12 to 2004:03			
LAG		(6.6)	(6.0)	LAG	(0.0)	(6.0)	
COINT	-3.441** (10)	-3.886** (0)	50.524**	COINT	-3.795*(11)	-3.836** (11)	12.29**
ECT	-0.098**		-0.061*	ECT	-0.044		-0.07**
CONST	0.013***	0.012***	0.063***	CONST	0.037***	0.037***	0.18***
DUMMY_98				DUMMY_98	0.029	0.029	-0.152**
β_1	0.679***	0.716***	0.445	β_1	0.132***	0.133***	0.196
Romania 1994:01 to 2004:03				Turkey 1985:03 to 2004:03			
LAG			(10.12)	LAG	(4.0)	(6.6)	
COINT	-2.408 (0)	NO	13.11**	COINT	-4.673** (1)	-4.267** (0)	5.084*
ECT	-0.062**		0.006	ECT	-0.131***	11	-0.111***
CONST	0.029		-3.303	CONST	-0.028***	0.004	0.037
DUMMY				DUMMY	0.145***	0.118***	0.101*
β_1	-0.065***		1.354	β_1	0.569***	0.676***	0.673**

Source: Author's calculations.
Note: As for table 4a.

CPI-to-PPI ratio (CPIPI), cointegration with the good sign could be established not only for Bulgaria, but also for Croatia, Turkey and Ukraine, albeit with fairly low coefficients in the latter country.

Finally, unit root tests including a constant are reported in table 5, from which it can be seen that the PPI-based real exchange rate is clearly not difference stationary in levels for Bulgaria, Croatia, Romania and Ukraine. For Russia, the null of a unit root cannot be rejected by the ADF, PP and ERS tests, and the KPSS test is not able to reject the null of stationarity. The opposite happens to be the case for Turkey, where the ADF, PP and ERS tests suggest difference stationarity. However, the KPSS test indicates nonstationarity. Thus, it is fair to say that PPP does not hold for the open sector for most of the countries.

Table 5

Unit Root Tests for the PPI-Based Real Exchange Rates,

Monthly Data

		ADF	PP	KPSS	ERS
Bulgaria	1993:01 to 2004:03	-2.084 (0)	-1.992 (2)	0.979*** (9)	-3.104* (3)
Croatia	1993:01 to 2004:03	-1.337 (1)	-1.290 (3)	0.764*** (9)	7.719 (1)
Romania	1994:01 to 2004:03	-1.686 (0)	-1.592 (6)	1.025*** (9)	15.797 (0)
Russia	1994:01 to 2004:03	-1.854 (1)	-2.078 (6)	0.169 (9)	11.840 (1)
Turkey	1985:01 to 2004:03	-3.138** (0)	-3.376** (2)	0.412* (11)	3.750* (0)
Ukraine	1996:01 to 2004:03	-1.088 (2)	-1.052 (2)	0.845** (7)	20.567 (2)

Source: Author's calculations.

Note: ADF, PP, KPSS and ERS are the Augmented Dickey-Fuller, the Phillips-Perron, the Kwiatkowski-Phillips-Schmidt-Shin and the Elliott-Rothenberg-Stock point optimal unit root tests, respectively, for the case including only a constant. In parentheses the lag length chosen using the Schwartz information criterion is given for the ADF and ERS tests, and the Newey West kernel estimator for the PP and KPSS tests. *, ** and *** denote the rejection of the null hypothesis at the 10%, 5% and 1% levels. For the ADF, PP and ERS tests, the null hypothesis is the presence of a unit root, whereas for the KPSS tests, the null hypothesis is stationarity.

4.1.3 To Sum Up

All in all, there is mixed evidence regarding the functioning of the basic assumptions. First, increases in productivity are connected to increases in real wages in the open sector roughly proportionately only in Croatia, Russia and Ukraine. The effect of productivity on real wages is below 1 in Bulgaria, and the relationship is highly questionable for Romania. By contrast, changes in productivity in the open sector lead to disproportionately large changes in real wages in Turkey. Second, a proportionate wage equalization between the open and closed sectors can be verified to a limited extent only for Russia. Third, notwithstanding the mixed evidence on real wages and nominal wage equalization, the service-based relative price is found to be linked reasonably well to dual productivity with a coefficient in the neighborhood of 1 for Bulgaria, Croatia and Russia. The coefficient is much higher than 1 for Turkey and considerably lower than 1 for Ukraine. No cointegration could be detected for Romania. Overall, this suggests that the B-S effect works reasonably well in Bulgaria, Croatia and Russia, whereas it is attenuated in Ukraine and is amplified in Turkey. For Romania, it does not seem to function. Another question is, however, the influence of the B-S effect on overall inflation, an issue which is addressed in the next section. Fourth, relative PPP is rejected for the real exchange rate of the open sector for all economies, perhaps with the exception of Turkey, which implies that the B-S effect will not be able to explain the entirety of real exchange rate movements.¹⁹

4.1.4 A Simple Accounting Framework

We now set out to analyze the size of the inflation to be attributed to the B-S effect (P^{B-S}). For this purpose, let us consider the following equation used in Égert (2004):

$$P^{B-S} = (1 - \alpha)\beta_1(PROD^T - PROD^{NT}) \quad (1)$$

where $(1 - \alpha)$ is the share of nontradables in the consumer basket, β_1 conceptually corresponds to the estimated coefficient from tables 4a and 4b, which connects the relative price of nontradables to productivity, and which, ideally, should be 1. PROD is the average labor productivity in the tradable (T) and nontradable (NT) sectors.

Average annual growth rates of the different measures of dual productivity are computed for the countries under consideration using annual data from national accounts for two periods, 1991–2001/2003 and 1996–2001/2003. For Turkey, the series start in 1970. This is why two additional periods are considered for this country, namely 1970–2003 and 1970–90.²⁰ In addition, average annual growth rates are computed using monthly industrial production-based productivity measures.²¹

The results are displayed in tables 6a to 6d. Several observations deserve attention. The first observation is that it may matter whether average labor pro-

¹⁹ If relative PPP were verified for the open sector, then the B-S effect could explain real exchange rate movements based on the CPI. By contrast, if relative PPP cannot be verified, the B-S effect will provide an explanation for changes in the difference between the (CPI-based) overall real exchange rate and the real exchange rate of the open sector.

²⁰ It should be mentioned that the productivity figures may be biased downward for Russia and Ukraine because from 1995 to 1998, huge numbers of employees were forced to take unpaid leaves. Hence, they are included in the statistics even if they did not contribute to output.

²¹ The same periods were considered here as for the national accounts-based data. For Croatia, Romania and Russia, data for 2003 (not available from national accounts) are also shown for comparison purposes.

ductivity is calculated on the basis of sectoral employment or employee data. This is especially the case for Bulgaria for DIFF3 to DIFF6 (table 6a) and for Romania for DIFF23, DIFF25 and DIFF31 to DIFF33 (table 6b). The second observation is that how the sectors are classified into open and closed sectors may have a large impact. An example is Bulgaria, where dual productivity is negative when transport and telecommunications are taken as a closed sector, but becomes highly positive when the same sector is considered an open sector. The opposite is true for Ukraine. However, some countries such as Croatia and Russia are less influenced by the choice of sectoral classification.

Table 6a

Average Growth Rates of Dual Productivity, Old Classification

			DIFF1	DIFF2	DIFF3	DIFF4	DIFF5	DIFF6
			%					
Bulgaria	EMPLOYEE	1991–2003	-4.44	-5.6	0.47	4.11	-3.76	9.66
		1996–2003	-2.62	-4.03	1.73	15.06	0.33	15.8
	EMPLOYMENT	1991–2003	-4.82	-3.94	-5.02	7.51	9.05	5.51
		1996–2003	-7.4	-7.1	-6.87	5.48	4.82	5.58
Croatia	EMPLOYEE	1991–2002	-0.1	-0.29	0.16	0.57	0.14	0.72
		1996–2002	4.11	3.37	3.92	4.87	3.42	4.81
Russia	EMPLOYMENT	1991–2001	5.83	3.36	7.11	5.2	2.21	6.43
		1996–2001	5.00	2.9	5.81	5.46	2.99	6.31
Ukraine	EMPLOYEE	1991–2002	1.4	2.93	-0.06	-2.61	-0.18	-3.18
		1996–2002	-4.11	-3.24	-3.48	-9.68	-7.94	-8.69
		EMPLOYMENT	1991–2002	4.94	3.95	4.01	0.98	0.91	0.78
		1996–2002	0.69	4.77	-3.36	-7.06	2.17	-9.98

Source: Author's calculations.

Note: EMPLOYEE refers to average labor productivity measured by means of the number of employees in the sectors. EMPLOYMENT denotes productivity figures computed on the basis of sectoral employment data.

Table 6b

Average Growth Rates of Dual Productivity, New Classification

	Bulgaria		Romania			
	EMPLOYEES	EMPLOYMENT	EMPLOYEES		EMPLOYMENT	
	1996–2003	1996–2003	1991–2002	1996–2002	1991–2002	1996–2002
%						
DIFF11	-0.86	-1.33	3.40	4.63	3.69	10.8
DIFF12	-2.98	-1.06	-0.63	-1.62	5.66	12.93
DIFF13	-0.86	-1.33	0.60	1.30	0.97	7.15
DIFF14	-2.98	-1.06	-1.29	-1.77	2.62	8.4
DIFF15	-0.86	-1.33	1.06	1.49	1.10	7.27
DIFF16	-2.98	-1.06	-0.77	-1.30	2.44	8.28
DIFF21	-0.57	-1.01	1.63	1.73	-2.88	0.93
DIFF22	-2.73	-0.73	-1.37	-2.31	-2.19	1.05
DIFF23	-0.57	-1.01	5.43	10.52	-0.68	6.09
DIFF24	-2.73	-0.73	0.59	2.23	-0.44	5.25
DIFF25	-0.57	-1.01	5.81	10.64	-0.53	6.28
DIFF26	-2.73	-0.73	1.22	2.94	-0.34	5.56
DIFF31	2.56	-1.02	4.74	6.50	-2.98	0.03
DIFF32	2.56	-1.02	9.64	17.41	-0.81	5.20
DIFF33	2.56	-1.02	10.13	17.7	-0.66	5.39
DIFF41	13.57	10.35	2.49	1.2	-0.90	1.21
DIFF42	1.20	6.30	-2.05	-4.11	0.17	1.74
DIFF5	16.51	9.50	5.15	5.33	-1.27	0.59

Source: Author's calculations.

Note: As for table 6a.

Table 6c

Average Growth Rates of Dual Productivity, New Classification,									
Turkey									
	DIFF11	DIFF12	DIFF13	DIFF21	DIFF22	DIFF31	DIFF32	DIFF33	DIFF41
	EMPLOYMENT								
1970–2003	1.66	1.36	1.56	1.47	1.47	3.53	1.10	1.10	3.55
1970–1990	1.09	1.28	1.59	0.44	0.44	2.31	1.75	1.75	1.93
1991–2003	1.12	0.25	0.28	2.11	2.11	2.70	–0.80	–0.80	3.46
1996–2003	1.81	0.35	0.44	3.70	3.70	0.94	–2.36	–2.36	2.05
1994–2001	0.40	–0.29	–0.40	1.52	1.52	0.01	–1.71	–1.71	0.67

Source: Author's calculations.
Note: As for table 6a.

The productivity growth rates reported in table 6d are broadly in line with data based on national accounts for Croatia, Russia and Turkey and to a lesser extent for Ukraine. By contrast, for Bulgaria and Romania, the reported figures based on industrial production are considerably higher than national accounts-based data when only manufacturing or industry are taken as the open sector. Nevertheless, they are comparable with the figures obtained when some service sectors are also included in the open sector (DIFF32 and DIFF33 for Romania and DIFF41 and DIFF5 for Bulgaria).

Table 6d

Average Growth Rates of Dual Productivity, Industrial Production						
		%			%	
Bulgaria	1992–2003	9.00	Russia	1996–2001	5.50	
	1996–2003	7.70		1996–2003	6.80	
Croatia	1993–2002	3.20	Ukraine	1996–2002	9.70	
	1993–2003	3.20		Turkey	1991–2003	2.50
	1996–2002	3.00			1996–2003	0.70
	1996–2003	3.00			1994–2001	–0.50
Romania	1996–2002	9.20				
	1996–2003	9.30				

Source: Author's calculations.
Note: One-year average yearly growth rates are derived from monthly series according to the practice of Eurostat. The average cumulated series for year t (average of 12 months) is divided by the average cumulated series for year $t-1$.

The inflation rate that can be associated with the B-S effect is quantified relying on equation (1). Table 7 reports the composition of the harmonized CPI for Bulgaria and Romania. It turns out that the share of services is slightly above 30%, whereas the share of market-based services is about 15% to 20%. As the countries studied here are comparable with the same level of development, 20% can be thought of as a reasonable estimate for the share of market-based nontradables for all countries. Of the calculated dual productivity measures, we select those for which the open sector is constructed using manufacturing or, if not available, industry, and for which the closed sector includes the rest except for health, education, public administration and other community services. Agriculture is once part of the closed sector (DIFF2, DIFF14, DIFF12), and is once excluded from the analysis (DIFF1, DIFF13, DIFF11). The coefficient β_1 is restricted to 1, which seems reasonable for Bulgaria and Russia. Because this coefficient is lower than 1 for the remaining countries, the reported figures could be viewed as upper-bound estimates.

Results in table 8 indicate that the B-S effect may be negative for Bulgaria irrespective of the period considered and for Croatia for 1991 to 2002 when using data based on national accounts. However, industrial production-based figures indicate a positive effect. This is mainly because such figures do not take account of productivity increases in services. However, if productivity grows in services, as is the case for the other countries, results based on national accounts and industrial production are fairly similar. Nevertheless, the effect rises to about 0.8 percentage point in Croatia for the period of 1996 to 2002. Table 8 also indicates a 1.1 percentage point average annual contribution to inflation of the B-S effect in Russia and Ukraine. The effect fluctuates around 0.2 percentage point in Turkey. Finally, the effect strengthens pretty much for the second half of the period studied in Romania, as it hovers around 1.9 percentage points. Nevertheless, when comparing these figures to the average inflation rates of the observed period, Croatia is the only country for which the B-S effect has an important impact from 1996 to 2002, as it explains roughly up to one-fifth of the observed inflation. The amplitude of the B-S effect is broadly in line with findings for the eight new EU Member States in Central and Eastern Europe (see Égert, Halpern and MacDonald, 2004, for a summary of the results).

What remains to be done is to get an estimate for the B-S effect for the foreign benchmark in order to be able to assess the appreciation of the real exchange rate, which could be explained by the dual productivity differential. For this purpose, we use the average of three studies which provide the needed figure for Germany, which is taken as a proxy for the euro area during the 1990s: 0.25%.²² For the industrial production-based productivity measure, the two figures which can be obtained using equation (1) are 1.2% for 1992 to 2003 and 1.0% for 1996 to 2003.²³ When adjusting the figures reported in table 8 appropriately, the equilibrium exchange rate appreciates in Romania, Russia and Ukraine, while the direction of a change in the equilibrium exchange rate hinges on whether or not national accounts or industrial production-based data are used in Bulgaria, Croatia and Turkey. However, using data obtained from national accounts seems more appropriate for measuring the B-S effect. This would imply an equilibrium depreciation in Bulgaria, an equilibrium appreciation in Croatia and a constant equilibrium exchange rate in Turkey.

Table 7

The Share of Different Groups of Items in the HICP in 2002

	NMS-10	Bulgaria	Romania
	%		
Goods	28.1	21.1	20.8
of which: durable	7.9	2.2	1.5
semidurable	10.5	6.6	9.0
nondurable	9.7	12.4	10.2
Energy	4.7	4.2	4.7
Food	29.9	43.4	46.3
of which: alcohol and tobacco	6.7	4.5	5.2
Services	48.9	34.0	32.0
of which: regulated	15.3	18.0	16.8

Source: Author's own calculations based on disaggregated HICP data drawn from NewCronos/Eurostat.
Note: NMS-10 stands for the ten new EU Member States.

²² For Germany, Swagel (1999), Lommatzsch and Tober (2003) and Égert et al. (2003) estimated the size of the B-S effect as 0% (1990–96), 0.1% (1995–2002) and 0.55% (1995–2000), respectively.

²³ The share of nontradables in the CPI is set to 40%.

Table 8

The Contribution of the Balassa-Samuelson Effect to Average Annual CPI in Percentage Points							
		DIFF1_Old	DIFF2_Old		IND_PROD	Observed CPI Period average	2003
Bulgaria	1991–2003	−0.96	−0.79	1992–2003	1.79	145.20	
	1996–2003	−1.48	−1.42	1996–2003	1.54	153.40	2.30
Croatia	1991–2002	−0.02	−0.06	1992–2002	0.63	203.00	
	1996–2002	0.82	0.67	1996–2002	0.60	4.30	1.80
Russia	1991–2001	1.17	0.67			292.30	
	1996–2001	1.00	0.58	1996–2001	1.11	36.40	13.60
Ukraine	1991–2002	0.99	0.79			675.90	
	1996–2002	0.14	0.95	1996–2002	1.94	24.30	5.20
		DIFF13_New	DIFF14_New				
Bulgaria	1996–2003	−0.27	−0.21	1996–2003	1.54	153.40	
Romania	1991–2002	0.19	0.52			100.60	
	1996–2002	1.43	1.68	1996–2002	1.84	57.30	15.30
		DIFF11_TK	DIFF12_TK				
Turkey	1970–2003	0.33	0.27			50.40	
	1970–1990	0.22	0.26			39.20	
	1991–2003	0.22	0.05	1991–2003	0.50	68.60	
	1996–2003	0.36	0.07	1996–2003	0.14	61.90	
	1994–2001	0.08	−0.06	1994–2001	−0.1	77.40	25.30
		NATIONAL ACCOUNTS		IND_PROD			
Euro area	1991–2003	0.25			1.00		
	1996–2003				0.80		

Source: Average annual inflation is computed based on data drawn from *wiiw* and from the OECD Economic Outlook for Turkey.

Note: IND_PROD refers to average labor productivity obtained on the basis of industrial production. For the industrial production-based figures, the same periods are shown as for the national account-based data mainly for the sake of full comparability. The extension of the period until 2003 for Croatia, Romania and Russia will not change the results significantly (see data in table 6d).

4.2 The Dutch Disease in Russia

Besides the classical channels of real exchange rate appreciation, countries rich in natural resources and especially those with economic structures relying heavily on oil production and export are usually good candidates for the Dutch disease (D-D) phenomenon. Of the countries under consideration, Russia is an important oil-producing and exporting country: the share of energy products (crude oil, fuel and gas) in total exports amounted to an impressive 51.6% in 2003 (chart 7).

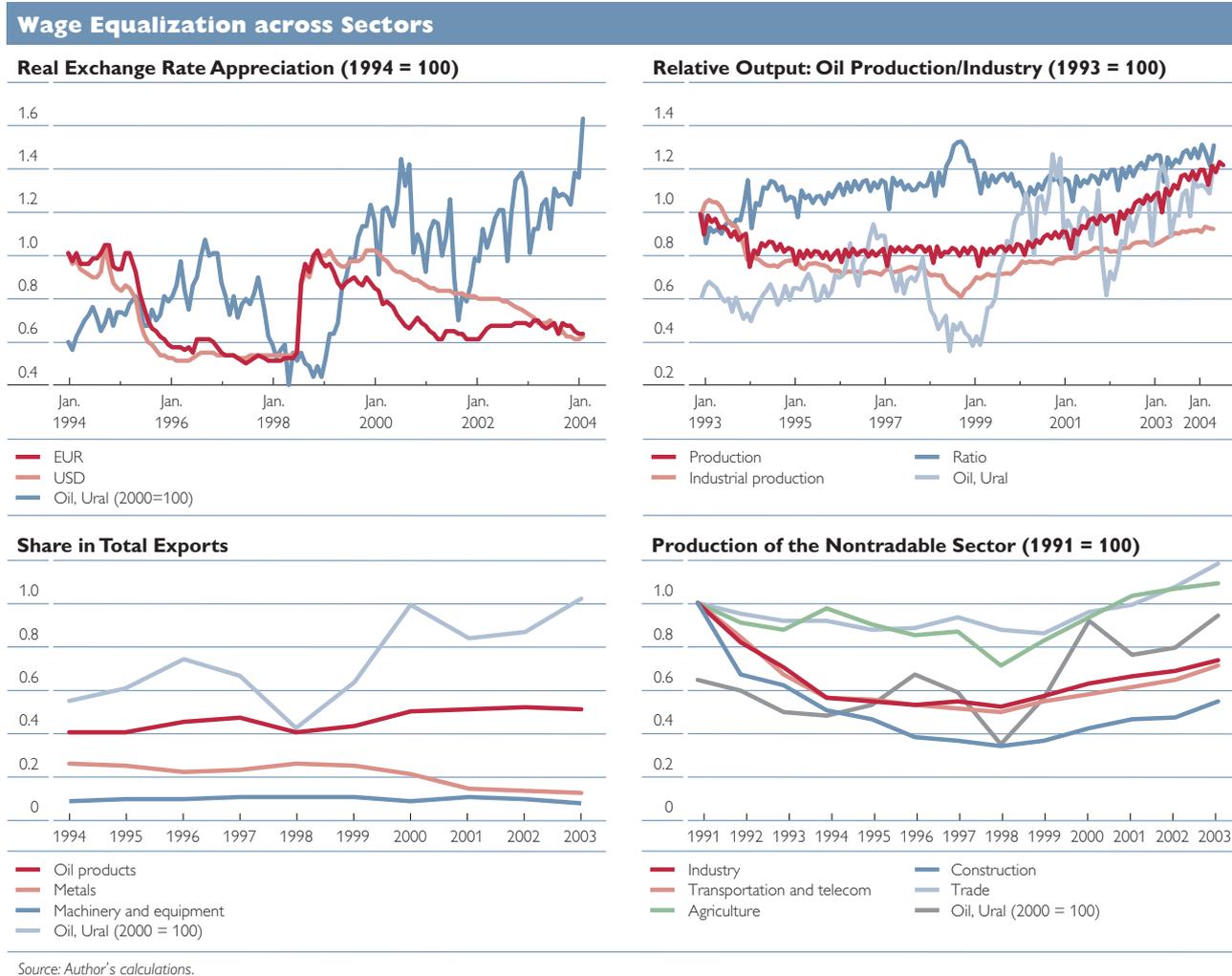
According to the D-D phenomenon, an increase in the price of the exported commodity on the world markets encourages more investment in the given sector, which in turn increases sectoral output. The need for more labor to produce more output in the commodity sector causes wages to increase, which, if wages tend to equalize across sectors, leads to an increase in wages in other sectors of the economy. As a result, the competitiveness of the non-oil open sector drops, implying a slowdown in exports and, as a consequence, in overall sectoral output. At the same time, because of wage increases, the relative price of nontradables and the production of this sector rise. Another implication of increasing commodity prices is the appreciation of the real exchange rate triggered by the inflow of export revenues. Simultaneously, the overall trade balance remains balanced or even in surplus. The symptoms of the Dutch disease can be summarized in the following propositions:

1. The real exchange rate appreciates.
2. The output and exports of the non-oil (nonbooming) open sector decline.
3. The production of the nontradable sector increases.
4. The trade balance is not in the red.

In the flagship paper of the proponents of the D-D phenomenon, Sachs and Warner (1995) find strong empirical evidence in favor of the D-D effect especially in emerging Asian economies and in Sub-Saharan Africa. Nevertheless, in the second half of the 1990s, an increasing number of papers put into question the general validity of the D-D phenomenon and showed that it holds under specific conditions, thus diminishing the policy implication of the findings of Sachs and Warner (1995), according to which countries with abundant natural resources should not exploit their natural resources because this puts at risk their long-term growth. Spilimbergo (1999), for instance, shows that the D-D phenomenon does not seem to work for the cases of Chile and South Africa, countries with abundant natural resources. Altamiro (1999) refers to Corden (1984), who suggests that the D-D phenomenon might not even hold for the Netherlands. Gylfason (2002) argues that abundant natural resources may lead to sluggish long-term growth because of (1) ill-defined property rights, imperfect or missing markets and lax legal structures in many developing countries and emerging market economies; (2) the fight for resource rents and the concentration of economic and political power, which hamper democracy and growth; and (3) too many people getting stuck in low skill-intensive, natural resource-based industries. Kronenberg (2004) argues that one of the main reasons for the D-D phenomenon in transition economies is corruption. Papyrakis and Gerlagh (2004) suggest that, when controlling for e.g. corruption, investment, openness and education, abundant natural resources do not decrease (as predicted by the D-D phenomenon) but foster economic growth in the long run.

Regarding the basic proposition number 1 of the D-D hypothesis for the case of Russia, wage equalization, as already discussed earlier, does not appear to be too heroic an assumption. Analyzing the symptoms of the Dutch disease in Russia, chart 8 shows that the real exchange rate of the Russian ruble vis-à-vis both the euro and the U.S. dollar underwent some appreciation episodes. The most notable is the steady appreciation from 1999 onward.

With regard to proposition number 2, chart 8 also plots the ratio of monthly crude oil production to industrial production in volume. The relative share of crude oil, fuel and natural gas in total exports grew from 40% in 1994 to above 50% in 2003. At the same time, the share of metal exports dropped considerably, whereas the share of machinery and equipment exports remained fairly stable. This indicates that only the commodity-exporting sectors are crowded out. The graph also indicates that the value added at constant prices in some of the nontradable sectors, namely trade and agriculture, grew faster than that in industry. By contrast, transport and telecommunications move broadly in line with industry. Finally, the Russian trade balance has exhibited large surpluses since the early 1990s. Overall, it seems that some of the symptoms of the D-D phenomenon are present in Russia and that there may therefore be some scope for the D-D effect in Russia. This analysis holds true especially for the period after 1999.



4.3 The Role of Net Foreign Assets and Additional Factors

In the previous sections, we investigated in more depth the B-S effect and the D-D phenomenon. In this section, we propose to incorporate them into a more general framework, namely the stock-flow approach to the real exchange rate, which has been used recently for industrialized countries (Faruqee, 1995; Aglietta et al., 1998; Alberola et al., 2002) as well as for transition economies (Burgess et al., 2004; Rahn, 2003; Alberola, 2003; Égert, Lahrèche-Révil and Lommatzsch, 2004), according to which the real exchange rate based on the CPI (Q^{CPI}) can be linked to the dual productivity differential (PROD) and to net foreign assets (NFA). The reduced-form equation commonly used is the following:

$$Q^{CPI} = f(\overset{-}{PROD}, \overset{+/-}{NFA}) \quad (2)$$

An increase in the productivity variable is expected to lead to an appreciation of the real exchange rate (negative sign). Alberola et al. (1999, 2002) and Rahn (2003) interpret this as the traditional B-S effect. The productivity variable for industry can also reflect nonprice competitiveness in the open sec-

tor and thus lead to a real appreciation as argued in Égert, Lahrière-Révil and Lommatzsch (2004).

The sign on NFA is not unambiguous. Égert, Lahrière-Révil and Lommatzsch (2004) put forth that for well-established economies, an increase in the NFA position is usually associated with an appreciation of the real exchange rate because of capital inflows related to increasing payments received on NFA (positive sign). However, in transition economies, domestic savings may be insufficient to finance the high growth potential. Thus, foreign savings are needed, the inflows of which reduce net foreign assets and increase net foreign liabilities and cause the real exchange rate to appreciate. This implies a negative sign. However, there is a threshold for the NFA position beyond which the sign is likely to switch because the domestic economy has to start servicing its foreign liabilities. Any additional increase in net foreign liabilities would lead to an appreciation of the real exchange rate.

The mechanism causing the real exchange rate to appreciate in case the D-D phenomenon takes effect can be associated with increasing revenues from oil exports. Therefore, for Russia, equation (2) is augmented with the corresponding variable, which is given as the product of the price of Ural crude oil and crude oil production volume ($REV_OIL = P^{OIL} \cdot Production^{OIL}$):

$$Q^{CPI} = f(PROD, NFA, REV_OIL) \quad (2a)$$

Sosunov and Zamulin (2004) use a general equilibrium model to investigate the appreciation of the real exchange rate in Russia. After calibrating their model, they come to the conclusion that the real exchange rate can be modeled as a function of the oil price with an elasticity of about 0.3. We try to match this finding with the data and perform cointegration tests between the real exchange rate and the real oil price for the whole period and for the post-1998 period. Strapafora and Stavrev (2003) also analyze the real exchange rate of the Russian ruble. Using quarterly data and the Phillips and Loretan (1991) cointegration technique, they find that the productivity variable, the oil price and a 1998 dummy significantly enter the real exchange rate equation. We also take a look at this specification.

To check for the robustness of our results, we include a set of control variables. Bergstrand (1991) argues that an increase in the relative price of nontradables may also be caused by demand-side pressures leading to real appreciation. Private and public consumption as a share of GDP have been widely used in the literature to account for these demand-side factors.²⁴ Because of data availability, we only use public expenditures as a share of GDP (EXP). Openness ($OPEN$) is also often included in empirical estimations. If openness were to reflect trade liberalization, an increase in openness should lead to a deterioration of the current account position. This is usually assumed to lead to a real depreciation. MacDonald (1998) and Clark and MacDonald (1999) use government debt (DEF) to approximate the risk premium. An increase in government debt implies higher risk, and this causes the real exchange rate to depreciate. MacDonald (1998) also includes real oil prices ($ROIL$), which is to reflect

²⁴ See, for instance, Avallone and Lahrière-Révil (1999), Beguna (2002), Bitans (2002), Coricelli and Jazbec (2004), Dobrinsky (2003), Fischer (2004), Halpern and Wyplosz (1997), Kim and Korhonen (2002) and MacDonald and Wójcik (2004) for transition economies.

changes in the terms of trade. For non-oil producing countries, a rise in real oil prices implies a worsening of the terms of trade, which calls for a depreciation of the real exchange rate. Equations (2b) to (2e) show equation (2) augmented with the control variables:

$$Q^{CPI} = f(\overline{PROD}, \overline{NFA}^{+/-}, \overline{EXP}) \quad (2b)$$

$$Q^{CPI} = f(\overline{PROD}, \overline{NFA}^{+/-}, \overline{OPEN}^+) \quad (2c)$$

$$Q^{CPI} = f(\overline{PROD}, \overline{NFA}^{+/-}, \overline{DEF}^+) \quad (2d)$$

$$Q^{CPI} = f(\overline{PROD}, \overline{NFA}^{+/-}, \overline{ROIL}^+) \quad (2e)$$

These equations are estimated based on both time series and panel cointegration techniques. Because of possible heterogeneity across the countries, we employ the mean group DOLS and ARDL estimators that are able to account for cross-country heterogeneity in the slope coefficients in a panel context. A negative and statistically significant error correction term for the mean group ARDL is interpreted as evidence for cointegration. For Russia, the equations tested are equations (2a) to (2e) augmented with the variable $P^{OIL} \cdot Production^{OIL}$.

Average labor productivity in industry, based on industrial production, is used for the productivity variable. Net foreign assets are approximated with cumulated monthly current account balances relative to GDP.²⁵ Openness is obtained as the average of exports and imports of goods relative to GDP. Similarly to MacDonald (1997), government debt is proxied by cumulated monthly deficits of the central or the consolidated general government. Government expenditures as a share of GDP are obtained as the share of expenditures of the central or the consolidated general government in GDP. For more details on data sources, see appendix 2.²⁶ Finally, it should be noted that dummy variables are included for Bulgaria to capture the financial crisis in 1997, and for Russia and Ukraine covering 1998 to capture the Russian crisis. For Turkey, two dummies are employed. The first is meant to capture the Mexican crisis in 1994, and the second intends to control for the effect of the Russian, Brazilian and Turkish crises in 1998, 1999 and 2001, respectively.

4.4 Estimation Results

4.4.1 Time Series Results

Tables 9 to 14 below show the estimation results based on alternative time series cointegration techniques.²⁷ For Bulgaria, although all econometric techniques detect the presence of cointegrating vectors, only the EG and DOLS estimates yield statistically significant coefficient estimates. For these estimates, the productivity variable is always significant and has the expected sign. Net foreign

²⁵ For Russia, official current account figures do not reflect the flight of capital from the country and hence may overstate net foreign assets.

²⁶ Data from national sources are preferred except if longer time series are available from the OECD or the IMF databases. The time span differs in function of the data availability of the different time series. The longest possible time span is always used (see tables 9 to 14 and appendix tables 1 to 3).

²⁷ The time periods used are given by data availability. The period for Turkey starts in 1985 and the period for the rest of the sample in 1994 or later. As we have shown, a large part of the initial undervaluation had been corrected by the mid-1990s. Therefore the criticism by Maeso-Fernandez et al. (2004) that the long-term coefficients will be biased because of initial undervaluation applies to our case only to a limited extent.

assets become significant only with the inclusion of the control variables. In those cases, they have a positive sign, implying that a decrease in NFA is associated with an appreciation of the real exchange rate. If significant, the control variables are correctly signed: an increase in real oil prices and in cumulated public deficits (as a proxy for public debt) causes the real exchange rate to depreciate, and a rise in openness also yields a real depreciation. Note that no cointegration could be found when public expenditures as a share of GDP are employed.

Regarding Croatia, both productivity and NFA are significant in the baseline equation when using DOLS. Contrary to Bulgaria, the sign on NFA is negative: a decrease in this variable is linked to a real depreciation. This result does not change with the inclusion of control variables. Real oil prices and openness are found significant only with DOLS, but then they are correctly signed. The public deficit is always significant but has a positive sign (an increase leads to a real appreciation). At the same time, the productivity variable becomes insignificant and switches signs, pointing to possible multicollinearity among the two variables. Results are most robust when public expenditures in GDP are included, given that all three estimation techniques yield similar results in terms of both signs and significance. Public expenditures seem to capture demand-side effects, as an increase in this variable is reflected in a real appreciation of the Croatian kuna.

Turning now to Romania, the productivity variable enters all equations with the wrong, positive sign for the whole period. Splitting the sample in 1998 allowed us to uncover that the productivity variable becomes negative in the baseline specification. However, the use of the control variable reversed the sign once again. Also, while positive for the whole period, the sign on NFA becomes negative for the second half of the period studied.

For Russia, we first start with the equation including only the oil price. For this purpose, we use three alternative measures: (1) oil revenues, (2) real oil prices and (3) nominal oil prices. As reported in table 12a, it is only by using the ARDL approach that it is possible to show, for the whole period, the presence of a cointegrating vector between the real exchange rate on the one hand and the oil price on the other hand.²⁸ The estimated coefficient varies from 0.5 to 0.65. However, when only the period after 1998 is considered (table 12b), the null of no cointegration cannot be rejected with any of the techniques. This makes us think that a more elaborate model is needed to model the real exchange rate in Russia than that used by Sosunov and Zamulin (2004). As a next step, we also include the productivity variable as in Strapafora and Stavrev (2003) (table 12a). The productivity variable is significant and has the expected sign. However, contrary to Strapafora and Stavrev (2003), the oil price turns out to be statistically insignificant. Apparently, the results are sensitive to the econometric technique (Phillips and Loretan, 1991, versus DOLS and ARDL) and/or the data frequency (quarterly versus monthly).

We now turn to the results of the baseline equation including productivity and NFA. This relationship turns out to be very robust in terms of statistical

²⁸ *If the cointegration tests are not able to reject the null of no cointegration, a negative and significant error correction term may be viewed as a weak evidence in favor of cointegration.*

significance and the stability of signs. The sign on NFA is found to be positive. The results remain broadly unchanged when the control variables are included. It should be mentioned that the oil revenue variable becomes significant only if another control variable (OPEN or DEF) is used.²⁹ In these cases, it bears a negative sign, implying that an increase in oil revenues causes the real exchange rate to appreciate.³⁰

As far as Ukraine is concerned, the results appear fairly robust.³¹ Productivity and NFA are mostly significant irrespective of the specifications. Like for Russia, NFA are linked to the real exchange rate through a positive sign. Of the control variables, the share of public expenditures in GDP is highly significant and has a negative sign confirming the demand-side channel. The real oil price variable has a negative sign. At first sight, this is surprising because Ukraine is not a net oil-exporting country. However, this finding may be the outcome of a spillover effect from Russian oil revenues: The transit of oil through Ukraine may generate revenues in function of changes in oil prices.

Turning to Turkey, several interesting things emerge from the estimation results obtained for the period of 1985 to 2003. Although productivity is usually found to be cointegrated with the real exchange rate with the expected negative sign, the sign on NFA depends largely on the inclusion of control variables. In the baseline specification and when using openness or real oil prices, the sign of the NFA variable is positive. However, when the estimations are performed using public debt or public expenditures, the sign becomes negative. Note that the public debt and expenditure variables are significant and have the expected sign. Like in Ukraine, the real oil price variable is negatively signed, although Turkey is a net oil-importing country.

²⁹ There may be several reasons why oil revenues variables are often found to be insignificant: First, oil prices may be too volatile on a monthly frequency to be cointegrated with the other, more stable variables. Second, changes in oil prices may impact on the real exchange rate not instantaneously but with a given lag. So, it would be expedient to use smoothed values for the oil revenue variable (e.g. moving averages) and to include them in the long-term relationship with some lag.

³⁰ In one of these cases, productivity and NFA become insignificant when using DOLS.

³¹ Data for openness are available only as of November 1999, which is a hindrance for the specification including openness to be estimated for Ukraine.

Table 9

Time Series Estimation Results, Bulgaria

	1993:1 to 2003:12			1993:1 to 2003:12		
	EG	DOLS	ARDL	EG	DOLS_AIC	ARDL_SIC
LAG		(0.4)	(4.2)		(1.4)	(3.0)
COINT	-4.481*(1)	-4.872** (0)	3.587a	-4.583*** (1)	-5.123*** (1)	4.457**
ECT	-0.073		0.014	-0.077		-0.074
CONST	-0.575***	-0.531***	-0.356	-0.725***	-0.705***	-0.965
PROD	-0.829***	-0.885***	-0.828	-0.84***	-0.906***	-0.934
NFA	0.195	0.14	0.057	0.392*	0.346*	0.606
ROIL				0.069	0.08*	0.193
OPEN						
DEF						
DUMMY	0.18***	0.146***	9.301***	0.162***	0.164***	-2.216***

	1994:1 to 2003:12			1993:1 to 2003:12		
	EG	DOLS_SIC	ARDL_SIC	EG	DOLS_SIC	ARDL_SIC
LAG		(1.2)	(4.1)		(0.2)	(3.0)
COINT	-5.83*** (1)	-5.808*** (1)	4.89**	0	-4.528*** (0)	3.978*
ECT	-0.166**		-0.147*	-0.077		-0.06
CONST	-0.046	-0.361***	0.18	-0.656***	-0.63***	-0.714
PROD	-1.005***	-0.909***	-0.924	-0.666***	-0.696***	-0.584
NFA	0.177	0.433***	0.865	0.315*	0.266	0.327
ROIL						
OPEN	0.336***	0.104	0.493			
DEF				-0.195**	-0.184	-0.429
DUMMY	0.072	0.054	-1.015***	0.209***	0.149**	-2.534***

Source: Author's calculations.

Note: EG, DOLS and ARDL denote the Engle-Granger, the Dynamic OLS and the Autoregressive Distributed Lags estimations. The raw LAG shows the lag structure of the DOLS and ARDL models. S, A and H indicate that the lag structure was chosen on the basis of the Schwartz, Akaike and Hannan-Quinn information criterion, respectively. The raw COINT contains residual-based cointegration tests for the EG and the DOLS approach (with the lag length in parentheses), and test statistics from the bounds-testing approach for ARDL. The error correction terms for EG and ARDL are reported in the raw ECT. *, ** and *** denote that the null hypothesis is rejected at the 10%, 5% and 1% levels, respectively. CONST is a constant term. The shadowed columns indicate that the given equation is used for the derivation of real misalignments in section 4.4.3. a) indicates ambiguity in the sense that the tests statistic lies in a range where there is no clear indication of the absence or existence of a cointegrating relationship (Pesaran et al., 2001). The periods indicated in the header of the table show the longest period available for all the variables.

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Table 10

Time Series Estimation Results, Croatia						
1993:1 to 2003:12			1993:1 to 2003:12			
	EG	DOLS	ARDL	EG	DOLS	ARDL
LAG		(1.3)	(3.3)		(4.4)	(4.4)
COINT	-1.705 (0)	-4.152** (1)	3.955a	-1.789 (0)	-4.636*** (1)	1.666
ECT	-0.058	0	-0.156**	-0.061		-0.192***
CONST		-0.074***	-0.117***		-0.143***	-0.135*
PROD		-0.613***	-0.184		-0.648***	-0.338
NFA		-0.067***	-0.098**		-0.057***	-0.089**
ROIL					0.028*	0.01
OPEN						
DEF						
EXP						
1994:1 to 2003:12			1995:1 to 2003:12			
	EG	DOLS	ARDL	EG	DOLS	ARDL
LAG		(4.2)	(1.3)		(4.4)	(0.1)
COINT	-1.943 (0)	-4.205*** (0)	-0.176***	-3.71 (1)	-4.796*** (1)	2.55
ECT	-0.063			-0.148**		-0.175***
CONST		0.018	0.052	-0.127***	-0.175***	-0.155***
PROD		-0.365***	-0.199	-0.114	0.171	0.144
NFA		-0.097***	-0.095**	-0.279***	-0.291***	-0.33***
ROIL						
OPEN		0.072**	0.096			
DEF				1.212***	0.896***	1.506***
EXP						
1995:12 to 2003:12						
	EG	DOLS	ARDL			
LAG		(2.2)	(1.3)			
COINT	-3.412 (1)	-5.46*** (1)	3.536a			
ECT	-0.179**					
CONST	-0.544***	-0.353***	-0.382***			
PROD	-0.495***	-0.483***	-0.628***			
NFA	-0.12***	-0.128***	-0.082*			
ROIL						
OPEN						
DEF						
EXP	-0.289***	-0.161***	-0.197***			

Source: Author's calculations.

Note: As for table 9.

Table 11

Time Series Estimation Results, Romania						
1994–2003			1998–2003			
	EG	DOLS	ARDL	EG	DOLS	ARDL
LAG		(4.4)	(3.2)		NO	(3.0)
COINT	-2.563 (0)	-5.194** (4)	4.485*	-3.896** (6)		5.47**
ECT	-0.117**		-0.175***	-0.092*		-0.191***
CONST	0.061***	-0.06***	-0.012	-0.408***		-0.364***
PROD	0.524***	0.828***	0.564**	-0.37***		
NFA	0.787***	0.739***	0.722***	-0.426***		-0.338

Source: Author's calculations.

Note: As for table 9. NO: No cointegration could be found.

Table 12a

Time Series Estimation Results, Russia

1994–2003

	1994–2003			1994–2003			1994–2003		
	EG	DOLS	ARDL	EG	DOLS	ARDL	EG	DOLS	ARDL
LAG		(4.4)	(4.4)		(4.4)	(4.4)		(4.4)	1.588
COINT	-2.159 (1)	-2.724 (1)	7.177**	-2.146 (1)	-2.693 (1)	6.861**	-2.559 (1)	-3.01 (0)	(1.0)
ECT	-0.056**		-0.068***	-0.053**		-0.065**	-0.067**		-0.058**
CONST	-0.406***		-0.507***	-0.225		1.008	-0.652***		-0.168
PROD							-1.017***		-3.144**
REV_OIL	-0.055		-0.481**						
ROIL				-0.067		-0.646**	0.111		-0.121
DUMMY	0.162***		0.458***	0.157***		0.372**	0.185***		0.504***

Source: Author's calculations.

Note: As for table 9. REV_OIL refers to the oil revenue variable.

Table 12b

Time Series Estimation Results, Russia

1994–2003

	REV_OIL			ROIL			OIL		
	EG	DOLS	ARDL	EG	DOLS	ARDL	EG	DOLS	ARDL
LAG		(4.4)	-2		(4.4)	(2.0)		(4.4)	(2.0)
COINT	-1.653 (0)	-1.485 (0)	-0.191	-0.844 (0)	-1.005 (0)	-0.397	-1.064 (0)	-1.072 (0)	-0.33
ECT	-0.028		-0.032	-0.021		-0.021	-0.022		-0.023

Source: Author's calculations.

Note: As for table 9. REV_OIL refers to the oil revenue variable.

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Table 12c

Time Series Estimation Results, Russia						
1994:1 to 2003:12			1994:1 to 2003:12			
	EG	DOLS	ARDL	EG	DOLS	ARDL
LAG		(4.3)	(3.1)		(6.6)	(2.3)
COINT	-2.457 (1)	-4.463** (0)	7.605**	-2.452 (1)	-4.401*** (0)	2.217
ECT	-0.042		-0.111***	-0.043		-0.107**
CONST	-0.058	-0.14***	0.015	-0.021	-0.108*	-0.154
PROD	-1.608***	-0.58**	-1.58*	-1.508***	-0.718**	-1.422
NFA	0.067***	0.157***	0.209***	0.077***	0.182***	0.178**
REV_OIL				-0.059	0.004	0.061
OPEN						
DEF						
EXP						
DUMMY	-0.266***	-0.035	0.253	-0.288***	0.153**	0.582***
1994:1 to 2003:12			1994:1 to 2003:12			
	EG	DOLS	ARDL	EG	DOLS	ARDL
LAG		(2.0)	(1.3)		(5.4)	(2.2)
COINT	-5.041** (3)	-5.035** (2)	2.147	-3.516 (1)	-5.672** (0)	7.59**
ECT	-0.148***		-0.222***	-0.153***		-0.252***
CONST	2.811***	0.471	0.141	0.389***	-0.356***	0.286*
PROD	0.499	-0.56*	-1.251	-1.846***	-0.139	-0.971**
NFA	-0.084	0.19***	0.243*	0.253***	0.036	0.329***
REV_OIL	-0.006	-0.156***	-0.133	-0.276***	-0.078**	-0.278**
OPEN	1.747***	0.24	0.008			
DEF				1.99	-0.981	-0.618
EXP						
DUMMY	-0.123**	-0.109**	0.075	-0.261***	0.034	0.169**
1995:11 to 2003:12						
	EG	DOLS	ARDL			
LAG		(6.5)	(1.5)			
COINT	-2.699 (0)	-6.659** (1)	3.61*			
ECT	-0.139**		-0.41***			
CONST	-4.146***	0.416	1.162			
PROD	0.191	-1.775***	-1.71***			
NFA	0.105**	0.246***	0.276***			
REV_OIL	-0.19***	-0.004	-0.073			
OPEN						
DEF						
EXP	-0.86***	0.06	0.204			
DUMMY	0.038	0.02	0.019			

Source: Author's calculations.

Note: As for table 9. REV_OIL refers to the oil revenue variable.

Table 13

Time Series Estimation Results, Ukraine

	1996:1 to 2002:12			1996:1 to 2002:12		
	EG	DOLS	ARDL	EG	DOLS	ARDL
LAG		(3.0)	(1.1)		(4.4)	(1.0)
COINT	-5.031*(1)	-5.908** (1)	-0.231	-5.011*** (1)	-6.506***	-0.575
ECT	-0.063		-0.193***	-0.053		-0.136**
CONST	-0.156***	-0.182***	-0.179**	-0.227*	1.071***	0.333
PROD	-0.435***	-0.635***	-0.627**	-0.451***	-0.585***	-0.502
NFA	0.68***	0.852***	0.724	0.626**	3.405***	1.129
ROIL				0.023	-0.364***	-0.158
DEF						
EXP						
DUMMY	0.35***	0.423***	0.424***	0.356***	0.077	0.328

	1996:1 to 2002:12			1996:12 to 2002:12		
	EG	DOLS	ARDL	EG	DOLS	ARDL
LAG		(4.0)	(2.1)		(1.0)	(4.1)
COINT	-4.699*** (1)	-7.32*** (1)	5.134***	-4.073* (6)	-5.775***	5.126**
ECT	-0.129***		-0.251***	-0.192**		-0.280***
CONST	-0.1***	-0.132***	-0.141***	-1.55***	-1.166***	-1.174***
PROD	-0.451***	-0.562***	-0.537***	-0.523***	-0.465***	-0.428***
NFA	0.404	0.948***	0.788**	0.26***	0.379***	0.448***
ROIL						
DEF	0.222***	0.027	-0.037			
EXP				-0.587***	-0.416***	-0.424***
DUMMY	0.36***	0.336***	0.336***	-0.07***	0.07**	0.034

Source: Author's calculations.

Note: As for table 9.

Table 14

Time Series Estimation Results, Turkey						
1985:1 to 2003:12						
	EG	DOLS	ARDL	EG	DOLS	ARDL
LAG		(5.4)	(1.1)		(0.6)	(1.1)
COINT	-3.918** (0)	-3.953** (0)	4.700*	-3.983* (0)	-4.042* (0)	2.846a
ECT	-0.125***		-0.131***	-0.123***		-0.131***
CONST	0.179***	0.19***	0.203***	0.431***	0.555***	0.164
PROD	-0.278***	-0.224*	0.132	-0.395***	-0.61***	0.101
NFA	0.225***	0.16*	0.184	0.28***	0.252***	0.202
ROIL				-0.096***	-0.149***	0.014
OPEN						
DEF						
EXP						
DUMMY 1	0.202***	0.128***	0.287**	0.175***	0.168***	0.296**
DUMMY 2	-0.063***	-0.1***	-0.034	-0.089***	-0.132***	-0.029
LAG		(5.4)	(1.1)		(5.4)	(1.0)
COINT	-3.997* (0)	-4.029* (0)	2.55	-5.097*** (0)	-5.481*** (1)	5.327**
ECT	-0.126***		-0.137***	-0.181***		-0.188***
CONST	0.451***	0.398*	0.648	0.163***	0.156***	0.166***
PROD	-0.19*	-0.25*	0.221	-0.657***	-0.583***	-0.452
NFA	0.37***	0.362**	0.465	-0.347***	-0.582***	-0.598**
ROIL						
OPEN	0.127*	0.094	0.206			
DEF				0.803***	0.96***	0.993***
EXP						
DUMMY 1	0.195***	0.094**	0.241*	0.236***	0.226***	0.318***
DUMMY 2	-0.072***	-0.112***	-0.056	-0.052***	-0.113***	-0.031
LAG		(5.6)	(1.0)			
COINT	-4.661*** (0)	-5.848*** (0)	4.883**			
ECT	-0.161***		-0.166***			
CONST	-0.545***	-0.942***	-0.668**			
PROD	-0.505***	-0.402***	-0.207			
NFA	-0.301***	-0.913***	-0.557*			
ROIL						
OPEN						
DEF						
EXP	-0.285***	-0.433***	-0.332***			
DUMMY 1	0.249***	0.244***	0.346***			
DUMMY 2	0.031	0.038	0.079			

Source: Author's calculations.
Note: As for table 9.

4.4.2 Panel Results

The estimation results obtained on the basis of a panel including Bulgaria, Croatia, Romania, Russia, Ukraine and Turkey are very robust compared to the country-by-country time series results (table 15). What should be mentioned first is the fact that the error correction term of the ARDL mean group estimator (MGE) is always negative and significant, which implies the presence of cointegration. Second, the productivity and NFA variables are always significant and the signs are also found to be very stable. Productivity is correctly (negatively) signed, whereas NFA have a positive sign. The use of control variables changes this picture only slightly. Public expenditures as a share of GDP and the openness ratio are significant and correctly signed. Real oil prices appear to be negatively signed. This is somewhat surprising, given that Russia is the only net oil-exporting country.

Table 15

Panel Estimation Results

	ECT	PROD	NFA	ROIL	DEF	EXP	OPEN
DOLS		-0.353***	0.743***				
MGE	-0.172***	-0.610*	0.641***				
DOLS		-0.426***	0.165***	-0.061**			
MGE	-0.100***	-0.4	0.656***	-0.176**			
DOLS		-0.236***	0.633***		0.350***		
MGE	-0.134***	-0.422*	0.570***		-2.784		
DOLS		-0.342***	0.317***			-0.220***	
MGE	-0.142***	-0.164***	0.117***			-0.071**	
DOLS		-0.040***	0.317***				0.242***
MGE	-0.143***	-0.257	0.482***				0.312*

Source: Author's calculations.

Note: DOLS and MGE are the panel DOLS and ARDL mean group estimators. ECT is the error correction term. PROD, NFA, ROIL, DEF, EXP, OPEN are the productivity, net foreign assets, real oil price, and public debt-to-GDP ratios, the public expenditures-to-GDP and the openness-to-GDP ratios.

4.4.3 Real Misalignments

As a final step of our analysis, we derive the deviation of the observed real effective exchange rate from the estimated equilibrium real effective exchange rate, i.e. the total real misalignment. For this purpose, both time series and panel estimates are used. Among the estimated time series equations, only those will be used in which all estimated coefficients are statistically significant and are correctly signed.³² As real misalignments obtained from different equations may differ, the mean with the confidence intervals is useful for summarizing the pieces of information contained in each equation. This key measure of total real misalignments is displayed in chart 9.

A couple of issues attract attention here. Panel and time series results are broadly in line with each other in terms of broad movements. However, the precise size of the derived misalignments may be rather different between the time series and panel cases. It can be observed that misalignments based on panel estimates may indicate prolonged periods of under- or overvaluations, while over- and undervaluations given by time series estimates cancel each other out over the period under study. This seems natural, given that the presence of cointegration implies for the time series case that the residuals, i.e. real misalignments, should be stationary.

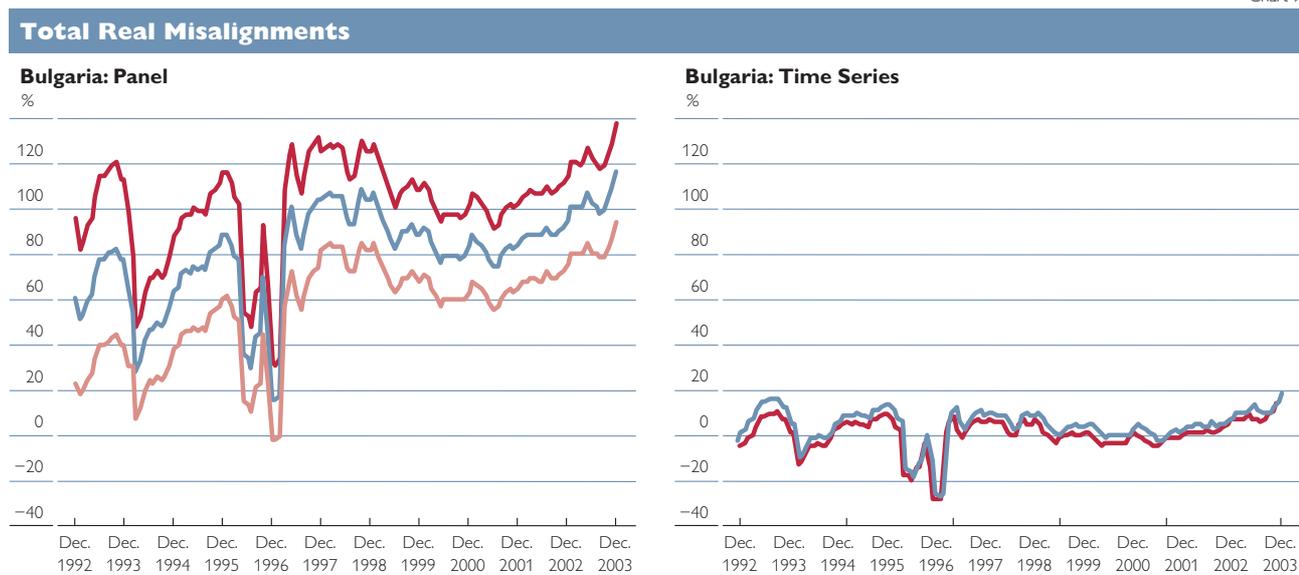
One reason for the conflicting results is the strong heterogeneity in the panel, which is also confirmed by the time series results. Thus, the size and the sign of the estimated coefficients reflect the sample average and not individual country behavior. Consequently, the derived misalignments should be viewed as a result of country heterogeneity and not as a consequence of the real exchange rate not matching the fundamentals. This is the reason why the real misalignments obtained using panel estimates will not be interpreted in the event that they are not in line with the time series misalignments. Another key difference between panel and time series data is this: Misalignments based on panel estimates are not necessarily based on the same set of equations as that

³² This leaves us with a single equation for Romania, two equations for Bulgaria, six equations for Croatia, Russia and Ukraine, and nine equations for Turkey. For some of the equations used for Russia, the openness and public deficit variables are not significant, but the others are. This is how we ensured that the oil revenue variable is considered. The retained equations are shaded in tables 9 to 14.

obtained from time series. For instance, the number of equations issued from the time series analysis is 1 for the case of Romania and 2 for Bulgaria.

Let us now take a look at the derived total real misalignments. For Bulgaria, the time series results reveal that the Bulgarian lev was slightly overvalued just before the financial crisis occurred in 1996 and 1997. During and after the crisis, the currency became heavily undervalued, followed by a swift adjustment to equilibrium. Fairly valued toward the turn of the millenium, the Bulgarian real exchange rate appears to have been moving away from equilibrium in the past two years and has become overvalued. For Croatia, the over- and undervaluation of the real exchange rate remained in a narrow corridor of roughly $\pm 5\%$ from 1994 to 2002. However, since then, the Croatian kuna seems to have been becoming slightly overvalued. As far as Romania is concerned, the lei is found fairly valued for the period of 1998 to 2003. Regarding Russia, a substantial overvaluation prior to the 1998 crisis, followed by an undershooting reaching an undervaluation of roughly 20% in 1999, can be observed. Since then, the real exchange rate has converged toward its equilibrium. In 2003, the ruble can be viewed as fairly valued or slightly overvalued. Similar to the ruble, the Ukrainian hryvnia appeared to be overvalued before the Russian crisis. The subsequent large adjustment resulted in an undervaluation, which was followed by a slow convergence toward equilibrium. Turning now to Turkey, the results indicate that the real exchange rate was overvalued prior to 1993 and then became strongly undervalued. After a progressive rapprochement to equilibrium, the real exchange rate appears to have become increasingly overvalued in the crawling peg system. This overvaluation was sharply corrected for in 2001. Since mid-2002, the Turkish currency has become increasingly overvalued once again.

Chart 9

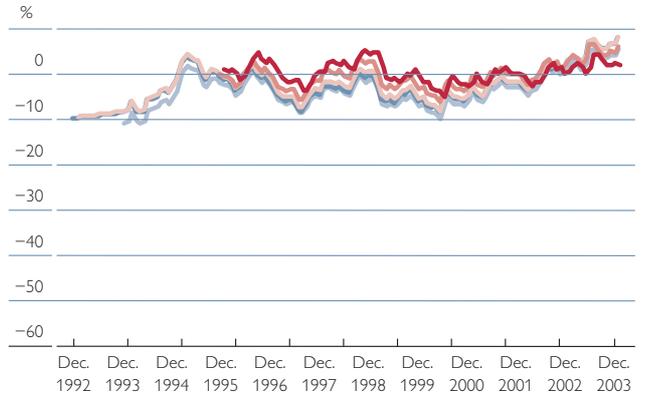


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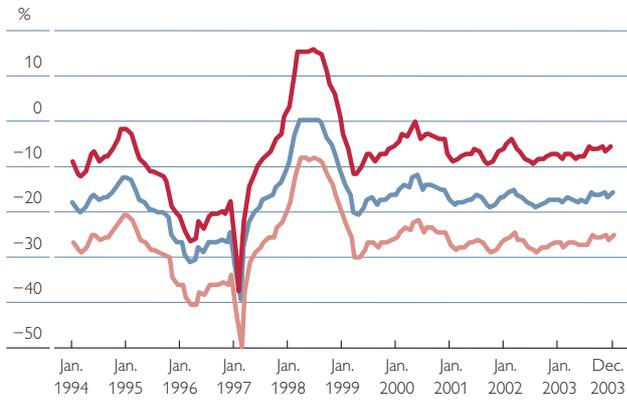
Croatia: Panel



Croatia: Time Series



Romania: Panel



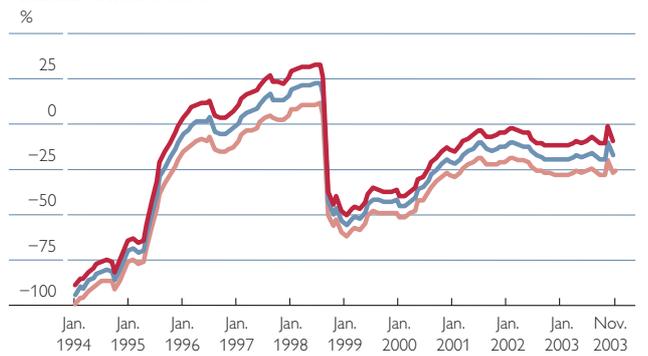
Romania: Time Series



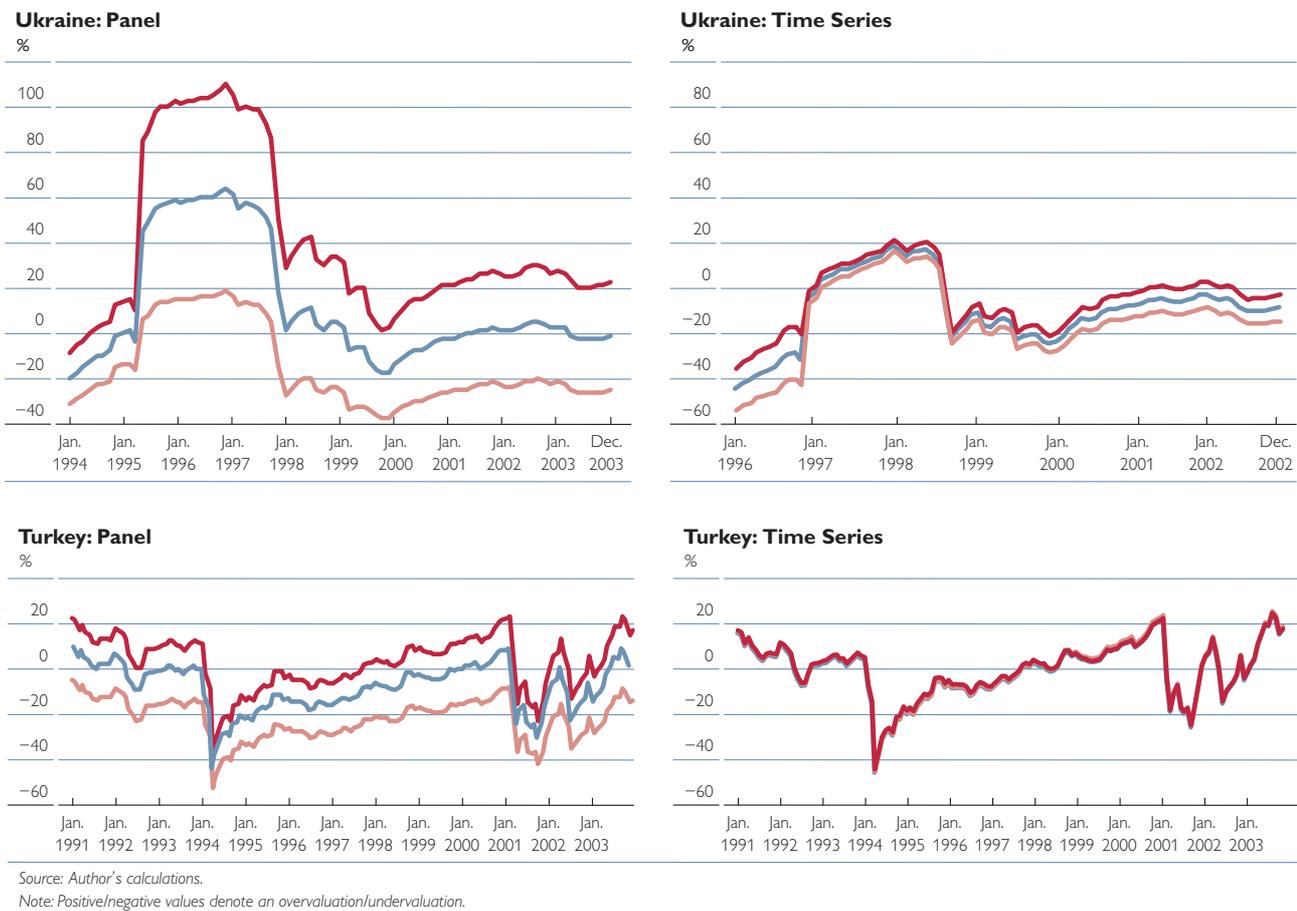
Russia: Panel



Russia: Time Series



EQUILIBRIUM EXCHANGE RATES IN
SOUTHEASTERN EUROPE, RUSSIA, UKRAINE AND TURKEY:
HEALTHY OR (DUTCH) DISEASED?



5 Concluding Remarks

This paper investigated the equilibrium exchange rate of two EU accession countries (Bulgaria and Romania), of two EU candidate countries (Croatia and Turkey) and of Russia and Ukraine. The analysis was carried out at three time horizons. We have shown that the currencies of these countries are largely undervalued in terms of absolute PPP. At the same time, some of them have undergone an appreciation, implying a long-term convergence toward absolute PPP. Cross-sectional regressions reported in the literature were employed to see whether the currencies are fairly valued in terms of relative productivity levels on the road to PPP. The results indicated an initial undervaluation for Bulgaria, Romania, Russia and Ukraine, which, however, largely disappeared by the mid-1990s. The real exchange rates in levels were broadly in line with relative productivity levels in Bulgaria, Russia and Ukraine and to a lesser extent in Romania from the late 1990s onward. In Croatia and Turkey, a strong mismatch is found between the level real exchange rate and relative productivity levels.

In a next step, we analyzed the extent to which the B-S effect and the D-D phenomenon may be driving the real exchange rate. It turned out that the basic hypotheses of the B-S effect are often violated in a number of countries. This implies that either productivity gains cannot translate into relative price

increases or that this transmission is either amplified or attenuated. A simple accounting framework has revealed that, similarly to other CEECs, the B-S effect has a fairly moderate role in the countries under study. Furthermore, we have also shown how sensitive the results are to the use of data based on employment and employee data and to the classification of sectors into open and closed sectors. For Russia, it seems that some of the symptoms of the D-D phenomenon are present.

Finally, we studied short- to medium-term deviations of the real exchange rates from their equilibrium. For this purpose, the stock-flow approach to the real exchange rate was employed, which was extended with demand-side and other control variables. The estimates revealed some common features across countries. First, increases in productivity were found to cause the real exchange rate to appreciate, perhaps with the exception of Romania. Second, NFA usually entered the equation. Time series estimates also indicate a great deal of heterogeneity across countries. While positive for most countries, the sign on NFA was negative in Croatia. This may imply that Croatia has already reached an accumulated net foreign liabilities position where it has to start servicing its debt, whereas the other countries are still on their way to the steady state. For Romania, the sign is found to be positive for the whole period but it was estimated to be negative for the period after 1998. This may indicate that easier access to financial markets and perceived progress in market reforms may soften external budget constraints. It should also be noted that the control variables (openness, government debt and public expenditures to GDP) turned out to be significant and correctly signed and not to alter results for productivity and NFA across the six economies under review.

The real oil price appears to have a different impact on the real exchange rate. We found limited evidence for an overwhelming role of oil prices and oil revenues in real exchange rate determination in Russia.

Contrary to the time series results, heterogeneous panel techniques yielded surprisingly significant and stable coefficient estimates for the panel composed of the six countries under study.

The estimation results uncovered that panel and time series estimates can yield conflicting results regarding the deviations from equilibrium. Although the heterogeneous panel econometric estimates turned out to be very robust, they proved to do a poor job when deriving real misalignments simply because they reflect average behavior of a heterogeneous set of countries. We have argued that for such small heterogeneous panels, time series estimates should be used for the calculation of real misalignments. When using these figures, it should be borne in mind that they reflect rather short-term deviations from equilibrium. In fact, the size of the deviations depends on how good real exchange rates can be modeled using fundamentals. Put in another way, the real exchange rate can be viewed as misaligned in the event the real exchange rate does not move in tandem with the underlying fundamentals. Our results have revealed that at the end of 2003, the Bulgarian lev, the Croatian kuna and the Turkish lira became increasingly overvalued. At the same time, the real exchange rates in Romania, Ukraine and probably also in Russia can be thought of as fairly valued.

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Appendix 1: Classification of Sectors

Table A1

Classification of Sectors, Old Standards

	OPEN	CLOSED
DIFF1_O	B	C+D+E
DIFF2_O	B	C+D+E+A
DIFF3_O	B+A	C+D+E
DIFF4_O	B+D	C+E
DIFF5_O	B+D	C+E+A
DIFF6_O	B+D+A	C+E

Source: Author's calculations.

Note: A = agriculture; B = industry; C = construction; D = transport and telecommunications; E = trade.

Table A2

Classification of Sectors, 15-Sector NACE Standards

	OPEN	CLOSED
DIFF11_N	D	F+G+H+I+J
DIFF12_N	D	F+G+H+I+J+(A+B)
DIFF13_N	D	F+G+H+I+J+K (market)
DIFF14_N	D	F+G+H+I+J+K+(A+B)
DIFF15_N	D	F+G+H+I+J+K+(L+M+O) (all)
DIFF16_N	D	F+G+H+I+J+K+(L+M+O)+ (A+B)
DIFF21_N	C+D+E	F+G+H+I+J = DIFF1_O
DIFF22_N	C+D+E	F+G+H+I+J+(A+B) = DIFF2_O
DIFF23_N	C+D+E	F+G+H+I+J+K (market)
DIFF24_N	C+D+E	F+G+H+I+J+K+(A+B)
DIFF25_N	C+D+E	F+G+H+I+J+K+(L+M+O) (all)
DIFF26_N	C+D+E	F+G+H+I+J+K+(L+M+O)+ (A+B)
DIFF31_N	C+D+E+(A+B)	F+G+H+I+J = DIFF3_O
DIFF32_N	C+D+E+(A+B)	F+G+H+I+J+K (market)
DIFF33_N	C+D+E+(A+B)	F+G+H+I+J+K+(L+M+O) (all)
DIFF41_N	C+D+E+(H+I)	F+G+J = DIFF4_O
DIFF42_N	C+D+E+(H+I)	F+G+J+(A+B) = DIFF5_O
DIFF5_N	C+D+E+(H+I)+(A+B)	F+G+J = DIFF6_O

Source: Author's calculations.

Note: A = agriculture, hunting, forestry; B = fishing; C = mining and quarrying; D = manufacturing; E = electricity, gas and water supply; F = construction; G = wholesale and retail trade; H = hotels and restaurants; I = transport, storage and telecommunications; J = financial intermediation; K = real estate, renting and business activities; L = public administration and defense as well as compulsory social security; M = education; N = health and social work; O = other community, social and personal services activities.

Table A3

Classification of Sectors, 6-Sector NACE Standards, Turkey

	OPEN	CLOSED
DIFF11_TK	(C+D+E)	F+(G+H+I)+(J+K) = DIFF21_N
DIFF12_TK	(C+D+E)	F+(G+H+I)+(J+K)+(A+B) = DIFF22_N
DIFF13_TK	(C+D+E)	F+(G+H+I)+(J+K)+(A+B)+(L+M+O) = DIFF25_N
DIFF21_TK	(C+D+E)+(A+B)	F+(G+H+I)+(J+K) = DIFF31_N
DIFF22_TK	(C+D+E)+(A+B)	F+(G+H+I)+(J+K)+(L+M+O) = DIFF33_N
DIFF31_TK	(C+D+E)+(G+H+I)	F+(J+K) = DIFF41_N
DIFF32_TK	(C+D+E)+(G+H+I)	F+(J+K)+(A+B) = DIFF42_N
DIFF33_TK	(C+D+E)+(G+H+I)	F+(J+K)+(A+B)+(L+M+O)
DIFF4_TK	(C+D+E)+(G+H+I)+(A+B)	F+(J+K) = DIFF5_N

Source: Author's calculations.

Note: Only 6-sectoral disaggregation is available: (A+B); (C+D+E); F; (G+H+I); (J+K); (L+M+O).

Appendix 2: Data Sources

Annual Data

Sectoral Value Added, Constant Prices

Bulgaria, Croatia, Romania, Russia, Ukraine: wiiw Annual Database (via WIFO Database)

Turkey: OECD National Accounts Database (via WIFO Database)

Sectoral Employment/Employees

Bulgaria, Croatia, Romania, Russia, Ukraine: wiiw Annual Database (via WIFO Database)

Turkey: Türkiye Cumhuriyet Merkez Bankası

Sectoral Nominal Wages

Bulgaria, Croatia, Romania, Russia, Ukraine: wiiw Annual Database (via WIFO Database)

Monthly Data

Services in the CPI, Goods in the CPI

Bulgaria, Romania, Russia, Ukraine: Main Economic Indicators, OECD (via Datastream, Bulgaria: BLOCP071F, BLOCCPSVF (services), BLOCP034F (goods); Romania: RMOCP071 (services), RMOCP027 (goods); Russia: RSOCPO72F (services), RSOCPO34F; Ukraine: UROCP071F (services), UROCP024F (food))

Croatia: Croatian Central Bureau of Statistics (CTCPIS.F (services), CTCPIG.F (goods))

Turkey: State Institute of Statistics, Turkey (via Datastream, TKCPSERVF, TKCPGOODF)

CPI, PPI

Bulgaria, Croatia, Romania, Russia, Ukraine: wiiw Monthly Database

Turkey: CPI: IFS/IMF (TKI64..F), WPI: State Institute of Statistics, Turkey (TKPROPRCF)

Euro area: Eurostat (EMCONPRCF, EMESPPIIF)

U.S.A.: Bureau of Labor Statistics (USOCP009E), Main Economic Indicators, OECD (USOPP019F)

Wages in Industry/in the Whole Economy

Bulgaria, Croatia, Romania, Russia, Ukraine: wiiw Monthly Database

Turkey: Türkiye Cumhuriyet Merkez Bankası

Nominal Exchange Rate against the Euro and the U.S. Dollar

Bulgaria, Croatia, Romania, Russia, Ukraine: wiiw Monthly Database

Turkey: Datastream (U.S. dollar: TKUSDSP, euro: TKEUROS, Deutsche mark: TKDEMSP)

Industrial Production

Bulgaria, Croatia, Romania, Ukraine: wiiw Monthly Database; for Bulgaria and Ukraine, the index series were obtained using two series of industrial production (real, same month previous year = 100, and previous month = 100)

Russia: Main Economic Indicators, OECD (Datastream, RSOPRX35G)

Turkey (Manufacturing): State Institute of Statistics, Turkey (TKOPR038G)

Euro area: Eurostat (Datastream, EMESINPRG)

U.S.A.: Main Economic Indicators, OECD (Datastream, USOPR038F)

Employment in Industry

Bulgaria, Croatia, Romania, Ukraine: wiiw Monthly Database

Russia: IFS/IMF (Datastream, RSI67...F)

Turkey: Türkiye Cumhuriyet Merkez Bankası

Euro area: Eurostat (Datastream, EMEBEMQ6%)

U.S.A.: Bureau of Labor Statistics (Datastream: USEMPMAN)

Wages in Industry/in the Whole Economy

Bulgaria, Croatia, Romania, Russia, Ukraine: wiiw Monthly Database

Turkey: Türkiye Cumhuriyet Merkez Bankası

Current Account

Bulgaria, Croatia, Romania, Russia, Ukraine: wiiw Monthly Database

Turkey: Main Economic Indicators, OECD (via Datastream, code: TKOBP\$15B)

Data for Bulgaria (before 1996), Croatia, Russia, Turkey, Ukraine are linearly interpolated from quarterly to monthly frequencies.

Consolidated General (G) or Central (C) Government Balance

Bulgaria (C), Croatia (C), Romania (C), Russia (C), Ukraine (G): wiiw Monthly Database

Turkey (G): Ministry of Finance, Turkey (via Datastream, code: TKGOVBALA)

Consolidated General (G) or Central (C) Government Expenditures

Bulgaria (C), Croatia (C), Romania (C), Russia (C), Ukraine (G): wiiw Monthly Database

Turkey (G): Ministry of Finance, Turkey (via Datastream, code: TKCBEXPNA)

Monthly expenditures are added up for 12 months on a rolling basis.

Exports and Imports

Bulgaria, Croatia, Romania, Russia, Ukraine: wiiw Monthly Database

Turkey: OECD (via Datastream, TKOEXPU\$A, TKOIMPU\$A)

Monthly exports and imports data are added up for 12 months on a rolling basis.

Nominal GDP

Bulgaria, Croatia, Romania, Russia, Ukraine: European Intelligence Unit (via Datastream, codes:

BLGDPD, CTGDPD, RMGDPD, RSGDGD, URGDPD)

Turkey: Türkiye Cumhuriyet Merkez Bankası

Interpolated linearly from yearly to monthly frequencies.

Price of Crude Oil – Ural, U.S. Dollars

Datastream (code: OILURAL(P))

Industrial Production – Crude Petroleum

VOLN, Russia: Datastream (code: RSOPR005P)

Please find below table 8 entitled “Russia’s Top 20 Banks (as at January 1, 2004)” that was unfortunately not printed in the study “Distorted Incentives Fading? The Evolution of the Russian Banking Sector since Perestroika” by Stephan Baritz, published in Focus on European Economic Integration 1/04. We regret any confusion this oversight may have created.

Table 8

Russia's Top 20 Banks (as at January 1, 2004)													
Rank	Bank	Majority owner	Location of headquarters	Assets	Credits extended ¹		Liabilities ¹		Private deposits ¹		Equity capital	Profit before taxes	
				RUR billion	RUR billion	% of total banking assets	RUR billion	% of total banking liabilities	RUR billion	% of total banking capital	RUR billion	RUR billion	
1	Sberbank	State	Moscow	1,502.45	564.18	26.8	966.38	30.0	693.03	67.5	147.79	18.1	39.45
2	Vneshtorgbank	State	Moscow	275.78	82.20	4.9	116.70	3.6	15.92	1.5	65.91	8.1	11.82
3	Gazprombank	Gazprom (state)	Moscow	219.71	48.45	3.9	128.34	4.0	14.61	1.4	28.50	3.5	5.58
4	Alfabank	Alfa-group (FPG)	Moscow	195.97	101.37	3.5	121.29	3.8	23.93	2.3	23.24	2.8	0.30
5	Mezhdunarodny Promyshlenny Bank	Shares distributed among legal entities (total number 40)	Moscow	136.90	90.54	2.4	87.20	2.7	0.72	0.1	28.75	3.5	0.55
6	Rosbank	Interros FPG	Moscow	114.72	33.67	2.0	56.95	1.8	11.84	1.1	11.49	1.4	1.10
7	MDM (Moskovsky Delovoy Mir) Bank	MDM FPG	Moscow	114.05	39.34	2.0	72.15	2.2	5.90	0.6	8.93	1.1	0.67
8	Bank Moskvy	City of Moscow	Moscow	111.05	53.65	2.0	80.14	2.5	25.50	2.5	10.98	1.3	1.98
9	MMB (Mezhdunarodny Moskovsky Bank)	HVB Bank/CBR	Moscow	80.96	21.92	1.4	75.67	2.4	7.05	0.7	5.74	0.7	3.03
10	Promstroybank	Shares distributed among legal entities and private individuals (total number 20,733)	St. Petersburg	68.10	30.37	1.2	43.31	1.3	8.28	0.8	5.22	0.6	2.06
11	Uralsibbank	Nikoil Banking and Investment Group (75% of voting shares), Republican government of Bashkortostan, Bashneft	Ufa	65.38	24.37	1.2	35.81	1.1	7.40	0.7	11.29	1.4	1.03
12	Citibank	Citigroup	Moscow	62.49	28.29	1.1	52.06	1.6	11.84	1.1	8.21	1.0	2.54
13	Raiffeisenbank	RZB Austria	Moscow	62.20	18.84	1.1	39.71	1.2	9.13	0.9	4.14	0.5	2.76
14	Bank Petrokommerts	Lukoil	Moscow	44.41	12.81	0.8	25.66	0.8	3.90	0.4	7.83	1.0	1.77
15	Bank Menatep St. Petersburg	Menatep FPG	St. Petersburg	37.65	16.76	0.7	36.28	1.1	6.61	0.6	3.22	0.4	0.34
16	Promsviazbank	Shares distributed among legal entities (total number 12)	Moscow	37.36	13.75	0.7	20.69	0.6	1.72	0.2	4.02	0.5	0.53
17	Nomosbank	Shares distributed among legal entities related to the defense sector	Moscow	36.64	14.69	0.7	15.38	0.5	1.19	0.1	4.95	0.6	0.36
18	Trastbank	Bought out by its managers from Menatep FPG	Moscow	34.60	..	0.6	..	..	..	..	5.35	0.7	1.01
19	Nikoilbank	Vagit Alekperov (head of Lukoil), Nikolay Tsvetkov (CEO of Nikoilbank)	Moscow	34.54	14.73	0.6	16.25	0.5	3.67	0.4	6.66	0.8	0.45
20	Bank Zenit	Shares distributed among a group of individuals (mostly bank managers) and legal entities from the Republic of Tatarstan (Iatneft o.o.)	Moscow	32.15	14.79	0.6	19.95	0.6	2.30	0.2	3.25	0.4	0.93

Source: CBR, Ekspert (March 22, 2004), viiv, Interfaks.

¹ As at January 1, 2003.

Note: Vneshekonombank is not listed here. It is a special state-owned institution that was established in the final years of the Soviet Union and whose main task is to service former USSR debt assumed by the Russian government. FPG = Finansovo-promyshlennaya gruppa (financial-industrial group).

HIGHLIGHTS

South Eastern EUROPEAN Challenges and Prospects – The OeNB’s Conference on European Economic Integration 2004

Compiled by
Stephan Barisitz¹

The OeNB’s first Conference on European Economic Integration (CEEI) took place from November 28 to 30, 2004, at the Marriott Hotel in Vienna and covered the topic “South Eastern EUROPEAN Challenges and Prospects.” Ever since the fall of the Berlin Wall 15 years ago, the Oesterreichische Nationalbank (OeNB) has been following the transition process very closely. One of the OeNB’s major activities in this respect has been to host the “East-West Conference” on an annual basis. With the accession of ten new member countries to the European Union on May 1, 2004, a pivotal step was made to permanently close the divide that used to run across our continent. To mirror this historic change and to reflect the growing together of Europe, the OeNB decided to change the name of the “East-West Conference” to “Conference on European Economic Integration.” The 2004 conference was the first to take place under the new name.

At the welcome reception on the eve of the conference, OeNB Executive Director *Josef Christl* explained that this year’s topic – “South Eastern EUROPEAN Challenges and Prospects” – was chosen because this part of Europe (comprising, from the OeNB’s perspective, Albania, Bosnia and Herzegovina, Bulgaria, Croatia, the Former Yugoslav Republic of Macedonia, Romania, and Serbia and Montenegro) has become a new focus of both regional growth and European integration. Writing “EUROPEAN” in capital letters reflects this double focus in a nutshell, showing that the OeNB has extended the geographical focus of its economic research to comprise this region of Europe, too.

Opening Remarks (Klaus Liebscher) and Keynote Speech (Jean-Claude Trichet)

The conference was opened by OeNB Governor *Klaus Liebscher*, who pointed out that compliance with the fiscal rules set by the Stability and Growth Pact (SGP) was essential in order to safeguard the stability of the euro and the credibility of Economic and Monetary Union. He emphasized that while the SGP worked as such, its implementation was a problem. A weakening of the SGP would certainly send a wrong signal to any new EU Member State. Governor Liebscher illustrated why the OeNB had such a pronounced interest in the Central and Eastern European countries (CEECs) in general and in the region of Southeastern Europe in particular. Since the end of the Cold War, economic and financial relations between Austria and the CEECs have substantially deepened and Austria has become one of the major foreign investors in the region. Furthermore, the Austrian banking sector plays an outstanding role in the Southeastern part of our continent.

The conference continued with a stimulating keynote speech by *Jean-Claude Trichet*, President of the European Central Bank (ECB), who took note of the high quality of the OeNB’s research on, and analysis of, economic developments in the CEECs and recognized the OeNB’s expertise on related issues within the Eurosystem. The ECB President then discussed the particular challenges South-eastern Europe faces in the transition process. He argued that both economic

¹ Authors: Stephan Barisitz, Jarko Fidrmuc, Thomas Gruber, Antje Hildebrandt, Gabriel Moser, Gerhard Reitschuler and Zoltan Walko.

and monetary performance in the region had improved over recent years, but a lot remained to be done. With a per capita income of only 26% of the EU average (based on PPP) in 2003, the region is poor, but growth rates have been relatively high in recent years. Jean-Claude Trichet elaborated on the region’s economic and financial ties with the EU. Not only is the European Union the most important trading partner for Southeastern European countries, but FDI inflows into the region – often coming from the euro area – have recently increased as well. President Trichet then focused on the use of the euro in Southeastern Europe. The Eurosystem takes a neutral position regarding the internationalization of the common currency. However, Trichet highlighted that “...countries aiming at EU accession cannot use unilateral euroization as a way of circumventing the stages foreseen by the Treaty establishing the European Community for the adoption of the euro.” Jean-Claude Trichet concluded by recapitulating the prospects for the region, which can be summed up simply as progress toward EU membership.

Opening Session: South Eastern Europe – Where Do Institutions and the Economy Stand?

Erhard Busek (Special Coordinator of the Stability Pact for South Eastern Europe), *Reinhard Priebe* (Director Western Balkans, DG External Relations, European Commission) and *Peter Sanfey* (Senior Economist for South Eastern Europe, EBRD) participated in the first session, which was chaired by Professor *Michael Landesmann* (Director of Research, wiiw). In his introductory statement, Erhard Busek pointed to major successes of the Stability pact for South Eastern Europe, which was adopted in Cologne in June 1999. The pact’s main achievements include the creation of a regional network of 28 bilateral free trade agreements, progress in the formation of a regional energy market and a core transportation network. Major problems persist, however: Post-conflict reconciliation has not yet been achieved everywhere and a number of obstacles remain with regard to the implementation of commitments. Intraregional trade is hampered by nontariff barriers. Busek went on to say that undoubtedly, the major driving forces of transformation in the region were the prospects of joining the European Union and NATO. The year 2005 is likely to prove difficult, however, as it will probably see the beginning of negotiations on the political status of UN-administered Kosovo; moreover, the existing union of Serbia and Montenegro might be modified by referendums.

Peter Sanfey stressed that the EBRD felt cautiously optimistic about Southeastern Europe/the Balkans. In his view, the general public discourse on the Balkans places too much emphasis on negative and distracting political questions, such as the political status of Kosovo.² GDP expansion in Southeastern Europe (which came to an average of 4% to 5% in recent years) exceeds growth in Central Europe, not to speak of the western part of our continent. But growth in Southeastern Europe is starting from a very low level. So far, of all the countries in the region, Bulgaria, Romania and Croatia have made the most progress in terms of transition – a development which is largely attributable to the “pull” of EU membership. Bosnia and Herzegovina as well as Serbia and

² The term Kosovo denotes Kosovo/Kosova.

Montenegro, by contrast, seem to be lagging behind. According to Peter Sanfey, challenges include the necessity to overcome widespread problems of corruption, organized crime and weak judiciary systems, to reduce the gray economy, which accounts for up to a third of GDP and undermines tax collection, to strengthen financial intermediation which – despite expanding credit volumes – is still quite modest, and to adjust the investment climate to attract more FDI.

According to Reinhard Priebe, the Stabilization and Association Process (SAP) constitutes an instrument promoting reforms and the rapprochement of the western Balkans to the EU. Priebe went on to explain where the individual countries of the western Balkans currently stand within the SAP.

With respect to Albania, negotiations on a Stabilisation and Association Agreement (SAA) are currently moving at a slow pace. Problems relate to the implementation of reforms, to organized crime, to corruption and to the judiciary.

According to the Feasibility Study the European Commission presented last year on Bosnia and Herzegovina, the country needs to improve policy enforcement in a number of areas, including customs reform. Constitutional reforms beyond the stipulations of the Dayton Agreement will be necessary to move the country nearer to the EU.

Croatia was granted EU candidate status in June 2004 and preaccession status a few weeks ago. Accession negotiations are scheduled to start in early 2005, depending on full cooperation with the Hague Tribunal.

After having received a membership request from the Former Yugoslav Republic of Macedonia (FYROM) in spring 2004, the European Commission is expecting a response to its questionnaire in early 2005. Red tape and protectionist attitudes should be overcome.

As regards Serbia and Montenegro, the EU has now adopted a new “twin track” approach: Two agreements are being negotiated separately with the two republics, but both within the framework of an SAA with the entire state union.

With a view to Kosovo, Priebe stated that more responsibility will need to be transferred to the elected authorities. Given the unclear status of the territory, privatization is particularly problematic.

Michael Landesmann pointed out that the region's current situation cannot be compared to that of Central Europe ten years ago. Among the distinguishing factors of Southeastern Europe is the heterogeneity of the reform process across the individual countries. Despite strong credit growth a banking crisis is not likely to materialize, given the foreign control of banking sectors. Southeastern Europe has witnessed a dramatic process of deindustrialization, which is one of the causes of current account deficits. In the ensuing discussion the growth record of the region was somewhat critically commented in the light of much higher growth rates in other transition countries further east. It was agreed that there was no room for complacency.

Session II: A Foreign Currency for My Country? The Case of Dollarization and Euroization

The chairman of session II, OeNB Executive Director *Josef Christl*, introduced the session with some remarks on foreign currency holdings in the countries adjoining Austria to the east. According to recent surveys conducted by the OeNB, the euro plays a significant role in Central and Eastern Europe and has assumed the importance the Deutsche mark and the Austrian schilling had before the cash changeover. 90% of all respondents think that the euro is currently rather stable or very stable and that it will remain stable over the next two years. Christl pointed out that overall, the single currency has an excellent reputation in Austria’s eastern neighbor countries. Moreover, today most countries in Southeastern Europe have geared their monetary policy to an external anchor which is – without any exception – the euro.

In his academic keynote address entitled “Dollarization and Euroization,” Professor *Eduardo Levy Yeyati* (Universidad Torcuato Di Tella, Buenos Aires) set out to analyze the difference between dollarization and euroization. According to Professor Yeyati, the case of euroization features an – at least implicitly – shared lender of last resort as well as an active monetary policy vis-à-vis the rest of the world. As the key difference between the two concepts, he pointed out the bilateral agreement with an anchor economy in the case of euroization, whereas dollarization embodies the truly unilateral adoption of a foreign currency. Euroization – as opposed to dollarization – constitutes part of the endgame to get the euro, as Professor Yeyati put it. He further stressed the most important dilemmas a country faces when dollarizing: first, reduced transaction costs versus exchange rate rigidity; second, enhanced credibility versus loss of countercyclical monetary policy; third, reduced borrowing costs versus financial fragility, i.e. loss of the lender of last resort.

In the next presentation, *Boris Vujcic*, Deputy Governor of Hrvatska narodna banka, showed that Croatia has one of the highest degrees of euroization among transition countries. In his view, the main reason for the importance of the euro is Croatia’s past history of macroeconomic and monetary instability, which even stretches back to former socialist Yugoslavia. In this respect, financial markets might not have a long memory, whereas citizens do. Furthermore, tourism plays an important role in Croatia, as it is accompanied by foreign currency inflows. Boris Vujcic made clear that a high degree of euroization implies high liquidity and solvency risks. In his conclusion he pointed out what can be done and what cannot be done in the case of Croatia. According to Vujcic, it is not possible to use nominal depreciation to improve competitiveness or to reverse euroization. Furthermore, unilateral euroization would not be acceptable. Therefore, he opts for continuing to manage a de facto euroized financial system.

The last speaker of this session was *Adalbert Winkler*, Deputy Head of the EU Neighbouring Regions Division at the ECB, who talked about motives, features and policy implications of current cases of official dollarization or euroization. He explained that sustained cases of official dollarization were rather politically than economically motivated. Countries opting for official dollarization are generally small, characterized by geographical proximity to the country of the anchor currency and have a status of political dependency. Key mechanisms to foster integration with the anchor country include fiscal transfers, tourism

and offshore finance. Thus, integration not only takes place via the trade effect of a common currency. Winkler concluded by pointing out that dollarization cannot be regarded as a substitute for integration. Overall, both dollarization and euroization should be considered with caution.

Session III – Panel Discussion: Circumstances and Choice in South Eastern Europe – Monetary and Exchange Rate Policies

The last session of the first day of the conference was chaired by *Peter Mooslechner*, Director of the OeNB’s Economic Analysis and Research Section. In the first contribution, Professor *Daniel Daianu* (Academy of Economic Studies, Bucharest) concentrated on disinflation in Romania from the perspective of the announced shift to inflation targeting in the second half of 2005. He stressed that standard inflation targeting may not be fully appropriate for the Romanian economy because some preconditions (e.g. an efficient transmission mechanism, the technical ability to forecast inflation in the medium run, a low share of the informal sector in the economy) have not yet been entirely met. Therefore, Professor Daianu proposed a “soft” inflation targeting framework which concentrates on shorter periods (up to four quarters) and recognizes the role of the exchange rate.

Professor *Julius Horvath* (Central European University, Budapest) discussed policy challenges in Southeastern Europe. He noted that the problems of the region were related to a wide range of historical and geopolitical factors. Still, this century provides new chances for economic development because important reforms have been implemented in recent years. Sound exchange rate policies and disinflation may play a key role in the region’s recovery. Further contributions to the discussion concentrated on the implementation of policy measures.

Ljubiša Krgović, President of Centralna banka Crne Gore (Central Bank of Montenegro), reviewed the challenges of monetary developments in his republic. In 1999 to 2000, Montenegro carried out a currency reform and replaced the highly inflationary Yugoslav dinar by the Deutsche mark (the euro). He stressed that official euroization constituted the appropriate monetary policy for Montenegro, which was borne out by a record of low inflation, GDP growth, and improvements in the banking sector. However, whereas the euro has helped with increased stability and predictability, the common European currency is no substitute for the continuation of structural reforms.

Mariella Nenova-Amar, Director of Economic Research and Projections at the Bulgarian National Bank, presented the case of the Bulgarian currency board. The major reasons for the severe economic and financial crisis of 1996–97 in Bulgaria, according to Nenova-Amar’s presentation, consisted in the subordination of monetary policy to the government and in the continued refinancing of commercial banks. However, the policy failures of the past (dollarization of the economy, reduction of domestic debt through hyperinflation, and defaults of the major banks) created good preconditions for the introduction of the currency board in 1997, which provided an appropriate framework for subsequent policies.

Finally, *Peter Nicholl*, Governor of Centralna banka Bosne i Hercegovine, explained Bosnia and Herzegovina’s monetary regime. He started his presentation by outlining the specific conditions of the country, where in the mid-1990s (a few years after the collapse of former socialist Yugoslavia), four currencies were broadly circulating, but only the Deutsche mark was generally accepted throughout the economy. Under these conditions, either official dollarization by way of the Deutsche mark or a currency board were the only policy options. Actually, the new domestic currency, which was named Bosnian convertible mark, became a national symbol that helped unify the young state. In the ensuing discussion, panelists confirmed that, like a currency board, a hard peg monetary regime by itself is not sufficient to “discipline” the economy; prudent fiscal policies and in-depth structural reforms are necessary to increase economic flexibility and efficiency.

Dinner Speech by Axel Weber

Axel Weber, President of the Deutsche Bundesbank, gave a dinner speech entitled “Changes in the Focus of European Economic Integration.” After presenting a short historic outline of the economic and monetary integration of Europe, Axel Weber dealt with a number of essential points of current and future European integration. In the euro area, the integration of European financial markets – to which EMU has made a substantial contribution – is particularly important. Key measures have already been decided in the framework of the Financial Services Action Plan (FSAP). In contrast, fiscal policies of a number of Member States give rise to concern, as EU agreements pertaining to the Stability and Growth Pact (SGP) are increasingly not being respected. In this context, President Weber warned against “deforming” the SGP. The size of budget deficits cannot be justified by the current economic situation; budgetary consolidation and other structural measures to ensure the long-term financial viability of pension systems in the face of population aging appear urgently necessary. In the area of banking supervision, priorities lie in the standardization of supervisory practices and the implementation of Basel II. Only once these steps have been taken should the discussion move to the division of responsibilities between the national and European levels. In this context, structural differences exist between the old and new Member States, given the clearly higher share of foreign ownership in the banking sectors of the new members.

As regards the future enlargement of EMU, Axel Weber underlined the importance of nominal convergence, i.e. convergence of nominal inflation rates through disinflation, before joining ERM II. This approach, as well as the planned wide fluctuation bands, may help secure the stability of the exchange rate regime. Premature entry into ERM II should be avoided, since such a move would forfeit flexibility in achieving adjustments to the real exchange rate. Healthy government finances are also important, as are the maintenance of a competitive edge vis-à-vis Western European countries and the attractiveness for foreign direct investors.

Session IV: FDI and Trade as Pivotal Elements for Catching-Up and Competitiveness

This session was chaired by *Peter Mooslechner*, Director of the OeNB’s Economic Analysis and Research Section, who argued, in his opening remarks, that openness to trade, access to international markets and FDI played a vital role for economic growth and real convergence in Southeastern Europe. He added that Austrian enterprises were among the region’s leading investors. After the devastating effects the armed conflicts of the 1990s had on trade relations and FDI, the signing of free trade agreements among the Southeastern European countries in recent years has been an important step toward economic and political stability. Most of these countries have abandoned tariffs and quantitative restrictions on almost all imports and exports. Reducing nontariff barriers and improving infrastructure and the investment climate remain the key challenges, Mooslechner contended.

Professor *Ewald Nowotny*, Vice Rector of the Vienna University of Economics and Business Administration, said in his introductory statement that he considered an export-driven growth strategy the best way to achieve real convergence. Such a strategy creates demand and employment and it forces countries to be competitive, which in turn increases the need for structural adjustment. Ewald Nowotny viewed the Stability Pact for South Eastern Europe as a very helpful instrument to foster trade integration. However, although the normalization of trade with regional neighbors is important for these countries, access to the EU market is even more important. With respect to FDI, Nowotny argued that production know-how and access to markets are the trump cards foreign direct investors have in their hands. Apart from Croatia, the countries of the western Balkans appear to be lagging behind their Southeastern European peers in the competition for FDI inflows. Nowotny further pointed out that the region would have to focus increasingly on greenfield investment and try to become part of the “car building bonanza” currently underway in the new EU Member States.

Dimitri Demekas, Division Chief of the Southeastern I Division of the IMF’s European Department, discussed the pros and cons of the impact of FDI on the host country and found that in transition economies the pros were clearly compelling. There is a need for extensive enterprise restructuring and technological upgrading. In addition, reliance on foreign savings puts a premium on non-debt-creating flows. Econometric analysis on FDI in Southeastern Europe reveals that gravity variables such as market size and proximity are the most important determinants of FDI. Also, business taxes and the quality of infrastructure play a crucial role, whereas the impact of trade policy and of governance seems to be weak. *Jarko Fidrmuc*, economist at the OeNB’s Foreign Research Division, presented a study on the trade integration of the new EU Member States and the Southeastern European countries. He drew attention to the question whether euro area trade integration with the Southeastern European countries will follow corresponding patterns with the new Member States. Fidrmuc found that Southeastern Europe is characterized by a rather small degree of trade integration with the euro area, reflecting the overall relative closedness of the former region’s economies. However, the geographical trade structures are converging with the trade structures of the new Member States, and there is ample scope

for Southeastern Europe to integrate into the world economy and to liberalize intraregional trade.

Boris Nemsic, CEO of Mobilkom Austria, found that the strong commitment of Austrian enterprises, such as Mobilkom Austria, in Southeastern Europe played a pivotal role in the catching-up process. For him, the quickly expanding economies in the region offered unique business opportunities. Of course, most Southeastern European economies are very small and poor. Except for Romania, which has a population of about 22 million and a GDP of almost EUR 50 billion (in 2002), the average economy in the region has 5 million people and a GDP of EUR 12 billion (which equals but 5% to 6% of Austria’s GDP). The telecom markets in these countries are highly underdeveloped and seem to be too small for the big European enterprises to engage efficiently. Thus, by being one of the first telecommunication companies active in the region, Mobilkom Austria may enhance its comparative advantages over time and become the major player while the Southeastern European markets grow. Nemsic considered it important to have a good knowledge and understanding of local conditions.

Session V: Confronting Serious Challenges: High Unemployment, Poverty, Brain Drain

The fifth session was chaired by *Thomas Wieser*, Director General at the Austrian Ministry of Finance. The other speakers were *Robert Holzmann*, *Tito Boeri* and *Kalman Mizsei*. In his presentation entitled “Poverty, Migration, and Employment in South-Eastern Europe: What Can the Data Tell Us?” *Robert Holzmann*, Director for Social Protection with the World Bank Group, noted that despite significant growth rates, enormous differences still existed between the South-eastern European countries in terms of real GDP per capita. With regard to poverty, migration and the labor market, Holzmann drew the following conclusions: Poverty in Southeastern Europe increased in parallel with the fall in output; inequality, however, seems to have changed little and therefore cannot be considered to have been a main contributor to the past increase in poverty rates. For the time being, only Albania seems to have recovered far enough to have reached the GDP level of the end-1980s. As a reaction to the fall in output and the increase in poverty, but also as a result of armed conflicts, migration has increased, albeit with significant differences between the countries with regard to the level and flows of migration. Robert Holzmann noted that despite indications of a migration of high-skilled workers from the region, one had to bear in mind that the level of re-migration was also high. The labor market situation is characterized by high, and sometimes increasing, unemployment and is therefore on average worse than in other Central and Eastern European countries. The persistent high level of joblessness is not so much a problem of labor market regulation, but suggests serious structural shortcomings in the areas of both company and job creation.

In his presentation “Jobless Growth in the South Eastern European Countries, Migration and the Role of the EU,” *Tito Boeri*, Professor at Bocconi University in Milan, noted that despite their high GDP expansion rates, Southeastern European countries have experienced more or less jobless growth since 1997. However, as he pointed out, this phenomenon was not attributable to

tight macroeconomic policies. In order to investigate the determinants of employment and the reasons for the jobless growth phenomenon, Professor Boeri presented reduced-form regressions, according to which GDP growth raises employment and a rise of real interest rates and budget deficits reduces employment. Why are loose fiscal policies partly responsible for joblessness? The reason is that budget deficits are often linked to public sector wage hikes, which push up private sector wages. With regard to immigration, Boeri suggested the adoption of a common EU policy toward immigrants and the use of EU conditionality to foster structural reforms in the product and labor markets. In his view, these measures would be essential to spread immigration flows evenly over time and to ensure that immigrants move according to demand. Large differences in welfare payments across the European Union may distort location decisions of immigrants. To prevent this, EU Member States should coordinate their minimum standards for welfare and eventually shift welfare funding to the Union level rather than close access to welfare benefits. According to Professor Boeri, neither migration restrictions nor welfare access exclusion can reduce migration pressures in the long run.

Kalman Mizsei, Director of the Regional Bureau for Europe and the CIS with the UN Development Program, identified unemployment as the main problem prevalent in Southeastern Europe: With lower unemployment, a number of (political or ethnic) tensions might disappear or fade. Mizsei pointed to concerns about continuing instability in Serbia and Montenegro, the province of Kosovo, Bosnia and Herzegovina, and the Former Yugoslav Republic of Macedonia and concluded that active labor market policies and retraining were needed. He further emphasized that one should not be deceived by the current average level of GDP growth in the region, which comes to between 4% and 5%. Southeastern Europe still has a lot of catching-up to do and is presently clearly outperformed when it comes to economic dynamism by other catching-up economies, like Ukraine, which registered a GDP expansion of 13% in the first three quarters of 2004 (year on year).

Session VI – Panel Discussion: Banking in South Eastern Europe and the Leading Role of Austrian Banks

The final session was chaired by OeNB Executive Director *Josef Christl*. The panel discussion was preceded by an introductory statement by Professor *Laurent Weill* of the Université Robert Schuman in Strasbourg. Professor Weill’s lecture focused on measuring efficiency differences between central and eastern European and western European banking sectors and found evidence of a gap in favor of the latter, albeit on the basis of a restricted number of selected indicators. But banking efficiency levels appear to vary strongly across Central and Eastern Europe. Professor Weill attributed the lower average efficiency of CEE banks largely to weaker managerial performance, which may, however, be too basic an indicator for this complex issue. By contrast, foreign ownership seems to have a beneficial impact on banking efficiency. *Radovan Jelasic*, Governor of Narodna banka Srbije, praised Austrian banks’ expansion in Serbia since 2000 and pointed out that their strategy of dealing with the CEECs as their home market was likely key to their success. According to Jelasic, the presence of foreign banks has made it easier for the public to differentiate between “good”

and “bad” credit institutions and has contributed to restoring confidence in the domestic financial system. Foreign banks have also spread better management practices and raised the quality of services. From the point of view of the central bank, foreign banks have played an important role in pushing regulators to improve regulation. In fact, many rules and regulations of Serbian banking have been copied from Austria.

The Director of the Research Department of Hrvatska narodna banka, *Evan Kraft*, focused on challenges for banking reform in Southeastern Europe. After elaborating briefly on the beneficial impact of foreign investors, Kraft referred to the recent consumer lending boom and identified the consumer loan bias in banks’ asset allocation as one of the major risk factors. As a rule of thumb, problems may arise if the rate of lending growth exceeds twice that of GDP expansion. He also raised the issue of the ambiguous relationship between competition and concentration, and of the challenges for cross-border regulation and crisis resolution. Based on Croatia’s experience with rogue traders, he highlighted foreign banks’ operational risks and pointed to the often mixed reception of foreign banks by the Southeastern European public. He explained that by “mixed reception,” he meant that, while many citizens principally object to the selling of domestic credit institutions or assets to foreigners, at the same time they prefer to place their own accounts with foreign banks. *Norbert Walter*, chief economist at the Deutsche Bank, summarized his views on foreign banks’ presence in the region. While acknowledging reform progress, Walter referred to the still modest level of banking intermediation in Southeastern Europe, which implies a huge growth potential. In his view, this potential is the major motive for foreign banks’ participation in the region, with a beneficial side effect on the quality of the host country’s banking system. Norbert Walter also pointed to the risks associated with the high share of foreign currency assets and liabilities on Southeastern European banks’ balance sheets, warning that authorities need to proceed cautiously when they contemplate opening up foreign exchange markets. He also stressed the importance of banking supervision and the need for coordination between supervisors at the European level.

Heinz Wiedner, Member of the Board of Austria’s Raiffeisen International Bank Holding AG, explained his bank’s strategy in Eastern Europe, which combines early market entry with employing local management and providing universal banking services in the region. Looking at expected future economic growth and the current level of financial intermediation, Wiedner expressed his optimism concerning the expansion potential in Southeastern European banking. According to Wiedner, foreign banks can contribute to the expansion by creating trust with private individuals, by providing know-how and technology transfer, by introducing new products and services, by enhancing competition and by supporting the SME sector. *Manfred Wimmer*, General Manager for Strategic Group Development at Austria’s Erste Bank, impressively demonstrated that success in the CEE banking business can be achieved by a different strategy as well. He explained that Erste Bank’s expansion strategy as a retail credit institution had been to wait for the privatization of the large savings banks and to concentrate on the retail business instead of offering universal banking services. The fact that savings banks are usually privatized at a late stage explains why Erste Bank is currently represented only in four CEECs

(the Czech Republic, Slovakia, Hungary and Croatia). When discussing the major contribution of regional business to the group’s overall performance, Wimmer said that CEE banks are better than western banks if one looks at cost-to-income or profitability ratios.

Closing Remarks

In his concluding statement, *Josef Christl* pointed out that Southeastern Europe was a region with considerable potential, that it was clearly on the catching-up lane, not without sizeable risks and in need of painful adjustment, but was driven by the powerful political anchor of strived-for future EU membership. Remarkable success has been achieved in improving the investment climate, but more needs to be done. Christl recalled that countries whose goal it is to join the EU do not have the option of using unilateral euroization as a way of circumventing the official stages for the adoption of the single currency. Even if the path to EU entry in some cases may still be long and difficult, the reward of serious efforts is on the horizon; it embodies our common European future – living together in peace, prosperity and freedom.

We hope that you will find this website useful and that you will stay in touch with us: Click on <http://ceec.oenb.at> or visit the OeNB's website at www.oenb.at, where you may click on the quick link Central and Eastern Europe. The CEEC website is available in German and English. Please send your inquiries or proposals directly to the CEEC team at ceec@oenb.at.

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CEEC Research Platform (ceec.oenb.at)

The CEEC Research Platform of the Oesterreichische Nationalbank's Foreign Research Division offers you selected reports, analyses and studies about economic developments in Central and Eastern Europe. Furthermore, you will find information about related events scheduled at the Oesterreichische Nationalbank.

Focus on European Economic Integration

Focus on European Economic Integration 1/2004

The OeNB's semiannual publication Focus on European Economic Integration (the successor of Focus on Transition) provides a wide range of CEEC- and SEE-related material – country analyses and data, studies on economic topics as well as descriptions of events hosted by the OeNB.

Banking Sector and Financial Stability

Financial Stability Report 8

Reports

International Environment Global Economic Developments and Financial Markets

Financial Flows into Emerging Markets

Events

Conference on European Economic Integration

The renowned East-West Conference of the Oesterreichische Nationalbank has been renamed. It is now the Conference on European Economic Integration!

The selected abstracts below alert readers to studies on CEEC topics published in other OeNB publications. For further details see www.oenb.at.

The Bulgarian Financial Sector

Zoltan Walko

This paper gives a comprehensive overview of the financial sector in Bulgaria. While the primary focus lies on the banking sector as the main channel of financial intermediation, capital markets for Bulgarian assets are analyzed as well. After a brief description of the turbulent historical development of the banking sector, its main features today are presented. An in-depth analysis of the structure of assets and liabilities is then followed by an investigation of the role of foreign exchange. The present study confirms that the share of foreign currency-denominated domestic claims in total domestic claims on nonbanks has increased and that the share of foreign currency-denominated deposits in total domestic deposits of nonbanks has decreased. To explain these observations the study refers to the ongoing real appreciation process against the backdrop of the currency board arrangement which has been in place since mid-1997. Next, the development of profitability, capital adequacy and asset quality is explored. Finally, a special section is devoted to the role of Austrian banks in Bulgaria, which have a market share of about 11.5% and enjoy high profitability.

Published in Financial Stability Report 8.

Credit and Deposit Interest Rate Margins in Four New EU Member States

Zoltan Walko

Thomas Reininger

Austrian banks' subsidiaries in Central and Eastern Europe deliver a higher contribution to their banking groups' overall pre-tax profit than their relative share in assets would suggest. One widespread explanation for this is that the margins between credit and deposit rates are higher in the Central and Eastern European countries than in Austria or the euro area. This paper presents an overview of the margins in four Central European new EU Member States and analyzes the major differences in the structure of deposit, lending and overall margins compared with the euro area and Austria.

Published in Financial Stability Report 8.

The “East Jour Fixe” of the Oesterreichische Nationalbank

53rd East Jour Fixe

Monetary Policy in New Member States

The East Jour Fixe of the Oesterreichische Nationalbank, a series of meetings initiated in 1991 as a forum in which economists, members of academia, government officials and other experts on Eastern Europe meet to discuss specific transition issues, looks back on a long tradition. On October 29, 2004, this seminar series was continued with the 53rd East Jour Fixe meeting on “Monetary Policy in New Member States,” which looked at specific monetary policy issues in the new Member States for the period between EU accession and the eventual adoption of the euro after the fulfillment of the convergence criteria. This topic has drawn a lot of attention from academic researchers and policymakers since the EU enlargement of May 2004.

The 53rd East Jour Fixe meeting was organized in two sessions. The first session was chaired by Doris Ritzberger-Grünwald, Head of the Foreign Research Division of the OeNB, who gave a short overview of the role of inflation targeting as a preferred monetary policy strategy of some countries (for instance, Finland) before joining monetary union and of those countries which are still not participating in ERM II (the U.K. and Sweden). Then, Lucjan Orłowski, Sacred Heart University (U.S.A.), who is currently a visiting research professor at the German Institute for Economic Research in Berlin, presented his recent work on “Targeting Relative Inflation Forecast as a Monetary Policy Framework for Adopting the Euro.” He started by describing policy options for the new Member States (NMS) before the adoption of the euro. Various forms of direct inflation targeting have prevailed in several NMS (the Czech Republic, Hungary, Poland) as a superior monetary policy framework compared to monetary base targets or a fixed exchange rate policy. However, the implementation of inflation targeting stirred a heated debate over its timing and format. In particular, the NMS do not satisfy the prerequisites for inflation targeting generally recommended in the literature. These prerequisites comprise first and foremost single-digit inflation, a stable relationship between inflation and policy instruments, and well-defined channels of monetary policy transmission.

Accordingly, in his presentation Orłowski proposed relative inflation forecast targeting as a monetary policy framework conducive to the adoption of the euro in the NMS. In this policy framework, the national monetary authority targets the differential between forecasts of domestic inflation (from the perspective of the NMS) and inflation in the euro area. Given the final objective for the NMS of fulfilling the convergence criteria (including the inflation criterion) and adopting the euro, the difference should diminish as progress in nominal convergence is achieved. However, in the adjustment period, relative inflation forecast targeting can accommodate possible external and domestic shocks better than comparable monetary regimes. This should ensure a higher credibility of this regime and a superior macroeconomic performance than under alternative designs of monetary policy.

The contribution was discussed by Julius Horvath, Central European University (Hungary). He addressed several features of relative inflation forecast targeting and discussed issues of its possible application in the NMS.

The second session addressed several more specific features of monetary policy in new and prospective Member States, including transmission mechanisms and money demand in these countries. The importance of these issues for the conduct of monetary policy was stressed by Peter Backé, European Central Bank (ECB), who chaired this session. He noted that the ECB has a keen interest in analyzing the issues featured in the session, also in the context of the unfolding monetary integration of the NMS.

In the first contribution, Judit Krekó presented the results of her joint research with colleagues at Magyar Nemzeti Bank, Anna Naszódi and Csilla Horváth, on the “Interest Rate Pass-through: The Case of Hungary.” The paper estimates error correction models with threshold autoregressive parameters to investigate the pass-through from monthly forint-based money market rates to the interest rates in the Hungarian banking system between 1997 and 2004. The latter approach allows for an analysis of various nonlinearities in the adjustment process of interest rate determination. The paper actually finds several sources of nonlinearities in interest rate behavior in Hungary. In particular, the results suggest that the speed of adjustment of bank rates depends on the size of the original changes in the money market rate and the deviation of the bank rates from their long-term equilibrium levels. Nevertheless, the pass-through in Hungarian corporate loan rates is stronger and faster than in comparable European countries, which may be due to the high degree of competition in the corporate segment of the Hungarian banking sector. The results using data aggregated for the whole banking sector are confirmed by bank-level data over a shorter period (2001–03). However, consumer credit rates in Hungary were found to be rigid in an international comparison, probably reflecting the low interest rate elasticity of loan demand and the high proportion of the risk premium.

Finally, Jarko Fidrmuc, Foreign Research Division (OeNB), presented his joint research with Abdur Chowdhury, United Nations Economic Commission for Europe, on “Money Demand and Disinflation: The Experience of Selected CEECs.” At the beginning of his presentation, Fidrmuc presented the process of disinflation in six CEECs (the Czech Republic, Hungary, Poland, Romania, Slovakia, and Slovenia). All selected countries achieved significant progress in disinflation, which was accompanied by a corresponding stabilization of broad money (M2), although the correlation between both variables is weaker in more recent periods of lower inflation. This may indicate an increasing importance of external factors in the determination of money demand in the CEECs. Applying a panel cointegration estimation of a money demand function for the CEECs, external factors (the euro area interest rate and exchange rate) are found to play an important role in the CEECs.

The contributions of the second sessions were discussed by Robert Kunst, University of Vienna, who stressed selected aspects of the econometric techniques employed. The general debate addressed various issues related to parameter stability and data availability as well as policy implications for the NMS.

STATISTICAL ANNEX

Table A1

Gross Domestic Product

Annual real change in %	2001	2002	2003	2003 Q2	2003 Q3	2003 Q4	2004 Q1	2004 Q2	2004 Q3
Albania	6.8	4.7	6.0	..	..	..	..	..	..
Bosnia and Herzegovina	4.4	5.5	3.5	..	..	..	..	..	..
Bulgaria	4.1	4.9	4.3	4.2	4.4	4.9	5.3	6.0	..
Croatia	4.4	5.2	4.3	5.0	3.9	3.3	4.2	3.8	3.6
FYR Macedonia ¹	-4.5	0.9	3.2	..	..	..	..	..	..
Romania	5.7	5.0	4.9	4.3	5.4	4.6	6.1	7.0	..
Russia	5.1	4.7	7.3	7.9	6.5	7.6	7.5	7.3	6.4
Serbia and Montenegro	5.1	3.0	..	..	..	..	..	..	..
Turkey	-7.5	7.9	5.8	3.9	5.5	6.1	10.1	13.4	..
Ukraine	9.2	5.2	9.4	10.0	6.5	12.7	10.8	14.6	..

Source: Eurostat, wiw, national sources.

¹ Former Yugoslav Republic of Macedonia.

Table A2

Industrial Production

Annual real change in %	2001	2002	2003	June 04	July 04	Aug. 04	Sep. 04	Oct. 04	Nov. 04
Albania	6.5	1.8	2.7	..	..	..	..	..	..
Bosnia and Herzegovina	7.4	13.9	-7.8	9.7	14.0	8.7	17.6	15.6	16.6
Bulgaria	2.5	4.7	15.3	21.5	16.5	18.3	..	..	..
Croatia	6.1	5.5	4.1	2.8	1.2	4.9	3.0	-3.3	..
FYR Macedonia	-3.1	-5.3	4.7	..	..	..	..	..	..
Romania	8.3	4.4	3.2	3.2	2.0	6.5	5.5	..	..
Russia	4.9	3.7	7.0	9.2	4.4	6.8	3.5	3.5	..
Serbia and Montenegro	0.0	1.7	-2.7	..	..	..	..	..	..
Turkey	-8.5	9.2	8.4	14.8	12.8	8.2	5.4	1.5	2.5
Ukraine	14.2	7.0	15.8	10.9	7.5	12.3	14.4	6.4	..

Source: wiw, EBRD, national sources.

Table A3

Average Gross Wages

Annual nominal change in %	2001	2002	2003	2003 Q2	2003 Q3	2003 Q4	2004 Q1	2004 Q2	2004 Q3
Albania ¹	15.9	22.7	8.5	11.9	3.4	5.0	9.5	15.0	..
Bosnia and Herzegovina ²	20.5	1.4	8.4	9.1	8.0	7.1	4.2	4.8	7.4
Bulgaria ³	11.8	7.0	4.0	3.8	3.9	4.7	6.5	5.9	..
Croatia ⁴	6.5	5.0	5.9	5.7	5.6	5.0	6.1	5.7	6.1
FYR Macedonia ⁴	3.5	6.9	4.8	..	..	..	..	..	..
Romania ⁴	40.5	27.1	25.4	24.4	24.7	24.9	23.8	22.3	21.5
Russia ³	45.7	34.5	24.8	24.4	22.3	27.3	28.6	25.9	24.7
Serbia and Montenegro ⁴	114.3	64.3	26.0	..	..	..	..	..	..
Turkey ⁵	35.3	32.1	17.2	..	14.5	17.7	12.8	12.1	..
Ukraine ³	34.9	20.7	23.0	22.5	24.4	24.5	28.8	27.4	25.6

Source: wiw, national sources.

¹ Monthly earnings in the state sector.

² Excludes Brcko district wages.

³ Total economy, gross.

⁴ Total economy, net.

⁵ Monthly manufacturing earnings.

Table A4

Unemployment Rate

End of period, %	2001	2002	2003	May 04	June 04	July 04	Aug. 04	Sep. 04	Oct. 04
Albania	14.6	15.8	15.0	..	..	..	..	..	..
Bosnia and Herzegovina	40.3	40.9	42.0	44.4	42.4	42.7	42.9	..	..
Bulgaria ¹	17.5	17.4	14.3	12.6	12.2	12.1	11.9	..	..
Croatia ¹	22.0	22.3	19.5	18.0	17.4	17.2	17.2	17.6	18.0
FYR Macedonia ²	30.5	31.9	36.7	..	..	..	..	..	..
Romania ¹	9.0	10.2	7.6	6.8	6.5	6.2	6.1	6.0	..
Russia ²	9.0	8.0	8.7	7.7	7.6	7.5	7.4	7.4	7.5
Serbia and Montenegro ¹	12.9	13.8	14.0	..	..	..	..	..	..
Turkey ²	8.4	10.4	10.5	..	..	..	..	..	..
Ukraine ²	11.1	10.1	9.1	..	..	..	..	..	..

Source: wiw, national sources.

¹ Registered, period average.² LFS, period average.

Table A5

Industrial Producer Price Index

Period average, annual change in %	2001	2002	2003	May 04	June 04	July 04	Aug. 04	Sep. 04	Oct. 04
Albania	..	..	..	..	..	..	..	..	..
Bosnia and Herzegovina	3.9	-0.3	-0.1	3.5	3.6	3.6	2.9	2.6	2.5
Bulgaria	3.8	1.4	5.0	8.5	6.8	8.1	7.5	..	..
Croatia	3.4	-0.5	1.9	4.4	3.9	4.6	5.1	5.7	6.3
FYR Macedonia	2.0	-0.9	-0.3	..	..	..	..	..	..
Romania	38.7	23.2	19.6	19.3	20.4	21.3	22.1	20.0	..
Russia	19.1	11.7	15.6	24.4	26.6	25.4	25.5	26.3	27.1
Serbia and Montenegro	-10.4	-41.3	-3.8	..	..	..	..	..	..
Turkey	61.6	50.1	25.6	9.6	10.5	9.4	10.5	12.5	15.5
Ukraine	8.6	3.1	7.8	20.6	22.4	21.3	22.0	23.2	24.3

Source: wiw, national sources.

Table A6

Consumer Price Index

Period average, annual change in %	2002	2003	2004	July 04	Aug. 04	Sep. 04	Oct. 04	Nov. 04	Dec. 04
Albania	5.2	2.3	..	3.1	2.7	2.0	2.0	2.2	..
Bosnia and Herzegovina ¹	0.4	0.6	..	-1.0	0.5	0.1	-0.6	..	..
Bulgaria	5.8	2.3	6.1	7.6	6.3	6.3	5.8	4.5	4.0
Croatia ²	1.7	1.8	..	1.9	2.0	1.6	2.0	2.3	..
FYR Macedonia ¹	1.4	2.4	..	..	..	..	..	..	..
Romania	22.5	15.3	11.9	12.1	12.4	11.1	10.8	9.9	9.3
Russia	16.0	13.6	..	10.5	11.3	11.5	11.6	11.7	..
Serbia and Montenegro	16.5	9.4	..	..	..	..	..	..	..
Turkey	45.0	25.3	10.7	9.6	10.0	9.0	9.9	9.8	9.3
Ukraine	0.8	5.2	..	8.1	9.9	10.7	11.7	11.3	..

Source: Eurostat, wiw, national sources.

¹ Retail prices.² Retail prices until 2001.

Table A7

Trade Balance

% of annual GDP	2001	2002	2003	2003 Q2	2003 Q3	2003 Q4	2004 Q1	2004 Q2	2004 Q3
Albania	..	..	..	..	..	..	..	..	..
Bosnia and Herzegovina	..	..	..	..	..	..	..	..	..
Bulgaria	-11.7	-10.2	-12.5	-15.8	-9.2	-16.5	-12.3	-17.4	..
Croatia	-20.8	-24.2	-26.8	-28.8	-26.7	-28.3	-23.7	-28.2	-21.1
FYR Macedonia	..	..	..	..	..	..	..	..	..
Romania	-7.5	-5.7	-7.9	-10.4	-5.9	-9.9	-6.0	-11.6	-7.1
Russia	15.7	13.4	13.9	13.5	13.1	12.8	14.1	15.0	15.2
Serbia and Montenegro	..	..	..	..	..	..	..	..	..
Turkey	-2.6	-4.0	-5.7	-6.1	-5.0	-6.3	-8.4	-9.2	..
Ukraine	0.6	1.7	-0.4	-0.4	-1.1	-2.5	6.7	10.2	..

Source: National central banks.

Table A8

Current Account Balance

% of annual GDP	2001	2002	2003	2003 Q2	2003 Q3	2003 Q4	2004 Q1	2004 Q2	2004 Q3
Albania	-6.2	-9.0	-7.6	..	..	..	..	..	..
Bosnia and Herzegovina	-16.2	-18.4	-17.4	..	..	..	..	..	..
Bulgaria	-7.2	-5.6	-8.5	-13.3	3.7	-15.7	-12.0	-10.4	..
Croatia	-3.9	-8.6	-6.8	-19.8	24.9	-19.5	-19.4	-14.0	24.2
FYR Macedonia	..	..	..	..	..	..	..	..	..
Romania	-5.6	-3.4	-5.8	-10.0	-2.6	-7.8	-2.7	-10.9	-4.0
Russia	11.0	8.5	8.3	8.1	6.2	7.0	10.0	9.8	9.3
Serbia and Montenegro	..	..	..	..	..	..	..	..	..
Turkey	2.4	-0.9	-3.2	-5.0	1.4	-4.9	-8.9	-6.9	..
Ukraine	3.8	7.3	5.8	6.5	4.6	2.7	14.6	16.4	..

Source: National central banks.

Table A9

Net Foreign Direct Investment

% of annual GDP	2001	2002	2003	2003 Q2	2003 Q3	2003 Q4	2004 Q1	2004 Q2	2004 Q3
Albania	..	..	..	..	..	..	..	..	..
Bosnia and Herzegovina	..	..	..	..	..	..	..	..	..
Bulgaria	5.9	5.7	7.0	9.4	5.5	6.5	8.9	14.0	..
Croatia	7.1	2.5	6.3	9.1	1.7	9.8	3.5	3.0	2.8
FYR Macedonia	..	..	..	..	..	..	..	..	..
Romania	3.0	2.5	3.2	3.5	2.3	3.0	4.1	6.1	2.7
Russia	0.1	0.0	-0.4	0.8	-0.6	-2.1	0.6	0.7	-0.9
Serbia and Montenegro	..	..	..	..	..	..	..	..	..
Turkey	1.9	0.5	0.4	0.2	0.6	0.6	0.6	1.0	..
Ukraine	2.1	1.6	2.8	4.0	2.7	2.1	2.7	4.0	..

Source: National central banks.

Table A10

Reserve Assets Excluding Gold

End of period, % of annual GDP	2001	2002	2003	2003 Q2	2003 Q3	2003 Q4	2004 Q1	2004 Q2	2004 Q3
Albania	..	..	..	..	..	..	..	..	..
Bosnia and Herzegovina	24.4	23.6	25.6	..	..	..	..	..	..
Bulgaria ¹	24.5	25.6	28.2	26.5	27.3	28.2	27.9	31.3	..
Croatia ¹	24.0	23.3	25.7	23.8	24.5	25.7	23.8	24.1	23.8
FYR Macedonia	21.7	19.0	..	..	..	..	..	..	..
Romania ¹	10.0	12.3	12.7	11.4	13.5	12.7	13.2	14.8	17.7
Russia ¹	10.8	11.6	15.2	14.5	13.6	15.2	16.3	16.4	16.5
Serbia and Montenegro	..	..	..	..	..	..	..	..	..
Turkey ¹	13.4	13.4	12.4	13.2	13.9	12.4	12.1	12.0	..
Ukraine	7.9	9.2	12.3	12.0	12.9	12.3	14.4	17.0	..

Source: wiw, IMF.

¹ Quarterly data on the basis of rolling four-quarter GDP.

Table A11

Gross External Debt

End of period, % of annual GDP	1997	1998	1999	2000	2001	2002	2003
Albania	39.2	..	36.9	32.3	31.8	28.2	23.1
Bosnia and Herzegovina	119.1	..	69.2	66.2	62.7	49.9	34.9
Bulgaria	..	..	..	..	87.8	79.0	59.3
Croatia	37.9	..	43.1	53.2	59.4	57.8	73.0
FYR Macedonia	31.4	..	40.1	40.6	41.5	43.9	38.7
Romania ¹	..	..	22.9	29.0	30.3	33.5	31.6
Russia	..	..	..	..	55.1	46.5	38.6
Serbia and Montenegro	59.0	..	67.3	61.8	164.0	103.5	68.9
Turkey	46.3	..	47.0	60.1	59.2	81.5	53.9
Ukraine	..	..	..	..	60.1	54.3	43.0

Source: National central banks, EBRD.

¹ Medium- and long-term debt.

Table A12

Central Government Balance

% of GDP	2001	2002	2003	2003 Q2	2003 Q3	2003 Q4	2004 Q1	2004 Q2	2004 Q3
Albania	-8.3	-6.2	-4.4	..	..	..	..	..	..
Bosnia and Herzegovina	-3.3	-2.2	0.4	..	..	..	..	..	..
Bulgaria ¹	-0.9	-0.6	0.0	6.4	2.3	-8.9	2.8	7.3	..
Croatia	-2.6	-2.0	-1.1	-2.7	-0.2	4.0	-5.3	..	..
FYR Macedonia ¹	-7.2	-5.6	-1.6	..	..	..	..	..	..
Romania	-3.1	-3.1	-1.5	-2.1	1.0	-2.8	-1.5	-1.7	1.0
Russia	3.0	1.4	1.7	3.1	1.5	-0.3	3.7	5.6	..
Serbia and Montenegro ¹	-1.3	-4.5	-4.2	..	..	..	..	..	..
Turkey ¹	-16.0	-14.1	-11.1	-17.4	-4.5	-10.2	-8.7	-8.0	..
Ukraine ¹	-0.3	0.7	-0.2	1.0	2.0	-5.8	1.9	-0.8	..

Source: wiw, EBRD, national sources.

¹ General government debt.

Table A13

Gross General Government Debt

% of annual GDP	1997	1998	1999	2000	2001	2002	2003
Albania	75.6	75.9	72.7	71.3	64.4	60.6	56.8
Bosnia and Herzegovina
Bulgaria	79.3	73.6	66.2	53.2	46.2
Croatia ¹	50.4	51.6
FYR Macedonia
Romania	23.9	23.2	23.3	21.8
Russia
Serbia and Montenegro
Turkey	..	50.1	65.9	57.4	105.2	94.9	87.1
Ukraine	30.1	37.6	50.7	45.1	37.5	33.5	29.3

Source: Eurostat, EBRD.

¹ Central government debt.

Table A14

Broad Money

End of period, annual nominal change in %	2001	2002	2003	June 04	July 04	Aug. 04	Sep. 04	Oct. 04	Nov. 04
Albania (M3)	20.2	5.7	7.6	7.4	8.6	10.0	9.9	9.7	..
Bosnia and Herzegovina (M2)	89.3	8.6	8.4	19.9	21.3	21.7	23.4	22.7	..
Bulgaria (M3)	25.8	11.7	19.6	26.8	24.2	20.3	23.1	18.7	..
Croatia (M4)	45.2	9.5	11.0	7.9	6.4	7.8	9.3	8.9	..
FYR Macedonia	64.0	-9.3	18.0	..	..	..	..	..	..
Romania (M2)	46.2	38.2	23.3	30.4	34.3	34.6	36.9	..	..
Russia ¹	36.3	33.8	38.5	35.2	33.0	31.7	29.0	32.7	33.7
Serbia and Montenegro	92.0	52.7	27.9	..	..	..	..	..	..
Turkey ¹	86.2	29.1	14.2	27.3	27.3	29.9	30.7	..	..
Ukraine	41.9	41.8	46.5	44.2	45.0	46.3	50.6	45.3	..

Source: wiw, national sources.

¹ Monetary survey definition.

Table A15

Official Key Interest Rate

End of period, %	2002	2003	2004	July 04	Aug. 04	Sep. 04	Oct. 04	Nov. 04	Dec. 04
Albania (repo rate) ¹	8.5	7.0	..	5.5	5.5	5.5	5.5	5.3	..
Bosnia and Herzegovina	..	..	..	..	..	..	..	..	..
Bulgaria (official refinancing rate) ²	3.31	2.83	..	2.44	2.40	2.39	2.50	..	..
Croatia (official discount rate) ³	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
FYR Macedonia (basic central bank rate)	10.70	6.50	..	..	..	..	..	..	..
Romania (official refinancing rate) ⁴	20.40	20.41	..	20.75	20.29	19.24	18.80	17.80	..
Russia (official refinancing rate) ⁵	21.00	16.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00
Serbia and Montenegro (discount rate)	9.50	9.00	..	..	..	..	..	..	..
Turkey (overnight deposit rate) ⁶	44.00	26.00	..	22.00	22.00	20.00	20.00	20.00	..
Ukraine (refinancing rate)	7.00	7.00	..	7.50	..	..	..	..	..

Source: Eurostat, Bloomberg, wiw, IMF.

¹ The Bank of Albania's basic interest rate.

² The Bulgarian National Bank's basic interest rate.

³ Hrvatska narodna banka's basic rate for lending to commercial banks.

⁴ From February 1, 2002, reference rate of Banca Națională a României.

⁵ Charged by the Bank of Russia on three-month loans to commercial banks.

⁶ The interest rate paid by Türkiye Cumhuriyet Merkez Bankası on overnight deposits.

Table A16

Three-Month Interbank Rate¹

End of period, %	2002	2003	2004	July 04	Aug. 04	Sep. 04	Oct. 04	Nov. 04	Dec. 04
Albania	..	..	..	..	..	..	..	..	..
Bosnia and Herzegovina	..	..	..	..	..	..	..	..	..
Bulgaria	..	3.50	3.64	3.46	3.41	3.39	3.61	3.69	3.64
Croatia	3.93	8.33	6.65	7.41	8.04	7.49	7.28	6.53	6.65
FYR Macedonia	..	..	..	..	..	..	..	..	..
Romania	20.47	22.31	17.19	20.25	19.31	19.00	19.00	18.06	17.19
Russia	13.35	6.20	6.16	9.05	8.85	7.81	5.60	5.64	6.16
Serbia and Montenegro	..	..	..	..	..	..	..	..	..
Turkey	49.00	26.00	..	25.00	24.00	24.00	23.00	23.00	..
Ukraine	..	4.75	..	17.00	..	..	..	..	..

Source: Bloomberg, Thomson financial.

¹ Ask rate.

Table A17

Exchange Rate

Period average, national currency per EUR (ECU)

	2002	2003	2004	July 04	Aug. 04	Sep. 04	Oct. 04	Nov. 04	Dec. 04
Albania	132.46	137.57	125.60	124.38	125.03	124.82	125.62	127.42	126.34
Bosnia and Herzegovina	..	..	..	..	..	..	..	..	..
Bulgaria	1.95	1.95	..	1.96	1.96	1.96	1.96	1.96	..
Croatia	7.41	7.56	7.47	7.37	7.37	7.41	7.54	7.56	7.57
FYR Macedonia	60.98	61.26	..	..	..	..	..	..	..
Romania	31,234.75	37,543.00	..	40,962.00	40,946.00	41,075.00	41,082.00	39,848.00	..
Russia	29.65	34.55	36.30	35.67	35.63	35.66	36.29	37.15	37.43
Serbia and Montenegro	60.79	65.26	..	..	..	..	..	..	..
Turkey	1,435,800.50	1,696,322.25	..	1,784,116.00	1,799,918.00	1,838,497.00	1,860,247.00	..	..
Ukraine	5.03	6.02	..	6.52	6.47	6.48	6.62	..	..

Source: Eurostat, wiw, national sources, Thomson financial.

NOTES

Legend, Abbreviations and Definitions

Legend

- × = No data can be indicated for technical reasons
- .. = Data not available at the reporting date
- 0 = The numerical value is zero or smaller than half of the unit indicated

Discrepancies may arise from rounding.

Abbreviations

ADF test	augmented Dickey-Fuller test
ARDL	autoregressive distributed lag
BEER	Behavioral Equilibrium Exchange Rate
B-S	Balassa-Samuelson
CBI	central bank independence
CEE	Central and Eastern Europe
CEECs	Central and Eastern European countries
CEEI	Conference on European Economic Integration (OeNB)
CIS	Community of Independent States
CPI	consumer price index
D-D	Dutch disease
DOLS	dynamic ordinary least squares
EBRD	European Bank for Reconstruction and Development
ECB	European Central Bank
Ecofin	Council of Economics and Finance Ministers
ECU	European Currency Unit
EEC	European Economic Community
EMI	European Monetary Institute
EMS	European Monetary System
EMU	Economic and Monetary Union
ERM	exchange rate mechanism
ERM II	exchange rate mechanism II
ERS test	Elliott-Rothenberg-Stock test
ESA	European System of Accounts
ESCB	European System of Central Banks
EU	European Union
EUR	euro
FDI	foreign direct investment
FSAP	Financial Services Action Plan
FYROM	Former Yugoslav Republic of Macedonia
GDP	gross domestic product
HICP	Harmonized Index of Consumer Prices
ICTY	International Criminal Tribunal for the Former Yugoslavia
ILO	International Labor Organization
IMF	International Monetary Fund
IPC	International Price Comparison
KPSS test	Kwiatowski-Phillips-Schmidt-Shin test
LFS	Labor Force Survey
MGE	mean group estimator

NACE	statistical classification of economic activities (EU)
NATREX	natural rate of exchange
NCB	national central bank
NFA	net foreign assets
NMS	new Member States (EU)
OCA	optimum currency area
OECD	Organisation for Economic Co-operation and Development
OeNB	Oesterreichische Nationalbank
OLS	ordinary least squares
PEP	Preaccession Economic Program
PP test	Phillips-Perron test
PPI	producer price index
PPP	purchasing power parity
ROE	return on equity
SAA	Stabilisation and Association Agreement (EU)
SAP	Stabilisation and Association Process (EU)
SEE	Southeastern Europe
SEECs	Southeastern European countries
SGP	Stability and Growth Pact
SMEs	small and medium-sized enterprises
SNA	System of National Accounts
Treaty	Treaty on European Union
UIP	uncovered interest rate parity
ULC	unit labor costs
VAT	value-added tax
WIFO	Österreichisches Institut für Wirtschaftsforschung – Austrian Institute of Economic Research
wiiw	Wiener Institut für internationale Wirtschaftsvergleiche – The Vienna Institute for International Economic Studies

Definitions

Bulgaria is a candidate country within the EU enlargement process. A candidate country is a country that has formally applied to the European Union for membership and has been officially recognized by the European Council as a candidate for membership. As accession negotiations have been provisionally closed but the Accession Treaty has not been signed yet, Bulgaria is still termed an accession country.

Bulgaria applied for EU membership on December 15, 1995, and was formally recognized as a candidate country at the Helsinki European Council meeting on December 10 and 11, 1999. Accession negotiations were opened on February 15, 2000. Negotiations were provisionally closed in December 2004, and the Accession Treaty is expected to be signed in April 2005, provided the European Parliament will have given its assent. Thereafter, the Accession Treaty will have to be ratified by the national parliaments of the 25 EU Member States and those of Bulgaria and Romania.

Romania is a candidate country within the EU enlargement process. A candidate country is a country that has formally applied to the European Union for membership and has been officially recognized by the European Council as a candidate for membership. As accession negotiations have been provisionally closed but the Accession Treaty has not been signed yet, Romania is still termed an accession country.

Romania applied for EU membership on June 22, 1995, and was formally recognized as a candidate country at the Helsinki European Council meeting on December 10 and 11, 1999. Negotiations were provisionally closed in December 2004, and the Accession Treaty is expected to be signed in April 2005, provided the European Parliament will have given its assent. Thereafter, the Accession Treaty will have to be ratified by the national parliaments of the 25 EU Member States and those of Bulgaria and Romania.

Croatia is a candidate country within the EU enlargement process. A candidate country is a country that has formally applied to the European Union for membership and has been officially recognized by the European Council as a candidate for membership.

Croatia applied for EU membership on February 21, 2003, and was formally recognized as a candidate country at the Brussels European Council meeting on June 17 and 18, 2004. The European Council of December 2004 has scheduled the start of accession negotiations for March 17, 2005, provided that Croatia fully cooperates with the ICTY.

Turkey is a candidate country within the EU enlargement process. A candidate country is a country that has formally applied to the European Union for membership and has been officially recognized by the European Council as a candidate for membership.

Turkey applied for EU membership on April 14, 1987, and was formally recognized as a candidate country at the Helsinki European Council meeting on December 10 and 11, 1999. On the basis of a report and recommendation by the European Commission, the European Council of December 2004 decided that Turkey fulfills the Copenhagen political criteria (provided that it brings into force six specified pieces of legislation) and that accession negotiations should be opened on October 3, 2005.

The *Former Yugoslav Republic of Macedonia* is an applicant country within the EU enlargement process. An applicant country is a country that has formally applied to the European Union for membership.

The Former Yugoslav Republic of Macedonia applied for EU membership on March 22, 2004.

List of Studies and Special Reports Published in Focus on European Economic Integration¹

For further details see www.oenb.at

Issue 1/04

Nonlinear Exchange Rate Dynamics in Target Zones:

A Bumpy Road Toward a Honeymoon

Some Evidence from the ERM, ERM II and Selected New EU Member States

Jesús Crespo-Cuaresma, Balázs Égert and Ronald MacDonald

Determinants of Geographical Concentration Patterns in Central and

Eastern European Countries

Antje Hildebrandt and Julia Wörz

Employment and Labor Market Flexibility in the New EU Member States

Thomas Gruber

Distorted Incentives Fading? The Evolution of the Russian Banking Sector
since Perestroika

Stephan Barisitz

Oil Prices and the World Economy

Ray Barrell and Olga Pomerantz

For a comprehensive list of studies and special reports published in Focus on
Transition, please see Focus on European Economic Integration 1/04,
pp. 199–203.

¹ *Focus on Transition* was published up to issue 2/2003 and has been replaced by *Focus on European Economic Integration* since issue 1/04.

Periodical Publications of the Oesterreichische Nationalbank

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quarterly

This publication contains reports and analyses focusing on Austrian financial institutions, cross-border transactions and positions as well as financial flows. The contributions are in German, with executive summaries of the analyses in English. The statistical part covers tables and explanatory notes on a wide range of macroeconomic, financial and monetary indicators. The tables including additional information and data are also available on the OeNB's website in both German and English. This series also includes special issues on selected statistics topics that will be published at irregular intervals.

Monetary Policy & the Economy

quarterly

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

Financial Stability Report

semiannual

The *Financial Stability Report*, issued both in German and English, contains first, a regular analysis of Austrian and international developments with an impact on financial stability and second, studies designed to provide in-depth insights into specific topics related to financial market stability.

Focus on European Economic Integration

semiannual

Focus on European Economic Integration, the successor publication to *Focus on Transition* (published up to issue 2/2003), contains a wide range of material on Central and Eastern European countries (CEECs), beginning with a topical economic analysis of selected CEECs. The main part of the publication comprises studies, on occasion several studies focusing on a special topic. The final section provides information about the OeNB's CEEC-related activities and conferences as well as a statistical annex.

Annual Report

annual

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

Economics Conference (Conference Proceedings)

annual

The *Economics Conference* hosted by the OeNB represents an important international platform for exchanging views on monetary and economic policy as well as financial market issues. It convenes central bank representatives, economic policy decision makers, financial market players, academics and researchers. The conference proceedings comprise all papers, most of them in English.

The Austrian Financial Markets

annual

The publication *The Austrian Financial Markets* provides easy access to continuously updated information on the Austrian capital markets to the international investment community. The brochure is jointly edited by the OeNB and the Oesterreichische Kontrollbank AG (OeKB).

Proceedings of OeNB Workshops

recurrent

The proceedings of *OeNB Workshops* were introduced in 2004 and typically comprise papers presented at OeNB workshops at which national and international experts, including economists, researchers, politicians and journalists, discuss monetary and economic policy issues. Workshop proceedings are available in English only.

Working Papers

recurrent

The *Working Paper* series is designed to disseminate, and provide a platform for discussing, findings of OeNB economists or outside contributors on topics which are of special interest to the OeNB. To ensure the high quality of their content, the contributions are subjected to an international refereeing process. The opinions are strictly those of the authors and in no way commit the OeNB.

Conference on European Economic Integration (Conference Proceedings)

annual

(formerly *East-West Conference*)

This series, published by a renowned international publishing house, reflects presentations made at the OeNB's annual central banking conference on Central, Eastern and Southeastern European issues and the ongoing EU enlargement process.

For further details see ceec.oenb.at

Newsletter of the Economic Analysis and Research Section

quarterly

The English-language *Newsletter of the Economic Analysis and Research Section* is only published on the Internet and informs an international readership about selected findings, research topics and activities of the Economic Analysis and Research Section of the OeNB. This publication addresses colleagues from other central banks or international institutions, economic policy researchers, decision makers and anyone with an interest in macroeconomics. Furthermore, the *Newsletter* offers information on publications, studies or working papers as well as events (conferences, lectures and workshops).

For further details see hvw-newsletter.oenb.at

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