



OESTERREICHISCHE NATIONALBANK

Eurosystem

F O C U S O N
E U R O P E A N E C O N O M I C
I N T E G R A T I O N

2 / 06

Contents

Editorial	5
RECENT ECONOMIC DEVELOPMENTS	
Developments in Selected Countries <i>compiled by Tomáš Slačik</i>	8
STUDIES	
Bank Intermediation in Southeastern Europe: Depth and Structure <i>Peter Backé, Zoltan Walko</i>	48
How Central and Eastern European Countries Choose Exchange Rate Regimes <i>Agnieszka Markiewicz</i>	69
The Dutch Disease in Kazakhstan: An Empirical Investigation <i>Balázs Égert, Carol S. Leonard</i>	85
Serbia: Country Profile and Recent Economic Developments <i>Klaus Michal, Tomáš Slačik</i>	109
The Financial Situation and Financing of Nonfinancial Corporations in the Ten New EU Member States – A First Empirical Orientation <i>Thomas Reininger, Zoltan Walko</i>	134
HIGHLIGHTS	
The CEEC Website	154
The 57 th “East Jour Fixe” of the Oesterreichische Nationalbank Economic and Monetary Challenges in Southeastern Europe <i>Compiled by Tomáš Slačik</i>	155
The 58 th “East Jour Fixe” of the Oesterreichische Nationalbank Slovenia: Economic and Monetary Integration <i>Compiled by Josef Schreiner</i>	163
The 59 th “East Jour Fixe” of the Oesterreichische Nationalbank Monetary Transmission in Central and Eastern European Countries <i>Compiled by Balázs Égert</i>	167
Olga Radzyner Award for Scientific Work on European Economic Integration	171

STATISTICAL ANNEX

<i>Maria Dienst, Angelika Knollmayer and Andreas Nader</i>	
Gross Domestic Product	174
Industrial Production	174
Average Gross Wages	174
Unemployment Rate	175
Industrial Producer Price Index	175
Consumer Price Index	175
Trade Balance	176
Current Account Balance	176
Net Foreign Direct Investment	176
Reserve Assets Excluding Gold	177
Gross External Debt	177
Central Government Balance	177
Gross General Government Debt	178
Broad Money	178
Official Key Interest Rate	178
Three-Month Interbank Rate	179
Exchange Rate	179

NOTES

Legend, Abbreviations and Definitions	182
List of Studies and Special Reports Published in Focus on European Economic Integration	187
Periodical Publications of the Oesterreichische Nationalbank	188
Addresses of the Oesterreichische Nationalbank	191

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

Editorial

Dear reader,

The last few months have been characterized by numerous important political decisions in the European Union. Some of these decisions have deepened the Union, others have enlarged it. In July 2006, the Ecofin Council decided that Slovenia will become the 13th member of Europe's monetary union as from January 1, 2007. For those of you who have been following the ongoing convergence process, this decision will not have come as a big surprise: After all, Slovenia benefits from a relatively high GDP-per-capita level, which has enhanced the nominal adjustment process. Ultimately, though, it was thanks to the strong national efforts made since EU accession in 2004 that Slovenia has succeeded in fulfilling the convergence criteria and is set to introduce the euro in 2007. It is a pleasure for me to take this opportunity to welcome our neighboring country as a new member of the euro area.

The fact that others have failed to meet the convergence criteria within the same period shows that joining the euro area is a challenging task. For those countries that have been working hard to achieve this goal and whose hopes have been deflated, the doors remain open. However, it is in all our interest to keep the euro area a stability-oriented monetary union, using clear, transparent and equal entry conditions for every country. This policy, in conformity with the Treaty, will be advantageous for all of us.

Indeed, it may be recalled that Bulgaria and Romania also saw their EU accession dates postponed initially; therefore, additional reform efforts were found to be necessary. Meanwhile, several reforms are still pending, but a number of measures have been duly undertaken. This led to the decision in September 2006 that both countries will join the EU on January 1, 2007. To my mind, this decision and all the other smaller or bigger steps taken with countries like Albania, Bosnia and Herzegovina, Croatia, Macedonia and Montenegro are important for making the Western Balkans part of the EU in the very long run. The regional shift in the enlargement process is also partially mirrored in the chapter *Developments in Selected Countries* and in several studies that we hope will be of interest to you. The contribution on *Bank Intermediation in Southeastern Europe: Depth and Structure* by Peter Backé and Zoltan Walko examines similarities and differences of the depth and structure of bank intermediation in Southeastern European (SEE) countries. Overall, it turns out that SEE countries have made significant progress in this area. The level of development is far from uniform, though: It ranges from very early stages of bank intermediation to levels comparable with those observed in the new Member States.

A study by Agnieszka Markiewicz, one of last year's Olga Radzyner Award winners, addresses the question of *How Central and Eastern European Countries Choose Exchange Rate Regimes*. The author identifies the main determinants of exchange rate regime choices in Central and Eastern European countries, which seem to be trade openness and concentration, inflation differentials, international reserve stocks and financial conditions.

Energy prices and their possible impacts on the economy are widely debated, even though oil price developments are not alarming at the moment.

The contribution by Balázs Égert and Carol S. Leonard on The Dutch Disease in Kazakhstan: An Empirical Investigation is a highly welcome contribution to the topic, as it sheds some light on energy price effects. The authors investigate whether or not the Dutch disease is at work in, and poses a threat to, the Kazakh economy. Their analysis suggests that the nonoil manufacturing sector has so far been spared the adverse effects of oil price increases. While the real exchange rate of the open sector has appreciated over the last few years, this effect is mainly limited to the oil sector and seems to be statistically insignificant for the nonoil manufacturing sector.

In line with our intensified focus on the Western Balkans, Tomas Slacik and Klaus Michal provide an overview of economic developments in the Republic of Serbia. Starting with a short political and institutional review, the authors present the most important structural reform measures and macroeconomic developments. The paper concludes that after a lost decade, Serbia has embarked on a fairly dynamic transition path and has achieved substantial progress in recent years.

Finally, Thomas Reininger and Zoltan Walko present a first empirical orientation on the Financial Situation and Financing of Nonfinancial Corporations in the Ten New EU Member States, offering a stocktaking of the available data. The authors focus on comparing the situation in the ten new Member States with the status quo in the euro area. They find that the range between the minimum and the maximum is sufficiently wide in the euro area to embrace the corresponding range in the ten new Member States for most indicators of both the structure of liabilities and assets and the financial results.

With this broad range of topics, we hope that you will find something of interest in this issue which either adds to your personal research agenda or simply enhances your understanding. 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

Developments in Selected Countries¹

1 Introduction

In the first half of 2006, economic growth accelerated or remained stable at relatively high levels in the countries of Central and Eastern Europe (CEE) and Southeastern Europe (SEE) (CEE encompasses the ten countries Czech Republic, Hungary, Poland, Slovakia, Slovenia, Bulgaria, Romania, Croatia, Turkey and Russia; SEE encompasses Bulgaria, Croatia, Romania and Turkey).² GDP growth rates ranged between 4.2% (Hungary) and 7.4% (Romania), thus significantly above the rate of expansion in the euro area (2.4%). In general, output growth was more dynamic in the acceding and candidate countries and in Russia than in the five Central European new EU Member States (NMS-5; the Czech Republic, Hungary, Poland, Slovakia and Slovenia), though GDP growth reached outstanding levels also in the Czech Republic and Slovakia.

Growth in the region determined more and more by domestic demand

With the exception of Hungary, where domestic demand contracted during the first half of 2006, GDP growth was increasingly driven by domestic demand across the region. Among the components of GDP growth, gross fixed capital formation grew significantly more strongly than consumption in most countries, supported by FDI inflows, favorable domestic credit conditions and – in some countries – the increased inflow of EU funds. Hungary, where investment growth slumped on account of weaker highway and residential investments, and Romania and Russia, where both consumption and capital formation registered impressive growth rates of around 10% year on year, represented exceptions. The dynamics of consumption remained below the overall GDP growth rate in the NMS-5 as well as in Bulgaria and Croatia. Notwithstanding the shift to domestic demand, the contribution of net exports to GDP growth was positive in the NMS-5, although in some countries, such as the Czech Republic or Slovakia, only marginally so. Export growth was underpinned by the economic recovery in major trading partners and by sustained competitiveness, which is suggested by roughly stable or even rising market shares in world imports despite adverse terms-of-trade effects. In Hungary, Poland and Slovakia, the export expansion was also underpinned by a deceleration of unit labor cost growth in manufacturing in euro terms compared to the euro area during the first half of 2006. Although the recovery of domestic demand fueled imports, the growth rate of imports lagged behind export growth in the NMS-5. By contrast, the contribution of net exports was deeply negative in Southeastern European countries, in particular in Bulgaria, and in Russia. The export growth rate halved in Turkey and remained stable at a relatively low level in Russia. This development was accompanied by a decline in Turkey's share in world imports, while Russia's share benefited from the increase in the prices of its major export commodities (particularly oil). In the five non-EU countries covered in this report, import growth, powered by vigorous domestic demand, outpaced the growth rate of exports.

¹ Compiled by Tomáš Slačik and Zoltan Walko with input from Stephan Barisitz, Balázs Égert, Johann Elsinger, Ingrid Haar-Stöhr, Silvia Kirova, Thomas Reininger, Josef Schreiner, Tomáš Slačik and Zoltan Walko. Draft version reviewed by Peter Backé and Stephan Barisitz. Final version approved by Doris Ritzberger-Grünwald. The analysis is based on information and data from various sources.

² A more detailed breakdown is: Central Europe – the Czech Republic, Hungary, Poland, Slovakia, Slovenia; Southeastern European acceding countries – Bulgaria, Romania; Southeastern European candidate countries – Croatia, Turkey; and the Eastern European country Russia.

Table 1

Gross Domestic Product (Real)

Annual change in %

	2002	2003	2004	2005	Q3 2005	Q4 2005	Q1 2006	Q2 2006
Czech Republic	1.9	3.6	4.2	6.1	5.9	6.9	7.1	6.2
Hungary	3.8	3.4	5.2	4.1	4.5	4.3	4.6	3.8
Poland	1.4	3.9	5.3	3.4	3.9	4.3	5.2	5.5
Slovakia	4.1	4.2	5.4	6.1	6.3	7.4	6.3	6.7
Slovenia	3.5	2.7	4.2	3.9	3.6	3.7	5.1	4.9
Bulgaria	4.9	4.5	5.7	5.5	4.6	5.5	5.6	6.6
Romania	5.2	5.2	8.4	4.1	2.4	4.3	6.9	7.8
Croatia	5.6	5.3	3.8	4.3	5.2	4.8	6.0	3.6
Turkey	7.9	5.8	8.9	7.4	7.7	9.5	6.5	7.5
Russia	4.8	7.4	7.2	6.4	6.6	7.9	5.4	7.5

Source: Eurostat, national statistical offices, wiiv.

Strong economic activity went hand in hand with a tightening of labor market conditions in several but not in all reviewed countries. In particular, double-digit unemployment rates in Poland and Slovakia have declined substantially, but the unemployment rate diminished from already lower levels also in other countries. Bulgaria's joblessness dropped to single-digit values. The only exceptions were the Czech Republic, Hungary, Turkey and Russia, where the unemployment rate stood at around 7% to 9% in mid-2006, unchanged from a year earlier. Although the improvement in the unemployment rate is partially cyclical, there is also evidence of structural improvements. For example, lower unemployment rates were accompanied by an increase in employment and activity rates in the majority of countries, and the share of long-term unemployment in total unemployment decreased in some CEE/SEE countries. However, employment and participation rates in most countries remain below the level of the euro area, calling for further policy action to better exploit existing labor reserves and lift output.

Regardless of improving labor market conditions in a number of countries, real wage growth stayed rather modest during the first half of 2006 in most analyzed countries. Real wages advanced strongly only in Russia (+15%) and somewhat less in Romania, the Czech Republic and Hungary. However, anecdotal evidence suggests the development of bottlenecks in certain areas of the labor market in some of the NMS-5, which may become the source of stronger wage pressure in the future. According to a recent World Bank report, such bottlenecks have emerged primarily in high-skill segments in sectors like construction, medical care, transport services and information technology. Moreover, it may well be that nominal wages are adapting to increased inflation with a time lag, as suggested by the acceleration of nominal wage growth during the second quarter of 2006 in several countries.

Inflation quickened across most of the region during the first nine months of 2006, with price pressures rising most in Turkey and Hungary. Bulgaria, Romania, Russia and Croatia were exceptions to this general trend. In Croatia, inflation was range-bound between about 3% and 4%, while it gradually eased in Romania and Russia. Inflation levels in September 2006 were generally higher in the acceding and candidate countries and in Russia than in the

The labor market remains a challenge despite some encouraging signs...

... and rather modest real wage growth in most countries

Food and energy prices dominate price developments in the region

NMS-5. In the latter and in Turkey, particularly higher prices for unprocessed food contributed a great deal to the increase in headline inflation during the first nine months of 2006. For more than half the year, rising energy prices pushed up headline inflation but eased somewhat in late summer. In addition, higher prices for these commodities are also likely to have translated into some upward pressure on core inflation (inflation excluding energy and unprocessed food prices). The upward pressure was triggered by higher prices for processed food and by increased transport costs. By contrast, in Romania the energy and unprocessed food component chiefly contributed to disinflation. Adjustments of regulated prices and indirect tax increases added to inflation in Slovakia, Bulgaria, Croatia and, in the wake of fiscal tightening, in Hungary. Inflationary pressure stemming from tax increases on alcohol and tobacco in Romania was offset by falling food prices. It should be noted that energy prices have a considerably bigger weight in the consumer price basket in all analyzed countries than in the euro area (12% to 19% versus 9%). The weight of unprocessed food prices also tends to be slightly higher in the NMS-5 than in the euro area, while it is considerably higher in Bulgaria, Romania, Croatia and Turkey. As a result, above-average price movements in these product groups tend to have a larger impact on overall inflation in CEE and SEE countries. Apart from these factors, a weakening of the Hungarian and, in particular, the Turkish currency during May and June 2006 appears to have contributed to higher price pressures in these two countries. To a smaller extent this may also have played a role in Poland, and possibly Slovakia and Romania.

Table 2

Harmonised Consumer Price Index (HICP)

Annual change in %

	2003	2004	2005	Q3 2005	Q4 2005	Q1 2006	Q2 2006	Q3 2006
Czech Republic	-0.1	2.6	1.6	1.6	2.2	2.4	2.5	2.4
Hungary	4.7	6.8	3.5	3.5	3.2	2.4	2.7	4.6
Poland	0.7	3.6	2.2	1.8	1.2	0.9	1.4	1.5
Slovakia	8.4	7.5	2.8	2.2	3.7	4.2	4.6	4.8
Slovenia	5.7	3.7	2.5	2.3	2.6	2.3	3.1	2.5
Bulgaria	2.3	6.1	5.0	4.8	6.6	8.0	8.3	6.7
Romania	15.3	11.9	9.1	9.0	8.5	8.7	7.2	5.9
Croatia ¹	1.8	2.1	3.4	3.5	4.0	3.5	3.8	..
Turkey	25.6	10.1	8.1	7.8	7.3	7.6	9.2	10.6
Russia ¹	13.6	11.0	12.5	12.5	11.2	10.8	9.6	..

Source: Eurostat, national statistical offices, wiiv.

¹ CPI.

Massive credit growth is characteristic of most countries of the region

Strong economic growth was supported by continued favorable domestic financing conditions and robust credit growth in most analyzed countries. The growth rate of domestic credit to households and nonbank corporations (HICP/CPI deflated) accelerated in all CEE and SEE countries during the first half of 2006 except in Bulgaria. Credit growth was particularly marked in Romania, Turkey and Russia (at around 30% to 40% year on year in the second quarter of 2006), but it was considerable also in most of the NMS-5 and

Croatia (18% to 24%). Credit expansion in Poland continued to lag behind that in the other countries, but still accelerated rapidly to reach 11% year on year by the second quarter of 2006. The rate of expansion was lower in Bulgaria (8%), where the central bank's measures over the past three years to slow credit growth showed up in a deceleration of domestic banks' lending activity. Strengthening credit expansion was also evident when measured in terms of annual economic output.³ Intensive credit activity, which has now lasted for several years in many CEE and SEE countries, has been widely debated among monetary authorities and international financial organizations concerned about implications for macroeconomic and financial stability. Strong credit expansion has been linked to widening current account deficits, rising inflation, an increase in the banking sector's reliance on foreign capital inflows and a potential deterioration of banks' portfolio quality in the future. Over the past few years, monetary authorities in Bulgaria, Romania and Croatia have repeatedly addressed this issue by taking appropriate monetary and prudential measures. However, available data suggest that so far, these measures have brought the desired effect only in Bulgaria while they might still prove successful in Croatia and Romania.⁴ Russia has witnessed a continued powerful expansion of nonbanks' and banks' foreign liabilities. Foreign currency lending remains a distinctive feature of credit activity in several analyzed countries and represents an additional credit risk to banks in the form of indirect currency risk. Among the countries covered in this report, the share of foreign currencies in total lending to households and corporations is highest in Croatia, Slovenia, Hungary, Bulgaria and Romania. The increasing role of foreign currencies is less of a concern in Slovenia, where euro adoption at the beginning of 2007 will eliminate most of the currency risk. Similarly, a tight peg (currency board) like in Bulgaria mitigates such risks as long as such a monetary regime remains fully credible. By contrast, their heavy reliance on foreign capital inflows to finance large external deficits makes Hungarian and – to a somewhat lesser extent – Romanian banks vulnerable to a possible deterioration in their clients' debt servicing capability in reaction to a weakening of domestic currencies or a further increase in interest rates in the euro area. The monetary authorities of Hungary, Poland, Croatia and Romania have specifically addressed the issue of foreign currency lending, although also in these cases monetary policy instruments are subject to limitations.⁵

Strengthening domestic demand and accelerating bank lending had a visible impact on the external accounts of CEE and SEE countries. During the first half of 2006, the deficit of the goods and services balance increased from already elevated levels in all four SEE countries and in Slovakia, while Poland maintained a negligible deficit and the surplus in the Czech Republic decreased. In Hungary and Slovenia, which posted comparably weaker domestic demand growth, the goods and services balance improved modestly and registered a small surplus. In Russia, favorable terms-of-trade effects outweighed the

**Balance of payments
reflects changes in
domestic demand and
bank lending**

³ Expressed as the absolute change in the outstanding value of credit compared to the same period of the previous year in percent of the cumulative value of GDP over the corresponding four quarters.

⁴ For a more detailed discussion on this issue as well as on the effects of the implemented measures, see *Financial Stability Report 12 of the OeNB*.

⁵ For details see *Financial Stability Report 12 of the OeNB*.

impact of strong domestic demand, leading also to an improvement in the already sizeable goods and services surplus. All ten countries showed a deficit of their combined income, transfer and capital account balances (with the exception of Bulgaria), which was especially large in the Czech Republic and Hungary. As a result, all countries (with the exception of Russia) recorded a deficit on their combined current and capital accounts. Except in Hungary and Turkey, the deterioration in the external balance was accompanied by an increase in the investment rate, but the savings rate deteriorated in all countries but Croatia. On a positive note, however, the expansion of net FDI inflows accelerated in these countries (except in the Czech Republic, which registered exceptionally high FDI in the first half of 2005), and covered a substantial portion of the deficit, except in Croatia and Turkey. The external financing requirement after adjusting for net FDI was substantial in the latter two countries, but it was also relatively large in Bulgaria, Romania and Hungary (at 2% to 4% of GDP).

Risks associated with heavy reliance on non-FDI capital inflows, exacerbated by insufficient economic policy credibility, became evident especially in Hungary and Turkey during the retrenchment of international risk appetite during March and May to June 2006. Heavy capital outflows from the domestic equity and bond markets caused the exchange rate in both countries to depreciate sharply, especially in Turkey. The currencies of Poland and Slovakia, which relied less on non-FDI capital inflows, but which were hit by political uncertainties, experienced comparably smaller losses. Particularly the Hungarian forint and, much more so, the Turkish lira continue to trade at significantly weaker levels than in early March 2006.⁶

The monetary authorities have reacted to developments by tightening policy

In response to robust economic growth, strong credit dynamics, rising inflation, widening external imbalances, and in Hungary, Slovakia and Turkey also to the increase in country risk premia that financial markets required, several central banks in the region lifted policy rates during the first half of 2006. The policy tightening was most substantial in Turkey (+425 basis points since the start of the rate hiking cycle), Hungary (+200 basis points) and Slovakia (+175 basis points), followed by Romania (+125 basis points) and the Czech Republic (+50 basis points). By comparison, the ECB has raised its key interest rate in four steps by 100 basis points since December 2005. The interest rate differential to the euro area is thus highest in Turkey (1,425 basis points) while it remains negative in the Czech Republic (75 basis points below that of the euro area).

Public finances capitalize on favorable cyclical conditions but could reap higher benefits

The conduct of monetary policy is complicated by fiscal policy in most CEE and some SEE countries. All new Central European EU Member States but Slovenia are subject to the EU Excessive Deficit Procedure (EDP). The reported fiscal overperformance in 2005 – the Czech Republic, Poland and Slovakia recorded a deficit below 3% of GDP in their April 2006 fiscal notifications – held out hope of a quicker return to sustainable public finances. However, such hopes were partly dashed when fiscal outcomes in 2005 were revised in Slovakia (–3.1% of GDP) and the Czech Republic (–3.6% of GDP) in their October 2006 fiscal notifications. In the Czech Republic and above all

⁶ See *Financial Stability Report 12 of the OeNB*.

in Hungary, the deficit not only exceeded the envisaged Maastricht benchmark but also climbed markedly compared to the deficit in 2004. Based on the European Commission's 2006 autumn forecast, the deficit is expected to improve in 2006 in Poland (2.2% of GDP and 4.2% of GDP, respectively, if pension reform costs are included), remain approximately stable in the Czech Republic and deteriorate slightly in Slovakia (3.4% of GDP) and Slovenia (1.6% of GDP). In Hungary, the budget deficit should peak at -10.1% of GDP this year, since the measures the government has finally taken should start to kick in in 2007.

In Romania the government has had to increase its deficit target for 2006 to -2.5% of GDP mainly due to additional expenditures on infrastructure, whereas Bulgaria seems to be firmly on its way to a 3% surplus in 2006, as agreed with the IMF. Also, Croatia has further consolidated its deficit target for 2006 (3.0%, down by 0.2 percentage points) by cutting investment. Moreover, Turkey has signaled an impressive fiscal consolidation effort by aiming at a 6.5% surplus. In Russia the budget surplus remains high (8.8% of GDP in January to August 2006), although the non-oil deficit has risen since 2004 according to IMF calculations.

In summary, despite some progress it seems that a more proactive policy stance that takes advantage of the current favorable cyclical conditions to reduce budget deficits more ambitiously and to move along with necessary structural adjustments would be appropriate, given that the long-term sustainability of public finances has been deemed to be at risk by the European Commission in several countries covered in this report. In the same vein, according to a recent analysis prepared by the World Bank,⁷ privatization and liberalization in strategic sectors saw little progress. Likewise, important public finance and administration reforms have stalled in the NMS-5 over the past two years, except in Hungary, where the administration has recently launched a new consolidation effort. By contrast, reforms have been stepped up over the past year in the two acceding countries Bulgaria and Romania to secure accession to the EU on January 1, 2007, albeit under significant outside pressure. Structural reforms have been further advanced in Croatia and Turkey as well, in tandem with EU membership negotiations.

Negotiations for EU accession with Croatia and Turkey started after the European Council gave its green light in October 2005. Thus far, 13 (Croatia) and 4 (Turkey) of 35 chapters have been screened. However, in both countries only the chapter on science and research has been opened up to this point, and has also been successfully completed in both cases.

After the European Commission concluded in the Monitoring Report at end-September that Bulgaria and Romania would be ready to join the EU on January 1, 2007, the decision was approved also by the Council of the European Union on October 17, 2006. The outstanding obstacles are thus on-time ratifications by remaining Member States and the European Parliament's endorsement. While the European authorities commended both countries for reforms undertaken and the progress achieved, the Accession Treaty provides for special safeguard measures. These may be called upon if the remaining

Croatia's and Turkey's negotiations for EU accession are under way

Bulgaria and Romania to join the EU in 2007

⁷ World Bank EU-8 Quarterly Economic Report, September 2006.

While Slovenia is preparing for euro adoption, political jitters overshadow reform prospects and the introduction of the single currency in some CEE countries

issues (particularly in the economic realm, internal market issues, the fight against corruption and organized crime) are not adequately tackled.

Whereas Slovenia will adopt the euro as a frontrunner among the new Member States (NMS) on January 1, 2007, the political setting has meanwhile become less conducive to euro adoption, fiscal consolidation and structural reforms in a number of Central European NMS. In the wake of political upheavals, envisaged dates for the introduction of the single currency have been questioned or shifted back in some NMS. Domestic politics has been stalled in the Czech Republic following the continuing deadlock in parliament as a result of elections in June 2006. Four months of political bargaining failed to produce a viable government, and the odds of early elections have risen. While the political stalemate has not yet had an immediate adverse impact on financial markets or economic developments in the Czech Republic, it is not surprising that the previous euro adoption target date of 2010 has been called into question. In Slovakia, the new government of leftist and far-right populist parties has announced modifications of some of the reforms introduced during 2004 to 2005 by its predecessor. At the same time, the government has promised that its measures would not derail the country from the envisaged fiscal consolidation path and has also stuck to the euro adoption target date of 2009. In Hungary, the announced fiscal tightening measures along with upsetting details from an internal party speech by the prime minister have provoked repeated mass demonstrations since mid-September. In the heated political climate and amid waning popular support for the government (manifested also in the poor showing of the coalition parties in local elections early October), it remains to be seen whether the envisaged fiscal consolidation measures and structural reforms will be implemented with the necessary rigor. Against the backdrop of recent fiscal outcomes, the government has dropped its previous euro adoption target date of 2010. The political situation has been unstable in Poland as well, where the ruling three-party coalition broke up during budget talks in late September but was reinstalled in early October. The government has set no official euro adoption target date so far, after the previous target date had been dropped some time ago.

Slovenia has not only consistently received the best rating among the countries covered in this report, but was also upgraded by Moody's as well Standard&Poor's within the review period. Moody's also upgraded Slovakia and Romania, Standard&Poor's upgraded Bulgaria and Russia. The latter rating agency, on the other hand, decided to downgrade Hungary in June (see table 3).

Table 3

Ratings of Sovereign Long-Term Foreign Currency-Denominated Debt

Currency	Moody's Current rating ¹	Last change (former rating)	Standard&Poor's Current rating ²	Last change (former rating)
Czech koruna	A1	Nov. 2002 (Baa1)	A-	Nov. 1998 (A)
Hungarian forint	A1	Nov. 2002 (A3)	BBB+	June 2006 (A-)
Polish zloty	A2	Nov. 2002 (Baa1)	BBB+	May 2000 (BBB)
Slovak koruna	A1	Oct. 2006 (A2)	A	Dec. 2005 (A-)
Slovenian tolar	Aa2	July 2006 (Aa3)	AA	May 2006 (AA-)
Bulgarian lev	Baa3	Mar. 2006 (Ba1)	BBB+	Oct. 2006 (BBB)
Romanian leu	Baa3	Oct. 2006 (Ba1)	BBB-	Sep. 2005 (BB+)
Croatian kuna	Baa3	Jan. 1997	BBB	Dec. 2004 (BBB-)
Turkish lira	Ba3	Dec. 2005 (B1)	BB-	Aug. 2004 (B+)
Russian ruble	Baa2	Oct. 2005 (Baa3)	BBB+	Sep. 2006 (BBB)

Source: Bloomberg.

¹ Aaa (best), Aa, A, Baa, Ba, B, Caa, Ca, and C (worst); each of the categories is further divided into 1, 2, and 3.

² AAA (best), AA, A, BBB, BB, B, CCC, CC, C and D (worst); each of the categories is further divided into + and -.

2 Czech Republic: Strong Growth Continues but Political Stalemate Delays Reforms Further

After a strong performance in 2005, the growth pace of the Czech economy accelerated further to 6.6% in the first half of 2006 despite a slight slowdown of the dynamics in the second quarter. Compared to 2005, however, the composition of growth changed: the contribution of net exports weakened substantially and growth predominantly stemmed from domestic demand.

The contribution of domestic demand components was fairly balanced. On the one hand, private consumption picked up and reached the highest rate of growth since end-2003. This was the consequence of moderately rising employment and, more importantly, improving real disposable incomes in the wake of income tax cuts in January 2006, constantly growing real wages, increases of average pensions and minimum wages. Also, households benefited from the continued availability of credit at relatively low interest rates. On the other hand, public consumption contracted because of base effects (purchase of fighter planes in 2005). Investment, particularly swelling inventories, reemerged as a big contributor to economic growth. The bulk of fixed capital formation stemmed from the reviving construction industry and investments flowing into machinery and equipment. By the same token, the substantial increase of stocks reflected the great number of unfinished construction projects as well as the buildup of stocks in retail trade in anticipation of strengthening demand. Powerful domestic demand and high energy prices caused import growth to accelerate, almost entirely eliminating the previously large contribution of net exports to growth in the first half of 2006.

On the supply side, the automobile industry has kept on playing a crucial role whose dominance is likely to deepen further after completion of an investment project being carried out by the Korean car producer Hyundai.

As in the previous two years, labor productivity growth in industry continued to outpace wage increases in this sector (by about 2 percentage points in the first half of 2006). However, despite marginally falling unit labor

Domestic demand becomes main driver of continuing robust growth

Still no tangible improvement on the labor market

costs, robust GDP growth failed to appreciably improve the mixed situation on the labor market. The unemployment rate stayed at around 8%. Particularly the percentage of long-term unemployed (more than half) remained persistently high.

**Balance of payments
deteriorates slightly**

The surplus of foreign trade with goods and services recorded in 2005 for the first time in a decade rose further in the first six months of 2006. Trade with vehicles and machines contributed most to this result.⁸ On the other hand, sizeable energy and commodity price hikes augmented the import bill. The deficit on the income account, largely determined by repatriated profits of foreign-owned companies, almost returned to the record level of 2004 after it had dropped somewhat in 2005. Thus, this deficit was the major driving factor behind the 1 percentage point deterioration of the current account deficit to 3.1% of GDP after an extensive recovery in 2005. Approximately the same amount flowed out of the economy in the form of portfolio investments. The capital account balance remained only faintly positive, and the foreign reserves of Česká národní banka (ČNB) did not record any perceivable change. Therefore, the Czech Republic's external financing requirement in the first half of 2006 was almost fully covered by net FDI inflows,⁹ other investments as well as by net errors and omissions. Total gross foreign debt dropped slightly to 37% of GDP in the first half of 2006 compared to end 2005 (almost 39%). By contrast, the net external position worsened over the same period, as net foreign assets shrank from over 15% of GDP by more than 2 percentage points.

**Inflation well under
control supported also
by appreciating koruna**

Whereas in 2005 the Czech economy did not show any signs of extensive inflationary pressure, the inflation rate did pick up in the first three quarters of 2006, particularly due to high and rising energy prices and corresponding administered price adjustments. HICP inflation thus crept up from 1.9% year on year in December 2005 to 2.4% in January 2006 and has hovered around that level ever since (2.4% in September 2006). CPI inflation has been a bit higher, but still remains below the middle of the ČNB's target range of 3% \pm 1 percentage point, which took effect in January 2006.¹⁰ Above all, decreasing prices of clothing, footwear and food along with a nominal-effective appreciation of the koruna helped curb inflation. Even though the nominal appreciation trend of the Czech currency has almost come to a halt due to the political stalemate since the parliamentary elections at the beginning of June, the koruna has still gained about 3% against the euro since January and is currently trading at around 28.3 CZK/EUR. Nevertheless, to counteract potential inflationary pressure stemming from the booming economy and the second-round effects of high energy prices, the ČNB raised its key interest rate in two steps by 50 basis points from 2.0% in October. Thus, the negative spread to the ECB's key interest rate has in the meantime increased to 75 basis points, which might be another reason for the slowdown of the koruna

⁸ Chiefly due to production increases of Škoda Auto and full capacity use of the joint car production plant TPCA in Kolín.

⁹ FDI inflows were almost completely made up of reinvested earnings and equity whereas intercompany lending played only a minor role.

¹⁰ The ČNB uses the CPI rather than the HICP as a basis for its inflation target.

Table 4

Main Economic Indicators: Czech Republic

	2002	2003	2004	2005	Q3 2005	Q4 2005	Q1 2006	Q2 2006
Year-on-year change of the period total in %								
GDP in constant prices	1.9	3.6	4.2	6.1	5.9	6.9	7.1	6.2
Private consumption	2.2	6.0	2.6	2.3	2.6	2.4	3.7	3.8
Public consumption	6.7	7.1	-3.2	0.7	4.5	-1.0	0.8	-3.4
Gross fixed capital formation	5.1	0.4	4.7	3.6	3.8	4.4	6.8	5.3
Exports of goods and services	2.1	7.2	21.1	10.6	10.9	10.1	17.6	10.2
Imports of goods and services	5.0	8.0	18.2	4.9	6.3	4.8	15.5	10.2
Contribution to GDP growth in percentage points								
Domestic demand	4.2	4.8	3.6	1.8	2.6	2.7	5.6	6.5
Net exports	-2.8	-1.6	-0.1	4.7	3.5	4.5	1.1	-0.8
Year-on-year change of the period average in %								
Labor productivity of industry (real)	3.9	7.7	9.4	6.8	7.8	8.2	12.4	7.0
Gross average wage of industry (nominal)	6.7	5.9	7.1	4.6	5.0	4.3	6.2	8.4
Unit labor cost of industry (nominal)	2.7	-1.7	-2.1	-2.1	-2.6	-3.6	-5.5	1.2
Producer price index (PPI) of industry	-0.5	-0.4	5.7	3.0	1.4	0.0	0.3	1.3
Consumer price index (here: HICP)	1.4	-0.1	2.6	1.6	1.6	2.2	2.4	2.5
EUR per 1 CZK, + = CZK appreciation	10.6	-3.2	-0.2	7.1	6.4	6.2	4.9	6.2
Period average levels								
Unemployment rate (ILO definition, %, 15-64 years)	7.4	7.9	8.4	8.0	7.8	7.8	8.0	7.1
Employment rate (15-64 years)	65.4	64.7	64.1	64.8	65.2	65.2	64.8	65.3
Key interest rate per annum (%)	3.6	2.3	2.2	2.0	1.8	2.0	2.0	2.0
CZK per 1 EUR	30.8	31.8	31.9	29.8	29.7	29.3	28.6	28.4
Nominal year-on-year change of the period average stock in %								
Broad money (including foreign currency deposits)	-7.6	5.2	10.3	6.4	6.2	8.1	12.5	12.2
Contributions to the year-on-year change of broad money in percentage points								
Net foreign assets of the banking system	8.5	1.2	2.9	5.2	7.9	9.5	11.4	3.1
Domestic credit of the banking system	-1.1	7.7	7.1	0.7	-1.0	0.9	3.0	6.5
of which:								
claims on the private sector	-9.6	0.9	6.0	8.6	9.3	10.0	11.5	11.8
claims on households	1.9	3.3	4.4	5.4	5.6	6.0	6.5	6.5
claims on enterprises	-11.4	-2.5	1.5	3.2	3.8	4.1	5.0	5.3
claims on the public sector (net)	8.4	6.8	1.2	-7.9	-10.4	-9.1	-8.5	-5.3
Other domestic assets (net) of the banking system	-15.0	-3.7	0.3	0.5	-0.6	-2.4	-1.9	2.6
% of GDP, ESA 95								
General government revenues	39.5	40.7	41.5	40.5				
General government expenditures	46.3	47.3	44.4	44.1				
General government balance	-6.8	-6.6	-2.9	-3.6				
Primary balance	-5.5	-5.5	-1.7	-2.5				
Gross public debt	28.5	30.1	30.7	30.4				
EUR million, period total								
Merchandise exports	40,713	43,053	54,071	63,003	15,489.8	17,082.4	17,923.5	18,499.2
Merchandise imports	43,034	45,235	54,910	61,662	15,515.8	17,068.8	16,964.0	18,156.0
% of GDP, period total								
Trade balance	-2.9	-2.7	-1.0	1.3	-0.1	0.1	3.7	1.2
Services balance	0.9	0.5	0.4	0.6	0.9	0.3	0.1	0.4
Income balance (factor services balance)	-4.7	-4.6	-5.7	-4.8	-4.9	-3.7	-3.4	-7.4
Current transfers	1.2	0.6	0.2	0.7	0.1	0.7	0.0	-0.4
Current account balance	-5.5	-6.2	-6.0	-2.1	-4.1	-2.7	0.3	-6.1
Capital account balance	0.0	0.0	-0.5	0.2	0.0	0.3	0.4	-0.2
Foreign direct investment (net)	11.1	2.1	3.6	8.1	5.7	4.3	3.2	2.2
EUR million, end of period								
Gross external debt	25,738	27,624	33,212	38,818	37,672	38,818	38,092	39,488
Gross official reserves (excluding gold)	22,483	21,189	20,746	24,864	24,664	24,864	24,362	23,721
Months of imports of goods and services								
Gross official reserves (excluding gold)	5.4	4.9	4.0	4.3	4.2	3.9	3.9	3.5
Memorandum item								
EUR million, period total								
Gross domestic product in current prices	80,054	80,936	87,285	100,033	25,335	26,514	26,099	28,743

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

appreciation in recent months. For end-2007 the ČNB expects annual inflation to range between 3.3% and 4.7%.

The highly competitive and robustly growing banking market in the Czech Republic experienced a shift in the property structure, as Raiffeisen International acquired eBanka from the biggest Czech insurance company, Česká pojišť'ovna, in October. The merger of both banks should be completed by 2008.

**Worsening fiscal balance
and challenging
prospects ahead**

After a recent data revision, the general government deficit did not amount to an encouraging 2.6% of GDP in 2005 as originally published. In fact, according to the revised data, the deficit was a whole percentage point higher. Hence, not only did the deficit exceed the Maastricht threshold but, despite the robust growth, it also deteriorated substantially compared to 2.9% in 2004. Despite solid GDP growth and domestic demand, the general government deficit is not expected to improve markedly in 2006. According to the European Commission's autumn forecast, it should amount to about 3.5% of GDP chiefly due to tax cuts and increased social spending.¹¹ The latter includes additional expenditures on pensions and health care, areas that have still not been sufficiently reformed. In the light of these updated fiscal projections and owing to the untackled overhaul of the pension and health care systems and to additional cofinancing needs of EU-funded projects after EU entry, the Czech budget deficit seems to be rather persistent. Against this backdrop, the country's previously announced euro adoption target year of 2010 has been officially postponed to an unspecified later date. A clearer picture of fiscal consolidation and the timelines of monetary integration will presumably only evolve once the current political impasse has been overcome.

3 Hungary: Finally Facing Reality

**Economic growth
beginning to slow**

GDP growth during the first half of 2006 was at around the same level as in 2005, but the dynamics slowed markedly from the first to the second quarter. During the first half of 2006, economic growth stemmed primarily from net exports. Export growth was supported by improved economic activity in Hungary's major trading partners, while import growth was restrained by the contraction of domestic demand. This was caused by large destocking and a significant deceleration of investment activity, in particular in the areas of housing and highway construction. Although the growth rate of domestic consumption more than doubled during the first half of 2006 compared to full-year 2005, it still remained significantly below overall GDP growth. With real wage dynamics having decelerated and employment remaining stable, this acceleration was primarily driven by the acceleration of real credit growth to households.

**Inflation pressures
building up**

Hungary's inflation performance during the first nine months of 2006 was rather disappointing. The cut in the highest VAT rate, which became effective on January 1, 2006, dampened headline HICP inflation less than the originally expected 1.4 percentage points, as the inflation rate decreased by only 1 percentage point between December 2005 (3.3%) and February 2006

¹¹ In early 2006, the last of a scheduled series of corporate income tax-rate cuts reduced the rate from 26% to 24%. (See World Bank EU-8 Quarterly Economic Report, September 2006).

(2.3%). Since then, inflation has edged up gradually to reach 4.7% by August 2006. This increase stemmed partly from energy and to a lesser extent from unprocessed food prices. However, inflation excluding these two items also accelerated considerably (from 1.0% to 2.4%). Core inflation developments can be attributed primarily to the diminishing role of retail competition, the depreciation of the forint, the increase in processed food prices and the secondary effect of higher energy prices (e.g. in the form of higher transport costs), and the growth of unit labor costs also seems to have picked up in the second quarter. In September 2006, inflation was pushed up further to 5.9% by the hike in the middle VAT rate from 15% to 20% and by an increase in excise taxes. Magyar Nemzeti Bank (MNB) expects inflation to ease to around 5% by the end of 2007 (after peaking at around 8% in the first half of 2007) and to fall slightly below 4% by end-2008.

In response to the deterioration in the twin deficit situation since 2002 and to repeated calls from the EU Council, the Hungarian government has embarked on a significant reduction of the general government budget deficit over the next three years. According to the updated convergence program of September 2006, the 2006 budget deficit will reach 10.1% of GDP,¹² following a modest upward revision of the 2005 deficit to 7.8%. The deficit is expected to be cut to 6.8% in 2007, to 4.3% in 2008 and to 3.2% of GDP in 2009 by reducing the expenditure ratio by 5.6 percentage points of GDP and increasing the revenue ratio by 1.3 percentage points. However, compared to the previous convergence program update released in December 2005,¹³ the government is now planning a less ambitious reduction in the expenditure ratio. Among the revenue-increasing measures, the increase in the middle VAT rate, an increase in social security contributions and a rise in the corporate and personal income tax burden stand out. Among the expenditure-reducing measures, employment cuts and a wage freeze in the public sector as well as a freeze of the nominal level of expenditures in all but a few areas in 2007 and 2008 (combined with the freeze of unspent funds and reserves) are most notable. To make the fiscal correction a lasting one, the government has also put forward a timetable for urgent structural reforms in the areas of public administration, health care, pension and education systems and price subsidy schemes. While welcoming the new program, the European Commission highlighted substantial risks to implementation. Therefore, it called on the authorities to rigorously execute the envisaged structural reforms, strictly enforce expenditure controls and strengthen the institutional framework of the budgetary process. Rigorous implementation is likely to be a challenge in view of widespread social resistance against tightening measures, as highlighted by the political unrest since mid-September 2006. So far the government has stuck with its reform plans despite the political developments, and the turmoil has not had a lasting negative impact on the forint and the local-currency bond spreads, either. However, it remains to be seen whether this resistance of the economy will continue,

Frontloaded fiscal adjustment: government embarks on significant budget deficit reduction

¹² Including the costs of the pension reform and of investment expenditure, which had previously been booked outside the budget.

¹³ The convergence program update of December 2005 included a planning horizon until 2008 only. Therefore, this comparison takes into account only target values until 2008.

Table 5

Main Economic Indicators: Hungary								
	2002	2003	2004	2005	Q3 2005	Q4 2005	Q1 2006	Q2 2006
Year-on-year change of the period total in %								
GDP in constant prices	3.8	3.4	5.2	4.1	4.5	4.3	4.6	3.8
Private consumption	10.8	8.3	3.8	1.5	2.0	1.7	2.7	2.5
Public consumption	5.8	6.2	1.6	-0.2	-0.6	-0.5	2.2	1.9
Gross fixed capital formation	10.2	2.9	8.0	6.6	8.7	3.1	9.7	-3.6
Exports of goods and services	3.9	6.1	15.8	10.8	11.2	12.6	18.2	15.1
Imports of goods and services	6.6	9.3	13.5	6.5	8.9	8.2	14.2	8.4
Contribution to GDP growth in percentage points								
Domestic demand	6.0	6.2	4.3	0.8	2.9	0.9	1.4	-2.1
Net exports	-2.3	-2.9	1.3	3.7	1.9	3.9	3.8	6.7
Year-on-year change of the period average in %								
Labor productivity of industry (real)	4.9	8.4	9.7	10.1	12.3	10.7	16.3	9.0
Gross average wage of industry (nominal)	12.6	9.3	10.0	7.2	6.7	7.0	8.3	7.7
Unit labor cost of industry (nominal)	7.3	0.8	0.3	-2.6	-5.0	-3.3	-6.9	-1.2
Producer price index (PPI) of industry	-1.1	2.5	3.6	2.9	2.6	4.0	4.9	6.5
Consumer price index (here: HICP)	5.2	4.7	6.8	3.5	3.5	3.2	2.4	2.7
EUR per 1 HUF, + = HUF appreciation	5.6	-4.2	0.7	1.5	1.3	-2.3	-3.8	-6.4
Period average levels								
Unemployment rate (ILO definition, %, 15–64 years)	5.9	5.9	6.1	7.2	7.3	7.3	7.7	7.2
Employment rate (15–64 years)	56.2	57.0	56.8	56.9	57.3	57.1	56.7	57.3
Key interest rate per annum (%)	9.1	8.6	11.4	7.1	6.5	6.0	6.0	6.0
HUF per 1 EUR	242.9	253.5	251.7	248.0	245.6	251.8	254.6	266.8
Nominal year-on-year change of the period average stock in %								
Broad money (including foreign currency deposits)	10.1	14.2	11.7	13.7	13.9	14.3	16.6	16.5
Contributions to the year-on-year change of broad money in percentage points								
Net foreign assets of the banking system	2.2	-1.1	-1.9	0.6	3.1	-0.7	-0.0	-1.5
Domestic credit of the banking system	12.3	22.4	17.9	15.2	12.3	17.3	19.1	22.2
of which:								
claims on the private sector	15.4	18.7	21.7	16.6	14.8	17.7	19.1	21.3
claims on households	6.3	10.6	9.8	7.3	7.3	8.1	8.5	9.4
claims on enterprises	9.1	8.1	11.9	9.2	7.6	9.6	10.6	11.9
claims on the public sector (net)	-3.1	3.7	-3.8	-1.3	-2.5	-0.4	-0.0	0.9
Other domestic assets (net) of the banking system	-4.5	-7.1	-4.2	-2.1	-1.5	-2.2	-2.5	-4.2
% of GDP, ESA 95								
General government revenues	42.2	41.9	42.3	42.1				
General government expenditures ¹	51.2	49.1	48.8	49.9				
General government balance ¹	-9.0	-7.2	-6.5	-7.8				
Primary balance ¹	-5.1	-3.3	-2.3	-3.9				
Gross public debt ¹	55.6	58.0	59.4	61.7				
EUR million, period total								
Merchandise exports	36,821	37,907	44,779	50,120	12,533.2	13,664.9	13,475.4	14,219.3
Merchandise imports	39,024	40,805	47,232	51,580	13,227.1	13,982.8	13,764.4	14,285.4
% of GDP, period total								
Trade balance	-3.2	-3.9	-3.0	-1.7	-3.0	-1.4	-1.4	-0.3
Services balance	0.8	0.1	0.3	0.8	1.2	0.4	0.2	1.6
Income balance (factor services balance)	-5.5	-5.0	-6.1	-6.2	-5.8	-5.7	-7.3	-8.2
Current transfers	0.8	0.8	0.3	0.2	-0.3	0.8	1.0	-0.1
Current account balance	-7.1	-8.1	-8.5	-6.8	-8.0	-5.9	-7.5	-7.0
Capital account balance	0.3	-0.0	0.3	0.8	0.3	1.2	0.6	0.2
Foreign direct investment (net)	4.1	0.6	3.4	4.7	3.1	10.2	9.1	0.4
EUR million, end of period								
Gross external debt	38,559	46,041	55,150	66,298	64,581	66,298	72,447	73,617
Gross official reserves (excluding gold)	9,887	10,108	11,671	15,678	14,530	15,678	17,781	16,576
Months of imports of goods and services								
Gross official reserves (excluding gold)	2.6	2.5	2.5	3.1	2.8	2.9	3.4	3.0
Memorandum item								
EUR million, period total								
Gross domestic product in current prices	69,660	73,508	81,283	87,869	22,897	23,314	20,423	21,048

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

¹ Including the net costs of the pension reform.

especially as the government's standing in opinion polls has worsened recently and social unrest might continue.

The slowdown of domestic demand during the first half of 2006 had a positive impact on Hungary's external balance, with the balance of goods and services turning into a minor surplus. The gradual decline in Hungary's goods and services deficit over the past few years reflects an improvement in competitiveness as a result of declining unit labor costs in manufacturing, despite substantial nominal wage increases in the first half of the decade, and the relative stability of the nominal effective exchange rate. However, a significant widening of the income deficit (mainly on account of larger profit repatriation by foreign direct investors) and a decline in the capital account surplus caused the deficit of the combined current and capital account to widen to 6.9% of GDP in the first half of 2006 from 5.8% in the same period of the previous year. Almost three-quarters of the financing requirement were covered by FDI, which consisted almost completely of intercompany lending, the rest by portfolio and other investments. Although the coverage of the deficit by net FDI inflows improved, the net FDI result stemmed primarily from smaller FDI outflows and increased inflows of intercompany loans (which are recorded as a part of FDI). Consequently, net foreign debt reached almost 40% of GDP in mid-2006, while gross foreign debt amounted to 84% of GDP.

External financing requirement fuels rise in net foreign debt

Given high economic imbalances and weak policy credibility, Hungarian bond and equity prices were affected more by the retrenchment of the international risk appetite in March and in May to June 2006 than prices in neighboring countries. The increase in the required risk premium on forint assets and the deterioration in the inflation outlook on the back of currency weakness (the forint lost around 8% of its value against the euro between mid-February and early October 2006) have been among the reasons for the MNB to hike interest rates in four steps between June and September 2006, raising them by a total of 175 basis points to 7.75%. In addition, the inflationary effect of the corrective fiscal measures and the central bank's desire to anchor inflation expectations and to avoid an erosion of the real interest rate level have increasingly impacted on monetary policy decisions.

Policy rate hikes underpin forint

4 Poland: Growth as a Window of Opportunity for Fiscal Policy

In the first half of 2006, real GDP growth in Poland was 5.4% year on year, thus considerably higher than in 2005. Despite the substantial acceleration of both private consumption and gross fixed capital formation growth, the contribution of real exports to GDP growth continued to outpace that of domestic demand, since exports have an increasingly large share in total demand and since their annual growth rate more than doubled compared to the first half of 2005. Although real import growth accelerated more than real export growth in response to the upswing in total demand, the contribution of net exports to GDP growth in the first half of 2006 remained positive.

Export-induced labor market performance boosts domestic demand ...

The sound export performance benefited from the cyclical upswing in euro area import demand and from the favorable dynamics in the global economy and in the CIS countries. Furthermore, the wage elasticity of the export sector with respect to exchange rate changes helped buffer the adverse impact of

the sizeable nominal appreciation of the zloty and helped preserve price competitiveness. Production in the export sector boosted employment growth both in manufacturing and in the whole economy. The decline of the unemployment rate, which amounted to 4 percentage points year on year in the second quarter of 2006, was mainly driven by the increase in the employment rate, which contributed 3 percentage points to this decline, and to a lesser extent also by a decline in the activity rate (due to a growing number of students and emigration). The higher employment rate improved both the wage bill and consumer confidence, and, together with hikes in social transfers (according to existing indexation rules), vigorous household credit growth and disinflation, lifted real private consumption growth.

The positive external and improving domestic sales outlook strengthened fixed investment growth. In addition, the decline in nominal unit labor costs in industry, the high profitability and liquidity of nonfinancial corporations, the fact that real short-term interest rates were below annual GDP growth, the increasing absorption of transfers from EU structural funds and the robust expansion of housing loans bolstered the powerful rise in investment. After years of stagnation or even decline, the year-on-year growth of domestic credit to nonfinancial corporations accelerated throughout the first half of 2006 both in nominal and in PPI-deflated terms. Higher investment growth, in turn, also enhanced labor market performance (see above). Following the increase in employment, nominal wage growth accelerated both in manufacturing and in the whole economy. At the same time, the annual nominal appreciation of the zloty in euro terms continued, albeit declining from nearly 13% on average in 2005 to about 5% in the first half of 2006. Thanks to strong productivity advances, nominal unit labor costs in industry continued to shrink, compensating for the further appreciation of the zloty. However, a further rise in wage growth combined with further currency appreciation may pose an upcoming challenge for price competitiveness and external trade. Ever since the appreciation trend came to a halt at the end of February, the zloty has been traded within a range of 3.8 to 4.0 PLN/EUR with considerable short-term volatility, and it stood at 3.87 PLN/EUR on October 27.

**Strong productivity
advances keep inflation
low despite supply-side
shocks**

The decline in nominal unit labor costs in industry decisively contributed to very low levels of the various core inflation rates. Annual headline HICP inflation fell from about 3% in the first half of 2005 to about 1% in the first half of 2006, despite the rise in international energy prices. This is by far the lowest inflation rate in the region. Hardly any signs of demand-side inflationary pressures are discernible in the recent development of consumer prices. However, inflation increased slightly in the third quarter due to the impact of drought on agricultural production. Nevertheless, annual inflation stood at 1.4% in September 2006, still substantially below the inflation target of the central bank (2.5% \pm 1 percentage point). Drought damage, stepped-up domestic demand and higher wage growth may lead to inflationary pressure or to higher imports. The central bank's inflation projection published on October 26 foresees inflation close to the target value at the beginning of 2007 and slightly below the target value in the second half of 2007. For the time being, the Monetary Policy Council has maintained the main policy rate at 4.0% since March 2006. Meanwhile, short-term real interest rates in ex post

Table 6

Main Economic Indicators: Poland

	2002	2003	2004	2005	Q3 2005	Q4 2005	Q1 2006	Q2 2006
Year-on-year change of the period total in %								
GDP in constant prices	1.4	3.9	5.3	3.4	3.9	4.3	5.2	5.5
Private consumption (excl. NPISH)	3.4	1.9	4.3	2.0	2.3	2.8	5.2	4.9
Public consumption (incl. NPISH)	1.5	4.7	3.1	4.9	3.1	5.2	3.1	-1.0
Gross fixed capital formation	-6.3	-0.1	6.4	6.5	6.5	10.1	7.4	14.4
Exports of goods and services	4.8	14.2	14.0	8.1	6.1	11.8	21.7	13.0
Imports of goods and services	2.6	9.3	15.2	4.8	1.2	14.7	19.9	11.7
Contribution to GDP growth in percentage points								
Domestic demand	0.9	2.8	6.1	2.2	2.0	5.4	4.5	5.1
Net exports	0.5	1.1	-0.8	1.1	1.9	-1.1	0.7	0.4
Year-on-year change of the period average in %								
Labor productivity of industry (real)	7.4	11.4	13.5	2.9	3.3	7.2	10.4	10.2
Gross average wage of industry (nominal)	3.7	3.0	4.5	3.2	3.2	4.4	4.3	4.9
Unit labor cost of industry (nominal)	-3.4	-7.5	-7.9	0.3	-0.1	-2.6	-5.5	-4.8
Producer price index (PPI) of industry	1.1	2.7	7.1	0.7	-0.2	-0.4	0.6	2.3
Consumer price index (here: HICP)	1.9	0.7	3.6	2.2	1.8	1.2	0.9	1.4
EUR per 1 PLN, + = PLN appreciation	-4.7	-12.4	-2.9	12.6	10.1	8.1	5.0	4.6
Period average levels								
Unemployment rate (ILO definition, %, 15-64 years)	20.3	19.9	19.3	18.0	17.6	17.0	16.3	14.3
Employment rate (15-64 years)	51.5	51.2	51.7	52.8	53.7	53.7	52.6	53.9
Key interest rate per annum (%)	8.8	5.6	5.8	5.3	4.8	4.5	4.3	4.0
PLN per 1 EUR	3.9	4.4	4.5	4.0	4.0	3.9	3.8	3.9
Nominal year-on-year change of the period average stock in %								
Broad money (including foreign currency deposits)	2.0	1.5	6.9	11.8	12.2	12.1	10.9	10.2
Contributions to the year-on-year change of broad money in percentage points								
Net foreign assets of the banking system	0.9	0.1	4.2	5.0	6.6	7.4	5.8	1.5
Domestic credit of the banking system	6.6	4.8	3.5	5.3	5.5	5.5	7.5	8.6
of which:								
claims on the private sector	2.9	3.4	4.0	5.6	7.1	6.7	8.9	8.9
claims on households	2.6	2.4	4.6	5.8	6.4	6.0	7.6	7.5
claims on enterprises	0.3	1.0	-0.6	-0.1	0.7	0.7	1.4	1.4
claims on the public sector (net)	3.7	1.4	-0.5	-0.3	-1.5	-1.2	-1.5	-0.2
Other domestic assets (net) of the banking system	-5.5	-3.3	-0.8	1.5	0.1	-0.8	-2.3	0.0
% of GDP, ESA 95								
General government revenues	41.0	39.9	38.7	40.8				
General government expenditures ¹	44.2	44.6	42.6	43.3				
General government balance ¹	-3.2	-4.7	-3.9	-2.5				
Primary balance ¹	-0.4	-1.9	-1.3	0.1				
Gross public debt ¹	39.8	43.9	41.8	41.9				
EUR million, period total								
Merchandise exports	49,324	53,814	65,841	76,879	19,222.0	21,252.0	21,722.0	22,639.0
Merchandise imports	57,036	58,890	70,393	79,290	19,833.0	22,047.0	22,075.0	23,289.0
% of GDP, period total								
Trade balance	-3.7	-2.7	-2.2	-1.0	-1.0	-1.1	-0.6	-1.0
Services balance	0.4	0.2	0.4	0.6	0.2	0.7	0.4	0.5
Income balance (factor services balance)	-0.9	-1.7	-4.5	-3.5	-3.3	-3.5	-3.2	-4.4
Current transfers	1.6	1.9	2.2	2.3	2.5	1.6	1.1	3.0
Current account balance	-2.6	-2.1	-4.1	-1.6	-1.5	-2.3	-2.2	-1.9
Capital account balance	-0.0	-0.0	0.4	0.3	0.2	0.3	0.6	0.3
Foreign direct investment (net)	2.0	2.0	4.6	2.2	2.8	1.4	5.4	1.9
EUR million, end of period								
Gross external debt	81,045	84,818	94,881	111,585	107,287	111,585	114,242	115,942
Gross official reserves (excluding gold)	27,367	26,000	25,904	34,536	32,844	34,536	34,952	35,356
Months of imports of goods and services								
Gross official reserves (excluding gold)	4.9	4.6	3.9	4.6	4.2	4.7	4.5	4.2
Memorandum item								
EUR million, period total								
Gross domestic product in current prices	209,723	191,261	204,878	244,165	59,981	69,722	62,563	63,789

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

¹ Excluding the net costs of the pension reform.

terms¹⁴ increased slightly to about 3% in September as a consequence of persistent disinflation.

Smaller fiscal deficit in 2006, but fiscal policy risks to become procyclical in 2007

The updated convergence program of January 2006 envisaged a public deficit target for 2006 of 2.6% of GDP (or 4.6% including the net costs of the pension reform) that was smaller than the program's target value for 2005, but higher than the actual 2005 deficit of 2.5% of GDP (4.4% including pension reform costs). Public debt stood at 42.0% of GDP (47.3% including pension reform costs) at the end of 2005. Some budget execution signs in 2006 suggest that the deficit may be smaller than targeted, namely about 2% of GDP. The autumn forecast of the European Commission foresees a deficit of 2.2% of GDP (4.2% including pension reform costs). The undershooting of the target seems to stem not only from buoyant revenue increases, but also from cautious expenditure policies. For 2007 and 2008, the convergence program envisages a moderate narrowing of the public deficit to 2.2% and 1.9% of GDP, respectively (4.1% and 3.7% of GDP including pension reform costs). The budget draft for 2007 foresees a slightly higher public deficit of 2.4%. The main rule of current fiscal budgeting is a nominal anchor (fiscal deficit equal to PLN 30 billion), with the aim of achieving a decline of the deficit-to-GDP ratio by relying on nominal GDP growth while sticking to the deficit anchor. However, if the deficit in 2006 turns out to be substantially smaller than initially envisaged, this approach may imply aiming for a procyclical increase in the nominal budget deficit in 2007, which might be partially avoided only if budget execution remains prudent. Alternatively, a more ambitious fiscal consolidation strategy corresponding to the EU Council decisions in the framework of the EDP could be adopted. The Polish authorities have, at present, not set any specific target date for euro adoption.

FDI inflows surpass the small current account deficit, external debt-to-GDP ratio decreases

Both the very small deficit of the goods and services balance and the considerable deficit of the income balance widened only marginally in the first half of 2006 compared to the first half of 2005. The moderate annual rise in the current account deficit in this period resulted primarily from smaller net inflows of transfers. Net FDI inflows mounted and more than compensated the current account deficit. Thus, gross external debt (as a percentage of rolling four-quarter GDP) declined from 45.7% at end-2005 to 45.3% in mid-2006. Net external debt stood at only 15% at end-2005.

5 Slovakia: Brisk Economic Activity Continues amid Rising Inflation

Robust economic growth on the back of domestic demand, surge in industrial production

Real GDP expanded by 6.5% in Slovakia in the first half of 2006. Growth was mainly driven by strong domestic demand, with private consumption profiting from the vigorous expansion of household credit, robust real wage growth and increasingly positive labor market developments, as reflected by the decrease of the quarterly unemployment rate from 15.4% in the last quarter of 2005 to 13.6% in the second quarter of 2006 and by higher employment growth rates (4.5% in the second quarter). Public consumption also expanded dynamically in the first half of 2006, while fixed capital formation has been driven to a considerable extent by foreign direct investment. In particular, two big

¹⁴ As measured by the CPI-deflated key interest rate per month compounded over the past 12 months.

production facilities have been or are being completed in the car industry in 2006. PSA Peugeot Citroën already took up production in June, while Kia planned to open its factory in November. Apart from being a driving force behind fixed capital formation, these direct investment projects have also had an impact on external trade, which was heavily characterized by the import of investment goods destined for the new plants. As the auto projects are now being finished, the growth of investment activity moderated in the second quarter. Imports lost momentum as well, while export growth remained steady and buoyant, resulting in a positive growth contribution of net exports. Exports can be expected to develop in an even more dynamic fashion once car production is fully running, thereby further strengthening the contribution of the external sector to GDP growth.

In recent years, Slovakia has introduced a series of economic reforms most prominently exemplified by the introduction of a flat rate of 19% for personal and corporate income tax as well as for value added tax in 2004. The new coalition government formed after the June 2006 parliamentary elections has announced reversals or modifications of some of the earlier reforms. Its program focuses on the construction of a “social market economy.” Measures to this end include lowering the tax burden on population strata with low and middle incomes by increasing the tax-free personal income tax base and by amendments to the flat VAT rate in selected commodities, taxing persons with above-average incomes more, increasing the minimum wage, halting strategic privatizations, and reforming the labor code to provide stronger employee protection. The program also includes expenditure streamlining in public administration, measures to lower tax and custom duty evasion and improved procurement procedures. Overall, changes in expenditures and revenues are planned to roughly offset each other, so that medium-term fiscal consolidation, as laid out in Slovakia’s 2005 convergence program, would remain broadly on course. In this vein, the new government also confirmed the goal set out by the previous administration to fulfill the Maastricht criteria with a view to adopting the euro in 2009.

In the first few weeks after the elections in June, the Slovak koruna came under depreciation pressure. For the first time since the country’s entry into the exchange rate mechanism II (ERM II) in November 2005, the koruna traded above its central parity of 38.455 SKK/EUR: After hitting 37.110 SKK/EUR in April, the koruna softened to 38.768 SKK/EUR in mid-July. In late June and in July, Národná banka Slovenska (NBS) sold approximately EUR 3 billion to stabilize the exchange rate near the central parity. This measure together with hikes in the key interest rate and the confirmation of the new government that it would stick to January 2009 as the planned entry date into the euro area supported the currency, and depreciation pressure dissipated. In fact, after the approval of the state budget for 2007 on October 11, the koruna appreciated to 36.616 SKK/EUR, its historically strongest value until the cutoff date for data. The currency traded 2.6% stronger in mid-October than at the beginning of the year.

On the back of robust economic activity, the targeted budget deficit for 2006 of 4.2% of GDP (including the costs of 1.3% of GDP for the pension reform launched in 2005) could be undershot. This is in line with the European

**New government
regears economic policy**

**Political uncertainty
exerts temporary
pressure on Slovak
koruna**

**Budgetary outcome
2006 should be better
than expected**

Table 7

Main Economic Indicators: Slovakia								
	2002	2003	2004	2005	Q3 2005	Q4 2005	Q1 2006	Q2 2006
Year-on-year change of the period total in %								
GDP in constant prices	4.1	4.2	5.4	6.1	6.3	7.4	6.3	6.7
Private consumption	5.2	0.2	4.2	7.0	7.5	6.4	6.5	5.7
Public consumption	5.2	3.9	2.0	0.5	3.2	-1.2	6.7	5.5
Gross fixed capital formation	0.3	-2.3	5.0	13.8	16.9	19.5	16.1	6.9
Exports of goods and services	4.7	15.9	7.9	13.5	19.2	16.3	18.0	18.4
Imports of goods and services	4.6	7.6	8.8	15.5	16.5	20.5	20.8	15.1
Contribution to GDP growth in percentage points								
Domestic demand	4.3	-1.3	6.2	8.0	4.6	11.9	8.6	4.4
Net exports	-0.2	6.1	-0.7	-1.8	2.1	-4.6	-2.2	2.8
Year-on-year change of the period average in %								
Labor productivity of industry (real)	6.5	4.9	3.9	0.8	1.8	4.1	10.8	10.9
Gross average wage of industry (nominal)	7.3	7.3	10.1	7.1	4.7	6.7	2.4	8.2
Unit labor cost of industry (nominal)	0.7	2.3	6.1	6.3	2.8	2.5	-7.6	-2.4
Producer price index (PPI) of industry	2.0	8.3	3.4	4.7	5.6	6.7	9.5	9.6
Consumer price index (here: HICP)	3.5	8.4	7.5	2.8	2.2	3.7	4.2	4.6
EUR per 1 SKK, + = SKK appreciation	1.4	2.9	3.6	3.7	3.5	2.5	2.2	3.3
Period average levels								
Unemployment rate (ILO definition, %, 15–64 years)	18.7	17.6	18.2	16.2	15.7	15.4	15.0	13.6
Employment rate (15–64 years)	56.8	57.7	57.0	57.7	58.0	58.5	58.3	59.3
Key interest rate per annum (%)	7.9	6.4	4.9	3.2	3.0	3.0	3.1	3.8
SKK per 1 EUR	42.7	41.5	40.0	38.6	38.7	38.5	37.5	37.7
Nominal year-on-year change of the period average stock in %								
Broad money (including foreign currency deposits)	8.7	5.5	4.0	5.0	4.5	4.3	2.2	4.5
Contributions to the year-on-year change of broad money in percentage points								
Net foreign assets of the banking system	13.5	7.7	-2.6	-5.8	-8.5	-7.9	8.1	16.6
Domestic credit of the banking system	-6.5	7.8	10.2	12.1	12.2	13.6	3.9	4.4
of which:								
claims on the private sector	4.9	5.5	4.0	8.1	9.3	11.4	15.2	16.6
claims on households	1.4	2.2	4.0	5.3	5.5	6.1	8.0	8.9
claims on enterprises	3.5	3.2	0.0	2.8	3.8	5.4	7.2	7.8
claims on the public sector (net)	-11.4	2.3	6.1	4.0	2.9	2.2	-11.3	-12.2
Other domestic assets (net) of the banking system	1.7	-10.0	-3.6	-1.3	0.8	-1.4	-9.7	-16.5
% of GDR, ESA 95								
General government revenues	35.6	35.7	35.9	34.0				
General government expenditures ¹	43.3	39.4	38.9	37.1				
General government balance ¹	-7.7	-3.7	-3.0	-3.1				
Primary balance ¹	-4.1	-1.2	-0.8	-1.4				
Gross public debt ¹	43.3	42.7	41.6	34.5				
EUR million, period total								
Merchandise exports	15,281	19,370	22,264	25,738	6,532	7,262	7,131	7,982
Merchandise imports	17,540	19,935	23,513	27,716	6,730	8,227	7,756	8,571
% of GDP, period total								
Trade balance	-8.7	-1.9	-3.7	-5.2	-2.1	-9.5	-6.3	-5.5
Services balance	1.9	0.7	0.6	0.7	1.0	0.3	0.5	1.5
Income balance (factor services balance)	-1.9	-0.4	-1.0	-4.2	-3.4	-6.1	-1.7	-5.5
Current transfers	0.8	0.7	0.4	0.0	-0.3	0.2	-0.1	1.1
Current account balance	-7.9	-0.8	-3.6	-8.6	-4.7	-15.1	-7.6	-8.4
Capital account balance	0.4	0.3	0.3	-0.0	-0.0	-0.1	-0.1	0.0
Foreign direct investment (net)	16.5	2.2	3.3	4.1	2.9	4.5	4.9	10.2
EUR million, end of period								
Gross external debt	12,576	14,323	17,446	22,932	22,035	22,932	23,567	24,779
Gross official reserves (excluding gold)	8,497	9,338	10,605	12,578	12,684	12,578	13,121	12,322
Months of imports of goods and services								
Gross official reserves (excluding gold)	5.1	4.9	4.8	4.9	5.0	4.1	4.6	3.9
Memorandum item								
EUR million, period total								
Gross domestic product in current prices	26,042	29,239	33,878	38,140	9,663	10,214	9,847	10,713

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

¹ Excluding the net costs of the pension reform.

Commission's autumn forecast of 3.4% of GDP for the 2006 deficit. As a case in point, revenues from corporate income tax, which are an important component of the country's tax revenues, already stood at 100.7% of the annual plan in September. Even though the budgetary outcome could be better than envisaged, the IMF still considers the fiscal stance slightly expansionary in 2006. In 2007, fiscal policy should be broadly neutral. The draft budget includes a deficit of 2.9% of GDP (including the costs of the pension reform of 1.3% of GDP). Inter alia, it provides for higher spending on health care, education and agriculture in accordance with the government program. A reduction in state employee numbers and an across-the-board 10% cut in ministries' disposable funds are planned. According to the central bank, the draft budget is realistic, but will not contribute to curbing inflationary pressures in the economy.

Inflation pressures have been increasing in the Slovak economy throughout 2006. Even though annual inflation declined by 0.5 percentage points in September compared to August, benefiting mainly from lower fuel and telecom service prices, the country still has one of the highest inflation rates (4.5%) in Central Europe. Inflationary pressures throughout the year originated from rising energy prices, price adjustments in the health sector and a turnaround in food price development from deflation to inflation. Core inflation has already been on an upward path for a few months (2.6% in September). This development can be traced particularly to employment, wage and productivity developments. In the first quarter of 2006, unit labor costs in the whole economy were 3.9% higher than in the same period of 2005. To contain inflation and inflation expectations, the NBS has raised its key interest rate by a cumulative 175 basis points from January to mid-October 2006. Still, inflation will not reach the central bank's target of below 2.5% in 2006, as the central bank is currently projecting 3.9% inflation for 2006. For 2007, the inflation target is below 2%, while the current central bank projection is 2.8%.

Inflationary pressures are picking up

Declining imports and increasingly dynamic exports have let the trade balance improve substantially since the fourth quarter of 2005. However, this positive development only led to a minor improvement in the combined current and capital account, as profit repatriation has been increasing throughout the year. The resulting deficit of 8% of GDP was almost entirely covered by FDI. The trade balance can be expected to improve further once the new car producers start exporting on a grand scale. Total gross foreign debt remained stable at around 60% of GDP.

Slight improvement of the combined current and capital account

6 Slovenia: The Start of a New Era – A Balanced Economy in the Run-Up to Euro Adoption

Slovenia's GDP growth accelerated to 5% year on year during the first half of 2006. Among the domestic demand components, gross fixed capital formation, especially in machinery and equipment and residential investment, grew most strongly. Gross fixed capital formation was supported by the acceleration of credit growth to households and enterprises. In addition, robust growth rates of investment in machinery and equipment continued to represent a rebound following stagnation during the first three quarters of 2005, while housing

Robust GDP expansion fueled by domestic demand

investment was aided by the release of funds from the National Housing Savings Scheme. Consumption growth lagged behind the growth rate of overall GDP. Within this total, the growth rate of private consumption remained broadly unchanged at around 3.5%, despite faster real household income growth and quickening real credit growth to households. Export growth during the first half of 2006 picked up slightly compared to full-year 2005. However, import growth accelerated more quickly, reflecting stepped-up gross fixed capital formation, and caused the contribution of net real exports to overall growth to decrease.

Inflation to stabilize at around 2.5%

Between December 2005 and September 2006, inflation fluctuated in a range of 2.0% to 3.4% year on year, with relatively large volatility in some months, depending mainly on the volatility of energy prices and the change in the seasonal pattern in some product categories. In September 2006, inflation stood at 2.5%, while the 12-month average inflation rate in the period from October 2005 to September 2006 was 2.6%. According to the 2006 autumn forecast of the European Commission, inflation should stabilize at around 2.5% over the next two years. Uncertainties about the forecast relate mainly to the development of regulated prices and excise duties, oil price developments and the liberalization of the electricity and natural gas market for households (from mid-2007) as well as the possible increase in VAT rates in 2008.

Current account deficit remains moderate

The deficit on the combined current and capital account amounted to 0.6% of GDP during the first half of 2006, modestly down from 1% in the same period of 2005. The deficit stemmed from the income and the transfer balances and was partly offset by a widening surplus on the balance of goods and services despite the ongoing deterioration of the terms of trade. Slovenia continued to register net FDI outflows during the first half of 2006, reflecting the ongoing expansion of Slovenian companies into neighboring countries and increased intercompany lending to foreign subsidiaries. The combined current and capital account deficits were thus mainly financed by other investment. Net foreign debt continued to rise gradually during the first half of 2006, reaching 13.4% of rolling four-quarter GDP by June 2006, primarily as a result of the increased net indebtedness of the banking sector and the decline in the net external lender position of the central bank and of the general government. In a similar vein, gross foreign debt climbed to 76.3% of GDP.

Solid public finances

Fiscal policy in Slovenia continues to stand on a relatively solid footing. According to the European Commission's autumn forecast, the budget deficit of the general government is expected to reach 1.6% of GDP in 2006, slightly up from the downward revised deficit of 1.4% in 2005. Cash-flow figures for the consolidated general government¹⁵ for the first half of 2006 showed a deficit of 0.5% of GDP, which was a significantly better outcome than during the same period of 2005 (2.6%). In mid-September, the government decided to reduce the personal income tax rates from the beginning of 2007. The corporate income tax rate will also be lowered from 25% to 23% from the same date and then further by a percentage point a year until 2010 to a final 20%. These measures, if approved by parliament, will complement the gradual

¹⁵ The consolidated general government does not include all state and local government funds and agencies (for example the Capital Fund and the Restitution Fund), which form part of the general government sector.

phasing out of the payroll tax, which started in 2006. The government also pledged to initiate a hike in VAT rates in 2008 if these tax cuts prove to bring Slovenia off the fiscal consolidation path.

In line with the decision of the EU Council of July 11, 2006, Slovenia will become the 13th member of the euro area on January 1, 2007. This will bring benefits, such as the elimination of any remaining element of exchange rate uncertainty for a broad range of business relations, enhanced price and cost transparency, reduced transaction and information costs and further scope for economic and financial integration with the euro area. While giving up monetary policy independence completely, Slovenia will benefit from the credible monetary policy framework of the Eurosystem to maintain price stability. Drawing on the experience of previous instances of euro adoption, some economic policy challenges can reasonably be expected for Slovenia for the period ahead.

First, looking at the immediate future, minimizing changeover-related price increases upon introduction of the euro represents one of the biggest – if not the biggest – economic challenge. To gradually prepare consumers for the valuation of prices in euro and to provide for the best possible monitoring of retailers' pricing behavior, the dual display of prices has been compulsory since March 1, 2006, and will remain obligatory until the end of June 2007, albeit allowing for a number of exceptions. In addition, Slovenia's consumer association, in cooperation with the statistical office, has been monitoring retail price developments of specific goods and services. During the period between May and August 2006, exceptional price increases were restricted to a handful of goods and services (e.g. parking in the capital, certain fruits and vegetables, coffee).

In addition to containing actual price increases during the changeover, it will also be essential to keep the perception of price increases limited. First, when euro notes and coins were introduced in the euro area in early 2002, the perception of the public in most countries was that prices had increased substantially, despite the fact that the inflationary impact registered officially by Eurostat was estimated to be within the range of 0.12% to 0.29%. Second, fears and perceptions of price increases related to euro adoption are widespread in Slovenia: According to the April 2006 Eurobarometer survey, 65% of respondents in Slovenia were afraid that euro adoption would give rise to inflation. This figure compares to an average of 46% for the ten new Member States, and to 49% for Slovenia in the survey conducted in September 2005. Against this psychological background and taking into account the increase in inflation during the first nine months of 2006 as well as the strong economic growth recorded during the first half of 2006, it will be essential to prevent exaggerated perceptions of price increases from having an impact on wage and price formation in the next few months.

A second risk in connection with euro adoption may result from the full loss of monetary independence. However, monetary policy has operated with considerably limited autonomy already during Slovenia's stay in ERM II. At the same time, authorities and social partners have proved their ability to align fiscal and wage policies in order to achieve a policy mix conducive to achieving and maintaining low inflation and a balanced external position. Preserving

Euro adoption: a win-win situation if challenges are mastered

Minimizing changeover-related price increases...

...and the perception thereof

Emphasis on fiscal, wage and structural policies

Table 8

Main Economic Indicators: Slovenia								
	2002	2003	2004	2005	Q3 2005	Q4 2005	Q1 2006	Q2 2006
Year-on-year change of the period total in %								
GDP in constant prices	3.5	2.7	4.2	3.9	3.6	3.7	5.1	4.9
Private consumption	1.3	3.4	3.1	3.3	3.4	2.8	3.5	3.3
Public consumption	3.2	1.6	2.9	3.1	3.2	3.9	3.3	4.1
Gross fixed capital formation	0.9	7.1	5.9	3.7	1.6	8.2	9.1	8.7
Exports of goods and services	6.7	3.1	12.5	9.2	9.5	8.8	14.9	8.6
Imports of goods and services	4.8	6.7	13.2	5.3	5.9	7.2	13.5	8.0
Contribution to GDP growth in percentage points								
Domestic demand	2.4	4.9	5.0	1.4	1.2	2.9	4.1	4.5
Net exports	1.1	-2.2	-0.8	2.4	2.3	0.8	1.0	0.4
Year-on-year change of the period average in %								
Labor productivity of industry (real)	5.6	3.5	6.4	5.9	5.4	9.8	10.4	7.5
Gross average wage of industry (nominal)	9.9	7.6	7.1	5.8	5.3	5.9	6.5	5.8
Unit labor cost of industry (nominal)	4.1	4.0	0.7	-0.1	-0.0	-3.5	-3.6	-1.6
Producer price index (PPI) of industry	5.3	2.6	4.4	2.8	2.0	1.8	1.6	2.4
Consumer price index (here: HICP)	7.5	5.7	3.7	2.5	2.3	2.6	2.3	3.1
EUR per 1 SIT, + = SIT appreciation	-3.5	-3.4	-2.2	-0.2	0.2	0.1	0.1	-0.0
Period average levels								
Unemployment rate (ILO definition, %, 15–64 years)	6.5	6.8	6.5	6.7	6.5	7.4	7.0	5.9
Employment rate (15–64 years)	63.4	62.6	65.3	66.0	66.6	66.0	65.9	68.9
Key interest rate per annum (%)	8.4	7.0	4.6	4.0	4.0	4.0	3.8	3.5
SIT per 1 EUR	225.9	233.8	239.1	239.6	239.5	239.5	239.5	239.6
Nominal year-on-year change of the period average stock in %								
Broad money (including foreign currency deposits) ¹	22.8	12.7	5.1	6.6	5.0	7.1	6.5	7.5
Contributions to the year-on-year change of broad money in percentage points								
Net foreign assets of the banking system	11.0	3.3	-8.1	-10.4	-10.0	-10.1	-14.5	-15.2
Domestic credit of the banking system	12.2	8.1	14.0	19.7	18.9	21.3	24.3	25.6
of which:								
claims on the private sector	9.1	8.0	11.5	16.6	16.8	18.3	23.8	26.4
claims on households	1.6	1.5	2.7	4.4	4.5	4.9	6.3	7.1
claims on enterprises	7.5	6.5	8.8	12.3	12.2	13.4	17.5	19.3
claims on the public sector (net)	3.2	0.1	2.4	3.0	2.2	3.0	0.6	-0.8
Other domestic assets (net) of the banking system	-0.4	1.3	-0.8	-2.7	-3.9	-4.0	-3.3	-2.9
% of GDP, ESA 95								
General government revenues	45.5	45.2	45.1	45.8				
General government expenditures	48.0	48.0	47.4	47.2				
General government balance	-2.5	-2.8	-2.3	-1.4				
Primary balance	-0.2	-0.7	-0.5	0.3				
Gross public debt	29.1	28.5	28.7	28.0				
EUR million, period total								
Merchandise exports	11,082	11,417	12,933	14,599	3,592.9	3,871.4	4,024.6	4,277.8
Merchandise imports	11,347	11,960	13,942	15,625	3,831.8	4,388.2	4,227.3	4,381.7
% of GDP, period total								
Trade balance	-1.1	-2.2	-3.9	-3.7	-3.4	-7.4	-3.0	-1.4
Services balance	2.6	2.2	2.6	3.1	3.4	3.5	3.1	3.3
Income balance (factor services balance)	-0.7	-0.9	-1.2	-1.0	-0.9	-1.4	-0.6	-1.1
Current transfers	0.3	0.1	-0.3	-0.3	0.1	-0.4	-1.2	-0.0
Current account balance	1.0	-0.8	-2.8	-2.0	-0.9	-5.6	-1.8	0.9
Capital account balance	-0.7	-0.7	-0.4	-0.4	-0.3	-0.8	-0.2	-0.3
Foreign direct investment (net)	6.6	-0.6	0.9	-0.2	0.0	1.6	-1.2	0.5
EUR million, end of period								
Gross external debt	11,483	13,259	15,271	19,566	18,448	19,566	20,508	21,606
Gross official reserves (excluding gold)	6,702	6,798	6,464	6,824	6,800	6,824	6,840	6,484
Months of imports of goods and services								
Gross official reserves (excluding gold)	6.1	5.9	4.8	4.6	4.4	4.1	4.3	3.9
Memorandum item								
EUR million, period total								
Gross domestic product in current prices	23,695	24,857	26,144	27,373	6,938	6,995	6,788	7,578

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

¹ The methodology for calculating broad money and its components were changed for data from the beginning of 2005 (thus affecting year-on-year rates from the beginning of 2006).

past success will, however, necessitate further significant efforts. For example, although available information suggests that unit labor cost dynamics decelerated during the first half of 2006, the marked acceleration of the growth of the compensation per employee to almost 7% year on year during the second quarter of 2006 calls for vigilance. It will also be important to make public expenditures more flexible and to ensure the long-term sustainability of public finances despite significant pressures from population aging. Similarly, lifting long-term economic growth prospects by increasing labor market participation and flexibility, raising productivity and improving the regulatory environment for businesses will be demanding, as the recent consultations with the IMF have highlighted.

The full convergence of interest rates to the euro area level represented an economic policy challenge in some current euro area member states. Available evidence suggests that this issue may not be as prominent in Slovenia as it would seem at first sight, despite the significant acceleration of real credit growth over the past three years. First, harmonized long-term interest rates in Slovenia have been at around the euro area level already since April 2006. Second, short-term interest rates in Slovenia have converged significantly to the euro area level since the end of the third quarter of 2005. Full convergence of 12-month interest rates was achieved by early May 2006. The difference in 3- and 1-month interest rates stood at around 15 and 30 basis points, respectively, in mid-October and in September 2006, as Banka Slovenije continued to cut interest rates until July 2006 and followed the ECB rate hike in August but not in October 2006. This pattern of interest rate developments resembled previous cases of euro adoption, when long-term interest rates converged relatively early while the convergence of short-term interest rates was concentrated on the past few months or weeks of the run-up to euro adoption. Third, the comparison of interest rates charged by Slovenian banks in business relations with households and nonfinancial corporations reveals that in some business lines, interest rates both on tolar- and euro-denominated loans are already lower than in the euro area.

Room for further interest rate convergence seems limited

7 Bulgaria: Strong Growth, Solid Fiscal Policy and Widening External Imbalances

Real GDP grew by 6.1% year on year in the first half of 2006 and accelerated during this period, reaching 6.6% in the second quarter of 2006. Individual consumption growth remained robust and was supported by the expansion of consumer credit especially in May and June. Gross fixed capital formation also remained very buoyant. Net exports continued to contribute negatively to GDP growth in the first half of 2006. However, as import growth slowed in the second quarter while export growth remained steady, the negative contribution of net exports to growth shrank somewhat most recently. High GDP growth helped reduce the unemployment rate (ILO definition) to 9.0% in the first half of 2006 (average). Registered unemployment in Bulgaria fell to 8.4% in September. In a longer-term perspective, the reduction of joblessness in Bulgaria is remarkable, coming down from rates of close to 20% in the late 1990s to single-digit rates lately.

Domestic demand continues to drive strong economic growth

Household credit growth
decelerating but
still rapid

Household credit growth has remained rapid and, according to the latest global financial stability report of the IMF, posted among the fastest rates worldwide in 2005. In order to constrain high and ongoing domestic demand, the central bank introduced a series of primarily prudential and administrative measures in 2004 and 2005.¹⁶ Credit growth to nongovernment decreased from 41.8% year on year in the first half of 2005 to 24.2% year on year in the first half of 2006, while credit growth to households fell from 72.2% year on year to 38.7% year on year. Overall, the Bulgarian National Bank (BNB) expects credit growth to slow down from 32.4% in 2005 to 17.5% in full-year 2006. Against this backdrop and considering the perception that such measures are only temporarily effective, the BNB already began to gradually loosen the administrative and monetary restrictions (credit ceilings and reserve requirements) on bank lending. The strict supervisory framework introduced and applied by the BNB, though, will remain unchanged.

While data suggest that bank lending has slowed, it appears that the demand for credit to finance private consumption growth is increasingly being met by other, i.e. nonbank, channels of financial intermediation, namely by leasing companies and other financial institutions outside the domestic banking sector. Moreover, retailers are increasingly providing direct financing to consumers, and last but not least parts of the corporate sector are to a growing extent able to borrow directly from abroad. On the occasion of the conclusion of the Article IV consultation with Bulgaria and the completion of the third review under the Stand-By Arrangement in August 2006, the IMF stressed the importance of the BNB's new role in supervising the growing nonbank financial sector, a function that was conferred on the central bank at the beginning of 2006.

Current account deficit
deteriorates further, but
net FDI inflows cover
most of the current
account gap

In recent years, Bulgaria has experienced a massive and fast widening of its current account deficit. In the first half of 2006, this process continued unabatedly, and the current account gap reached 16.7% of GDP compared to 11.3% of GDP in the first half of 2005. This development in the first six months of 2006 was partly attributable to the deterioration of the balance of goods and services, whose deficit rose from 17.6% to 20% of GDP, reflecting ongoing marked consumption and investment growth as well as rising oil prices. Moreover, the income and the transfers balances also worsened somewhat. On the financial side, in the first six months of 2006, net FDI inflows nearly doubled compared to the first half of 2005 and covered about three-quarters of the current account gap.¹⁷ Since portfolio flows remained balanced and the central bank's reserves augmented slightly, the outstanding financing requirement was covered by other investments. Looking ahead to the outlook for the whole year 2006, it is important to note that Bulgaria typically runs a surplus on nonfactor services in the tourist season. This will be crucial in offsetting to some extent the deficit in the trade balance and in reducing the current account deficit to 12.5% of GDP in 2006, as projected by IMF.

¹⁶ See *Developments in Selected Countries, Focus on European Economic Integration 2/05 and 1/06* for more details.

¹⁷ FDI amounted to 12.7% of GDP, 5 percentage points of which originated from intercompany lending.

Table 9

Main Economic Indicators: Bulgaria

	2002	2003	2004	2005	Q3 2005	Q4 2005	Q1 2006	Q2 2006
Year-on-year change of the period total in %								
GDP in constant prices	4.9	4.5	5.7	5.5	4.6	5.5	5.6	6.6
Individual consumption	3.4	7.1	4.9	7.4	9.4	7.1	5.4	7.4
Collective consumption	6.0	3.0	6.7	2.2	4.3	-4.7	0.1	1.2
Gross fixed capital formation	8.5	13.7	13.5	19.0	24.0	21.5	21.4	20.3
Exports of goods and services	7.2	7.9	13.0	7.2	1.1	8.9	12.9	10.2
Imports of goods and services	4.9	15.3	14.1	14.6	18.8	12.9	20.0	11.4
Contribution to GDP growth in percentage points								
Domestic demand	4.3	12.1	9.5	14.7	19.6	12.5	18.8	12.1
Net exports	0.6	-7.6	-3.9	-9.2	-15.1	-7.1	-13.2	-5.5
Year-on-year change of the period average in %								
Labor productivity of industry (real)	2.7	12.6	16.9	1.9	0.7	2.7	10.1	8.5
Gross average wage of industry (nominal)	3.5	3.8	7.1	7.2	7.7	7.9	9.4	9.4
Unit labor cost of industry (nominal)	0.8	-7.8	-8.3	5.2	6.9	5.1	-0.6	0.8
Producer price index (PPI) of industry	1.4	5.0	5.9	7.0	6.7	7.9	8.4	10.0
Consumer price index (here: HICP)	5.8	2.3	6.1	5.0	4.8	6.6	8.0	8.3
EUR per 1 BGN, + = BGN appreciation	-0.1	0.0	-0.2	-0.1	0.0	0.0	0.0	0.0
Period average levels								
Unemployment rate (ILO definition, %, 15–64 years)	18.3	13.9	12.2	10.2	9.3	10.0	9.8	9.0
Employment rate (15–64 years)	50.6	52.5	54.2	55.8	57.8	56.0	55.5	59.1
Key interest rate per annum (%)	4.0	2.7	2.6	2.1	2.0	2.0	2.2	2.5
BGN per 1 EUR	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0
Nominal year-on-year change of the period average stock in %								
Broad money (including foreign currency deposits)	18.3	16.3	22.3	27.3	27.1	26.5	19.2	17.0
Contributions to the year-on-year change of broad money in percentage points								
Net foreign assets of the banking system	7.7	5.4	4.4	8.9	11.3	8.6	8.3	10.7
Domestic credit of the banking system	12.1	14.5	21.8	25.8	23.6	26.0	18.5	12.7
of which:								
claims on the private sector	13.6	19.9	26.3	27.9	25.0	23.6	17.9	12.6
claims on households	3.3	5.9	10.0	13.0	13.1	13.1	11.7	9.2
claims on enterprises	10.3	14.0	16.3	14.9	11.9	10.5	6.2	3.5
claims on the public sector (net)	-1.5	-5.4	-4.5	-2.1	-1.4	2.4	0.6	0.0
Other domestic assets (net) of the banking system	-1.5	-3.6	-3.8	-7.4	-7.8	-8.2	-7.6	-6.4
% of GDP, ESA 95								
General government revenues	37.4	38.8	40.7	41.1				
General government expenditures	37.8	38.5	38.0	38.7				
General government balance	-0.4	0.3	2.7	2.4				
Primary balance	1.8	2.5	4.5	3.9				
Gross public debt	53.7	46.0	38.4	29.8				
EUR million, period total								
Merchandise exports	6,063	6,668	7,985	9,466	2,414.8	2,666.0	2,666.7	3,032.5
Merchandise imports	7,941	9,094	10,938	13,809	3,571.9	4,031.8	3,705.2	4,164.9
% of GDP, period total								
Trade balance	-11.3	-13.7	-15.1	-20.2	-19.3	-23.0	-20.7	-19.3
Services balance	3.1	3.1	3.5	3.2	11.3	-2.6	-4.0	3.2
Income balance (factor services balance)	2.4	1.6	1.2	1.1	0.9	0.7	-0.2	0.9
Current transfers	3.4	3.5	4.5	4.6	4.5	4.6	2.6	3.2
Current account balance	-2.4	-5.5	-5.8	-11.3	-2.5	-20.2	-22.3	-11.9
Capital account balance	0.0	-0.0	0.0	-0.0	0.0	-0.0	0.0	0.0
Foreign direct investment (net)	5.7	10.3	11.5	11.2	14.9	12.5	15.6	10.2
EUR million, end of period								
Gross external debt	10,769	10,641	12,572	14,530	13,550	14,530	15,905	16,304
Gross official reserves (excluding gold)	4,247	4,981	6,443	6,816	6,795	6,816	6,400	7,271
Months of imports of goods and services								
Gross official reserves (excluding gold)	5.2	5.3	5.7	4.9	4.7	4.3	4.3	4.4
Memorandum item								
EUR million, period total								
Gross domestic product in current prices	16,589	17,727	19,594	21,448	6,010	5,939	5,019	5,875

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

Private gross external debt rises significantly

Domestic credit growth is funded abroad by the banking sector and is reflected both in the high current account deficit and in the significant increase in Bulgaria's private external debt, which amounted to 54.8% of GDP in annual terms in the second quarter of 2006 compared to 41.1% of GDP in the second quarter of 2005. By contrast, public debt has been decreasing steadily.

Fiscal surplus target of 3% of GDP for 2006 appears to be within reach

Bulgaria has been conducting a strict fiscal policy, which is the main instrument to control domestic demand. Based on national methodology, the consolidated budget in the first half of 2006 showed a surplus of 6.6% of GDP. The consolidated budget revenue-to-GDP ratio grew at a faster pace than the expenditure-to-GDP ratio. So far, budgetary developments have been in accordance with the fiscal surplus target of 3% of GDP for the full year 2006 agreed with the IMF. For 2007, the Bulgarian authorities and the IMF have tentatively envisaged a surplus target in the order of 2% of GDP, taking into account Bulgaria's prospective cofinancing needs to tap EU funds. While the 2007 budget is still under preparation, the Bulgarian parliament has already voted unanimously to cut the corporate income tax rate from the current 15% to 10% from January 1, 2007, which will be the lowest level in the EU.

Annual inflation rate drops to 5.6% in September

The increases in oil prices and hikes in indirect taxes at the beginning of 2006 added to inflation pressures in the Bulgarian economy.¹⁸ HICP inflation increased to 8.8% in February 2006 and stayed around that level for the next four months. Thereafter, a drop in food prices contributed to a gradual fall of inflation from 7.6% in July to 6.8% year on year in August. According to the National Statistical Institute, mainly owing to a sharp slowdown in the growth of transport prices, inflation dropped further to 5.6% year on year in September. The central bank expects that annual inflation will be lower than 6% at the end of 2006 (compared to 6.5% at the end of 2005).

Bulgaria's ERM II and euro adoption strategy is unchanged. The authorities are planning to join ERM II as soon as possible after membership in the EU becomes effective, while retaining the currency board as a unilateral commitment. Bulgaria intends to fulfill the convergence criteria in time to qualify for entry into the euro area after two-year participation in ERM II.

8 Romania: Strong Growth and Falling Inflation alongside Growing External Disequilibria

Growth is picking up on the eve of EU accession

In the first half of 2006, growth of real GDP in Romania rebounded to 7.4% after a somewhat more subdued performance in 2005, a year severely affected by adverse weather conditions. The main factor driving growth was domestic demand. Both private consumption and gross fixed capital formation showed double-digit real growth rates throughout the first half year. Private consumption increased on the back of robust real wage growth, declining unemployment and the strong expansion of household credit. Investments profited from the unabated strong inflow of FDI, further reconstruction measures after the 2005 floods and infrastructure investment. At the same time, the contribution of net exports to growth deteriorated further. Export growth picked up a bit in the first half of 2006, while imports continued to rise dynamically.

¹⁸ See *Developments in Selected Countries, Focus on European Economic Integration 1/06* for more details.

The HICP inflation rate decreased to 5.5% in September and was thus 3.5 percentage points lower than at the beginning of the year. This favorable development was mainly caused by below-average growth of food prices, which have a weight of nearly 40% in the HICP basket. Slow food price growth, in turn, has largely been a consequence of the recovery of agricultural production, which had contracted substantially in 2005 due to extreme weather conditions. Nominal exchange rate developments and two policy interest rate hikes of the Banca Națională a României (BNR) amounting to a total of 125 basis points since the beginning of the year further helped to curb inflation. New or higher taxes on alcohol and tobacco have been exerting a certain upward pressure on prices since May. The BNR's inflation target of 5% \pm 1 percentage point, which is to be reached in December 2006, could be achieved, depending on the further trajectory of food prices and on possible demand-related inflation pressure, inter alia also as a consequence of an easing of fiscal policy. In its August inflation report, the BNR forecast an inflation rate of 6.1% for December and thereby a marginal overshooting of the inflation target. The BNR announced that it would maintain a tight monetary stance to attain its inflation goal of 4% \pm 1 percentage point for 2007.

Further successful steps on the disinflation path

Romania's combined current and capital account deficit grew to nearly 12% of GDP in the first half of 2006, mostly due to an increasing deficit in the trade balance. Imports have been spurred by the nominal appreciation of the leu, which amounts to 4.6% since January, and by strong consumption demand fueled by rapid credit growth. Up to now, the deficit could be financed without any problems, as it is largely (so far approximately 80%) covered by FDI inflows, which are expected to reach a new record level in 2006. Still, the high current account deficit represents an element of macroeconomic vulnerability. Gross foreign debt increased in absolute terms during the first half of 2006. As a percentage of GDP, though, a slight downward trend is observable (from 30.8% in 2005 to 29.0% in the first half of 2006).

The current account balance is deteriorating further

In view of the strong performance of the Romanian economy and the prospects and expectations associated with EU accession, households are increasingly engaging in consumption smoothing. As the banking sector has undergone a major restructuring in the past few years and as competition among banks has increased, the supply of financial services has also improved markedly. The BNR has already taken several measures to curb credit growth. Its main target was to slow lending denominated in foreign currency. Following up on a first set of measures taken in 2005, the BNR has raised the reserve requirement on banks' foreign currency-denominated liabilities in two steps from 30% to 40% in 2006. Up to now, this measure appears to have helped slow the growth of foreign-currency lending to the private sector, which has declined from around 30% in January to around 24% in August (year on year), while its share in total private sector credit moderated from 54% at the end of 2005 to 47% in August 2006. However, at the same time, leu-denominated credit to the private sector started to skyrocket, showing annual growth rates of over 100% in August (compared to 70% at the end of 2005). This surge was mainly due to rapidly expanding credit to households (+126% in the same period). The growth of total private sector credit increased to about 60% in August. In response to this development, the NBR also hiked the reserve

Credit growth remains rapid

Table 10

Main Economic Indicators: Romania

	2002	2003	2004	2005	Q3 2005	Q4 2005	Q1 2006	Q2 2006
Year-on-year change of the period total in %								
GDP in constant prices	5.2	5.2	8.4	4.1	2.4	4.3	6.9	7.8
Private consumption	5.6	8.4	14.1	9.7	8.2	6.5	11.8	14.2
Public consumption	2.7	7.7	4.9	4.4	3.7	6.2	3.4	0.8
Gross fixed capital formation	7.6	8.6	10.7	13.1	10.8	21.3	11.4	12.2
Exports of goods and services	17.1	8.4	13.9	7.6	8.4	9.8	13.0	10.5
Imports of goods and services	11.8	16.0	22.1	17.2	17.4	17.2	18.7	18.0
Contribution to GDP growth in percentage points								
Domestic demand	4.3	8.8	12.9	9.1	6.7	8.2	11.0	12.7
Net exports	0.9	-3.6	-4.5	-5.0	-4.3	-3.9	-4.1	-4.9
Year-on-year change of the period average in %								
Labor productivity of industry (real)	5.4	5.2	7.1	4.4	2.8	6.5	8.8	13.6
Gross average wage of industry (nominal)	23.6	19.5	23.0	16.8	17.0	18.1	16.6	14.3
Unit labor cost of industry (nominal)	17.2	13.6	14.8	11.9	13.9	10.9	7.2	0.6
Producer price index (PPI) of industry	23.2	19.6	19.1	10.8	9.0	9.1	11.2	11.9
Consumer price index (here: HICP)	22.5	15.3	11.9	9.1	9.0	8.5	8.7	7.2
EUR per 1 RON, + = RON appreciation	-16.8	-16.8	-7.3	11.8	16.3	9.5	4.0	2.9
Period average levels								
Unemployment rate (ILO definition, %, 15-64 years)	9.1	7.5	8.5	7.5	6.5	7.2	8.1	7.4
Employment rate (15-64 years)	57.6	57.6	57.7	57.6	57.8	57.2	57.2	59.6
Key interest rate per annum (%)	29.6	18.8	20.4	10.0	8.0	7.7	7.7	8.5
RON per 1 EUR	3.1	3.8	4.1	3.6	3.5	3.6	3.6	3.5
Nominal year-on-year change of the period average stock in %								
Broad money (including foreign currency deposits)	40.9	31.2	31.5	41.9	41.6	40.5	32.8	27.8
Contributions to the year-on-year change of broad money in percentage points								
Net foreign assets of the banking system	31.8	15.5	12.9	21.1	18.4	20.8	14.9	9.5
Domestic credit of the banking system of which:	18.7	23.9	26.0	17.1	16.5	22.6	27.6	29.4
<i>claims on the private sector</i>	24.1	28.2	32.2	26.7	26.6	31.1	31.8	34.6
<i>claims on households</i>	..	10.0	13.1	13.2	14.3	16.3	15.9	17.7
<i>claims on enterprises</i>	..	18.2	19.1	13.5	12.3	14.8	15.8	16.9
<i>claims on the public sector (net)</i>	-5.3	-4.3	-6.2	-9.5	-10.1	-8.4	-4.1	-5.2
Other domestic assets (net) of the banking system	-9.6	-8.3	-7.4	3.7	6.7	-2.9	-9.8	-11.1
% of GDP, ESA 95								
General government revenues	37.6	36.6	36.8	36.7				
General government expenditures	39.6	38.1	38.3	38.2				
General government balance	-2.0	-1.5	-1.5	-1.5				
Primary balance	0.5	0.2	0.0	-0.3				
Gross public debt	25.0	21.5	18.8	15.9				
EUR million, period total								
Merchandise exports	14,644	15,614	18,935	22,255	5,939.0	5,789.0	6,215.0	6,453.0
Merchandise imports	17,392	19,569	24,258	30,062	7,686.0	8,771.0	7,915.0	9,138.0
% of GDP, period total								
Trade balance	-5.7	-7.6	-8.7	-9.8	-7.8	-11.6	-9.9	-12.4
Services balance	0.0	0.1	-0.3	-0.5	0.1	-0.8	0.1	0.4
Income balance (factor services balance)	-1.0	-1.2	-4.2	-2.9	-3.1	-1.4	-3.7	-3.7
Current transfers	3.4	3.1	4.9	4.6	4.1	4.1	4.2	3.9
Current account balance	-3.4	-5.5	-8.4	-8.6	-6.7	-9.7	-9.3	-12.0
Capital account balance	0.2	0.4	0.8	0.7	0.5	1.0	0.7	-2.5
Foreign direct investment (net)	2.5	3.1	8.4	6.7	6.7	6.6	10.3	6.8
EUR million, end of period								
Gross external debt	15,417	16,311	18,120	24,474	22,982	24,474	24,717	25,226
Gross official reserves (excluding gold)	5,877	6,374	10,848	16,796	16,647	16,796	18,146	18,176
Months of imports of goods and services								
Gross official reserves (excluding gold)	3.6	3.4	4.8	5.9	5.7	5.0	6.0	5.2
Memorandum item								
EUR million, period total								
Gross domestic product in current prices	47,970	52,246	60,892	79,465	22,362	25,811	17,126	21,572

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

requirement on leu credits from 16% to 20% in June 2006. Although credit growth has started from a low base, it warrants close monitoring, in particular in the light of external imbalances and the risks of foreign-currency borrowing by unhedged households.

The Romanian government increased its budget deficit target for 2006 in two successive steps from 0.5% to 2.5% of GDP. The increased deficit is due to additional spending, mainly for infrastructure investments. Some 15% of additional spending, though, is devoted to the payrolls of teachers and government officials, pensions and heating allowances. As the budget shows a surplus of 1.6% of GDP for the first eight months of 2006, a spending spree for the remainder of 2006 would seem to be in the offing. Further absorption of EU structural funds, EU budget contributions and higher investment expenditure will, according to the draft budget of the Romanian government, lead to a further deterioration of the budget deficit to 2.8% of GDP in 2007. This is at odds with the recommendations of the IMF, which has urged Romania to target a balanced budget in 2006 and small budgetary surpluses over the medium run. In the present setting of brisk GDP growth and a widening current account deficit, the announced fiscal stimulus appears to be procyclical and will make the preservation of macroeconomic stability more difficult.

Untimely fiscal easing could aggravate external imbalances

9 Croatia: Stabilizing Inflation and Foreign Debt

Annualized GDP growth accelerated slightly from 4.3% in 2005 to 4.8% in the first half of 2006. In more detail, robust 6.0% year-on-year growth in the first quarter of 2006 moderated to 3.6% (year on year) in the second quarter. This considerable volatility in real GDP growth is the result of large volatility in all but one of its components: public consumption remained largely flat throughout the first half of 2006. By contrast, the year-on-year growth of private consumption and gross fixed capital formation dropped despite the continuously strong growth of credit to households and nonbank corporations. Nevertheless, investment continued to expand dynamically. The previously markedly negative growth contribution of net exports declined from -4.1 to -0.4 percentage points. Notwithstanding greater economic volatility and the slowdown in real GDP growth during the first half of 2006, the rate of (registered) unemployment fell continuously from 18.3% in January to 15.7% in August 2006. Although unemployment is still high in an international comparison, Croatia last saw such a relatively low level in 1996.

Growth picks up despite most recent slowdown

The IMF has recently finished its third review of the Stand-By Arrangement provided to Croatia until November 15, 2006, with an overall positive assessment of Croatia's economic development. The IMF acknowledged the efforts to stabilize external debt, achieve fiscal consolidation and implement structural reforms. However, it also criticized slow privatization advances (shipyard restructuring, sale of the telecommunication and oil companies).

Conclusion of the third review of the Stand-By Arrangement

The target for the general government deficit was set at 3.2% of GDP in 2006. In July 2006, the authorities passed an even more ambitious supplementary budget aiming at a 3.0% deficit. The 0.2 percentage point decrease is to be achieved by cutting investment. At the same time, both revenues and current expenditures are expected to rise by 0.5% each.

Consolidation of public finances under way

Foreign debt seems to be stabilizing

Gross foreign debt continued to increase in 2006 and reached a new record high of EUR 27.5 billion (84.6% of GDP) in the second quarter of 2006 as a result of a rise of the private sector's gross (and net) foreign indebtedness. At the same time, gross public foreign debt declined substantially over the year to June 2006, apparently because government shifted from euro bonds issued abroad to domestic euro bonds bought by domestic banks, which in turn finance themselves abroad. The latest totals released by the central bank in September show that gross foreign debt contracted to EUR 26.8 billion in August. Although the gross external indebtedness of the nonfinancial corporate sector still seems to be on the rise, public foreign debt stayed flat and bank debt decreased in August 2006.

To contain further foreign borrowing by banks, the central bank closed a loophole that had enabled commercial banks to bypass the minimum required amount of foreign currency claims as a proportion of foreign currency liabilities: Given that foreign exchange-indexed kuna deposits mostly represent liabilities to foreign depositors and could be used to finance kuna loans, foreign exchange-indexed kuna deposits now – as of October 2, 2006 – have to be included in the base of foreign currency liabilities for the 32% coverage of banks' foreign currency liabilities by corresponding liquid claims.

The current account deficit stood at 20.5% as of GDP in the first half of the year, primarily because of the massive trade deficit (26.2%), which is compensated by net exports of services during the summer months. Net foreign direct investment reached 6.9% of GDP in June and partially finances the large current account deficits, whereas other investments cover most of the remaining deficit.

Seasonal exchange rate movements and foreign exchange interventions

Owing to tourism, the usual seasonal pattern characterized exchange rate movements also throughout 2006. The exchange rate vis-à-vis the euro appreciated by some 2.1% from January to July 2006 with a slight correction in March. Along the lines of its announced intervention strategy, the Croatian central bank sold kuna on the foreign exchange market at several occasions during this period in an attempt to slow the speed of appreciation. The appreciation trend reversed in mid-August, and the kuna depreciated by 2.7% in less than two months. In September, the central bank stepped in again, this time buying domestic currency. As a result, the kuna started to appreciate from end-September, which again triggered central bank kuna sales. Overall, the exchange rate recorded a slight depreciation of 0.13% between January 2 and October 16. The exchange rate fluctuated within an interval of 2.7% (weakest value over strongest value) over the same period.

Inflation subsides below 3% as energy prices drop and seasonal factors kick in

The marked acceleration of the year-on-year consumer price inflation to around 4% by the end of 2005 persisted until July 2006, when year-on-year growth gradually subsided to 3.4% in August and to 2.8% in September 2006. The fall in the inflation rate from 4.0% in July to 2.8% in September 2006 can be largely explained by a drop in goods inflation from 2.8% to 1.8%. In particular, two factors played a crucial role in lower goods prices. First, the prices of seasonal items passed their summer peak. Second, the drop in energy prices, in particular that of crude oil, seemed to have a quick effect both on fuels and lubricants for personal transport equipment and on household liquid and solid fuels.

Table 11

Main Economic Indicators: Croatia

	2002	2003	2004	2005	Q3 2005	Q4 2005	Q1 2006	Q2 2006
Year-on-year change of the period total in %								
GDP in constant prices	5.6	5.3	3.8	4.3	5.2	4.8	6.0	3.6
Private consumption	7.7	4.6	3.9	3.4	3.8	3.2	4.0	2.1
Public consumption	4.9	1.3	-0.3	0.8	1.0	1.4	1.0	1.8
Gross fixed capital formation	13.9	24.7	4.4	4.8	5.8	9.9	18.1	8.4
Exports of goods and services	1.2	11.4	5.4	4.6	4.9	4.9	14.0	5.2
Imports of goods and services	13.4	12.1	3.5	3.5	2.3	3.6	16.1	4.2
Contribution to GDP growth in percentage points								
Domestic demand	12.3	7.2	3.4	4.2	3.3	5.0	10.2	4.0
Net exports	-6.7	-1.8	0.4	0.1	1.9	-0.2	-4.1	-0.4
Year-on-year change of the period average in %								
Labor productivity of industry (real)	7.8	3.5	4.0	6.2	6.6	6.5	8.0	1.1
Gross average wage of industry (nominal)	6.9	5.4	5.5	5.3	5.4	5.4	7.2	7.3
Unit labor cost of industry (nominal)	-0.8	1.8	1.5	-0.8	-1.2	-1.1	-0.8	6.1
Producer price index (PPI) of industry	-0.5	1.9	3.6	3.1	2.0	2.3	3.5	3.7
Consumer price index (here: CPI)	1.7	1.8	2.1	3.4	3.5	4.0	3.5	3.8
EUR per 1 HRK, + = HRK appreciation	1.0	-2.1	1.0	1.3	0.3	2.3	2.3	0.9
Period average levels								
Unemployment rate (ILO definition, %, 15–64 years)	15.1	14.5	14.1	13.0	..	12.6	..	..
Employment rate (15–64 years)	53.4	53.4	54.7	55.0	..	55.2	..	..
Key interest rate per annum (%)	5.6	4.5	4.5	4.5	4.5	4.5	4.5	4.5
HRK per 1 EUR	7.4	7.6	7.5	7.4	7.4	7.4	7.3	7.3
Nominal year-on-year change of the period average stock in %								
Broad money (including foreign currency deposits)	32.4	11.3	8.3	9.5	9.9	10.3	9.9	12.6
Contributions to the year-on-year change of broad money in percentage points								
Net foreign assets of the banking system	9.8	-7.7	-0.5	-5.0	-6.0	-6.0	-6.8	-6.4
Domestic credit of the banking system	23.2	19.5	9.4	17.3	18.6	19.6	19.6	21.9
of which:								
claims on the private sector	21.5	17.7	10.1	13.2	13.6	15.4	17.6	21.3
claims on households	11.3	11.9	7.5	9.0	9.6	10.0	10.2	11.5
claims on enterprises	10.2	5.8	2.6	4.1	4.0	5.4	7.4	9.8
claims on the public sector (net)	1.7	1.8	-0.7	4.1	5.0	4.2	2.0	0.6
Other domestic assets (net) of the banking system	-0.5	-0.5	-0.7	-2.7	-2.7	-3.3	-3.0	-2.9
% of GDP, ESA 95								
General government revenues	49.6	46.4	46.2	47.5				
General government expenditures	53.7	50.9	51.2	51.4				
General government balance	-4.1	-4.5	-5.0	-3.9				
Primary balance	-2.0	-2.5	-2.9	-1.6				
Gross public debt	40.1	40.9	43.7	44.2				
EUR million, period total								
Merchandise exports	5,293	5,572	6,603	7,217	1,848.1	1,979.6	2,002.9	1,970.4
Merchandise imports	11,254	12,546	13,331	14,738	3,720.2	3,949.5	3,865.1	4,313.1
% of GDP, period total								
Trade balance	-24.4	-26.6	-23.7	-24.3	-21.8	-25.2	-24.4	-27.8
Services balance	13.4	18.8	16.8	17.2	46.2	2.8	-0.6	15.6
Income balance (factor services balance)	-2.3	-4.1	-2.2	-3.1	-1.5	-0.6	-5.2	-6.2
Current transfers	4.7	4.7	4.2	3.8	3.1	3.7	3.8	3.4
Current account balance	-8.6	-7.1	-4.9	-6.4	26.0	-19.3	-26.4	-15.1
Capital account balance	2.1	0.3	0.1	0.2	0.0	0.5	-0.0	0.0
Foreign direct investment (net)	2.4	6.4	2.5	3.9	3.8	0.9	4.3	9.2
EUR million, end of period								
Gross external debt	15,055	19,811	22,781	25,541	24,107	25,541	26,469	27,458
Gross official reserves (excluding gold)	5,651	6,554	6,436	7,438	6,999	7,438	8,089	8,744
Months of imports of goods and services								
Gross official reserves (excluding gold)	4.9	5.2	4.8	5.1	4.7	4.8	5.3	5.2
Memorandum item								
EUR million, period total								
Gross domestic product in current prices	24,456	26,221	28,405	30,959	8,593	7,826	7,631	8,412

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

Persistence of service price inflation

Notwithstanding the deceleration of overall inflation, service price inflation remained fairly persistent, as overall service price inflation grew 6.3% in September, up from 5.3% in July. For instance, house rents, services related to housing, medical and hospital services, package holidays and financial services exhibited double-digit inflation rates, and transport services and other services recorded high single-digit growth rates.

A majority of these increases was concentrated on services subject to some kind of regulation by public authorities and can be explained by the reform of the health care system and the attempt to close the gap to cost recovery levels of some public services. Rises in market-based service prices might be explained by a mixture of demand- and supply-side effects, possibly due to economic catching-up.

10 Turkey: Strong Economic Growth only Marginally Dampened by Financial Market Turbulences**Turbulences in financial markets reveal persisting macroeconomic vulnerabilities**

Unsettled conditions in global financial markets in May and June 2006 considerably dampened exchange rates and equity prices in Turkey and led to a substantial increase in the risk premium on Turkey's bond market. At 230 basis points, Turkish U.S.-dollar bond yield spreads are still about 50 basis points higher than before the recent correction, whereas spreads in other emerging markets are now close to the levels seen at end-April. Hence, the extent to which the country was affected by the global reduction in risk appetite – the downward correction in asset prices was stronger and the recovery slower than in other emerging markets – highlights Turkey's persisting macroeconomic vulnerabilities. These are above all Turkey's large and growing current account deficit, which is widely seen as unsustainable, a credit boom fueled by strong capital inflows, the country's relatively short history of sound macroeconomic policies, concerns about further progress with structural reforms as well as emerging political tensions within the country.

Somewhat slower but still robust economic performance

Real GDP growth (year on year) amounted to 7% in the first six months of 2006 and is expected to slow in the full year 2006, but to still remain robust between 5% and 6%. The composition of growth remained broadly the same as in 2005. The main contributors on the demand side were consumption (7.7 percentage points) and gross capital formation (3 percentage points). Conversely, net exports reduced growth by 3.1 percentage points. On the supply side, industrial output and construction were the driving factors of growth. The unemployment rate remains high at above 10% due to significant disincentives to formal sector employment and a sharply increasing labor force potential.

Disinflation process suffered further setback in 2006, end-2006 target range out of reach

The disinflation trend observed over the past years started to slow in 2005 and reversed from the beginning of 2006 on. Inflation augmented unexpectedly in April 2006, rising to 8.8% year on year, increased further to 11.7% in July and was above 10% in August and September, mainly as a consequence of the quick pass-through of the depreciation of the Turkish lira in late spring by almost 30% vis-à-vis the euro. Against this background, Turkey will miss its 2006 end-year inflation target of 5% (± 2 percentage points) by a considerable margin. The IMF forecasts end-2006 inflation of around 10%. Nevertheless, the central bank, Türkiye Cumhuriyet Merkez Bankası (TCMB), has retained

its medium-term inflation target of 4% (± 2 percentage points). Over the summer, inflation expectations rose substantially, and despite a recent small decline they are still significantly above the medium-term target. The TCMB faces the challenge of reestablishing credibility by convincing the public that the deviation from the inflation target is temporary and that inflation will soon return to the previously announced disinflation path.

Up to May 2006, the Turkish lira appreciated vis-à-vis the euro, mainly due to large capital inflows. This trend was interrupted by the above-mentioned sharp depreciation of the lira, which peaked at 2.13 TRL/EUR in June 2006. Most recently (in mid-October), the Turkish currency traded at 1.84 TRL/EUR. From the beginning of 2006 to the cutoff date, the Turkish lira declined by 17.7% against the euro. The TCMB reacted by abandoning its previous course of interest rate cuts and raised the short-term policy rate in various steps by a total of 425 basis points, pushing the short-term interest rate up to 17.50%. In May and June, the TCMB also intervened in the foreign exchange market to support the lira.

Turkey has undergone an impressive fiscal consolidation effort. It is supported by the IMF (the Stand-By Arrangement ends in May 2008), which has made it politically easier to sell the goal of achieving an annual primary fiscal surplus of 6.5% of GDP to the public and within the government. Moreover, it seems that this target will be met in 2006. The strategy of targeting a high primary surplus has been critical for reducing public debt, establishing confidence and supporting the disinflation objective of the TCMB. But a fixed primary surplus target may well constrain automatic stabilizers from operating. The relatively tight fiscal stance over the past years became less strict during the recent cyclical upswing because the actual primary balance was being targeted. To prevent this procyclicality, the government has announced that it would complement the annual primary balance target with an expenditure cap within the multiyear budgeting framework. The IMF has also played an important role in ensuring investor confidence by monitoring the Turkish fiscal accounts. In the first half of 2006, the general government balance thus registered a surplus of 0.5% of GDP. One of the largest fiscal risks has been social security, where projected deficit targets have been persistently breached. Large pension deficits are expected to continue even after the 2006 social security reform.

Turkey has a long history of current account deficits. A breakdown shows that high deficits in merchandise trade and net factor income are only partly offset by surpluses in the balance of services (from tourism) and net transfers. During the first half of 2006, the current account deficit widened further to 11% of GDP; no significant improvement is expected for the whole year 2006 despite the sizeable currency depreciation. The persistence of the gap may be attributed mainly to the increased price of energy imports in the first half of 2006 and declining tourism revenue. Approximately 5 percentage points of the current account deficit of 11% of GDP are financed by FDI inflows, the remainder by other investment. Although FDI inflows continue to expand rapidly and the proportion of short-term capital flows funding the current account has fallen, the spring turmoil on financial markets fully exposed the risks of financing deficits by non-FDI inflows. The main impetus behind the

Strong appreciation of the Turkish lira followed by a sharp decline

Fiscal policies still on track, but further progress in structural reforms needed

Current account deficit widens despite sizeable depreciation and is largely financed by rapidly expanding FDI inflows

Table 12

Main Economic Indicators: Turkey								
	2002	2003	2004	2005	Q3 2005	Q4 2005	Q1 2006	Q2 2006
Year-on-year change of the period total in %								
GDP in constant prices	7.9	5.8	8.9	7.4	7.7	9.5	6.5	7.5
Private consumption	2.1	6.6	10.1	8.8	10.4	16.7	8.6	10.1
Public consumption	5.4	-2.5	0.5	2.4	3.2	0.0	8.1	18.1
Gross fixed capital formation	-1.1	10.0	32.4	24.0	30.7	33.0	30.7	10.9
Exports of goods and services	11.1	16.0	12.5	8.5	3.9	10.9	3.5	4.4
Imports of goods and services	15.8	27.1	24.7	11.5	11.2	15.3	8.2	10.1
Contribution to GDP growth in percentage points								
Domestic demand	8.8	8.9	13.9	9.1	10.3	11.9	9.4	11.2
Net exports	-0.9	-3.0	-4.6	-1.7	-2.4	-2.3	-2.7	-3.4
Year-on-year change of the period average in %								
Labor productivity of industry (real)	8.5	7.1	7.5	6.0	6.1	8.4	4.6	10.9
Gross average wage of industry (nominal)	37.6	23.1	13.4	12.2	12.5	11.4	10.6	11.5
Unit labor cost of industry (nominal)	26.8	15.0	5.5	5.9	6.1	2.8	5.7	0.5
Producer price index (PPI) of industry	50.1	25.6	14.6	6.0	4.3	2.3	4.9	8.4
Consumer price index (here: HICP)	47.0	25.6	10.1	8.1	7.8	7.3	7.6	9.2
EUR per 1 TRY, + = TRY appreciation	-23.2	-15.4	-4.5	5.9	10.4	16.0	8.6	-6.9
Period average levels								
Unemployment rate (ILO definition, %, 15-64 years)	10.4	10.5	10.3	9.8	9.2	9.2	11.9	8.8
Employment rate (15-64 years)	44.7	43.5	43.6	43.9	44.8	44.8	40.1	44.3
Key interest rate per annum (%)	49.6	36.1	21.9	14.8	14.3	13.8	13.5	14.0
TRY per 1 EUR	1.4	1.7	1.8	1.7	1.6	1.6	1.6	1.8
Nominal year-on-year change of the period average stock in %								
Broad money (including foreign currency deposits)	43.1	16.5	24.1	20.6	21.1	21.6	26.8	31.0
Contributions to the year-on-year change of broad money in percentage points								
Net foreign assets of the banking system	-6.9	-1.8	2.2	6.4	7.2	7.7	11.2	12.1
Domestic credit of the banking system	55.9	24.8	28.7	20.5	20.6	18.4	20.4	23.5
of which:								
<i>claims on the private sector</i>	2.1	9.4	19.1	18.8	18.4	18.8	20.9	23.9
<i>claims on households</i>	0.1	3.1	8.0	8.7	8.7	9.4	10.3	11.4
<i>claims on enterprises</i>	2.0	6.3	11.1	10.2	9.7	9.4	10.7	12.6
<i>claims on the public sector (net)</i>	53.8	15.5	9.6	1.7	2.2	-0.4	-0.5	-0.4
Other domestic assets (net) of the banking system	-5.9	-6.5	-6.9	-6.3	-6.7	-4.5	-4.9	-4.6
% of GDP, ESA 95								
General government revenues	25.9	24.4	31.2	36.9				
General government expenditures	38.8	35.7	36.9	38.1				
General government balance	-12.9	-11.3	-5.7	-1.2				
Primary balance	7.1	5.9	5.9	8.0				
Gross public debt	93.1	85.1	76.9	69.6				
EUR million, period total								
Merchandise exports	42,392	45,192	53,913	62,012	15,530.7	17,635.6	16,206.3	17,919.0
Merchandise imports	49,980	57,449	73,102	88,630	23,308.5	24,938.0	23,309.9	27,038.5
% of GDP, period total								
Trade balance	-4.0	-5.7	-8.0	-9.1	-8.5	-8.9	-10.6	-12.7
Services balance	4.3	4.3	4.3	3.9	6.9	2.4	1.4	2.7
Income balance (factor services balance)	-2.5	-2.3	-1.9	-1.6	-1.2	-1.4	-1.7	-1.8
Current transfers	1.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Current account balance	-0.9	-3.3	-5.2	-6.4	-2.4	-7.5	-10.5	-11.4
Capital account balance	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Foreign direct investment (net)	0.5	0.5	0.7	2.5	2.1	5.8	1.5	8.3
EUR million, end of period								
Gross external debt	124,052	114,739	119,082	145,018	..	145,018	153,649	152,298
Gross official reserves (excluding gold)	25,562	26,616	26,436	42,820	34,686	42,820	48,152	44,626
Months of imports of goods and services								
Gross official reserves (excluding gold)	5.4	5.0	3.9	5.2	4.0	4.6	5.7	4.6
Memorandum item								
EUR million, period total								
Gross domestic product in current prices	190,668	214,235	241,185	292,121	91,281	82,360	67,030	71,809

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

strong pickup in FDI flows is Turkey's EU accession process, which is perceived to improve the business climate in the years to come. A significant increase in the dynamics of structural reforms could accelerate Turkey's catching-up process and could facilitate the negotiation process with the EU.

The growth potential of the Turkish banking sector is attracting foreign banks: Two Greek private banks acquired large stakes of Tekfenbank and Finansbank. But the privatization of the large state-owned Turkish banks is not on track.

Amounting to almost 110% of GDP, Turkey's gross external debt is still high compared to that of other emerging market economies. In fact, the recent depreciation of the Turkish lira has reversed the trend of a declining ratio of external debt to GDP.

11 Russia: Continuing Brisk Growth

Domestic demand (notably private consumption as well as investment) remains the driving force of the Russian economy, while contracting net exports continue to act as a drag on growth. In January to July 2006, GDP was 6.7% higher than in the corresponding period of the previous year. Gross fixed capital formation expanded particularly strongly (+10.8% in the first seven months). However, some economic sectors, above all resource extraction and transportation, seem to have reached capacity constraints, and the energy sector is struggling with a rough business climate and particularly high taxation. Looking at the supply side, in January to August retail sales expanded by 12.1% (year on year), construction augmented by 10.1%, industrial production grew by 4.3%, and agriculture shrank slightly (-1%). Unemployment (labor force survey data) remained largely stable (7.2% in August 2006).

Notwithstanding the latest drop of oil prices in September 2006, Russia's terms of trade have continued to improve overall in recent months. This improvement and the sustained prudence of macroeconomic policies have kept Russia's twin surpluses very high. The current account surplus exceeded 13% of GDP in the first half of 2006, as high as in the first half of 2005. Net FDI inflows came to 1.7% of GDP, while net portfolio flows remained limited. These developments resulted in an increase of total reserves of 14.2 percentage points of GDP (see below). In the first three quarters of 2006, the current account surplus appears to have risen further. The federal budget surplus is fairly stable at an estimated 8.8% of GDP in January to August 2006. Despite this impressive level, IMF calculations suggest that the government's nonoil deficit has risen since 2004,¹⁹ which would point to a degree of fiscal relaxation recently. The government's budget plan for 2007, a year of parliamentary elections, was approved by the State Duma in first reading in September 2006. It is based on a less conservative oil price assumption (USD 61 per barrel of Urals grade crude) than previous budgets and aims at a surplus of 4.8% of GDP.

Foreign exchange reserves (including gold) reached a new record level of EUR 209.9 billion at end-September 2006 (which corresponds to over 16 months of goods and services imports). Russia's budgetary stabilization fund

Domestic demand remains driving force of economy, shrinking net exports detract from growth

Terms of trade improve further and twin surpluses remain very high

Foreign exchange reserves and the stabilization fund have reached new record levels

¹⁹ IMF Article IV projections as of October 2005 and June 2006.

Some nominal appreciation has helped trim still rather high inflation

more than doubled within a year to EUR 55.7 billion at end-September, which is quite remarkable given that the authorities had used this source to prepay the rest of the country's Paris Club debt (EUR 18.7 billion) in August. This early redemption was the largest such transaction so far on record.

The Central Bank of Russia (CBR) – whose main monetary policy instrument continue to be foreign exchange market interventions – has allowed the ruble to nominally appreciate by 4% against the U.S. dollar from end-March to end-September 2006, whereas the ruble's exchange rate against the euro has remained largely stable (–1%). This helped reduce the inflation rate modestly to below 10% year on year (9.5% in September 2006). Inflation has been declining despite rising capital inflows in the wake of the abolition of remaining (minor) capital controls and the introduction of full ruble convertibility on July 1, 2006. Accelerating money supply growth (M2 rose by 45% in August 2006 over the corresponding month of the previous year) was largely matched by increasing money demand, reverse currency substitution and further monetization of the economy. The volume of bank loans continued its robust expansion (+30% in real terms in July year on year), although it is still at a relatively modest level (around 28% of GDP at end-2005). Following market developments, the CBR has been cutting policy interest rates; it most recently reduced the refinancing rate – from 12% to 11.5% – at the end of June 2006. In the 6 months preceding the cutoff date, the real effective exchange rate of the ruble went up by 4%, in the 12 months to mid-October 2006, it rose by 10%. The ruble's unrelenting real appreciation seems to be putting the competitiveness of some manufacturing branches under pressure. Russia is showing some symptoms of the Dutch disease, although it does not (yet) appear to have fully contracted the illness.

Stock market capitalization is second to none in emerging markets; capital flight may have reversed

Notwithstanding macroeconomic and structural pressures, financial market exuberance has continued also at the Moscow stock exchange, whose capitalization reached a record level at end-August 2006 (around EUR 735 billion – slightly higher than Russia's expanding annual GDP). In absolute terms, this capitalization has thus outstripped that of any other emerging market stock exchange. Despite its expansion, the banking sector does not fully meet the financial needs of large resource-oriented Russian corporations, which have continued to take up funds abroad. While the state has been cutting its foreign liabilities, the private sector has become the country's main debtor. Russia's gross external debt is estimated to have declined to 30% of GDP at end-September 2006. Nonfinancial enterprises account for about half of this debt, credit institutions for about a quarter, and the authorities only for the remainder. According to CBR data, Russia's traditional net private sector capital outflows (which are also a measure of capital flight)²⁰ have lately been reversed and have turned into net capital inflows: While in 2004, net private sector capital outflows had still come to 1.4% of GDP, 2005 witnessed a slight inflow (0.2% of GDP), which multiplied in the first three quarters of 2006 (to around 4% of pro rata GDP). The expansion of private foreign liabilities may have contributed to this reversal.

²⁰ According to CBR methodology, the net outflow of private sector capital equals the net capital outflow of banks, nonfinancial corporations and households (including net errors and omissions of the balance of payments).

Table 13

Main Economic Indicators: Russia

	2002	2003	2004	2005	Q3 2005	Q4 2005	Q1 2006	Q2 2006
Year-on-year change of the period total in %								
GDP in constant prices	4.8	7.4	7.2	6.4	6.6	7.9	5.4	7.5
Private consumption	8.3	7.4	11.2	10.9	11.5	11.2	10.5	11.7
Public consumption	2.6	2.2	2.2	1.8	2.0	1.8	3.3	4.1
Gross fixed capital formation	2.8	12.8	11.3	10.5	10.2	12.3	5.7	13.6
Exports of goods and services	10.3	12.5	11.8	6.3	5.1	10.3	7.8	5.7
Imports of goods and services	14.6	17.7	22.0	17.3	19.4	18.6	25.7	19.1
Contribution to GDP growth in percentage points								
Domestic demand	4.1	6.6	8.3	8.3	9.4	9.1	8.5	9.9
Net exports	0.4	0.4	-1.0	-2.3	-3.3	-1.7	-3.9	-3.3
Year-on-year change of the period average in %								
Labor productivity of industry (real) ¹	7.0	16.5	14.0	7.3	7.1	7.5	6.9	10.2
Gross average wage of industry (nominal) ¹	27.2	25.4	5.2	21.5	21.0	22.9	20.2	20.7
Unit labor cost of industry (nominal) ¹	18.9	7.6	-7.7	13.2	12.9	14.3	12.5	9.5
Producer price index (PPI) of industry	11.7	15.6	24.0	20.7	20.6	16.2	14.8	12.7
Consumer price index (here: CPI)	16.0	13.6	11.0	12.5	12.5	11.2	10.8	9.6
EUR per 1 RUB, + = RUB appreciation	-11.9	-14.5	-3.1	1.7	2.5	8.1	7.9	3.6
Period average levels								
Unemployment rate (ILO definition)	8.0	8.6	8.2	7.6	7.3	7.5	7.9	7.5
Employment rate	..	..	..	..	..	..	..	..
Key interest rate per annum (%)	22.7	17.3	13.5	13.0	13.0	12.9	12.0	12.0
RUB per 1 EUR	29.6	34.7	35.8	35.2	34.8	34.2	33.8	34.2
Nominal year-on-year change of the period average stock in %								
Broad money (including foreign currency deposits)	31.2	39.2	35.5	33.9	35.8	36.8	35.0	36.1
Contributions to the year-on-year change of broad money in percentage points								
Net foreign assets of the banking system	19.8	21.3	22.4	34.0	34.2	32.4	30.2	33.1
Domestic credit of the banking system	30.4	29.6	17.6	0.4	1.4	5.8	9.3	10.9
of which:								
claims on the private sector	28.9	29.5	30.8	30.0	29.8	32.6	32.1	34.7
claims on households	..	..	..	..	..	..	..	..
claims on enterprises	..	..	..	..	..	..	..	..
claims on the public sector (net)	1.5	0.2	-13.2	-29.6	-28.4	-26.8	-22.8	-23.7
Other domestic assets (net) of the banking system	-19.1	-11.7	-4.5	-0.2	0.1	-1.3	-5.2	-8.6
% of GDP								
Federal government revenues	20.3	19.5	20.5	23.7				
Federal government expenditures	18.4	17.8	16.1	16.2				
Federal government balance	1.8	1.7	4.4	7.4				
Primary balance	3.9	3.4	5.6	8.4				
Gross public debt, general government	37.0	28.6	21.7	14.9				
EUR million, period total								
Merchandise exports	113,201	120,040	147,168	196,763	53,129.8	58,045.3	56,118.3	60,900.5
Merchandise imports	64,278	67,066	78,192	101,314	26,592.3	31,791.5	26,352.0	30,197.9
% of GDP, period total								
Trade balance	13.5	13.9	14.6	15.5	15.8	14.2	17.6	16.5
Services balance	-2.9	-2.5	-2.3	-2.0	-2.5	-1.8	-1.4	-1.5
Income balance (factor services balance)	-1.9	-3.0	-2.2	-2.5	-3.8	-2.3	-1.6	-3.5
Current transfers	-0.2	-0.1	-0.1	-0.1	-0.2	-0.2	-0.1	0.0
Current account balance	8.5	8.2	9.9	10.9	9.4	9.8	14.5	11.6
Capital account balance	-3.5	-0.2	-0.3	-1.7	-5.3	-0.3	0.0	0.0
Foreign direct investment (net)	-0.0	-0.4	0.3	0.2	1.9	-3.7	0.7	2.5
EUR million, end of period								
Gross external debt	143,746	148,489	159,163	222,719	189,171	222,719	226,950	226,225
Gross official reserves (excluding gold)	42,291	58,531	88,661	148,094	129,169	148,094	181,240	205,515
Months of imports of goods and services								
Gross official reserves (excluding gold)	5.7	7.7	10.1	13.3	10.6	10.9	16.2	15.8
Memorandum item								
EUR million, period total								
Gross domestic product in current prices	363,558	381,607	473,181	615,679	168,287	184,862	169,102	185,649

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

¹ Due to breaks in the time series, data are only indicative.

Russia's growth seems to have decoupled from the oil price

It is noteworthy that since 2004 Russia's economic growth – while impressive – has apparently no longer been able to keep pace with the steep rise of the oil price. Thus, Russian growth seems to have decoupled from the oil price. This may be due to emerging capacity bottlenecks, the challenging business climate, the rather modest investment ratio (about 18% of GDP), the rigorous siphoning off of demand by the stabilization fund (established in 2004), the prepayment of large amount of foreign debt (in 2005 and 2006) and some other factors. A substantial and sustained fall of the oil price would reveal whether Russia could resort to a path of nonoil-dependent – but still robust – economic expansion or not.

Cutoff date for data: October 27, 2006.

STUDIES

Bank Intermediation in Southeastern Europe: Depth and Structure

Peter Backé
and Zoltan Walko¹

This short study examines similarities and differences in the depth and structure of bank intermediation in Southeastern European (SEE) countries. In the process, we also analyze to what extent the patterns of bank intermediation in SEE countries are already similar to those observed in the new EU Member States of Central and Eastern Europe. Overall, it turns out that the depth, structure and quality of bank intermediation has advanced considerably in all SEE countries. At the same time, the development in the individual SEE countries is far from uniform. In some countries, bank intermediation is already similar to, or approaching the levels observed in, the new Member States, while in others, it is at an earlier stage, notwithstanding major progress in recent years.

1 Introduction

In recent years, financial intermediation by banks has changed rapidly and substantially in Central and Eastern Europe (CEE), in terms of both depth and structure. This study examines to what extent this transformation of bank intermediation has already spread beyond these new EU Member States to the acceding, candidate and potential candidate countries of Southeastern Europe (SEE). The study focuses on Bulgaria and Romania (EU acceding countries), Croatia and the Republic of Macedonia (EU candidate countries) as well as Albania, Bosnia and Herzegovina, and Serbia (potential EU candidate countries).² The present analysis focuses on developments in the first half of the current decade (2000–2001 to 2005). As for the general lines of banking sector transformation, we chose a somewhat longer time frame, starting from the 1990s, so as to put developments into perspective.³

This article is structured as follows. Section 2 sketches the stylized features of bank intermediation in the new EU Member States of Central and Eastern Europe (CEE-8). This group of countries thus serves as a benchmark against which developments in SEE countries are assessed. Section 3 examines banking sector transformation and changes in the depth and structure of bank intermediation in Southeastern Europe. Our analysis is based on a set of key structural and prudential indicators as well as on banking sector asset and liability data. The quality of supervision and regulation is indirectly covered by our presentation of transition indicators created by the European Bank for Reconstruction and Development (EBRD). We also make selective references to stress testing, depending on the accessibility of up-to-date information. However, we do not examine market-based data, such as stock prices or credit

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² The authors take note of the recent separation of Serbia and Montenegro into two independent states. This study draws on statistical data published by Narodna banka Srbije which refer to banks operating in Serbia. Montenegro is not covered separately, as it was not yet independent during the period under review. Turkey is not covered, as this study focuses on countries that have undergone a transition process from a planned to a market economy (for a recent study on banking sectors that includes Turkey, see Backé, Reininger and Walko, 2006).

³ There are only very few studies on bank intermediation which cover the whole SEE region and include, in particular, also the potential candidate countries. A notable exception is Bruckbauer, Perrin and Gardo (2005).

ratings, as this would go beyond the scope of our analysis. The main findings are summarized in section 4.

One of our main aims is to keep the analysis short and concise. To achieve this aim, we mostly follow a cross-country (horizontal) approach that is synthesized, intentionally selective and, at times, generic. For example, when sketching the macroeconomic setting in which SEE banks operate, we restrict ourselves to a few pointers and stylized facts. However, there is no rule without an exception: The analysis of banking sector balance sheets is at the very core of our topic, and thus we explore it in greater detail than the other aspects. This focus is underlined by our presentation of both country-by-country and cross-country data for that particular part of the analysis.

2 General Stylized Features of Bank Intermediation in the CEE-8

The literature on bank intermediation in Central and Eastern Europe has grown fast in recent years.⁴ As for the new EU Member States, this literature conveys the following stylized facts: Financial sectors in the CEE-8 countries have remained predominantly bank-based, despite the development of nonbank financial intermediaries (mainly insurance companies, investment funds and leasing companies) in recent years. Banking sectors in the new Member States have undergone a comprehensive transformation process that included wide-ranging reforms of regulatory frameworks and supervisory arrangements, bank consolidation schemes and – in almost all countries – sweeping privatization, mainly to foreign strategic owners (mostly financial institutions based in “old” EU Member States). In the new CEE Member States, this process took place mostly in the second half of the 1990s, while in a few countries it stretched into the early 2000s. Bank governance has improved substantially, and banking sector performance and soundness have advanced considerably, too.⁵

A standard summary indicator for the transformation of the banking sector is the EBRD transition indicator on “banking reform and interest rate liberalization,” which captures mostly the quality of regulation and supervision as well as ownership structures, but also private sector access to finance. This indicator can take values between 1 and 4+, with the value 1 representing little progress in transition, and a value of 4+ meaning full convergence with the standards and performance typical of advanced industrial economies (the indicated scores refer to the state of affairs in fall 2005).⁶ Reflecting the thorough overhaul of banking sectors, the new Member States score high on this indicator (4– to 4, close to the top value of 4+). Only Slovenia is an exception, scoring 3+, which is presumably attributable mainly to the slow progress on privatization of the Slovenian banking system.

⁴ See e.g. ECB (2005a and 2005b); Coricelli, Mucci and Revoltella (2006); Hilbers, Otker-Robe and Pazarbaşıoğlu (2006); Backé and Zumer (2005); Barisitz (2005a); Bruckbauer et al. (2004); IMF (2005, 2006a).

⁵ Some standard prudential indicators for the CEE-8 countries are reported in section 3.

⁶ The EBRD transition indicators reflect the judgment of the EBRD’s Office of the Chief Economist about country-specific transition progress and capture progress in key transition areas; “banking reforms and interest rate liberalization” is one of these areas. For a more detailed account, see EBRD (2005).

Banking sector transformation has been an important element in the overall transition process, which encompasses macroeconomic stabilization, institution-building, structural reforms and the creation of new regulatory frameworks in all major policy areas. EU membership (and, before that, the prospect thereof) has been a key anchor for implementing this far-reaching agenda of systemic change. Successful transition has led to robust output growth, improved growth expectations, low or moderate inflation and – more recently – improved labor market conditions.

In the Central European Member States, in particular in the Czech Republic, Hungary, Poland and Slovenia, GDP growth has been broadly balanced in recent years, with sizeable contributions from both domestic and external demand, while in the Baltic countries, GDP growth has been mainly driven by domestic demand (both private consumption and fixed capital formation). In most CEE-8 countries, residential investment has been booming; aggregate domestic demand growth has been supported by a fast expansion of domestic lending by banks and most recently also by nonbank financial institutions. Credit growth to the private sector has been quite pronounced, with particularly high growth rates registered for credit to households (most notably mortgage loans). By contrast, credit to the public sector has remained steady or has even fallen. This fast credit growth in the new Member States set in at different points in time: While it started in the late 1990s in Estonia, Hungary, Latvia and Slovenia, it began in late 2001 in Lithuania and in 2004–2005 in the Czech Republic and Slovakia. Only in Poland have developments taken a somewhat different course: After experiencing a credit boom in the late 1990s that continued until 2000–2001, aggregate private sector credit growth has been rather anemic, as credit to the corporate sector has declined, while credit to households has (increasingly) picked up.

In the early stages of credit expansion, credit growth was typically financed domestically, i.e. by private sector (especially household) deposits, which increased dynamically as confidence in the banking sector reforms strengthened and real incomes grew. In the later stages, credit expansion was increasingly financed from abroad. As a consequence, banking sectors in most countries shifted from a net foreign asset to a net foreign liability position, which has become fairly large in some cases. Concomitantly, non-FDI capital inflows (often provided by foreign parent banks) have increased, complementing typically sizeable FDI inflows. In addition, the lending booms have often been associated with widening external imbalances, in particular in the Baltic countries and in Hungary. At the same time, the lending boom has bolstered banking sector profitability despite falling interest rates and narrowing interest rate margins, while banking sector stability indicators have so far remained broadly satisfactory or good.

3 Banking Sectors and Bank Intermediation in Southeastern Europe

3.1 Banking Sector Transformation

Where do the banking sectors in Southeastern Europe stand compared with the CEE-8? As the EBRD transition indicator on “banking reform and interest rate liberalization” shows, SEE countries have also advanced substantially in

terms of overall banking system transformation. However, in some countries there is certainly still some scope for further improvements of regulation, supervision, ownership transformation and access to finance. More specifically, Croatia and Bulgaria (with a 2006 score of 4 and 4–, respectively) are essentially at par with the CEE-8 countries in terms of overall banking sector reforms, while Romania (with a score of 3) lags behind somewhat. Given the ongoing progress of bank privatization in Romania, however, the country's 2007 score is presumably in for an upgrade.

Table 1

EBRD Transition Indicator on Banking Reform and Interest Rate Liberalization (1989–2006)

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Bulgaria	1	1	1	2–	2	2	2	2	3–	3–	3–	3	3	3+	3+	4–	4–	4–
Romania	1	1	1	1	1	2	3	3	3–	2+	3–	3–	3–	3–	3–	3	3	3
Croatia	1	1	1	1	2	3–	3–	3–	3–	3–	3	3+	3+	4–	4–	4	4	4
Republic of Macedonia	1	1	1	1	1+	2	3–	3–	3–	3–	3–	3–	3–	3–	3–	3–	3–	3–
Albania	1	1	1	1	1+	2	2	2	2	2	2	2+	2+	2+	2+	3–	3–	3–
Bosnia and Herzegovina	1	1	1	1	1	1	1	1	1	2+	2+	2+	2+	2+	2+	3–	3–	3–
Serbia and Montenegro	1	1	1	1	1	1	1	1	1	1	1	1	1	2+	2+	2+	3–	3–
CEE-8 (range)	1	1 to 2	1 to 2	1 to 3	2 to 3	2 to 3	3– to 3	3– to 3	3– to 4	3– to 4	3– to 4	3 to 4	3 to 4	3 to 4	3+ to 4	3+ to 4	3+ to 4	3+ to 4

Source: EBRD.

Note: For more details on this indicator and the values it can take see section 2.

The other SEE countries covered in this study – the Republic of Macedonia, Albania, Bosnia and Herzegovina, and Serbia – recorded a score of 3– in 2006. Interestingly, though, the Republic of Macedonia had reached this score already by 1995, while the other countries did so only in 2004 and 2005, respectively. To put the current state into perspective, it is instructive to adopt an intertemporal perspective: Back in the mid-1990s, the CEE-8 countries recorded EBRD transition scores of 3 (Slovakia: 3–) on “banking reform and interest rate liberalization.” Thus, it took them between four and twelve years to move up to scores of 4– and 4. For Bulgaria and Croatia, in turn, it took seven to eight years to move from 3– (the current score for the Republic of Macedonia, Albania, Bosnia and Herzegovina, and Serbia) to 4–.⁷

A closer look at ownership transformation in SEE banking sectors on the basis of EBRD data suggests that the basic pattern observed in almost all new Member States, namely privatization of large parts of the sectors to financial institutions, is also very characteristic of the SEE countries. In terms of time lines, we find that Croatia had privatized its banks by 2000, while privatization in Bulgaria took place mostly in the early 2000s and in Romania toward the middle of the current decade. In Albania, banking sectors had been privatized by 2004 and in Bosnia and Herzegovina by 2002, while privatization is advanced but still not fully completed in Serbia (which posted a state ownership share of 24% in 2005). The ownership figures for the Republic of Macedonia have shown a very low share of state ownership since the 1990s, which seems to be

⁷ The indicated time spans relate to the number of years between the first year in which a country recorded the lower score and the first year in which the country recorded the higher score.

attributable to the fact that socially owned banks were counted as nonstate banks.

As in the new Member States, banking sector transformation is a key element in the overall transition process of the SEE economies. This process has yielded fairly strong output growth in recent years that was mainly driven by domestic demand (both private consumption and fixed capital formation) and accompanied by external imbalances in most countries. Moreover, significant success has been achieved in disinflation across the region and in most countries also with respect to fiscal consolidation. The prospect of EU membership has strongly anchored the transition process in the acceding countries (Bulgaria and Romania). While the perspective of EU accession is still an incentive for the candidate countries (Croatia, Republic of Macedonia) and in the longer run also for the potential candidate countries (Albania, Bosnia and Herzegovina, Serbia, and now also Montenegro), the strength of this anchor certainly hinges on the degree of commitment to further enlargement by the EU.

3.2 Prudential Indicators and the Role of Foreign Currencies

A quick review of standard prudential indicators on capitalization, asset quality and profitability underscores that banking sector transformation in Southeastern Europe has promoted the sectors' soundness.

Chart 1 shows that capital adequacy ratios (CARs) have, in general, fallen somewhat in the first half of this decade, as bank capital rose less quickly than banks' risk-weighted assets. Nevertheless, CARs in the countries under observation remain at double-digit levels; they are higher than the CARs in the CEE-8 and certainly much higher than the Basel minimum threshold of 8%. When putting these figures into perspective, a note of caution is in order. First, if capital is overstated or risk-weighted assets are understated, published CARs may be more favorable than they are in reality.⁸ Second, regular stress testing (or at least the publication of stress test results) is not yet fully established in all SEE countries. Up-to-date information on stress tests by the IMF and/or national central banks is available for four SEE countries, namely Albania, Bulgaria, Romania and Serbia; relatively recent but partial information (released in mid-2005) is accessible for Bosnia and Herzegovina.⁹ For Bulgaria, the stress tests suggest that the banking system is well placed to absorb adverse shocks in the areas of credit as well as market risk. In the case of Romania, central bank stress tests suggest that the banking system is resilient to the direct impact of interest rate and exchange rate movements, while indirect exposures through loan portfolios are more difficult to assess.¹⁰ The stress tests performed in Albania indicate that the domestic banking sector is resilient to standard credit quality, exchange rate and interest rate shocks. For Serbia,

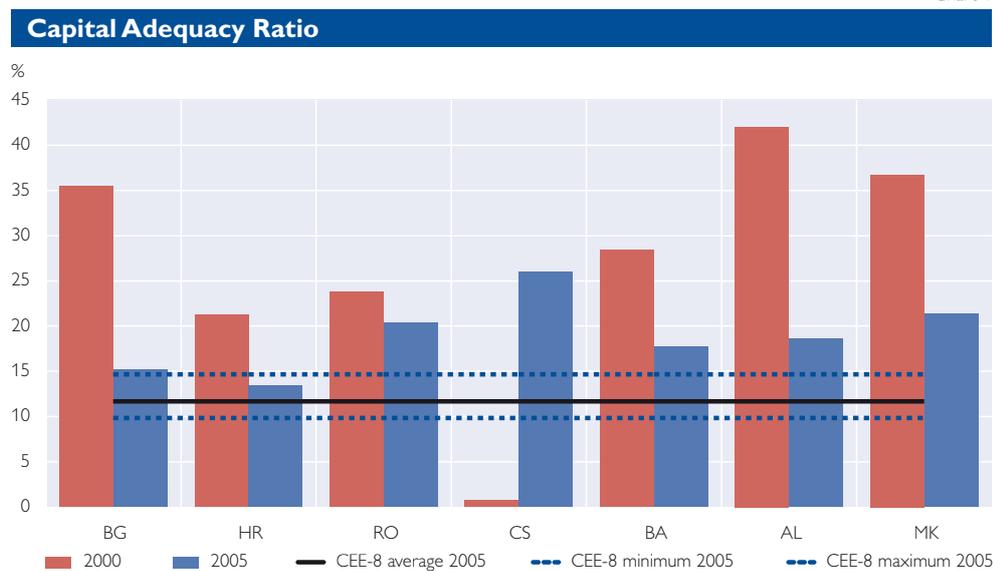
⁸ Risk-weighted assets may be understated due to inaccurate asset classification or insufficient risk provisioning by individual banks. This risk was explicitly pointed out in the Financial System Stability Assessments (FSSAs) for Serbia (IMF, 2006b) but may also be present to some extent in a few other SEE countries.

⁹ This paragraph draws from recent Article IV consultations and, in the cases of Albania and Serbia, from recent FSSAs. See IMF (2005, 2006a and 2006b). Another FSSA is currently being completed for Bosnia and Herzegovina, but it has not yet been published.

¹⁰ This indirect exposure of banks results from unhedged foreign exchange borrowing by nonbanks, which may become a source of debt servicing difficulties in the case of adverse exchange rate movements.

the available stress tests suggest that credit risk is the most significant risk for the country's banking system and a credit shock could lead to a material loss of bank capital. Banks also face indirect exposure to credit risk resulting from unhedged foreign exchange borrowing. Interest rate risk, in turn, is found to be rather low. However, the large state banks are vulnerable to a narrowing of interest rate margins. For Bosnia and Herzegovina, the stress tests undertaken in 2005 showed that the resilience of some banks to shocks to credit quality was not high.¹¹

Chart 1



Source: NCBs, ECB.

Note: BG: Bulgaria, HR: Croatia, RO: Romania, CS: Serbia, BA: Bosnia and Herzegovina, AL: Albania, MK: FYR Macedonia; CEE-8 represents the arithmetic average of data for Estonia, the Czech Republic, Latvia, Lithuania, Hungary, Poland, Slovakia and Slovenia.

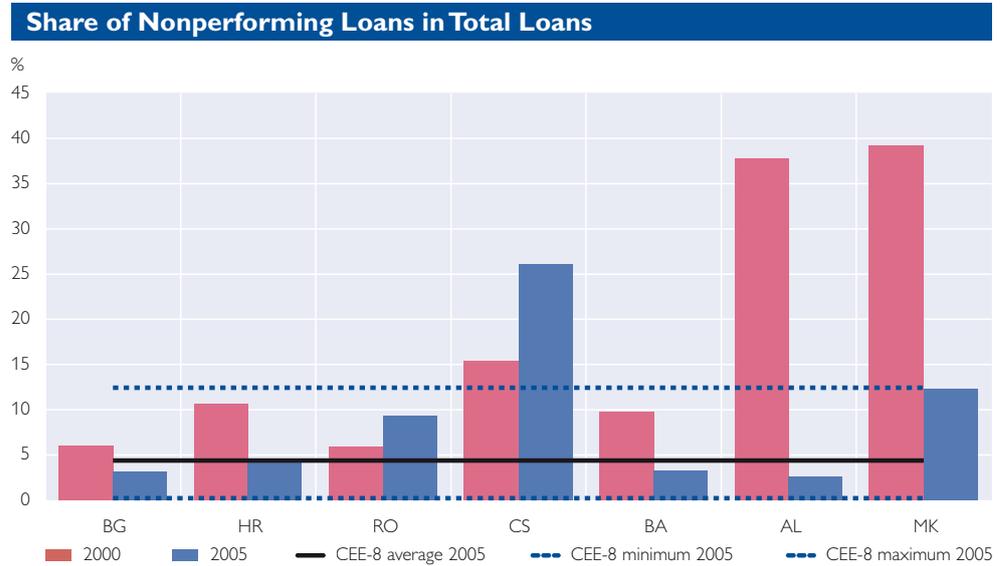
In most countries of the region, the share of nonperforming loans (NPLs) has fallen in the first half of this decade (see chart 2). Romania and Serbia are exceptions in this respect, with the share in Serbia being much higher than elsewhere in the region.¹² In both countries, the rise in the share of NPLs is attributable to the tightening of classification rules. Albania, Bosnia and Herzegovina, and the Republic of Macedonia have recorded substantial improvements in asset quality, with the latter country still recording a somewhat high NPL share. In the case of Albania and of Bosnia and Herzegovina, the main factor for the improvement of the NPL ratio was the cleaning of banks' balance sheets, while in the Republic of Macedonia changes in the methodology of asset classification also played an important role. In Bulgaria, Croatia, Albania, and Bosnia and Herzegovina, the NPL ratio was comparable with or lower than the average ratio in the CEE-8. At the same time, it should be borne in mind that NPL ratios are a lagging indicator that may be significantly biased downward in periods of credit booms (which cause the denominator of the ratio to rise rapidly, while the numerator increases only with a time lag as

¹¹ Public information on stress tests to assess market risk is not yet available for Bosnia and Herzegovina.

¹² Note that differences in classification rules across countries render exact comparisons difficult.

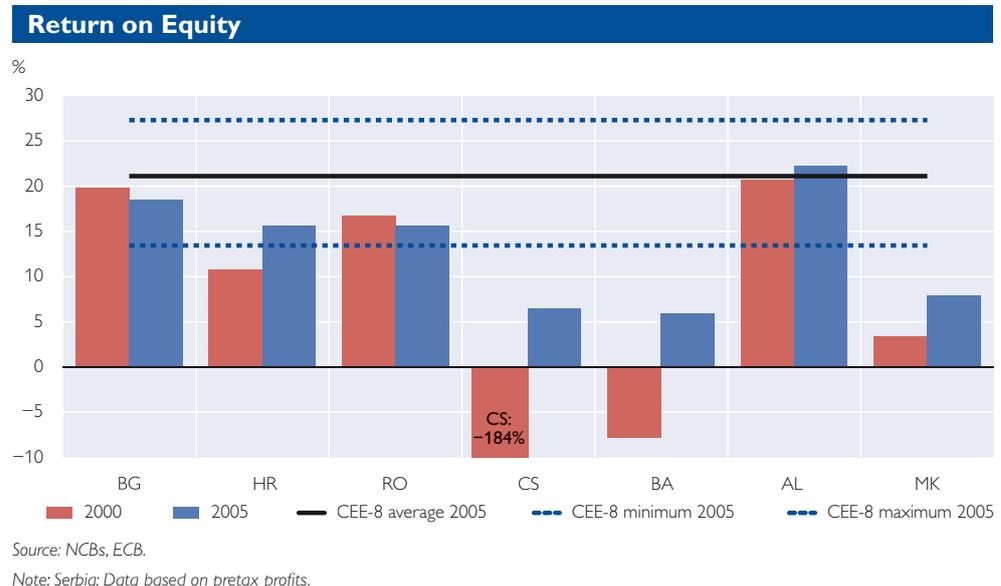
the credit portfolio matures). Similarly, a slowdown in lending activity and/or a deterioration in general macroeconomic conditions may lead to an increase in NPL ratios in the future.

Chart 2



In most SEE countries, bank profitability has improved substantially during the first half of the current decade – see the return on equity (ROE) figures in chart 3. Notwithstanding this improvement, the 2005 ROE levels in all SEE countries except Albania were below the CEE-8 average. While in Bulgaria, Croatia and Romania, ROE was above the minimum level of the CEE-8, profitability in the other three countries (Bosnia and Herzegovina, Serbia and

Chart 3



the Republic of Macedonia) was clearly lower but positive. This variation seems to be in part attributable to differences in asset quality, which means that the cost of risk provisioning weighed heavily on bank profits. Profitability in the SEE countries continues to be supported by relatively large interest rate margins, as suggested by the higher ratio of net interest income to average assets in the SEE region than in the CEE-8 countries. However, this advantage is eroded by higher operating costs (as a percentage of average assets) in the SEE countries, highlighting the need for further efforts to increase efficiency.

An important feature of bank intermediation in Southeastern Europe is the large role of foreign currencies both on banks' asset and liability sides. It goes without saying that this currency substitution involves risks. This is particularly true for foreign currency lending to unhedged borrowers, especially households. As pointed out above, the resulting foreign currency exposure of households and other borrowers increases banks' indirect foreign exchange risk and thus their credit risk. This clearly pertains to countries with flexible exchange rate regimes, while countries with fixed exchange rate arrangements are less exposed as long as such regimes remain credible.

Charts 4 and 5 illustrate the share of foreign currency loans in total loans to the private sector¹³ and the share of foreign currency deposits in total deposits to the private sector, respectively. The charts convey that currency substitution in Southeastern Europe has been persistent and in some cases has increased noticeably in recent years (foreign currency loans in Bulgaria, Albania and the Republic of Macedonia; foreign currency deposits in Albania, Serbia and in the Republic of Macedonia). Moreover, currency substitution has on the whole been higher in the SEE countries than in the CEE-8 countries. It is important to know that foreign currency-indexed instruments are in use in some, but not all, of the countries under observation. Such instruments exist in Croatia, Serbia, and Bosnia and Herzegovina, but not in Albania, Bulgaria, the Republic of Macedonia and Romania. In Croatia, Serbia, and Bosnia and Herzegovina, central banks do not publish time series that distinguish between local currency loans and foreign currency-indexed loans (the latter are registered as local currency loans). Thus, the loan data in chart 4 – including the indicated differences across countries and time – need to be interpreted with some caution.¹⁴ On the deposit side, indexation to foreign currencies is generally much less common.¹⁵

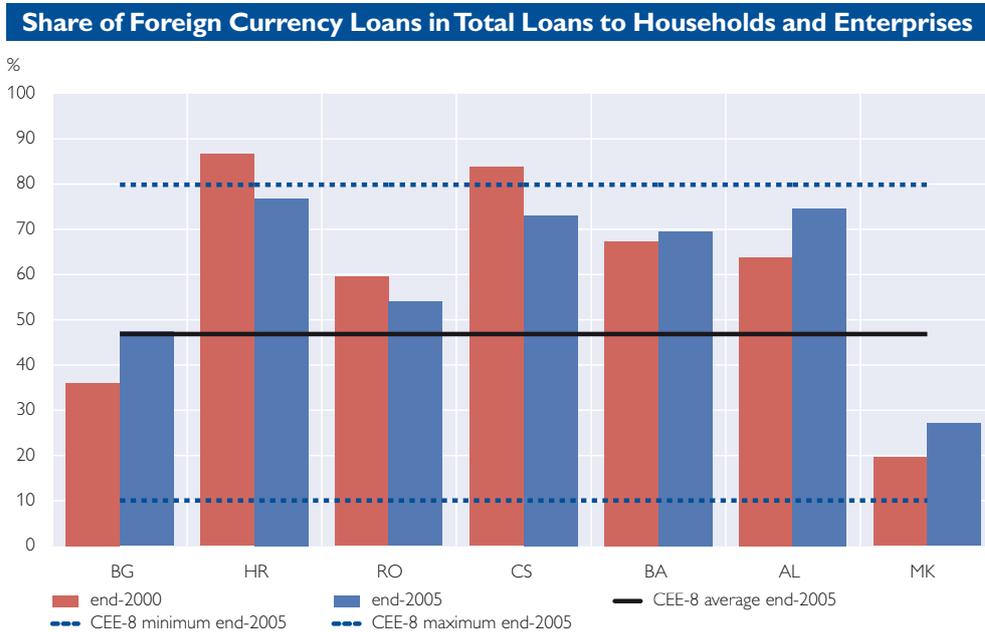
Overall, it turns out that the banking sectors in SEE are (1) well capitalized, but display different degrees of resilience to standard shocks (with results of stress tests being available for most, but not all, SEE countries), (2) profitable, though to different degrees, (3) fairly diverse in terms of asset quality, and (4) characterized by a rather high degree of currency substitution.

¹³ The private sector is defined here as the nongovernment nonbank sector, i.e. households, nonfinancial corporations and nonbank financial institutions.

¹⁴ This caveat is somewhat mitigated, but not fully resolved, when taking into account (as chart 4 does) data on indexed loans which the central banks of Croatia and of Bosnia and Herzegovina have kindly provided and which, for Serbia, were taken from IMF (2006b).

¹⁵ For the factors that drive currency substitution and for its implications, see ECB (2006a).

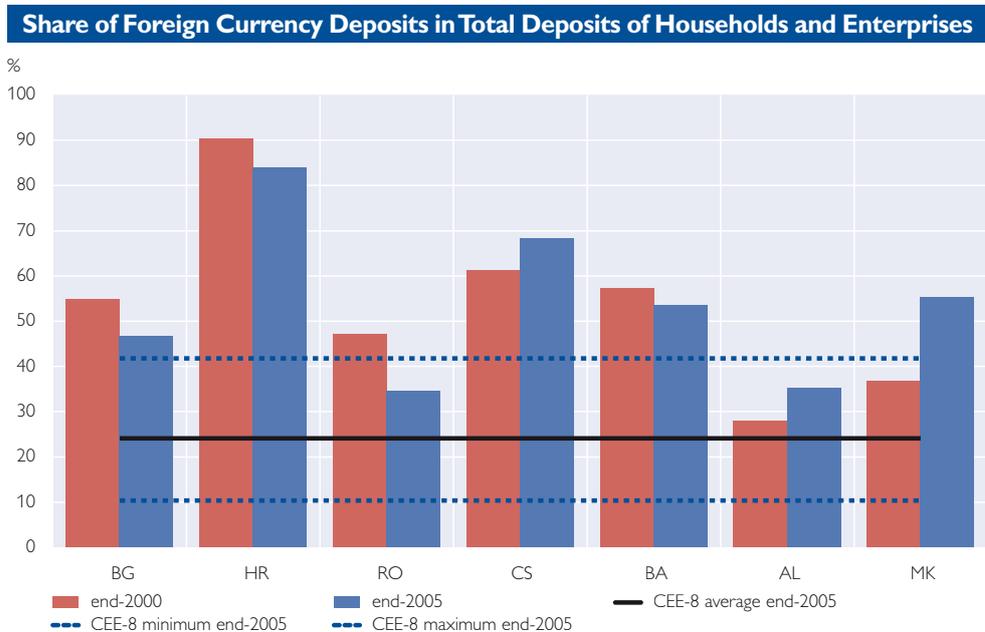
Chart 4



Source: NCBs, IMF, OeNB.

Note: Data including loans indexed to foreign currencies in Croatia. 2005 data for Serbia as at end-September 2005 and including loans indexed to foreign currencies. 2005 data for Bosnia and Herzegovina including loans indexed to foreign currencies to all sectors (as a disaggregation by sectors is not available for indexed loans).

Chart 5



Source: NCBs.

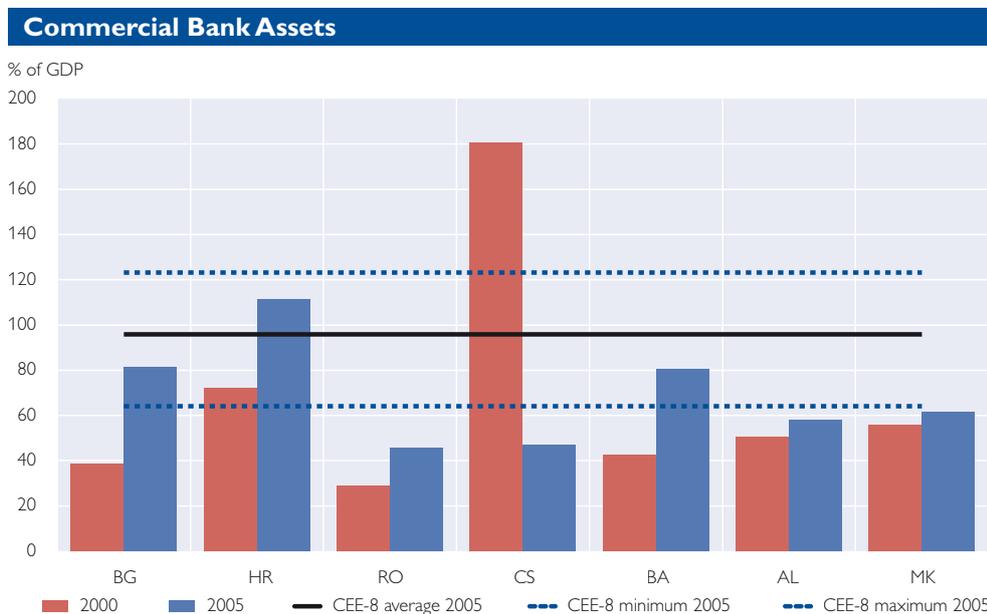
Note: Data for Croatia including deposits indexed to foreign currencies. 2000 data excluding Hungary and Slovakia.

3.3 Bank Intermediation: Developments in Individual Countries

Over the past few years, bank intermediation, expressed as bank assets in percent of GDP, has advanced in the SEE countries (see chart 6). Still, with the exception of Croatia (which posted around 110% of GDP at end-2005), the degree of intermediation ranges between 40% and 80% of GDP and is thus below the average level observed in the CEE-8 countries (around 93% of GDP). This is not surprising, given that the GDP-per-capita levels (in PPP) in the SEE countries (excluding Croatia) are roughly half of those of the new Member States: There is an empirical regularity that financial depth, e.g. measured by credit-to-GDP levels, increase with rising GDP-per-capita levels.¹⁶

During the first half of the decade, banking assets in Southeastern Europe have increased steadily and dynamically relative to GDP, in particular in Bulgaria, Croatia, and Bosnia and Herzegovina. In Albania, Serbia and the Republic of Macedonia, this process has been less even, and bank assets started to expand somewhat later (in Macedonia in 2003, in the other two countries in 2004), i.e. after bad loan write-offs had taken effect. A broadly similar picture emerges, if we consider the development of commercial bank credit to households and enterprises (i.e. to households, nonfinancial corporations and nonbank financial institutions) in percent of GDP, as documented in chart 7. It is noteworthy that in this segment already two countries – Croatia and Bosnia and Herzegovina – passed the respective CEE-8 average ratio in 2005.

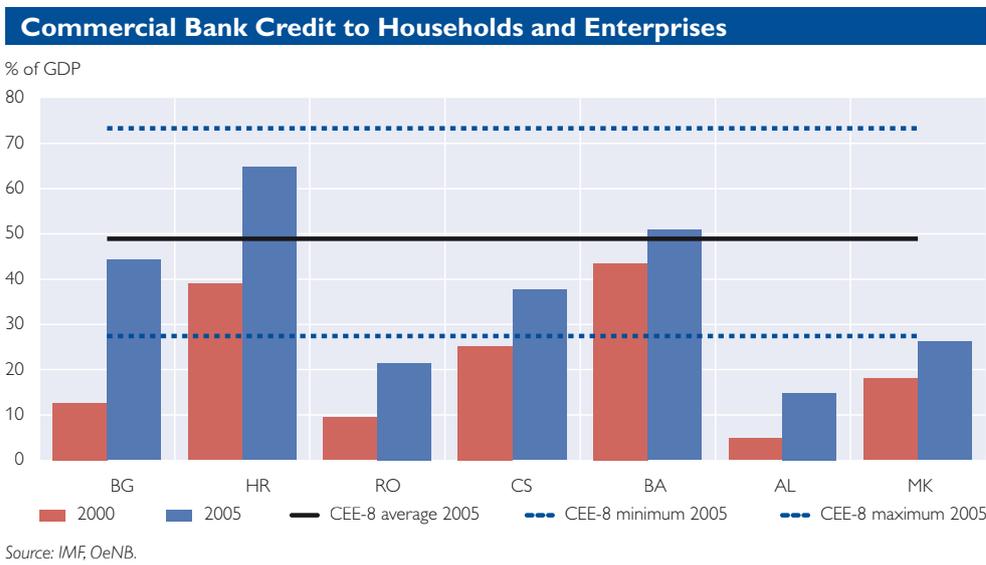
Chart 6



Source: NCBs.

¹⁶ This was first noted by Goldsmith (1969). For recent references, see Backé and Zumer (2005) or Arpa, Reiningger and Walko (2005).

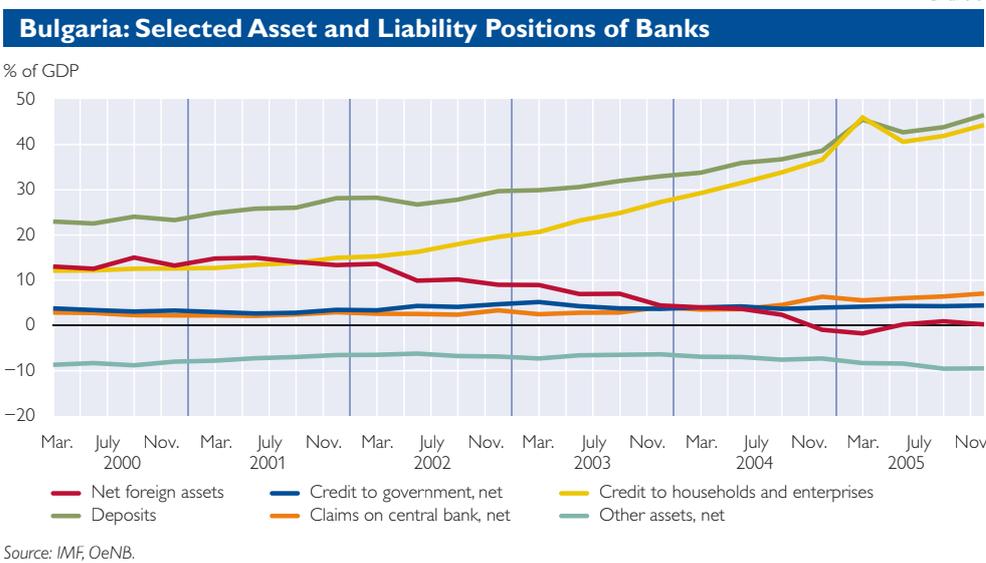
Chart 7



A more detailed examination of the development of the structure of bank assets on a country-by-country basis provides further interesting insights.

The analysis shows that developments in Bulgaria (see chart 8) and Croatia (see chart 9) conform to the stylized pattern drawn in section 2: Following an initial period in which deposit accumulation preceded and then kept pace with credit expansion, private sector credit started to grow increasingly faster than deposits. This phenomenon has been associated with a gradual decrease of net foreign assets in Bulgaria and a gradual increase of net foreign liabilities in Croatia. As regards Bulgaria, the spike in lending and, to a lesser extent, in deposits in March 2005 is noteworthy. It has to be seen in the context of a (preannounced) move by the central bank to introduce quarterly credit growth ceilings and additional mandatory reserves for commercial banks.

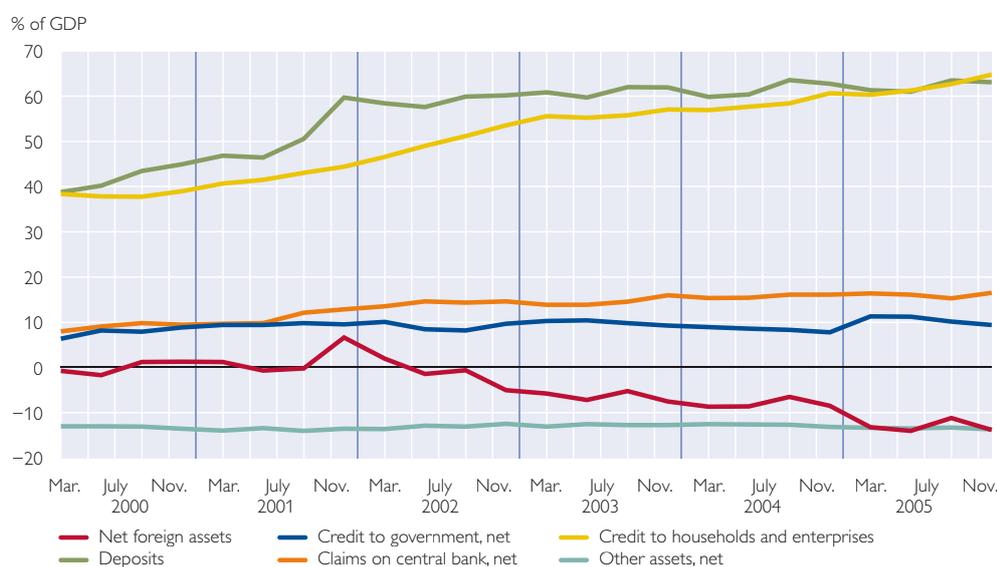
Chart 8



The new ceilings were to be calculated on the basis of the credit volume outstanding at end-March 2005, which prompted banks to frontload their lending activities so as to achieve a high base. In the case of Croatia, two other interesting aspects can be highlighted: First, deposits soared at the turn of 2001 to 2002 due to the euro cash changeover – a feature that is also observable in most other SEE countries. Second, net claims on the central bank have risen, which apparently reflects central bank measures to contain domestic lending and foreign borrowing by banks (via interest-free deposits that commercial banks have to hold at the central bank when they increase their foreign liabilities).

Chart 9

Croatia: Selected Asset and Liability Positions of Banks

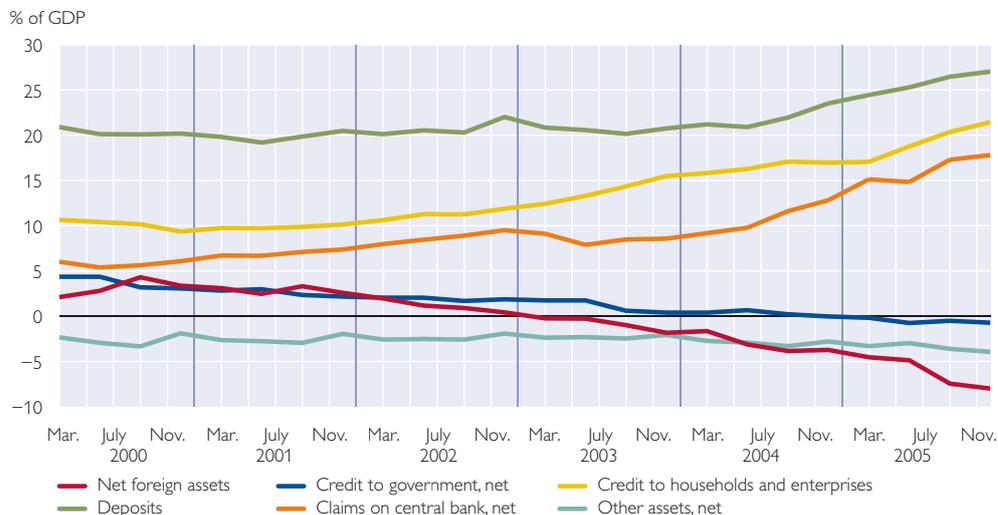


Source: IMF, OeNB.

Developments in Romania (see chart 10) differ to some extent from those in Bulgaria and Croatia. While credit has expanded dynamically, so have deposits. Still, net foreign assets have fallen noticeably, as in many CEE-8 countries. These developments seem to be associated with higher foreign capital inflows, attracted by sizeable interest rate differentials to the euro area. Net claims on the central bank increased considerably owing to substantial interventions by Banca Națională a României (NBR) to contain exchange rate appreciation (especially before the move to allow more exchange rate flexibility from November 2004 onward) and accompanying sterilization measures, alongside the tightening of reserve requirements by the central bank.¹⁷ To a lesser extent, a reduction in net credit to the government made room for the expansion of credit to the private sector.

¹⁷ See various recent NBR press releases (www.nbr.ro) as well as Neagu et al. (2006).

Romania: Selected Asset and Liability Positions of Banks

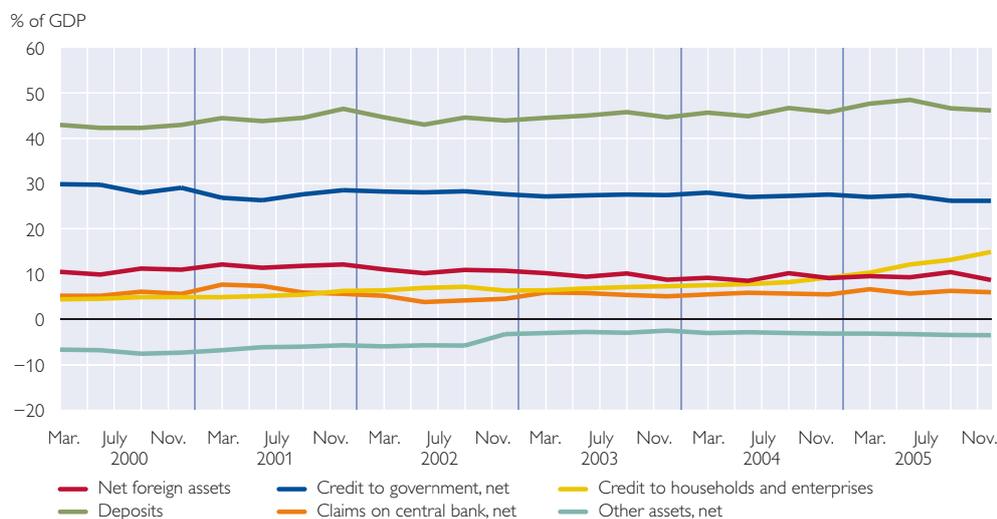


Source: IMF, OeNB.

Albania (see chart 11) is set apart from the other countries, as a large part of bank assets in this country consists of public sector credit. However, the growth of credit to the private sector started to pick up rapidly in 2005 (albeit from very low levels). This development has been financed almost completely by an increase in deposits and some decline in the public sector credit-to-GDP ratio, leading only to a very modest decline in net foreign assets. Thus, Albania does not (yet) seem to display the previously described stylized pattern of private sector credit growth that is financed to a considerable degree from abroad (for example by parent banks of foreign-owned subsidiaries). It remains to be seen to what extent banks will finance the further expansion of credit to the private sector by reducing their exposure to the government and to what extent they will, alternatively, revert to foreign sources of funding – a move that would not be surprising, given the very high (92% in 2005) share of foreign-owned banks in total banking sector assets.

Chart 11

Albania: Selected Asset and Liability Positions of Banks



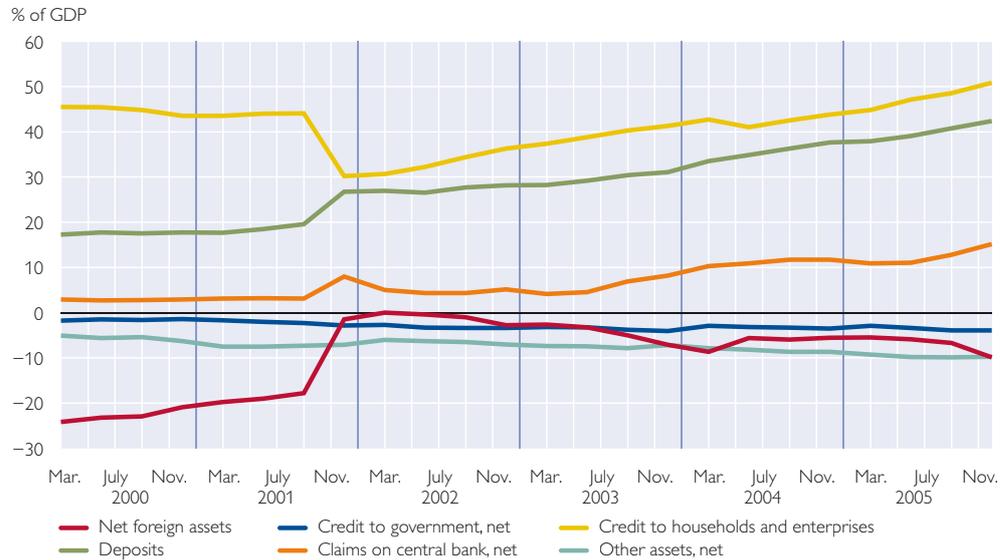
Source: IMF, OeNB.

Until late 2001, the private sector credit-to-GDP ratio in Bosnia and Herzegovina (see chart 12) was substantially higher than the deposits-to-GDP ratio. This fact was mainly offset by sizeable but gradually declining net foreign liabilities. At the end of 2001, substantial volumes of nonperforming loans were written off, thus reducing overall credit outstanding – a development which coincided with a surge in deposits due to the euro cash changeover.¹⁸ These two factors, in turn, basically equilibrated credit and deposit levels and reduced net foreign liabilities to very low levels. Since then, credit has grown only somewhat faster than deposits, which is, however, partly attributable to a temporary halt in aggregate credit growth in 2004, when further measures to clean banks’ balance sheets took effect. Net claims on the central bank have also risen noticeably since mid-2003 – a development that should be seen in the context of the repeated tightening of mandatory reserve regulations during this period, which the central bank undertook to dampen domestic lending activity. Net foreign liabilities have increased only more recently (fourth quarter of 2005).

¹⁸ It should be noted that the Central Bank of Bosnia and Herzegovina (CBBH) uses a data set that deviates, in some respects, from the IMF data used in this study. The differences mainly relate to the timing at which the write-offs entered the statistics. While the IMF recorded them as of end-2001, the CBBH did so at the actual time of the write-off. The break observed at end-2001 in the data displayed in chart 11 is thus attributable to the fact that the IMF recorded the write-offs at that point. While there are good reasons to use the CBBH data, in particular for economic analysis, we opted for the IMF data, mainly with a view to cross-country comparability.

Chart 12

Bosnia and Herzegovina: Selected Asset and Liability Positions of Banks

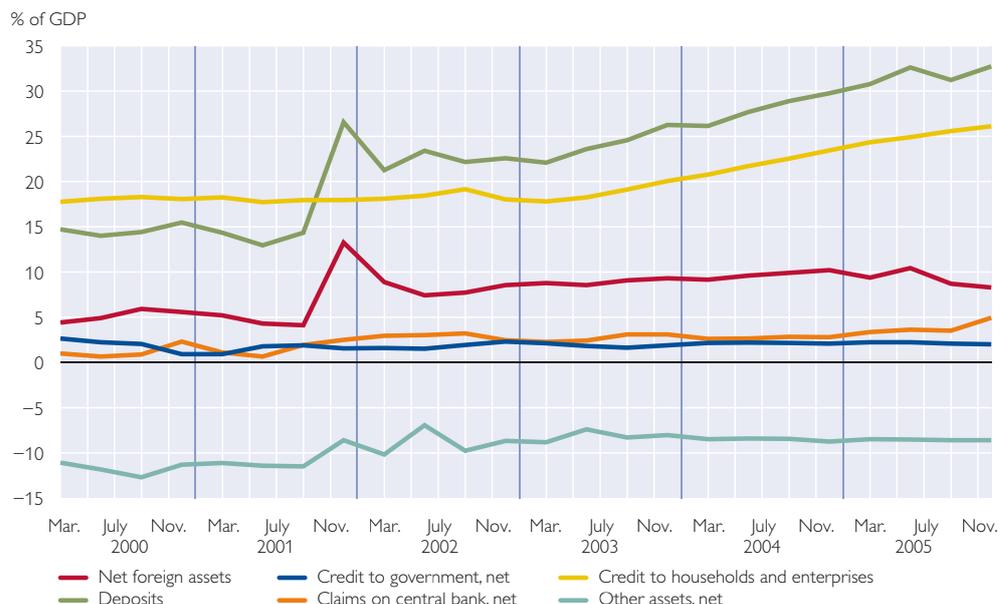


Source: IMF, OeNB.

In the Republic of Macedonia (see chart 13), the picture is again somewhat different. As in Bosnia and Herzegovina, the euro cash changeover caused deposits and net foreign assets to soar in late 2001. Since mid-2003, credit to the private sector – which had been at slightly below 20% of GDP for several years – has gradually risen (unlike credit to the government, which continues to stagnate). Deposits have also grown, starting in the second quarter of 2003,

Chart 13

Republic of Macedonia: Selected Asset and Liability Positions of Banks

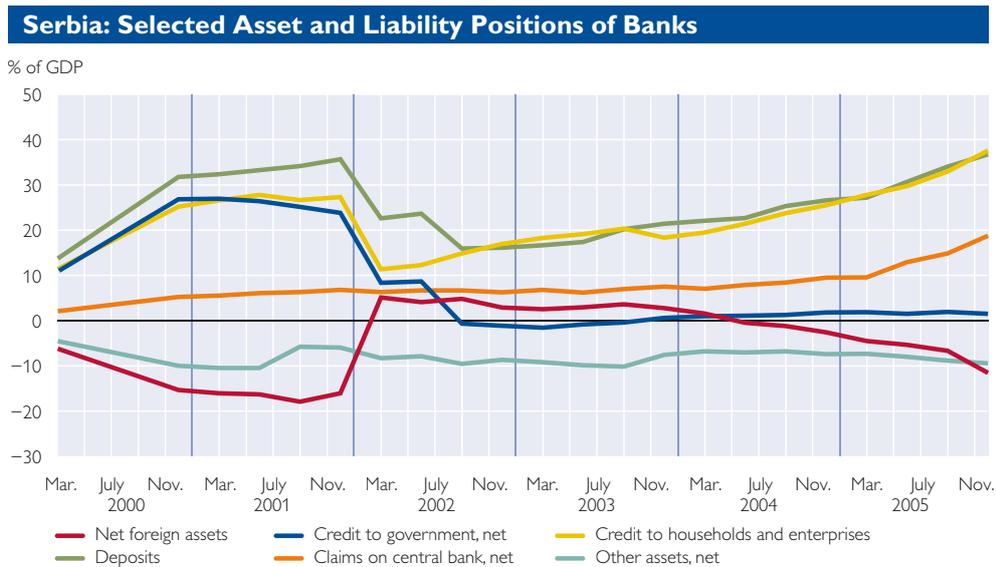


Source: IMF, OeNB.

broadly at similar rates as credit, thus leaving net foreign assets steady. Net claims on the central bank, which were also relatively stable between early 2002 and late 2005, rose noticeably only in the last quarter of 2005, reflecting a pick-up of sterilization activities in a setting of increased foreign exchange purchases by the central bank.

In Serbia (see chart 14), credit developments in the early 2000s have been dominated by sizeable bad loan write-offs, reducing the private sector credit-to-GDP ratio from nearly 30% at end-2001 to slightly more than 10% in March 2002. Net credit to the government fell from 24% to around 8% of GDP in the same period and had been practically eliminated by September 2002. The simultaneous decrease in the deposit-to-GDP ratio was attributable to the transfer of frozen foreign currency deposits from the balance sheet to off-balance sheet positions in the course of 2002. In the same period, banks' net foreign asset position improved considerably owing to the conversion of obligations toward the London and the Paris Clubs into bank shares. Since early 2002, credit to the private sector has risen again to almost 40% of GDP, whereas credit- and deposit-to-GDP levels have moved in tandem since late 2002. Net credit to the government has risen only very modestly since 2002. Net foreign assets started to decline in late 2003 and turned negative in mid-2004. Since then, net foreign liabilities have climbed to more than 10% of GDP, almost doubling in the last quarter of 2005. The development of net claims on the central bank roughly mirrors these changes: after rising very gradually until early 2005, net claims on the central bank surged in the last three quarters of 2005. Again, sterilization and increases in reserve requirements seem to explain this increase.

Chart 14



Source: IMF, OeNB.

3.4 Bank Intermediation: The Cross-Country Perspective

Overall, a relatively diverse picture emerges. Credit growth has been dynamic in all SEE countries, which compares to the trends observed in the new Member States. Lending dynamics have been particularly strong in Bulgaria and in Albania, where private sector credit-to-GDP ratios tripled in the first half of the decade, albeit starting from low, and in Albania very low, levels. On the other end of the spectrum, more moderate credit expansion was recorded in the Republic of Macedonia as well as in Bosnia and Herzegovina. Private sector credit growth in the SEE region began at different points in time, but generally later than in those new Member States where lending booms started back in the late 1990s.

The timing of the write-offs of bad loans has also had an impact on credit developments in some SEE countries; this impact was also observable in the CEE-8, but already mostly in the 1990s (only in the Czech Republic and in Slovakia did write-offs extend into the beginning of the current decade). In the SEE countries, sizeable write-offs were undertaken in Bosnia and Herzegovina and in Serbia in the early 2000s. In the other SEE countries (Croatia, Bulgaria, Romania, Albania and the Republic of Macedonia), the credit ratio declined on similar grounds already in the second half of the 1990s.

As in the new Member States, credit growth to the private sector, in particular to households (with a substantial share of mortgage loans), has been fairly strong, while credit to the public sector has remained steady or has even declined. In fact, in some SEE countries, the crowding-in of private sector credit by reducing public sector credit-to-GDP ratios seems to have been more pronounced than in the CEE-8 countries.

Net claims on the central bank have risen substantially in a number of SEE countries, while climbing less in the CEE-8 (with the exception of Latvia and Slovakia). Increases in reserve requirements to contain bank lending and, in some cases, sterilization activities explain this development.

Net foreign asset positions have worsened in most SEE countries, as they have in many CEE-8 countries. However, while in the CEE-8 this was attributable to the fact that credit expansion has been increasingly financed by borrowing from abroad, the same can be said only of Bulgaria Croatia among the SEE countries. In the other countries of the region, credit growth has essentially been financed by deposit growth, and changes in the net foreign asset positions appear to be mainly associated with rising net claims on central banks. There are several explanations for the different development in the SEE countries and the CEE-8: First, in some cases, lending booms are yet at a relatively early stage in the SEE region (and at this stage, domestic financing was also the typical pattern in the new Member States). Second, the euro cash changeover has had a much more pronounced level effect in most SEE countries than in the CEE-8, given that currency substitution in the cash segment has been much more important in the former group of countries than in the latter. Third, remittances play a key role in the balance of payments in a number of SEE countries (in some cases surpassing 10% of GDP). This steady and strong stream of remittances has certainly contributed to bolstering deposits in SEE banking sectors (as part of these transfers was certainly saved), thus providing

an extra layer of funding for credit growth without incurring foreign liabilities. In this respect, bank intermediation in SEE will probably remain different from that witnessed in CEE-8 countries.

Progress in bank intermediation has entailed substantial economic benefits for SEE countries. At the same time, one of the key features of this development – fast credit growth – has posed substantial challenges to policymakers. If we compare the authorities' response to these challenges, we find that the authorities in SEE countries have, on the whole, taken a more activist stance toward containing credit growth in recent years than those in CEE-8 countries. The measures taken included implementing higher minimum reserve requirements and administrative measures (like introducing credit limits and limits to foreign borrowing), but also selective prudential measures.¹⁹ Given that monetary policy is constrained by explicit or implicit exchange rate commitments in a number of SEE countries,²⁰ interest rate policy did not play an important role (or no role at all) in most cases.²¹

Official statements suggest that it was mainly macroeconomic considerations that made the authorities take measures to contain credit growth.²² In recent years, the SEE countries have actually recorded fairly strong output growth, and income expectations have risen, which has encouraged consumption smoothing. GDP growth has been mainly driven by domestic demand (both private consumption and fixed capital formation). In most countries, residential investment has been booming. Credit expansion has given an extra impetus to brisk domestic demand growth. In the process, lending booms have also contributed to widening current account deficits to high or very high levels in most SEE countries, clustering around 6% to 12% of GDP in 2005, and reaching 22% in Bosnia and Herzegovina. The only exception in this respect is the Republic of Macedonia, which displayed a deficit of slightly above 1% of GDP last year.²³ Rapid credit growth may also have added to inflation pressures, but this link is less certain (except for prices in the construction sector), as much of the extra demand (aside from housing) has been satisfied by additional imports.

Financial stability considerations, in turn, have been a less prevalent motive for policy measures to restrain lending booms. Notable exceptions are prudential and administrative measures taken by some SEE central banks to keep foreign currency lending to households in check.

Initially, these measures have, to some extent, been effective e.g. in slowing bank credit growth in Bulgaria and foreign currency lending in Romania. What remains to be seen, however, is the scope of the substitution effects (causing a shift from domestic to external borrowing and from bank intermediation to nonbank financial intermediation), if these measures remain in

¹⁹ For a more detailed account of the measures taken, see ECB (2006a), Hilbers, Otker-Robe and Pazarbaşıoğlu (2006), as well as recent reports on IMF Article IV Consultations with SEE countries on www.imf.org.

²⁰ See Barisitz (2005) for an account of exchange rate arrangements and monetary policy in SEE countries.

²¹ It should be noted that in a setting of high capital mobility, the room for monetary policy to contain aggregate demand and credit growth is limited even for those SEE countries that operate flexible exchange rate regimes; compare Lipschitz, Lane and Mourmouras (2002) for a more detailed discussion.

²² For a more detailed presentation of macroeconomic developments and data of SEE countries, see Gligorov (2006) or EBRD (2006).

²³ See Duenwald, Gueorgiev and Schaechter (2005) for empirical evidence on the latter aspect.

place for a longer period of time. The most recent rapid expansion of nonbank financial intermediation in some SEE countries is obviously connected to the implementation of various regulations on bank lending. Furthermore, credit developments in Croatia – which has several years of experience with controls over lending and borrowing – already clearly point to the diminishing effectiveness of such measures over time.

4 Conclusions

This study examined similarities and differences in the depth and structure of bank intermediation in Southeastern European countries. In doing so, we also analyzed to what extent the patterns of bank intermediation in SEE countries are already similar to those observed in the new EU Member States of Central and Eastern Europe. Overall, it turns out that the depth, structure and quality of bank intermediation has advanced considerably in all SEE countries.

As in the new Member States, the process was driven by banking sector consolidation and privatization, in the course of which many banks were sold to foreign financial institutions. These banks then started to tap previously underserved market segments. At the same time, the level of banking sector development is far from uniform in the region: In some SEE countries, the structure and depth of bank intermediation are already similar to, or approaching the levels observed in, the new Member States, whereas they are at an earlier stage in others, notwithstanding major progress in recent years.

As regards the structure of intermediation, the following aspect is particularly noteworthy: While in a number of new Member States the credit expansion has been increasingly financed by foreign sources, it is still mainly financed by domestic sources (deposits, in some cases falling public credit-to-GDP levels) in most SEE countries, even though foreign funding has recently gained in importance. Only in Croatia and Bulgaria is the significance of foreign funding as high as in the new Member States. Risks in connection with the increased reliance on foreign capital inflows are partially mitigated by the fact that a considerable portion of these inflows is provided by foreign parent banks.

Foreign currency lending to unhedged borrowers, in particular households, is high and rising in a number of SEE countries. The resulting exposure of nonbanks to fluctuations in the exchange rate and in foreign interest rates eventually increases banks' credit risk. While being fairly diverse in terms of asset quality, banking sectors in SEE appear to be well capitalized overall and profitable (albeit to different degrees). Furthermore, stress tests conducted by the IMF and/or national central banks attested banking sectors different degrees of resilience to standard shocks, with Bulgaria, Romania and Albania standing out positively in this respect.

Overall, the rapid changes in bank intermediation observed in the CEE region have also reached Southeastern Europe. As elsewhere, this brings with it a wide range of benefits, but the sheer speed of these changes and, in some cases, structural weaknesses inherited from the past involve risks that need to be monitored and tackled appropriately.

Cutoff date for data: November 13, 2006.

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How Central and Eastern European Countries Choose Exchange Rate Regimes

Agnieszka Markiewicz¹

In this study, we identify the main determinants of the exchange rate regime choices in Central and Eastern European countries (CEECs). For this purpose, we use an ordered logit model for the official (de jure) and the actual (de facto) exchange rate classifications. We find that trade openness and concentration, inflation differentials, international reserves stocks and financial conditions are the main determinants of the selection of exchange rate regimes in the CEECs.

1 Introduction

The issue of the appropriateness of the exchange rate regimes in the Central and Eastern European countries (CEECs) has taken center stage in the policy debate owing to the recent enlargement of the European Union (EU) and the ensuing possibility of the new Member States joining the euro area.

The objective of this paper is to investigate the main determinants of the selection of exchange rate regimes in CEECs. First, we employ a large range of potential determinants of exchange rate regimes and compare their capacity to explain the choice of regimes among CEECs. Second, we consider the choice of exchange rate regimes according to official (de jure) and de facto classifications, using both classifications in a way in which, to our knowledge, it has not been used before in the existing empirical literature. We include the category of hard peg to test explicitly for the “corner solutions” hypothesis and embody our hypotheses in an ordered logit model for an unbalanced panel of ten countries.

The sample comprises eight new EU Member States – the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia and Slovenia. In addition, we included Bulgaria and Romania to diversify our sample. These two economies have made less progress in managing the transition to a market economy and in stabilizing their economies than the eight new EU members. Our study is based on the period between 1993 and 2002. We chose 1993 as the starting date, as data is only available from that time on. In contrast with other works, this empirical study takes into consideration the most recent developments in the CEECs’ exchange rate strategies, which were stimulated by the perspective of joining the euro area.

The remainder of the paper is organized as follows: Section 2 provides a literature overview on the issue of exchange rate regime choice, while section 3 describes developments in the CEECs’ exchange rate strategies and discrepancies of de facto and de jure classifications in these countries. Furthermore, we briefly touch upon the exchange rate strategies in other transition economies. Section 4 reviews the different approaches and the associated theoretical determinants of the exchange rate regime choice. In section 5, we develop the baseline econometric model of exchange rate regime choice. The results of our estimations are presented in section 6, and the

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development in the CEECs is compared with that in other transition economies in section 7. Conclusions are drawn in section 8.

2 Literature Overview

The literature on exchange rate regime choice is extensive. The research inspired by Mundell's seminal paper (1961) on optimum currency areas (OCAs) focuses on the structural characteristics of a country. These characteristics include factor mobility (Mundell, 1961), economic size and openness (Mundell, 1961), the geographical concentration of trade (McKinnon, 1963) and the diversity of production structures (Kenen, 1969). Mundell (1963) and Fleming (1962) extended the OCA theory by including the factor of capital mobility. According to their analysis, the choice between fixed and flexible regimes depends on the source of possible shocks. Although the OCA theory has been used extensively to explain the choice of exchange rate regimes, the empirical findings did not permit drawing clear conclusions about the relevant determinants of this choice. As a result, other factors have been suggested to explain it. For instance, Edwards (1996) and Collins (1996) argued that political variables can explain the selection of exchange rate policies. The currency crisis literature has also been used to assess the importance of potential determinants for the choice of an exchange rate regime. For instance, Ozkan and Sutherland (1995) suggested that a variety of factors that may affect the authorities' objective functioning could be used as indicators of a currency crisis and thus as determinants of exchange rate regime choices. Masson and Ruge-Murcia (2003) estimated a Markov chain model of the exchange rate in which currency crisis variables play an important role. Numerous recent studies cover a large range of these factors (see, e.g. Poirson, 2001; von Hagen and Zhou, 2004; Bordo, 2003; Levy-Yeyati and Sturzenegger, 2004; and Rizzo, 1998). Few economists, however, have focused in particular on the problem of exchange rate regime choice in the CEECs. Corker et al. (2000) and Backé (1999) examined the issue for some of the transition economies in a descriptive study. Bénassy-Quéré and Lahrière-Révil (1998) as well as Boone and Maurel (1999) approached the question of regime selection in CEECs empirically, but only via OCA theory characteristics. Finally, this problem was examined by von Hagen and Zhou (2002). They developed an empirical model of the exchange rate regime choice of a group of 25 transition economies in the 1990s. Their model tests for the relevance of OCA variables, financial development measures and crisis variables to exchange rate regime selection. Moreover, the authors assess the discrepancies between de jure and de facto regimes in transition economies. However, they do not account for political conditions, which seem to be an important factor in the CEECs' selection of an exchange rate system.

3 Exchange Rate Regimes in CEECs

The CEECs have adopted rather diverse exchange rate regimes and monetary strategies since the early 1990s. Their monetary and exchange rate strategies can be divided into three phases in accordance with the challenges they were confronted with. Table 1 shows the development of de jure and de facto exchange rate regimes in ten CEECs.

3.1 Development of Exchange Rate Regimes in CEECs

During the first phase, between 1990 and 1994, the monetary authorities focused on stabilizing the economy. Most CEECs entered the transition process with a monetary overhang and experienced high inflation rates. In order to combat inflation, several countries initially opted for the external anchor in the form of pegged exchange rates (e.g. Czechoslovakia – later the Czech Republic and Slovakia – and Hungary). A few countries (e.g. Bulgaria and Romania) initially adopted flexible exchange rate regimes, despite being confronted with high inflation rates. This choice may have been attributable to the relatively low level of international reserves these countries held in the early 1990s,² which made it difficult to back a peg.

Until the mid-1990s, most CEECs made strong progress toward disinflation, in particular thanks to the fixed exchange rates. When the need to stabilize the economy with an external anchor became less acute, several countries gradually opted for a more flexible exchange rate strategy. Still, not all the CEECs adopted a more flexible regime. The Baltic countries and Poland maintained the fixed or intermediate exchange rate regimes they had initially chosen, while Slovenia and Romania continued to use flexible regimes. Bulgaria was the main exception, as it steered in the opposite direction, abandoning a relatively flexible regime and adopting a currency board arrangement.

Given the perspective of joining monetary union, several CEECs chose to change their exchange rate policies between 2000 and 2002. A number of CEECs aligned their regimes with the institutional requirements of future participation in the monetary union. In February 2002, Lithuania repegged its currency board from U.S. dollar to the euro. In January 2000, Hungary introduced an exchange rate system that shadows the exchange rate mechanism ERM II. There is, however, one fundamental difference between this arrangement and actual participation in ERM II: Hungary made a unilateral commitment to maintain the parity, whereas ERM II is a multilateral binding arrangement between the National Central Banks (NCBs) and the European Central Bank (ECB). Latvia, with its peg to the Special Drawing Rights (SDR) of the International Monetary Fund (IMF), has had to adapt its regime to the conditions required for joining ERM II. By contrast, Poland, the Czech Republic, Slovakia and Romania still use a floating regime. Slovakia and Poland switched to more flexible regimes in 1998 and 2000, respectively.

Although our sample period ends in 2002, it is important to note that seven of the ten new Member States have already joined ERM II. Estonia, Lithuania and Slovenia were the first to do so in June 2004. Cyprus entered ERM II in April 2005, Malta and Latvia followed suit in May 2005, while Slovakia joined ERM II in late November 2005.

3.2 Classification of Exchange Rate Regimes in CEECs

In order to study exchange rate regime choices, it is necessary to employ the proper classification of exchange rate systems. Recently, numerous empirical studies have provided evidence that adjustments of central parities and foreign

² In 1992 and 1993, Bulgaria and Romania held, on average, only one-fifth of the reserves Poland or Hungary possessed in the same period.

exchange market interventions can generate exchange rate regimes that differ considerably from the official arrangements.³ First, a country may experience only very small exchange rate movements, even though the monetary authorities have made no official commitment to maintaining the parity. This behavior is often referred to as the “fear of floating” phenomenon. Second, a country can manifest “fear of pegging” behavior. This is the case when a country that claims to have a pegged exchange rate regime in fact carries out frequent changes in parity.

The approach taken here is, first, to report results according to the official classification, which uses the IMF’s Annual Report on Exchange Arrangements and Exchange Restrictions. Then we supplement these results with a *de facto* classification based on a measure developed by Reinhart and Rogoff (2002). Empirical studies used to assign exchange rate regimes (both *de facto* and *de jure*) to three categories – peg, intermediate and float, whereas recent works often try to assess whether emerging markets switch to the “corner solutions.”⁴ This hypothesis, however, cannot be tested, as hard and soft pegs fall into the same category: According to the “bipolar view” literature, one of the corner solutions is a hard peg, while a soft peg is perceived as an intermediate regime. A distinction between the two is thus a necessary prerequisite for investigating the “corner solutions” hypothesis. We followed this line of argumentation, distinguishing between soft pegs and hard pegs in our study. The *de jure* exchange rate regimes are classified into four principal categories: hard peg, soft peg, intermediate and float regimes. Hard pegs include currency boards, while soft pegs contain single currency pegs, SDR pegs and other narrow bands (less than $\pm 1\%$) that are not constrained by the central bank’s strong commitment. The intermediate category includes tightly managed and broad band exchange rate systems (at least $\pm 1\%$). Finally, the float category includes managed floats without preannounced exchange rate paths and free floats. The *de facto* regimes are also classified into four groups. We regrouped the Reinhart and Rogoff categories into four groups following the IMF’s definition of the regimes.

Table 1 shows the *de jure* and the *de facto* regimes in CEECs. What is striking at first glance is that there are no substantial differences between the development of *de jure* and *de facto* regimes.

During the stabilization phase, hard and soft pegs made up an almost equal share of *de jure* and *de facto* exchange rate regimes. Floating regimes were more frequent in *de jure* regimes, indicating a “fear of floating.”

During the transition phase, several countries switched to more flexible regimes. Accordingly, the number of *de jure* and *de facto* floaters increased between 1995 and 1999. This change in exchange rate strategies was consistent with the progressive capital account liberalization in the CEECs and the increasing risk of speculative attacks. The number of intermediate regimes declined in this period, whereas the number of soft pegs remained stable.

³ For a detailed discussion of the discrepancy between *de facto* and *de jure* exchange rate regime classifications, see Calvo and Reinhart (2000), Gosh et al. (1997), and Levy-Yeyati and Sturzenegger (2005).

⁴ The proponents of the “corner solutions” hypothesis emphasize the increasing role of pure floats and hard pegs as sustainable solutions in emerging economies and maintain that all other exchange rate regimes (called “vanishing middle”) are unsustainable in the long run.

Table 1

De Jure and De Facto Classification of Exchange Rate Regimes in CEECs

	Year	BG	CZ	EE	HU	LV	LT	PL	RO	SK	SL
Stabilization phase	1993	0(0)	2(1)	3(3)	2(1)	0(0)	0(0)	1(0)	0(0)	2(0)	0(1)
	1994	0(0)	2(1)	3(3)	2(1)	2(2)	3(3)	1(0)	0(0)	2(1)	0(1)
Transition phase	1995	0(0)	2(1)	3(3)	1(1)	2(2)	3(3)	1(1)	0(0)	2(1)	0(1)
	1996	0(0)	1(1)	3(3)	1(1)	2(2)	3(3)	1(1)	0(0)	1(1)	0(1)
	1997	3(3)	0(0)	3(3)	1(1)	2(2)	3(3)	1(1)	0(0)	1(1)	0(1)
	1998	3(3)	0(0)	3(3)	1(1)	2(2)	3(3)	1(1)	0(0)	0(1)	0(1)
	1999	3(3)	0(0)	3(3)	1(1)	2(2)	3(3)	1(1)	0(0)	0(1)	0(1)
Preparation phase	2000	3(3)	0(0)	3(3)	1(1)	2(2)	3(3)	0(0)	0(0)	0(1)	0(1)
	2001	3(3)	0(0)	3(3)	1(1)	2(2)	3(3)	0(0)	1(1)	0(1)	0(1)
	2002	3(3)	0(0)	3(3)	1(1)	2(2)	3(3)	0(0)	1(1)	0(1)	0(1)

Source: IMF (various issues), Reinhart, C. and K. Rogoff, 2002.

Notes: De facto exchange rate regimes are presented in parentheses.

0 (float): independent floating (market-determined exchange rate and independent monetary policy); managed float with no preannounced path for the exchange rate.

1 (intermediate): exchange rates with crawling bands; crawling pegs; pegged exchange rate arrangements within horizontal bands (at least $\pm 1\%$).

2 (peg): fixed peg arrangements within a band of no more than $\pm 1\%$.

3 (hard peg): currency board arrangements.

During the last, preparatory phase, the de facto and de jure regimes clearly converged. This observation is in line with findings by Masson and Ruge-Murcia (2003). They argue that once inflation has decreased and gross domestic product (GDP) growth can be maintained in emerging economies, intermediate regimes may be able to resist speculative attacks. Indeed, at the end of the observation period, we note a strong decline in inflation and stable growth in the CEECs. Therefore, there is no incentive for these countries to adopt corner solutions and implement different strategies.

The choice of exchange rate regimes in other transition economies (TEs)⁵ was guided by somewhat different circumstances, most notably by the slower progress in macroeconomic stabilization: At the end of the 1990s, the TEs were still struggling with two-digit inflation rates. Most of these economies were also heavily dollarized, so that all exchange rate changes had a considerable impact on their financial stability. Therefore, they often relied on de facto nominal exchange rate anchors, even though their currencies were officially floating. Markiewicz (2006) observed a *fear of floating* that made most of them de facto anchor exchange rate regimes to the U.S. dollar. Schnabl (2005) even maintained that the countries of the Commonwealth of Independent States (CIS) adopted an informal dollar standard.

4 Theoretical Determinants of Exchange Rate Regime Choice

Our analysis of the determinants of exchange rate regime choice in CEECs centers on three main approaches. The traditional approach is embodied in the OCA theory and its extension, the concept of the impossible trinity. Today's discussions on the choice of exchange rate regimes include the political

⁵ In this context, the term "transition economies" (TEs) refers to the following countries: Albania, Armenia, Azerbaijan, Belarus, Croatia, Georgia, Kazakhstan, Macedonia, Moldova, Russia, Tajikistan, Turkmenistan and Ukraine.

economy view and the currency crisis approach. These traditional and modern models imply a set of potential determinants of exchange rate regime choice. We included ten of them as explanatory variables in the specification.

4.1 OCA Theory and the Impossible Trinity

The early literature based on Mundell's OCA theory concentrated on geographical and trade characteristics. This approach weighs the trade and welfare gains in a fixed exchange rate regime against the benefits of exchange rate flexibility as a shock absorber in the presence of nominal rigidities. Since stable exchange rates increase trade gains, pegs are more suitable for countries characterized by a high degree of trade openness. A rigid regime is also preferred in small economies, as they tend to trade more internationally. Finally, a strong geographical concentration of a country's trade favors pegging its currency to that of its main trading partner.

In order to test the relevance of the traditional OCA hypothesis in CEECs, we use measures of the countries' size (*GDP* as real GDP; for details regarding the units used in the text below and in table 2, see table 4), openness (*Openness* as the GDP share of exports plus imports) and concentration of trade with the EU countries (*Trade*).^{6,7}

Mundell (1963) and Fleming (1962) extended the OCA theory by including the factor of capital mobility. Their model indicates that it is impossible to simultaneously achieve the following three goals: exchange rate stabilization, capital market integration and the pursuit of an independent monetary policy. This is usually referred to as the impossible trinity. The currency crises in Mexico, Asia, Brazil and Russia as well as increasing capital mobility brought the impossible trinity hypothesis to the forefront and resulted in the bipolar view of exchange rate regimes. According to this approach, intermediate regimes are less viable in financially open economies owing to the high level of capital mobility.⁸ Since monetary policy in financially open economies cannot aim at maintaining a stable exchange rate while at the same time attempting to smooth cyclical output fluctuations, these countries should move to corner solutions, i.e., a pure float or a hard peg.

The rapid process of financial deepening and innovation has reduced the effectiveness of capital controls. Consequently, the traditional trinity dilemma has been reduced to a tradeoff between monetary policy independence and exchange rate stability. Moreover, countries with relatively undeveloped financial sectors lack market instruments to conduct domestic open market operations. Thus, low financial development will increase the probability of adopting pegs.

We assess the empirical relevance of the impossible trinity approach, employing a capital control index (*Restrictions*) and the ratio of private credit to GDP (*Credit*, a measure of financial development), both lagged one period, as explanatory variables.

⁶ We use lagged values of these variables to minimize potential endogeneity problems.

⁷ We choose the EU as a benchmark for geographical trade concentration because it is the CEECs' main trade partner.

⁸ See e.g. Fischer (2001).

4.2 Currency Crisis

The early literature of balance of payments crises (Krugman, 1979) stressed that crises were caused by weak “economic fundamentals,” such as excessively expansionary fiscal and monetary policies. It shows that in a fixed exchange rate regime, domestic credit expansion in excess of money demand growth leads to a gradual but persistent loss of international reserves and, ultimately, to a speculative attack on the currency. The empirical implication of this model is that expansionary monetary policy combined with a fixed exchange rate leads to external imbalances. As a consequence, a country experiencing a high rate of inflation might be reluctant to fix its exchange rate. Schardax (2002) argues that the exchange rate crises in the CEECs may be considered as “first generation” balance of payments crises in the spirit of Krugman (1979). Following this argument, we introduce two “first generation” crises indicators: inflation rate differential (*Inflation*) and foreign exchange reserves (*Reserves* as the ratio of international reserves to broad money).⁹

While this traditional approach stresses the role of declining international reserves in triggering the collapse of a fixed exchange rate regime, some recent models, e.g. by Ozkan and Sutherland (1995), suggest that the decision to abandon the parity or choose a flexible regime may stem from the authorities’ concern about the development of other key economic variables. For instance, an increase in the domestic interest rate that is needed to maintain a fixed exchange rate may result in higher financing costs for the government. The decision to adopt a peg may thus depend on the public deficit. This might be a strong argument particularly in the CEECs, since these countries wish to join the euro area and, therefore, have to comply with the convergence criteria.¹⁰ Moreover, the budget deficit was found to be a significant predictor of exchange rate crises in CEECs (see Brüggemann and Linne, 2003). It is important to note that fixed regimes provide more fiscal discipline than the flexible ones. We investigate the relevance of the public deficit to the choice of the exchange rate regime by using the level of government deficit as a percentage of GDP (*Deficit*) as a regressor. Again, all crisis variables will be lagged one period.

4.3 Political Economy

Numerous authors emphasize the credibility gains associated with adopting a peg arrangement.¹¹ They maintain that governments with a low level of institutional credibility that are willing to convince the public of their commitment to price stability may adopt a peg as a “policy crutch” to tame inflationary expectations. Accordingly, weak governments that are more vulnerable to expansionary pressures may choose to use a peg as an instrument to eliminate (or considerably reduce) these pressures. In addition, some authors argue that a fixed exchange rate disciplines the government because an

⁹ We use the German inflation rate as a benchmark inflation rate, assuming that it is a good approximation of the average inflation rate in Europe, since in the 1990s, most European countries followed the monetary policy of the Deutsche Bundesbank.

¹⁰ The convergence criteria impose a 3% limit on public deficit and a 60% limit on public debt, both as a share of GDP.

¹¹ See the precursors Barro and Gordon (1983), Giavazzi and Pagano (1998), as well as Drazen (2000).

excessively expansionary fiscal policy may lead to a currency crisis.¹² Collins (1996) and Edwards (1996) build their empirical models around a framework in which the political cost associated with devaluation under fixed exchange rates plays a major role. While Collins does not directly use political economy variables in her analysis, Edwards introduces variables that measure the degree of political stability and the strength of the government. He argues that weaker governments and unstable political environments reduce the likelihood of a peg being adopted. His results support the “sustainability hypothesis,” as opposed to the “policy crutch” approach.

In order to investigate which political economy approach is appropriate to explain the exchange rate regime choices in the CEECs, we follow the line of argumentation used by Edwards (1996) and employ two indices. The strength of the government is measured as the fraction of seats the ruling party (or parties) holds in the lower chamber of parliament (*GovStrength*). The second index (*PolStab*) focuses on instances involving a transfer of power from the government party or organization to an opposition party or organization. This index measures the stability of the political system, since its value increases with the number of years that this party or coalition is in office.¹³

5 Baseline Model Explaining Regime Choice

In this section we present the econometric model that is applied to test the hypotheses presented in the previous section in a unified framework. We use a discrete variable $y_{i,t}$ to describe exchange rate regime choices. In line with our classification presented in section 3, this variable can take one of the following four values:

- $y_{i,t} = 0$, if a flexible regime is chosen by country i in year t ,
- $y_{i,t} = 1$, if country i chooses the intermediate regime in year t ,
- $y_{i,t} = 2$, if a soft peg is chosen by country i in year t ,
- $y_{i,t} = 3$, if a currency board arrangement is adopted by country i in year t

with the probabilities p_i where $i=0, 1, 2, 3$ and $\sum_{i=0}^3 p_i = 1$. This choice is based

on the continuous latent variable $y^*_{i,t}$ (attractiveness of a fixed exchange rate regime), which is a linear function of all the economic variables discussed above.

$$y^*_{i,t} = Z_{i,t} + u_{i,t} \text{ for } i = 1, 2, \dots, N; t = 1, 2, \dots, T_i \quad (1)$$

where $Z_{i,t}$ is a vector of explanatory variables, N is the number of countries, and T_i denotes the number of observations for country i . The likelihood that a country belongs to a category is defined in terms of the probability regarding the value of an underlying latent variable $y^*_{i,t}$. We assume that a country

¹² See Aghevli et al. (1991).

¹³ For details on the construction of this measure, see table 4.

chooses a flexible exchange rate regime when the latent variable is below a certain threshold level c_1 :

$$y_{i,t} = 0, \text{ if } y_{i,t}^* < c_1 \quad (2)$$

When the latent variable is between the two thresholds c_1 and c_2 , the country adopts an intermediate regime:

$$y_{i,t} = 1, \text{ if } c_1 < y_{i,t}^* < c_2 \quad (3)$$

If the latent variable takes values between c_2 and c_3 , the country chooses a soft peg:

$$y_{i,t} = 2, \text{ if } c_2 < y_{i,t}^* < c_3 \quad (4)$$

Finally, if the latent variable exceeds c_3 , the country adopts a currency board arrangement:

$$y_{i,t} = 3, \text{ if } y_{i,t}^* > c_3 \quad (5)$$

These three thresholds ($c_1 < c_2 < c_3$) are estimated in our analysis along with the coefficients of the explanatory variables of the vector $Z_{i,t}$. The probabilities of $y_{i,t}$ being classified as flexible, intermediate, pegged or hard peg are given by

$$Pr(y_{i,t} = 0) = Pr(Z_{i,t} + u_{i,t} < c_1) \quad (6)$$

$$Pr(y_{i,t} = 1) = Pr(c_1 < Z_{i,t} + u_{i,t} < c_2) \quad (7)$$

$$Pr(y_{i,t} = 2) = Pr(c_2 < Z_{i,t} + u_{i,t} < c_3) \quad (8)$$

$$Pr(y_{i,t} = 3) = Pr(Z_{i,t} + u_{i,t} > c_3) \quad (9)$$

We can assume here that the error term follows the logistic or normal distribution. As the (Akaike, Schwarz and Hannan-Quinn) information criteria do not indicate clearly which model (probit or logit) is superior for our data set, we assume the error term $u_{i,t}$ to be *iid* with a logistic distribution function

with a mean of 0 and a variance of $\frac{\pi^2}{3}$. Since the probit estimations provide

similar results, our arbitrary choice of logistic distribution does not have any negative consequences on the quality of our findings. Since the values of the exchange rate regime variable can be logically ordered, this gives rise to an ordered logit. The estimates of the coefficients of the vector $Z_{i,t}$ and the thresholds c_1 , c_2 and c_3 are obtained by maximizing the likelihood function using the quadratic hill climbing algorithm. We pool all country-year observations and make an ordered logit estimation.

6 Econometric Results and Implications

In this section we empirically assess the relevance of the hypotheses underlying the three approaches to the actual exchange rate regime choice in the CEECs. We estimate the specification for de jure and de facto classifications.

The results of de facto and de jure classification estimations are reported in table 2. Results corresponding to the de jure specification are shown in parentheses next to the de facto findings. A positive sign of a coefficient means that an increase in the associated variable raises the probability that the country will adopt a hard peg. In order to facilitate an interpretation of the results, we also report the discrete changes in the probabilities of choosing a hard peg ($y=3$), a soft peg ($y=2$), an intermediate regime ($y=1$) and a float ($y=0$) for significant coefficients. These changes denote the differences in the predicted probabilities when one explanatory variable changes by one unit and all the other regressors are held at their means.

Table 2

Determinants of De Facto and De Jure Exchange Rate Regimes						
Changes in Probabilities						
Variable	Coefficient	z-statistic	y=0	y=1	y=2	y=3
Openness	0.05129 (0.03365)	4.19*** (2.65**)	-0.0024 (-0.0051)	-0.0068 (-0.0029)	0.0055 (0.0052)	0.0038 (0.0027)
GDP	0.00532 (0.01798)	0.56 (2.02**)	(-0.0027)	(-0.0015)	(0.0028)	0.0014
Trade	-0.13093 (-0.18423)	-4.75*** (-5.36***)	0.0061 (0.0277)	0.0175 (0.0156)	-0.014 (-0.0286)	-0.0096 (-0.0142)
Restrictions	-0.85255 (-1.51847)	-2.25** (-4.01***)	0.0401 (0.2283)	0.1139 (0.129)	-0.0914 (-0.2361)	-0.0625 (-0.1212)
Credit	-0.75441 (-0.78581)	-3.58*** (-3.00**)	0.0354 (0.1182)	0.1007 (0.0668)	-0.0809 (-0.1222)	-0.0553 (-0.0627)
Inflation	0.00326 (0.00384)	1.96** (1.65*)	-0.0002 (-0.0006)	-0.0004 (-0.0003)	0.0003 (0.0006)	0.0002 (0.0003)
Deficit	-0.0032 (-0.00471)	-1.29 (-1.51)	0.0002			
Reserves	0.27729 (-0.17684)	1.77* (-0.17)	-0.013	-0.037	0.0297	0.0203
PolStab	-0.20596 (-0.30458)	-1.34 (-1.82*)	0.0458	(0.0259)	(-0.0474)	(-0.02431)
GovStrength	0.06609 (0.08471)	2.34** (2.66**)	-0.0031 (-0.0127)	-0.0088 (-0.0072)	0.0071 (0.0132)	0.0048 (0.0068)
Log likelihood	-65.695 (-71.5927)					
LR $\chi^2(11)$	72.76 (43.83)					
Predictive power	62% (65%)					

Source: Authors' calculations.

Notes: * z statistics significant at 10%; ** at 5%; *** at 1%. The numbers in parentheses correspond to the de jure specification. Changes in probabilities for nonsignificant coefficients are not reported. The χ^2 value is defined as $2(L1-L0)$, where L1 is the value of the log-likelihood function with only the constant term, and L0 is the value of the log-likelihood function when all the explanatory variables are included. Since for ordered logit models the R^2 is meaningless, we report here an appropriate measure of goodness of fit, i.e. predictive power of the specification. This measure computes the share of regimes correctly predicted by the model.

First of all, we note that there are only few differences between the results of de facto and de jure specifications. This is not surprising, given that the discrepancies between the two classifications are not substantial.¹⁴ In the recent literature, many de facto measures of exchange rate regimes were developed that seemed to differ from one another.¹⁵ Therefore, we also employed the de facto classification as proposed by Levy-Yeyati and Sturzenegger (LYS) in addition to the Reinhart and Rogoff measures. As the results of the estimations carried out with LYS exchange rate regimes are very similar to the others, we report only the results of the de facto measure by Reinhart and Rogoff.

¹⁴ See section 3.

¹⁵ Frankel (2003) shows that Calvo and Reinhart's measure of de facto exchange rate regimes differs considerably from the LYS classification.

The results suggest that seven (eight) out of ten explanatory variables actually play a role in the choice of de facto (de jure) exchange rate regimes in the CEECs. The de jure specification exhibits a higher level of predictive power (65% against 62% obtained with de facto exchange rate arrangements) for all exchange rate regimes in the CEECs. Table 2 shows that the OCA indicators are significant determinants of exchange rate regime choices in the CEECs. More open CEECs tend to adopt more rigid exchange rate regimes. An increase by 1 percentage point in the openness ratio ceteris paribus increases the probability of choosing a de facto soft peg by 0.0055. We find that the coefficient of trade concentration has a negative sign, thus contradicting the OCA theory. A country will be less likely to adopt a fixed exchange rate, if its external trade is highly concentrated on EU countries. This result may be explained by the “sustainability hypothesis.” Very open economies with a high degree of geographical trade concentration are more vulnerable to external shocks, which makes it more difficult to sustain pegs. Since open CEECs are more prone to choose fixed regimes, they will do so only if their trade is not highly concentrated. This result is substantiated by other works (e.g. by Poirson, 2001; Savvides, 1990 and von Hagen and Zhou, 2004). The size of the economy (in terms of GDP) is a significant variable only in the de jure specification. The sign of its coefficient again contradicts the OCA theory. Bigger economies favor pegs.¹⁶ Since the coefficient denoting the size of the economy is not significant in the de facto specification, we believe that the contradictory significant sign is attributable to classification issues.

Turning to the impossible trinity hypothesis, both coefficients indicate that financial globalization has a significant impact on the choice of the exchange rate regime. The development of the financial sector (*Credit*) favors the choice of more flexible exchange rate systems, which is in line with expectations. However, the countries that are more integrated into capital markets (*Restrictions*, decrease of restrictions) are more prone to adopt a peg. According to the “bipolar view,” financially open countries should opt for a hard peg or a pure float. The results show that as the CEECs open their capital account, they move toward the rigid corner solution.

The larger the inflation differential (*Inflation*) with Germany, the larger the likelihood of adopting a fixed regime. This result contradicts the currency crisis approach. As mentioned in section 4, a country experiencing a high rate of inflation may be reluctant to fix its exchange rate. In the CEECs, however, the fixed exchange rate was often used as an external anchor to bring down inflation expectations. Therefore, a higher inflation rate implies a higher probability of adopting a peg in these countries. The budget balance (*Deficit*) does not play a significant role in the selection of the exchange rate regime in the CEECs. The size of the foreign international reserves is a significant determinant of de facto but not of de jure regime choices. As already mentioned

¹⁶ The robustness checks show that this result is attributable to the presence of the trade concentration variable in the model. Since the latter is a ratio of exports to GDP, there is a high correlation (0.5) between the size of the economy (GDP measured as real GDP) and the trade concentration variable (Trade). When we run a regression omitting the trade concentration indicator, the size of the economy seems to be an insignificant variable. The coefficient of geographical trade concentration remains significant and keeps its sign, no matter which specification we use.

in section 2, CEECs that did not hold a sufficient stock of international reserves used flexible regimes. The de facto specification results confirm this observation: The higher the stock of international reserves in a country the more likely the adoption of a fixed exchange rate is.

Finally, the choice of the exchange rate regime depends significantly on the political conditions prevailing in the country. Both specifications suggest that stronger governments have a greater tendency than weaker governments to opt for a pegged system. However, the de jure results imply that politically unstable countries are more likely to adopt a rigid regime. This result is puzzling, so we checked for a correlation between these two variables. Although the correlation turned out to be low at 0.1566, we performed a likelihood ratio test. Its value was 22.55, which indicates that the two variables are jointly significant at the 1% level. In addition, we ran separate regressions with each of them. The results confirm the statistical significance and the signs of their coefficients. Since the political stability coefficient is not significant in the de facto specification, we believe that the de jure result is again attributable to the classification bias.

7 Comparing Regime Choices in CEECs and Other TEs

As already mentioned in section 3, the factors underlying the choice of exchange rate regimes in the other TEs are in several respects different from that in the CEECs. In Markiewicz (2006), we maintained that the estimations of the de jure and the de facto specifications generate different results for the TEs. More precisely, the de facto model has a better fit, as it does not produce the puzzling result for political variables found in the de jure specification. Furthermore, we showed that the CEECs are much more likely to adopt a de facto flexible regime than the other TEs. However, we also observed many similarities between the results of these two studies. In both cases, a country is less likely to adopt a fixed exchange rate if its external trade is highly concentrated with the EU and if its financial sector is more developed. Higher inflation favors a more rigid regime. Finally, in both cases, stronger governments tend to favor pegs. In TEs, the choice of the exchange rate regime seems to be guided by the size of the budget deficit, whereas this variable turns out to be insignificant in CEECs. More financially integrated CEECs are more prone to select rigid regimes; this factor does not play a role in the other TEs.

8 Conclusions

The objective of this study was to identify the determinants of exchange rate regime choices in CEECs. We proceeded in two steps. First, we built an extended specification of the exchange rate regime choice, considering the relevance of variables suggested by traditional and modern theories. Second, we employed two distinct classifications of exchange rate regimes, i.e., de jure and de facto classification. In order to test the validity of our hypotheses, we used an ordered logit framework.

We found that numerous factors influence the choice of exchange rate regimes in the CEECs. Since the variables used in our specification were measured in different units, it was impossible to assess their relative importance.

Still, we identified those indicators that seem to have guided the CEECs' choice of exchange rate regimes between 1993 and 2002.

Fixed exchange rate regimes are strongly associated with open economies, which confirms the OCA theory. However, a country is less likely to adopt a fixed exchange rate if its external trade is highly concentrated on EU countries, which contradicts the OCA theory. Our interpretation of this result is that very open economies with a high level of geographical trade concentration are more vulnerable to external shocks, which makes it more difficult to sustain a peg. Since open CEECs are more likely to choose fixed regimes, they do so only if their trade is not highly concentrated.

A country experiencing a high inflation rate differential is likely to adopt a peg as an instrument of disinflation policy. This confirms the idea that the CEECs used fixed exchange rate regimes as an instrument of importing credibility. By contrast, the "sustainability hypothesis" suggests that a high level of international reserves is required to lend credibility to a pegged regime.

Financial variables also play a significant role in the choice of the exchange rate regime. First, the development of the financial sector favors floats in the CEECs. Second, financial openness favors pegs. Since the impossible trinity approach rules out a combination of intermediate exchange rate regimes and open capital markets, more financially integrated countries switch to more rigid regimes (and ultimately hard pegs).

Finally, we find that stronger governments have a greater tendency than weaker governments to opt for a pegged system.

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Annex 1

Table 3

Regime	Frequencies of Exchange Rate Regimes			
	De jure		De facto	
	Value	Count	Value	Count
Pure float	0	26	0	38
Intermediate	1	40	1	20
Soft peg	2	9	2	17
Hard peg	3	25	3	25
Total		100		100

Source: IMF (various issues), Reinhart C. and K. Rogoff, 2002.

Notes: The second column includes the values of dependent variable. The third column reports a count and a percentage (since the number of all regimes is equal to 100) of the corresponding exchange rate regimes.

Annex 2

Table 4

Data Description	
Variable	Definition and Source
Credit	Credit by commercial banks, normalized by GDP. Source: International Financial Statistics – IFS.
Deficit	General government budget balance, normalized by GDP. A positive entry denotes a surplus. Source: EBRD Transition Report.
De jure	Official exchange rate regimes. Source: IMF Annual Report on Exchange Arrangements and Exchange Restrictions.
De facto	Actual exchange rate regimes. Source: Reinhart C. and K. Rogoff, 2002.
GDP	Real GDP in USD billion. Source: IFS, various issues.
GovStrength	Strength of the government measured as the fraction of seats held by the government party or coalition in the lower chamber of parliament. Source: Database of Political Institutions 2000, Thorsten et al. (2001) and authors' calculations.
Inflation	Inflation differential ($\pi - \pi^*$) where π is a domestic inflation rate and π^* is a German inflation rate. Source: IFS.
Credit	Financial development measured as a ratio of private credit to GDP. Source: IFS.
Openness	Degree of trade openness measured as the ratio of exports and imports to GDP. Source: IFS.
PolStab	The value of this index increases by 1 with every year that the government stays in office. A transfer of power from a party or group in office to a party or group formally in the opposition reduces the value by 1. Source: www.electionworld.org, authors' calculations.
Reserves	International reserves measured as the ratio of international reserves (without gold) to broad money. Source: EBRD Transition Report.
Restrictions	Restrictions on capital movements. The index can take a value between 0 and 6, where 0 indicates no restrictions and 6 stands for completely closed capital account. Source: The index was created by Garibaldi P, N. Mora, R. Sahay and J. Zettelmeyer (IMF) and was updated by the authors.
Trade	Trade concentration with the EU measured as a ratio of exports from CEECs to the EU to a country's total exports. Source: IMF Direction of Trade Statistics.

The Dutch Disease in Kazakhstan: An Empirical Investigation

In this paper we investigate whether or not the Dutch disease is at work in, or poses a threat to, the Kazakh economy. For this purpose, we first summarize the mechanism through which fluctuations in the price of oil could possibly damage the non-oil manufacturing industry and thus the long-term growth perspectives of an economy that relies heavily on oil production. Subsequently, we seek to analyze the specific chains of this transmission mechanism in Kazakhstan. The analysis of annual data for the period from 1998 to 2005 suggests that non-oil manufacturing has so far been spared the perverse effects of oil price increases. However, the real exchange rate of the open sector has appreciated during the last couple of years chiefly due to the appreciation of the nominal exchange rate. In a second step, we analyze to what extent this appreciation is linked to oil price developments and oil revenues. Our econometric estimations based on the monetary model of the exchange rate and a variety of real exchange rate models provide us with some indication that the rise in the price of oil and in oil revenues might be linked to an appreciation of the U.S. dollar exchange rate of the oil and non-oil sectors. However, the appreciation is mainly limited to the oil sector for the real effective exchange rate and seems to be statistically insignificant for the non-oil manufacturing sector.

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Carol S. Leonard^{2,3}

1 Introduction

There is an ongoing debate on the role of natural resources in economic growth in developing and transition economies. According to the conventional wisdom advocated by, among others, Sachs and Warner (1995), the abundance of natural resources in a given economy leads, per se, to higher macroeconomic volatility and to lower long-term economic growth. However, a number of recent papers have cast doubt on this view, arguing that countries rich in natural resources do not need to suffer from the Dutch disease (Spilimbergo, 1999; Kronenberg, 2004; Papyrakis and Gerlagh, 2004; Stijns, 2005).⁴ This question is particularly relevant from a policy perspective for economies of the former Soviet bloc with economic structures that rely to a great extent on the production of oil.

It is in this vein that we analyze the possible danger the Dutch disease may pose to the Kazakh economy. There are indeed very few papers with strong empirical foundations that analyze the case of the Kazakh economy and focus on country-specific features. Typically, papers either focus on large cross-sectional datasets to analyze the determinants of long-run growth (Sachs and Warner, 1995; Kronenberg, 2004; Papyrakis and Gerlagh, 2004; Davoodi, 2005) or rely on narrow time series setups to investigate the relationship

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³ We would like to thank Jesús Crespo Cuaresma, Sabit Khakimzhanov, Iskander Karibzhanov, Mathilde Maurel, Saulesh Yessenova, the participants of a seminar at the Oesterreichische Nationalbank and of the workshop on the impact of the oil boom in the Caspian Basin held at the University of Paris I-Sorbonne in June 2006 and three anonymous referees for helpful comments and suggestions. We are also indebted to Karlygash Kuralbayeva for help in collecting some of the data used in the paper and to Dagmar Dichtl for language advice.

⁴ "Dutch disease" refers to the deindustrialization of a small open economy where the export of natural resources drives up the exchange rate, making manufactured goods less competitive and crowding out industries where there are learning effects or economies of scale. The term was first used in the 1970s in reference to the impact of the discovery of large reserves of natural gas in the North Sea on the Dutch economy.

between the real exchange rate on the one hand and some kind of a proxy for the Balassa-Samuelson effect and the real price of oil on the other hand (Kutan and Wyzan, 2005). Importantly, country-specific details relating to the presence of the Dutch disease in Kazakhstan are left unexplored in cross-sectional studies, and most of the chains of the transmission mechanism from the Dutch disease to long-run growth remain undetected in time series studies with a narrow focus.

Against this backdrop, we propose a careful analysis of the case of Kazakhstan in this paper, using the most disaggregated dataset ever applied when investigating the recent economic history of this country. We start by identifying the sub-channels through which changes in the price of oil are transmitted onto wages and prices in other parts of the economy, which in turn causes the real exchange rate to appreciate and thus leads to a loss in price competitiveness of the non-oil manufacturing sector. Bearing this in mind, we then go through the transmission channel in a meticulous way and attempt to provide empirical evidence for each chain in the transmission mechanism to find out (1) whether the transmission channel exists at all, and if it does, (2) whether it is complete or breaks down at some point. Our analysis indicates that thus far the effects of the rise in the oil price such as predicted by the standard Dutch disease hypothesis have not been carried forward to the rest of the economy. Nevertheless, the real exchange rate has appreciated somewhat. To what extent is the appreciation due to booming oil prices? To answer this question, we make use of two more general approaches that help link the exchange rate and the price of oil. The first one is the monetary model aimed at pinning down the determinants of the nominal exchange rate, and our second approach consists in estimating a variety of real exchange rate models.

The remainder of the paper is organized as follows: Section 2 summarizes the main symptoms of the Dutch disease phenomenon and studies each single symptom using annual data for Kazakhstan. Section 3 provides the theoretical foundations with regard to the relationship between oil prices and the exchange rate. More specifically, the oil price-exchange rate relationship is embedded in the monetary model of the exchange rate and in real exchange rate models. Section 4 describes the data sources and the estimation techniques and presents the estimation results. Finally, section 5 provides some concluding remarks.

2 The Dutch Disease

2.1 Background

It is a widely held view that countries with abundant natural resources and especially with economic structures that rely heavily on oil production can suffer from the so-called Dutch disease, resulting in boom-bust cycles and sluggish long-term economic growth.

Taking the example of an oil-producing country, an increase in the price of oil⁵ encourages more investment in, and attracts more labor to, the oil-producing sector, which in turn increases sectoral output. A side-effect of the surge in investment in the oil sector might be that foreign capital flows into the oil sector but not into non-oil manufacturing. Wage increases in the oil

⁵ *The discovery of new oil fields or an exogenous technological shock would have the same effect (Corden, 1984).*

sector attract labor from non-oil manufacturing and from the nontradable sector to the oil sector. Corden (1984) terms this phenomenon the *resource movement effect*, which leads to direct deindustrialization. In addition, indirect deindustrialization occurs as the relative price of nontradables rises, which draws labor from the non-oil manufacturing sector to the nontradable sector. The relative price of nontradables may rise for three reasons. First, as part of the resource movement effect, nontradable prices will increase because of the excess demand for nontradables, which is brought about by a fall in supply owing to less labor in the nontradable sector. Second, as nominal and real wages increase in the oil sector, wages will also rise in other parts of the economy, provided that wages tend to equalize across sectors. As a consequence of wage increases in the nontradable sector, the relative price of nontradable goods will increase. Third, the relative price of nontradables will rise in the event that higher profits and wages in the oil sector and the related tax revenues are spent on nontradable goods and provided the income elasticity of demand for nontradables is positive. This latter effect is also called the *spending effect*.

At the same time, the real exchange rate tends to appreciate. One reason for this is the rise in the relative price of nontradable goods because of the wage spillover from the oil-producing sector. This increase in the relative price of nontradables can overlap with the traditional Balassa-Samuelson effect⁶ due to productivity gains in the non-oil manufacturing sector. If there is proportionate wage equalization across sectors and if increases in wages feed into nontradable prices in a one-to-one fashion, the Dutch disease will dominate the Balassa-Samuelson effect in the event that wage increases generated in the oil-producing sector outpace those in the non-oil manufacturing sector (due to productivity increases). This appreciation – regardless of whether it is attributable to the oil sector or to the Balassa-Samuelson effect – can be viewed as competitiveness neutral if it does not affect the real exchange rate of the non-oil manufacturing sector.

Nevertheless, this cannot be taken for granted, since the non-oil open sector's real exchange rate is another source of real appreciation;⁷ it appreciates because of higher wages and prices generated by the wage equalization process stemming from the oil-producing sector. Note, however, that the effect of wages on prices may be cushioned by productivity gains in the non-oil manufacturing sector (Balassa-Samuelson effect). The real exchange rate appreciation of the non-oil open sector can be exacerbated by the appreciation of the nominal exchange rate due to the inflow of “petrol dollars” and FDI to the oil-producing sector.

As a consequence of a strong appreciation, the non-oil manufacturing sector loses ground because of the fall in its competitiveness, which manifests itself in a decline in output and employment, and, in the end, leads to

⁶ According to the relative version of the Balassa-Samuelson effect, an increase in productivity of the open sector exceeding that of the closed sector may go in tandem with increases in real wages in the open sector without any loss in competitiveness, provided that relative PPP holds for the open sector (i.e. the real exchange rate 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.

⁷ Note that the expressions “open sector” and “tradable sector” are used interchangeably in this paper. The same applies to “closed sector,” “sheltered sector” and “nontradable sector.”

deindustrialization as the non-oil manufacturing sector fades away.⁸ It is precisely the disappearance of the non-oil manufacturing sector, which gives rise to boom-bust economic cycles – during the downturn phase of the oil price cycle there is no non-oil manufacturing sector to step in to compensate for the decline in oil production. Hence, oil price fluctuations are strongly reflected in economic fluctuations.

This is what we could refer to as the long-term Dutch disease: Economic growth is damaged in the long run because non-oil manufacturing is hollowed out. Even if non-oil manufacturing activity is maintained, however, economic fluctuations may remain strong in the short run due to fluctuations in the price of oil, simply because of swings in oil-related activities. The lower the share of the oil-producing sector in GDP, the lower the impact of the short-term or passive Dutch disease on overall economic activity.

Let us now take a closer look at the findings of the empirical literature. Sachs and Warner (1995) find strong empirical evidence in favor of the Dutch disease effect 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 Dutch disease hypothesis, showing that it holds only under specific conditions, thus diminishing the policy implication of the findings of Sachs and Warner (1995). Simply put, the Sachs and Warner hypothesis is that countries with abundant natural resources should not exploit their natural resources because this puts at risk their long-term growth.

By contrast, Spilimbergo (1999) shows that the Dutch disease phenomenon is not at work in Chile and South Africa, countries with abundant natural resources. Kronenberg (2004) shows empirically that corruption is one of the main reasons for the Dutch disease in transition economies.⁹ 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 Dutch disease hypothesis) but foster economic growth in the long run.

More generally, a high dependence on natural resources as the engine of economic growth can impede long-term growth in particular (1) in the presence of ill-defined property rights, imperfect or missing markets and lax legal structures, (2) if the fight for resource rents and the concentration of economic and political power hampers democracy and growth, and finally (3) if too many people get stuck in low-skill intensive natural resource-based industries (Gylfason, 2001). The implications of this are that strong institutions and a good educational system aimed at upgrading human capital (to enable new and higher value-added industries to settle in the country) may help avoid the Dutch disease.

⁸ It should be noted that the share of the nontradable sector in GDP and in total employment should decrease according to the resource movement effect and it should increase according to the spending effect (see Oomes and Kalcheva, 2006, for a summary of the effects of the Dutch disease). Note, however, that an increase in the share of nontradables in total employment may also occur if productivity gains are higher in manufacturing than in nontradables. The resulting rise in nontradable prices (Balassa-Samuelson effect) gives rise to an increase in the share of nontradables in GDP measured at current prices. This is something which can be observed in many advanced countries over time (Rowthorn and Ramaswamy, 1997).

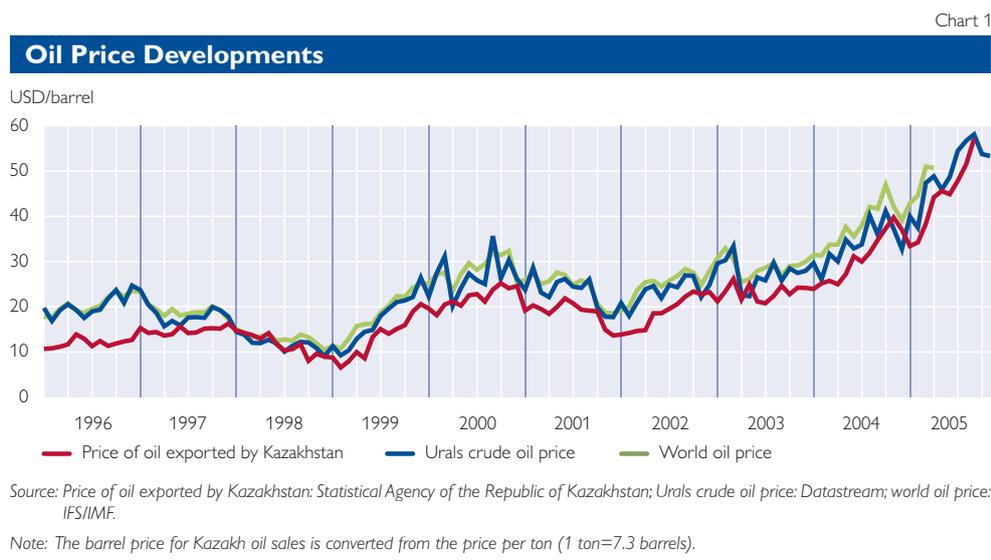
⁹ Abundant natural resources are conducive to corruption, and corruption hampers economic growth.

2.2 Evidence from Descriptive Statistics

In this section, we look at the symptoms of the Dutch disease for the case of Kazakhstan in an attempt to establish whether or not there are signs of the Dutch disease at work. For this purpose, it is essential to formulate the symptoms and the specific transmission mechanism of the Dutch disease in empirical terms.

2.2.1 Increasing Oil Prices

Chart 1 below shows that after an initial drop from around USD 25 per barrel to USD 10 per barrel in the aftermath of the Asian crisis, the price of crude oil has more than quintupled from below USD 10 per barrel to above USD 50 per barrel by the second half of 2005. Although the price of oil exported by Kazakhstan is on average lower by some USD 6 per barrel over the period displayed, the price of exported Kazakh oil is very much synchronized with world market prices, implying that developments on the world market have an immediate impact on Kazakhstan.



2.2.2 Massive Investment in the Oil Sector (Partly FDI)

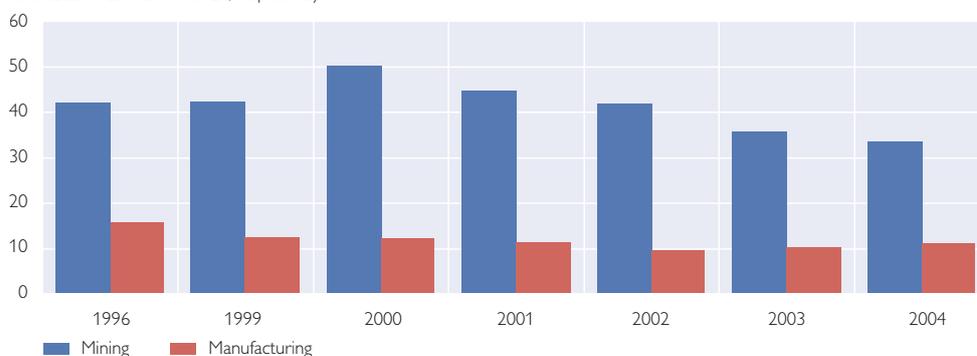
Although the share of investment in the oil sector as a share of total investment is very large, it has been declining since 2000, while investment in manufacturing has remained relatively stable (chart 2, left). This seems to indicate no major overinvestment in the oil sector related to the increase in oil prices. At the same time, foreign direct investment flows to the oil sector recorded a surge from 1999 to 2001, when oil prices started to increase. However, the relative share of FDI in this sector has declined later on. The share of investment in the manufacturing sector remained relatively stable from 1996 to 2004, and FDI picked up slightly after 2000, which coincided with the drop in FDI in the oil sector.

Chart 2

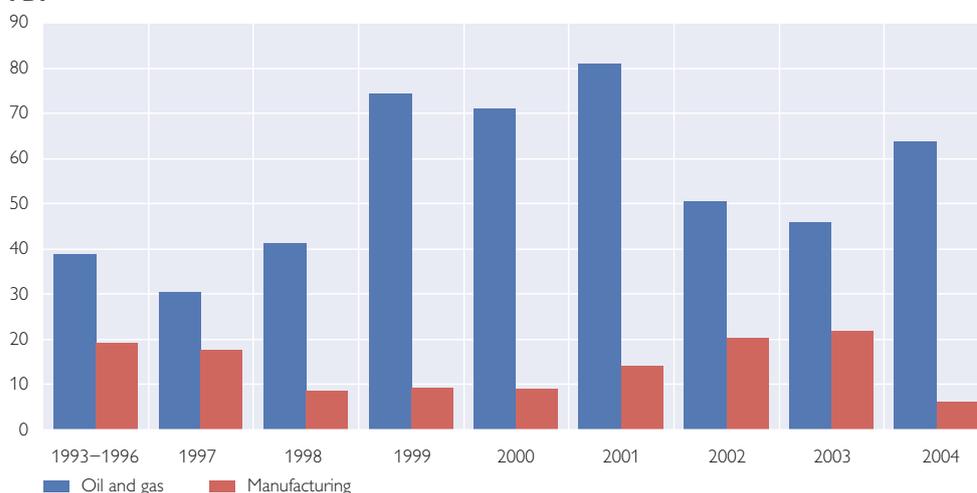
Investment and FDI in the Oil Sector and in Manufacturing

Investment

% of total investment and FDI, respectively



FDI



Source: Statistical Agency of the Republic of Kazakhstan.

2.2.3 Productivity, Real and Nominal Wages and Relative Prices

If real and nominal wages rise in the oil sector and if there is wage equalization across sectors, with the oil sector being the leader in wage setting, prices will increase in non-oil manufacturing and in the nontradable sector.

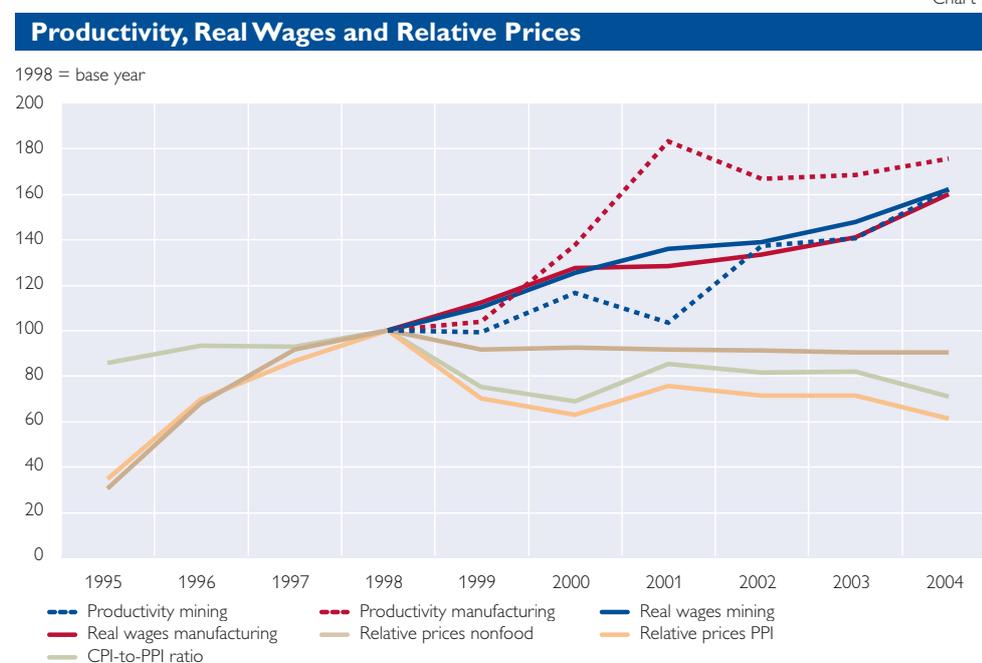
As depicted in chart 3a, average labor productivity rose by about 60% between 1998 and 2004 in the oil sector, as did real wages. Productivity gains in the manufacturing sector¹⁰ exceeded those in the oil sector, while the development of real wages in manufacturing followed very closely that in the oil sector because of wage equalization between the two sectors. The ratio of nominal wages in the oil sector to those in the manufacturing sector, plotted

¹⁰ The share of oil-related industries (mining and manufacturing) in the Kazakh GDP was around 8% between 2000 and 2004; this figure increases to 12% if oil-related construction and transport services are also taken into account. At the same time, the share of non-oil manufacturing in the Kazakh GDP which is not directly linked to oil production was around 14% in 2000 and 2004. These figures are not particularly low when compared to those for other non-oil transition economies. The countries which exhibited shares of less than 20% in 2003 are Bulgaria (15.4% in 2002), Macedonia (15.8%), Poland (16.2%), Croatia (16.6% in 2002), Slovakia (19.1%) and Hungary (19.6%). Source: The Vienna Institute for International Economic Studies (wiiw), Annual Database, 2005.

in chart 3b, indeed remains stable over time.¹¹ The fact that real wages progressed less than productivity in manufacturing suggests that wage pressures coming from the oil sector do not hamper competitiveness in the manufacturing sector.¹²

As shown in chart 3b, the nominal wage ratios show a downward trend, except for financial services. This indicates that nominal wages in certain market-based service sectors grow faster than nominal wages in the oil-producing sector. If this is an indication of a wage equalization process which is amplified in the services sectors, then the relative prices of market-based services should have been on the rise during the observed period. Yet, chart 3a shows that relative prices, measured in three different ways, have remained very much flat from 1998 onwards. Hence, wage increases did not translate into higher relative prices.

Chart 3a



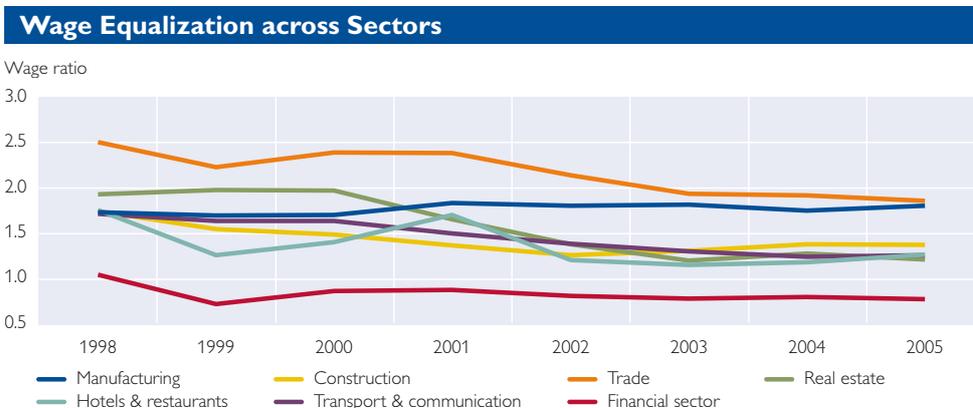
Source: Author's calculations based on data obtained from the Statistical Agency of the Republic of Kazakhstan.

Note: Relative prices nonfood and relative prices PPI refer to the relative prices of nontradables computed as market-based services divided by nonfood and the PPI, respectively.

¹¹ Wage equalization in levels would be verified if the ratio equaled 1, but this seems to be rejected by the data for all sectors (perhaps with the exception of the financial sector). However, absolute differences in wages may well be explained by differences in the required levels of qualification of the labor force in the different sectors. Hence, for wage increases in the oil sector to be transmitted to the rest of the economy, it suffices that the wage ratios remain stable over time (changes in oil-sector wages cause proportionate changes in wages in other sectors).

¹² These figures show that competitiveness did not change over time. It should be noted, however, that energy prices are highly subsidized in Kazakhstan. Hence, competitiveness may be maintained at an artificially high level. The question is how sustainable such subsidies are in the longer run, and what would happen to competitiveness if they were abolished.

Chart 3b



Source: Author's calculations based on data obtained from the Statistical Agency of the Republic of Kazakhstan.

Note: Monthly average nominal salary in the oil sector divided by the nominal salary of the corresponding sectors.

2.2.4 Appreciation of the Real Exchange Rate

The real exchange rate can, in principle, appreciate because (1) the relative price of nontradables increases, (2) the real exchange rate of the open sector appreciates due to a positive inflation differential in tradable prices or (3) because of the appreciation of the nominal exchange rate.¹³

Chart 4 shows that the real exchange rate in Kazakhstan depreciated in the aftermath of the Russian crisis and remained fairly constant until 2003, when it started to appreciate.¹⁴ The fact that the relative price of nontradable goods was stable in the Kazakh economy after 1998 is reflected in the behavior of the overall (CPI-deflated) real exchange rate: the CPI- and PPI-based real exchange rates, measured against the U.S. economy and in effective terms, are very strongly correlated. However, even if relative prices rose, their overall impact on the CPI would be limited because of the low share of services in the CPI as shown in table 1.^{15, 16}

Table 1

Shares of Different Goods and Services in the CPI from 1997 to 2005

%	1997	1998	1999	2000	2001	2002	2003	2004	2005
Food	55.40	52.40	52.00	51.70	50.50	50.30	50.10	50.00	49.00
Nonfood goods	23.30	24.10	23.80	22.90	24.00	23.90	24.00	24.10	24.60
Services	21.30	23.50	24.20	25.40	25.50	25.90	25.90	25.90	26.40

Source: Statistical Agency of the Republic of Kazakhstan.

¹³ The nominal and real exchange rates are defined as domestic currency units over one unit of foreign currency. Hence, a decrease (increase) is an appreciation (depreciation).

¹⁴ We do not show the real exchange rate for the period from 1994 to 1998 because it was very volatile and oil prices were fairly stable during this period.

¹⁵ The impact of changes in the relative price of nontradables on overall inflation can be calculated using the following formula: $p_t = (1 - \theta)(p_t^{NT} - p_t^T)$ where p_t^{NT} and p_t^T are the price of nontradable and tradable goods, respectively, and $(1 - \theta)$ measures the share of nontradables in the CPI basket.

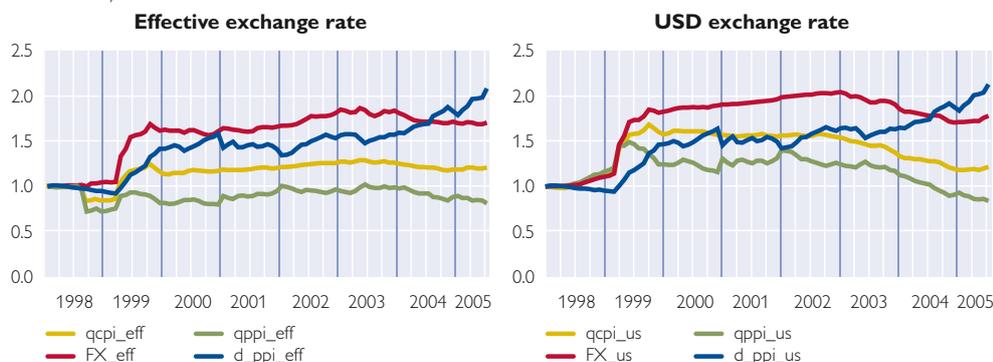
¹⁶ Note that even though the domestic relative prices in Kazakhstan did not change, the real exchange rate can appreciate if relative prices in the foreign economy decrease.

Hence, the development of the Kazakh real exchange rate is closely related to the evolution of the nominal exchange rate and the tradable inflation differential vis-à-vis the foreign benchmark. Chart 4 shows that both factors contributed to the real appreciation of the exchange rate as the inflation differential started to rise and the nominal exchange rate began to appreciate in 2003. The data also indicate that the real appreciation was more pronounced against the U.S. dollar, mainly because of the stronger nominal appreciation against the U.S. dollar. However, the positive tradable inflation differential is the result of the high oil price, reflected in the producer price index. As can be seen in chart 5, there is indeed a strong co-movement between the selling price of oil in Kazakhstan and the producer price index, which in turn shows a strong correlation with producer prices in mining and extraction and in the metallurgical industry.¹⁷ By contrast, prices in the manufacturing sector remained rather flat and followed the movement of the oil price only to a lesser extent. Accordingly, the real exchange rate of the non-oil open sector, obtained using the non-oil PPI, started its appreciation later and appreciated less against the U.S. dollar than the real exchange rate based on the overall PPI (see chart 6). This is due to the fact that the appreciation is mainly associated with a nominal appreciation of the Kazakh tenge.¹⁸ Remarkably enough, the non-oil real effective exchange rate did not appreciate at all after 1999.

Chart 4

Real and Nominal Exchange Rates and the Tradable Inflation Differential

1998 = base year



Source: Authors' calculations based on data obtained from the Central Bank of Kazakhstan and the Statistical Agency of the Republic of Kazakhstan.

Note: qcpi and qppi are the CPI- and the PPI-deflated real exchange rates, FX and d_ppi denote the nominal exchange rate and the inflation differential based on the PPI. _eff and _us refer to the effective benchmark (composed of the U.S.A., Russia and the euro area) and the U.S. economy.

¹⁷ This is because commodity and metal prices have risen in tandem with oil prices.

¹⁸ Real exchange rates can be connected to terms-of-trade developments. Rising oil prices, set in U.S. dollar, imply improving terms of trade in the oil sector. A rise in the U.S. dollar price of oil is automatically reflected in higher oil prices in the domestic currency, which in turn is reflected in higher inflation of oil products, and, as a consequence, in an appreciation of the real exchange rate of the oil sector. Improved terms of trade stimulate oil-related exports, and this leads to a nominal appreciation. If there is a nominal appreciation, domestic oil prices decrease automatically (because they are set in U.S. dollar), but the real exchange rate may remain unchanged, depending on the degree of nominal appreciation. For non-oil industries, possible real appreciation comes from the nominal appreciation of the Kazakh tenge, and perhaps to a lesser extent, from oil price increases in the domestic currency (this depends on the oil intensity of, and the price-setting behavior in, the non-oil manufacturing sector, provided the terms of trade of the non-oil industry remain unchanged).

Chart 5

Oil Price and Subcomponents of the Producer Price Index

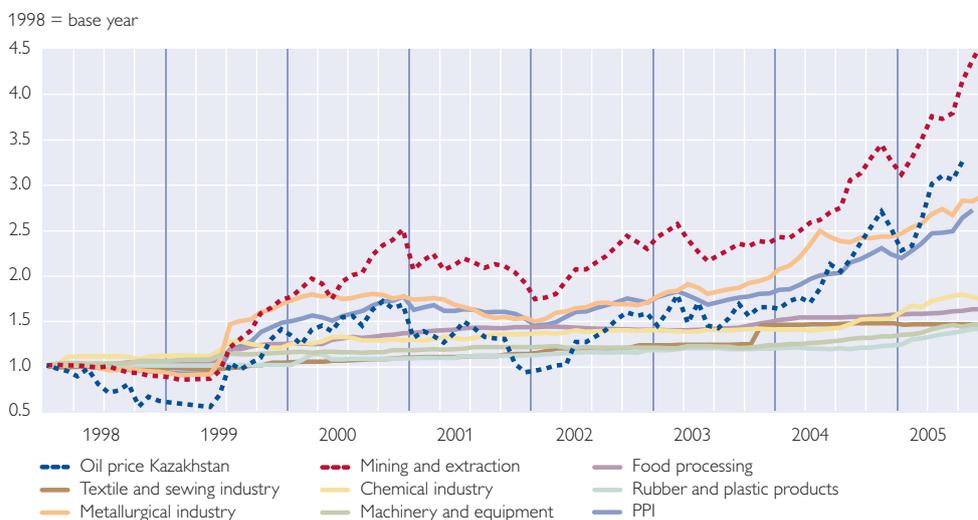
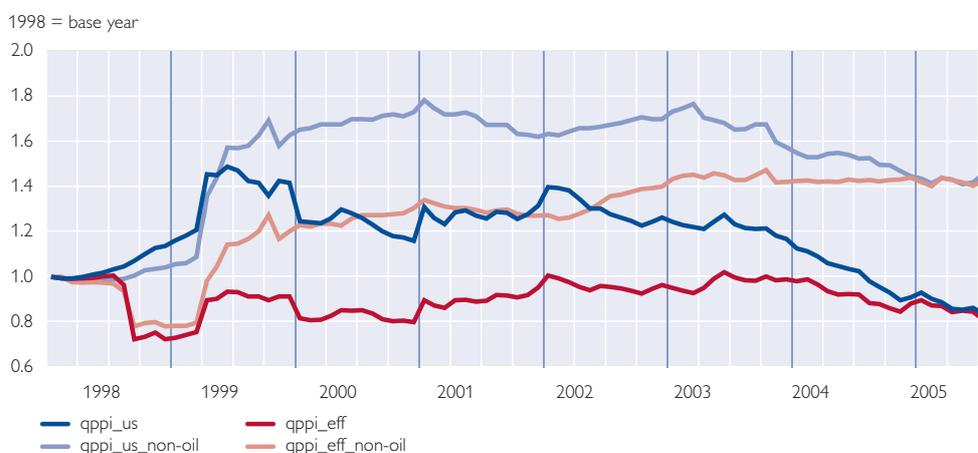


Chart 6

Real Exchange Rate of the Open Sector and the Non-Oil Open Sector

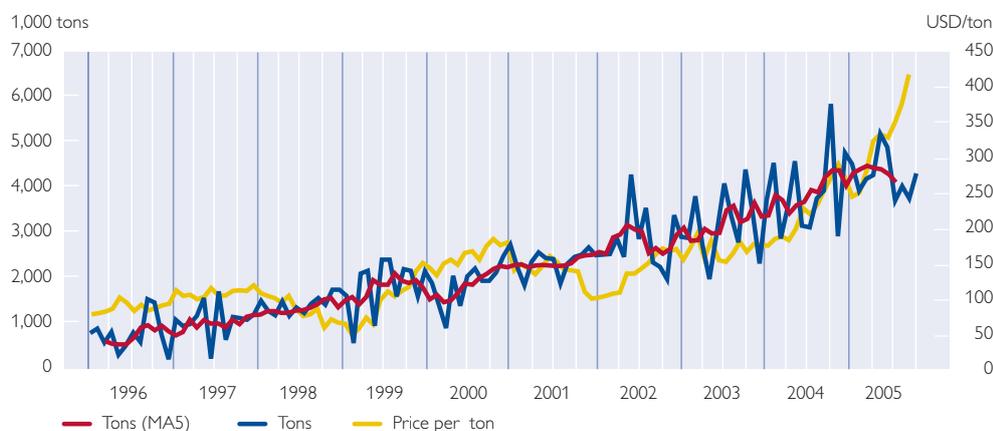


2.2.5 Declining Output, Employment and Exports in Non-Oil Manufacturing

There appears to be a relatively tight correlation between the U.S. dollar price for one ton of crude oil and the volume of oil production in Kazakhstan, at least as far as ocular econometrics allows us to state so on the basis of chart 7a. At the same time, although real growth in the oil sector outpaced that in the rest of the Kazakh economy, real GDP growth remained strong in the non-oil manufacturing sector after 2000, and economic growth in the market-based nontradable sectors did not exceed growth in manufacturing by far. This means that while growth in the oil sector was underpinned by strong oil prices, this

Chart 7a

Selling Price of Oil and Oil Production in Kazakhstan



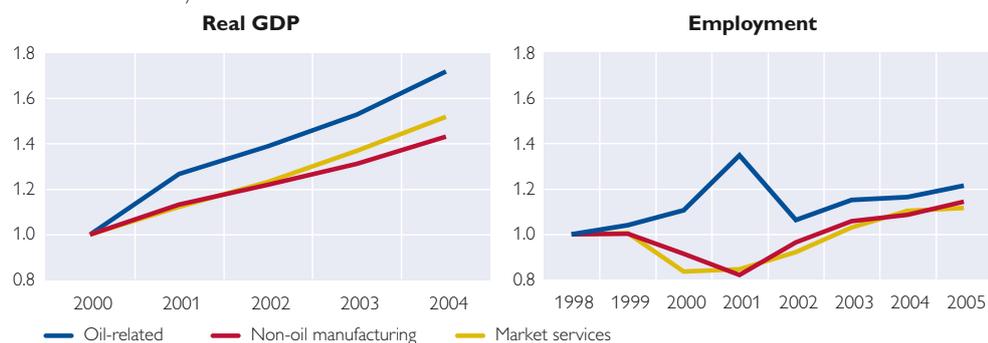
Source: Statistical Agency of the Republic of Kazakhstan.

Note: MAS refers to a 5-month moving average.

Chart 7b

Real GDP and Employment in the Economy

2000 and 1998 = base year



Source: Statistical Agency of the Republic of Kazakhstan.

Note: Author's calculation based on data obtained from the Statistical Agency of the Republic of Kazakhstan.

development had no major impact in the manufacturing sector. Along the same lines, no major reallocation of labor took place as reflected in the growth rate of sectoral employment.^{19, 20}

According to table 2, which reviews the transmission channels, it appears that some of the symptoms of the Dutch disease can be observed in Kazakhstan while others cannot. First, while the price of oil increased from 1998 to 2005, this did not lead to disproportionate growth in investment in the oil sector nor did it have an effect on the relative price of nontradables and non-oil tradables through the wage channel. Second, the real exchange rate appreciated due to a nominal appreciation. This does not seem to have impacted on growth and employment in the manufacturing sector until now.

¹⁹ Note that the pick-up in employment in the oil sector and the drop in employment in manufacturing and services is due to methodological changes. This can be also observed in the productivity figures shown in chart 3a.

²⁰ The share of the nontradable sector in GDP and in total employment should decrease according to the resource movement effect and it should increase according to the spending effect.

Table 2

Overview of the Symptoms of the Dutch Disease between 1998 and 2005

STAGE	FINDING
1. Rise in the price of oil	YES
2. Increase in investment in the oil sector due to high oil prices	Tendency to NO
3. Wages and relative prices in the rest of the economy driven by developments in the oil sector	NO
4. Appreciation of the real exchange rate due to	YES
4a. the relative price of nontradables	NO
4b. the relative price of non-oil tradables	NO
4c. a nominal appreciation	YES
5. Growth hampered in manufacturing	NO

3 Oil Prices and the Exchange Rate

The question emerging from table 2 is whether there is a relationship between the observed rise in oil prices and the appreciation of the nominal and the real exchange rate in Kazakhstan. In this section, we propose two approaches which help us embed the relation between the oil price and the exchange rate in a more general framework. The first approach relies on variants of the monetary model of the exchange rate which aims at modeling changes in the nominal exchange rate. The second approach rests on modeling the development of the real exchange rate on the basis of a set of fundamentals. Based on these two approaches we seek to estimate econometrically the relationship between oil prices and the exchange rate.

3.1 Nominal Exchange Rate

The monetary model has been widely used for industrialized countries in the past to explain observed movements of the nominal exchange rate and also to forecast exchange rates (Groen, 2000).²¹ The baseline version of the monetary model expresses the nominal exchange rate as a function of money demand, income and interest differential across the home and foreign economies:

$$e_t = m_t^D - m_t^{D*} - \alpha_1(y_t - y_t^*) + \alpha_2(i_t - i_t^*) \quad (1)$$

where e_t is the nominal exchange rate, expressed as units of domestic currency over one unit of foreign currency,²² m_t^D , y_t and i_t are money demand, income and the interest rate, respectively, with small letters denoting log-transformed variables. The asterisk refers to the foreign economy. α_1 and α_2 are the income and interest elasticity of money demand, and it is assumed that $\alpha_1 = \alpha_1^*$ and $\alpha_2 = \alpha_2^*$.

One strong assumption of the standard monetary model is that PPP holds for the economy as a whole, i.e. the real exchange rate is stable over time. However, according to the well-known Balassa-Samuelson effect, the real exchange rate may appreciate systematically because of the impact of

²¹ This revival comes after the seminal paper of Meese and Rogoff (1983), which showed that a random walk outperforms exchange rate models (among others the monetary model) in forecasting exchange rates.

²² This implies that an increase (decrease) in the exchange rate is a depreciation (appreciation) of the domestic currency vis-à-vis the foreign currency.

productivity gains in the open sector on the relative price of nontradables. The Balassa-Samuelson (B-S) augmented monetary model²³ can be derived under the assumption that PPP holds for the open sector ($e = p_t^T - p_t^{T*}$):²⁴

$$e_t = m_t^D - m_t^{D*} - \alpha_1(y_t - y_t^*) + \alpha_2(i_t - i_t^*) - (1 - \phi)((a_t^T - a_t^{NT}) - (a_t^{T*} - a_t^{NT*})) \quad (2)$$

If we think of the implications of the Dutch disease for the nominal exchange rate, according to which an increase (decrease) in the oil price (p_t^{OIL}) causes the nominal exchange rate to appreciate (depreciate), it seems reasonable to add the oil price to the standard or the B-S-augmented monetary model:

$$e_t = m_t^D - m_t^{D*} - \alpha_1(y_t - y_t^*) + \alpha_2(i_t - i_t^*) - \alpha_3 p_t^{OIL} \quad (3)$$

$$e_t = m_t^D - m_t^{D*} - \alpha_1(y_t - y_t^*) + \alpha_2(i_t - i_t^*) - (1 - \phi)((a_t^T - a_t^{NT}) - (a_t^{T*} - a_t^{NT*})) - \alpha_3 p_t^{OIL} \quad (3')$$

As we are primarily interested in the effect of oil prices on the exchange rate, the standard version (equations 4a and 4b) and two variants of the B-S-augmented monetary models (with relative productivity (equations 5a and 5b) and with relative prices (equations 6a and 6b)) completed with oil prices are employed. Not only the U.S. dollar price of Urals crude is employed but also a variable capturing the total revenue from oil production (production volume multiplied by the selling price). The latter stands for the potential inflow of “petrol dollars.”

$$e_t = f((m_t^S - m_t^{S*}); (y_t - y_t^*); (i_t - i_t^*); p_t^{OIL}) \quad (4a)$$

$$e_t = f((m_t^S - m_t^{S*}); (y_t - y_t^*); (i_t - i_t^*); vol^* p_t^{OIL}) \quad (4b)$$

$$e_t = f((m_t^S - m_t^{S*}); (y_t - y_t^*); (i_t - i_t^*); (a_t^T - a_t^{NT}) - (a_t^{T*} - a_t^{NT*}); p_t^{OIL}) \quad (5a)$$

$$e_t = f((m_t^S - m_t^{S*}); (y_t - y_t^*); (i_t - i_t^*); (a_t^T - a_t^{NT}) - (a_t^{T*} - a_t^{NT*}); vol^* p_t^{OIL}) \quad (5b)$$

$$e_t = f((m_t^S - m_t^{S*}); (y_t - y_t^*); (i_t - i_t^*); (p_t^{NT} - p_t^T) - (p_t^{NT*} - p_t^{T*}); p_t^{OIL}) \quad (6a)$$

$$e_t = f((m_t^S - m_t^{S*}); (y_t - y_t^*); (i_t - i_t^*); (p_t^{NT} - p_t^T) - (p_t^{NT*} - p_t^{T*}); vol^* p_t^{OIL}) \quad (6b)$$

²³ It has been first proposed by Clements and Frankel (1980) and applied recently to transition economies by Crespo Cuaresma, Fidrmuc and MacDonald (2005) and Crespo Cuaresma, Fidrmuc and Silgoner (2005).

²⁴ Given the fragility of some of the strong underlying assumptions, we suggest a few notes of caution when applying the monetary model to transition economies. The first assumption is the existence of a stable money demand function. This issue is not even uncontroversial for industrialized countries; the stability of the money demand function is probably too strong a hypothesis for transition economies with multiple changes in the real economy and in the monetary policy framework. Second, PPP fails not only for the overall real exchange rate but also for the real exchange rate of the open sector (crucial for establishing the relationship between the exchange rate and money demand) as documented in e.g., Égert, Halpern and MacDonald (2006). Finally, the homogeneity imposed on some of the elasticities in different versions of the monetary model may fail in practice. For instance, Knell and Stix (2003) emphasize systematic cross-country differences in the α_1 and α_2 terms (hence, $\alpha_1 \neq \alpha_1^*$ and $\alpha_2 \neq \alpha_2^*$). The same applies to θ and θ^* given that the share of nontradable goods in the consumer price index is considerably lower in developing countries (around 25% in Kazakhstan in 2005, table 1) as compared to industrialized countries (around 45% in the euro area).

An increase in relative money supply and the interest differential is expected to lead to a depreciation (positive sign), while an increase in relative income, relative productivity, the price of oil and total oil revenues is assumed to cause an appreciation of the exchange rate (negative sign).

3.2 Real Exchange Rate

3.2.1 Productivity and the Real Exchange Rate

When it comes to modeling the real exchange rate (q_t), a widely accepted view for the failure of PPP in the case of catching-up economies is the much-cited Balassa-Samuelson effect, which is due to productivity gains. However, New Open Economy Macroeconomics (NOEM) models have recently demonstrated that higher productivity growth in the open sector can have an effect on the real exchange rate not only through nontradable prices but also through tradable prices. MacDonald and Ricci (2002), Benigno and Thoenissen (2003) and Unayama (2003) put forward that a rise in productivity in the tradable sector causes the real exchange rate of the open sector to depreciate through the terms-of-trade channel. Whether the real exchange rate of the whole economy depreciates or appreciates in the aftermath of an increase in the productivity of the open sector depends on whether the depreciation of the open sector's real exchange rate is outweighed by the real appreciation induced by the Balassa-Samuelson effect.

In contrast to NOEM models stands the view that the open sector's real exchange rate in transition economies may undergo a trend appreciation because of the transformation process. The argument goes as follows: The transition from plan to market entails productivity increases in the tradable sector and enables the home economy to produce a growing number of goods of better quality. The increase in the quality of tradable goods goes unfiltered in the CPI (because quality changes are too fast and statistical offices too inexperienced in coping with quality adjustment). In addition, quality improvements cause a shift in (domestic and foreign) consumer behavior in favor of domestically produced goods²⁵ and an increase in reputation, which allows higher prices to be set for goods produced in the home economy. This entails a positive inflation differential for tradable goods and leads to a real appreciation of the real exchange rate. Since productivity gains in the open sector are a consequence of FDI inflows and the subsequent quality improvement, an increase in productivity in the open sector is associated with a real appreciation of the open sector's real exchange rate (Égert et al., 2003).

All in all, productivity may bear a negative as well as a positive relationship with the real exchange rate.

3.2.2 Other Explanatory Variables

The risk-adjusted real interest parity relationship, which has been used extensively in the literature, provides a convenient general framework for modeling the relationship between the real exchange rate and economic fundamentals (other than productivity). It is in this framework that net foreign assets, public consumption, openness, terms of trade or real oil prices can be

²⁵ *At the beginning of the transition process, there was a rush on foreign goods.*

easily connected to the real exchange rate (see e.g. Faruquee, 1995; MacDonald, 1998a,b).

An increase in net foreign assets is expected to be linked to an appreciation of the real exchange rate in order to offset the surplus in the trade balance.^{26,27} The time varying risk premium can be approximated by public or foreign debt. Higher debt is reflected in an increase in the risk premium, which leads to a real depreciation. Finally, the real interest differential can be viewed as a medium-term factor. The real price of oil (and the oil revenue variable) is expected to have a negative sign, i.e. an increase in this variable leads to a real appreciation. The same applies to the public expenditure and the terms of trade variables. By contrast, an increase in openness is assumed to be related to a depreciation of the real exchange rate (positive sign).²⁸

3.2.3 Testable Equations

Kutan and Wyzan (2005), the only paper we are aware of that uses country-specific data for Kazakhstan, estimate a real exchange rate model which includes the real effective exchange rate, productivity, the price of oil and the inflation rate. We go beyond this framework not only because we also analyze the determinants of the nominal exchange rate, but also because we look at the real exchange rate of the whole economy (CPI), of the open sector (PPI) and of non-oil manufacturing (PPI excluding oil prices), and because we use a score of control variables.

A number of specifications are estimated for the real exchange rate (q_t) using the CPI, the PPI and the PPI excluding oil prices. Our baseline specification contains productivity (prod) and, alternatively, relative prices (rel), as they turn out to be a very robust variable in empirical testing, and includes the real price of oil (roil) or the oil revenues variable (revoil), which is the variable of interest here. Additionally, a number of macroeconomic variables are used, such as the public debt-to-GDP ratio (pdebt), the public expenditure-to-GDP ratio (exp), openness (open), terms of trade (tot) and net foreign assets (nfa):

$$q_t = f(\overset{-/+}{prod}_t / \overset{-}{rel}_t, \overset{-}{roil}_t / \overset{-}{revoil}_t) \quad (7)$$

$$q_t = f(\overset{-/+}{prod}_t / \overset{-}{rel}_t, \overset{-}{roil}_t / \overset{-}{revoil}_t, \overset{+}{pdebt}_t) \quad (8)$$

$$q_t = f(\overset{-/+}{prod}_t / \overset{-}{rel}_t, \overset{-}{roil}_t / \overset{-}{revoil}_t, \overset{-}{exp}_t) \quad (9)$$

²⁶ Net foreign assets were also incorporated into real exchange rate models via the so-called stock-flow approach advocated by Faruquee (1995), Aglietta et al. (1997), Alberola et al. (1999, 2002) and via the NATREX (NATural Rate of EXchange) model of Stein (1994, 1995).

²⁷ However, the expected sign is not clear-cut for transition and emerging economies. The reason for this is that these economies need foreign savings to finance economic growth and the catching-up process. Thus, an inflow of foreign capital, mainly FDI, may cause the real exchange rate to appreciate. However, in the longer term, once net foreign liabilities attain a critical level, the home country will have to start servicing its net foreign liabilities. As a result, any additional increase in net foreign liabilities would lead to a depreciation of the real exchange rate. This corresponds to the long-run relationship between net foreign assets and the real exchange rate.

²⁸ See e.g. MacDonald (1998a,b) for a general discussion on the variables and Égert, Halpern and MacDonald (2006) for a discussion for transition economies.

$$q_t = f(\overset{-/+}{prod_t} / \overset{-}{rel_t}, \overset{-}{roil_t} / \overset{-}{revoil_t}, \overset{+}{open_t}) \quad (10)$$

$$q_t = f(\overset{-/+}{prod_t} / \overset{-}{rel_t}, \overset{-}{roil_t} / \overset{-}{revoil_t}, \overset{-}{tot_t}) \quad (11)$$

$$q_t = f(\overset{-/+}{prod_t} / \overset{-}{rel_t}, \overset{-}{roil_t} / \overset{-}{revoil_t}, \overset{-/+}{nfa_t}) \quad (12)$$

Evidence from cross-sectional regressions (not reported here) indicates a large initial undervaluation of the real exchange rate in 1994. This was corrected for very quickly, but it was followed by another, rather prolonged and stable undervaluation period. Although initial undervaluation might pose a problem for the econometric estimations for the period from 1994 to 1998, there appears to be no long-lasting and indeed a steadily declining undervaluation.

4 Estimation Results

As the series turn out to be I(1) for the periods studied,²⁹ we implement three alternative cointegration techniques, namely the residual-based Engle and Granger cointegration tests applied to the residuals of the long-run relationships obtained by using first ordinary least squares (OLS) and then the dynamic ordinary least squares (DOLS) suggested by Stock and Watson (1993), and the bounds testing approach relying on an auto-regressive distributed lag (ARDL) model developed by Pesaran, Shin and Smith (2001).³⁰

4.1 Nominal Exchange Rate

The cointegration analysis is carried out for the whole period (1994/1995 to 2005) and for the post-Russian crisis period (1999 to 2005). This split is motivated by the desire not only to filter out the effect of the Russian crisis (although a dummy capturing the period from September 1998 to June 1999 is employed for the whole period) but also to cope with the problem related to a possible initial undervaluation. Overall, the estimation results show that it is difficult to establish robust cointegrating vectors, given that we most often find weak evidence for cointegration. At the same time, our results also show the absence of cointegrating vectors in some cases, especially for the whole period for the U.S. dollar exchange rate, and find strong evidence for cointegration mostly for the subperiod for the DOLS estimations.

²⁹ We use the following standard unit root and stationarity tests: the augmented Dickey-Fuller (ADF), the Phillips-Perron (PP) and the Elliott-Rothenberg-Stock (ERS) point optimal unit root tests and the Kwiatkowski, Phillips, Schmidt and Shin (KPSS) stationarity test. In some cases, the tests produce conflicting results. However, they never indicate unambiguously that the series are stationary in level. This is why we conclude that the series are I(1). These results are available from the authors upon request.

³⁰ Before turning to the model estimations, it is important to make sure that no major initial undervaluation is observed for Kazakhstan at the earlier stages of the transition process. Maeso-Fernandez, Osbath and Schnatz (2005) were the first to note that in the presence of an initial undervaluation of the real exchange rate, the estimated coefficients and the constant term in the real exchange rate equation could be biased. A simple first check for a possible initial undervaluation consists in regressing the level of the real exchange rate on GDP per capita in Purchasing Power Standards (PPS) against the USD for cross-sectional data. The fitted value of the real exchange rate for Kazakhstan gives us the level of the real exchange rate, which would be consistent with the country's level of development (measured by GDP per capita) when considering the average relationship for 169 countries.

Regarding the entire sample period, there is a great amount of instability of the coefficient estimates of the monetary model for the period as a whole, as the coefficient estimates are either statistically insignificant or have the wrong sign for most of the variables even though we control for the Russian crisis with a dummy variable.³¹ With this caveat in mind, we would be well advised to interpret the result for the oil price and total oil revenue variables with care. As far as the price of oil is concerned, the estimated coefficients turn out to be either insignificant or to have a positive sign, meaning that a rise in this variable is associated with a nominal depreciation. When it comes to total oil revenues, they are, not surprisingly, mostly significant and have the expected negative sign three times and the wrong positive sign once.

For the subperiod running from 1999 to mid-2005, the first obvious observation is that the monetary model as a whole performs much better than for the entire period. Nonetheless, this does not mean that the estimation results are very robust across different estimation methods and alternative foreign benchmarks (effective exchange rate or against the U.S. dollar).³² Against this background, both oil variables seem to systematically enter the estimated equations with a negative sign, indicating that an increase in the price of oil and in oil revenues results in an appreciation of the exchange rate. Note, however, that the oil revenue variable is found to be somewhat fragile

Table 3

Estimation Results – Monetary Model												
1994:01/1995:01–2005:07						1999:06–2005:07						
Effective exchange rate			USD exchange rate			Effective exchange rate			USD exchange rate			
EG	DOLS	BTA	EG	DOLS	BTA	EG	DOLS	BTA	EG	DOLS	BTA	
Coefficient estimates of the nominal Urals crude oil price												
Eq(4a)	0.120***	0.126***	0.121	0.005	-0.02	-0.914	-0.056***	-0.041	-0.065**	-0.129***	-0.122***	-0.136
Eq(5a)	0.107***	0.101**	0.098	-0.007	0.163***	-0.053	-0.055***	-0.289***	-0.063**	-0.122***	-0.125***	-0.135
Eq(6a)	0.206***	0.127***	0.224**	-0.294***	0.081	-0.772	-0.055**	-0.234***	-0.169***	-0.166***	-0.508***	-0.245*
Coefficient estimates of the USD revenues of oil production (volume times price)												
Eq(4b)	-0.045**	-0.222***	-0.09	0.077	0.164**	0.178	-0.017	0.041	-0.032	-0.074***	-0.078***	-0.145**
Eq(5b)	0.008	-0.095**	0	-0.014	-0.17 ***	-0.182**	-0.011	-0.011	-0.035	-0.052***	-0.058***	-0.164**
Eq(6b)	0.005	0.013	0.02	-0.008	0.004	0.309	-0.005	0.070**	-0.021	-0.073***	-0.087***	-0.163**

Source: Authors' estimates.

Note: EG, DOLS and BTA denote the Engle-Granger, Dynamic OLS and the bounds testing approach. Shaded cells indicate that no cointegration could be established. Bold figures indicate that both formal tests of cointegration and the error correction terms reject the null of no cointegration (strong evidence for cointegration). Unmarked cells show that only one of the tests was significant (weak evidence for cointegration). *, ** and *** indicate statistical significance at the 10%, 5% and 1% levels, respectively.

³¹ These results are not reported here because of space constraints. However, they are available from the authors upon request.

³² Despite the fact that the variables turn out to be occasionally insignificant, the main variables such as relative income, relative money supply and the interest differential have the expected sign. A notable exception is the productivity differential and the relative price variable, which usually bear a positive sign instead of the negative one that one might expect. The finding that an increase in the productivity differential or in the relative price of nontradables does not cause an appreciation but leads to a depreciation or has no effect at all on the nominal exchange rate corroborates the preliminary evidence from chart 3a, where increases in productivity in the open sector are not accompanied by a rise in relative prices as the Balassa-Samuelson effect would have predicted.

when the effective nominal exchange rate is used but is fairly robust for the U.S. dollar exchange rate.³³

4.2 Real Exchange Rate

In this section, we discuss only the estimation results for the real exchange rate based on the PPI and the real exchange rate deflated by means of the non-oil PPI.³⁴ The CPI-based real exchange rate is not considered here because, as we have seen earlier using descriptive statistics and the monetary model, the relative price of tradables is very flat and does not seem to influence the exchange rate, suggesting the absence of the Balassa-Samuelson effect in Kazakhstan. The second reason for not presenting these results is that they are very similar to the ones for the PPI-based real exchange rate. This is another piece of evidence for the absence of the Balassa-Samuelson effect.³⁵

Similar to the monetary model, we mostly find weak evidence for cointegration.³⁶ As far as the general robustness of the coefficient estimates is concerned, it seems that the estimation results for the real exchange rate are slightly more robust than those for the monetary model, given that the fundamentals have a significant effect on the real exchange rate.³⁷

Let us now start analyzing the oil revenue variable.³⁸ The general pattern that emerges is that this variable has a negative significant effect on the real exchange rate vis-à-vis the U.S. dollar, irrespective of whether we use the overall PPI or the non-oil PPI for the computation of the real exchange rate and regardless of the period studied. In other words, an increase in oil revenues is associated with an appreciation of the U.S. dollar real exchange rate. However, the magnitude of this effect turns out to be larger for the overall PPI than for the non-oil PPI.

When it comes to the effective exchange rate, the results are also interesting. For the whole period, the oil revenue variable bears no relationship with the overall PPI-deflated real exchange rate, whereas it is positively related to the non-oil PPI-based real exchange rate (an increase in the oil variable leads to a real depreciation). For the period from 1999 to 2005, during which the oil revenue variable rose sharply, an increase in oil revenues is generally found to be linked to an appreciation of the overall PPI-based real exchange rate, but it appears to lead to a real depreciation if the non-oil PPI is employed. This is probably so because the appreciation of the nominal effective exchange rate is

³³ Note also that a sensitivity check is performed with regard to different data definitions. Not only nominal GDP but also industrial production as a proxy for nominal GDP – as often done in the literature (e.g. in Crespo Cuaresma, Fidrmuc and MacDonald, 2005) – is used. The results do not change quantitatively.

³⁴ These results are also available from the authors upon request.

³⁵ Note that the Balassa-Samuelson effect should explain the difference between the CPI- and the PPI-based real exchange rate. If PPP holds for tradables, the B-S effect has the potential to drive overall exchange rate movements. Otherwise it has a partial influence. By contrast, if the relative price of nontradable goods enters with very similar coefficients both the PPI- and CPI-deflated real exchange rate equations, this indicates that something else is going on.

³⁶ As in the nominal exchange rate estimations, a Russian crisis dummy is used for the entire period.

³⁷ The signs mostly meet our expectations. For instance, public expenditures usually have a negative sign, as have net foreign assets and terms of trade. With the exception of a few instances, the sign on the openness and public debt variables is positive. As for the productivity variable, the estimated coefficients have, as a rule, a positive sign.

³⁸ Estimation results for the real price of oil are not reported because they are fairly similar to the ones obtained using the oil revenue variable.

Table 4a

Estimation Results for the Real Exchange Rate, Full Sample												
Effective exchange rate						USD exchange rate						
Based on the PPI			Based on the non-oil PPI			Based on the PPI			Based on the non-oil PPI			
EG	DOLS	BTA	EG	DOLS	BTA	EG	DOLS	BTA	EG	DOLS	BTA	
Coefficient estimates of the USD revenues of oil production (volume times price)												
Eq (7)	0.012	0.017	-0.061	0.09 ***	0.111***	0.061	-0.159***	-0.426***	-0.489***	-0.135***	-0.318***	-0.427**
Eq (8)	-0.034**	-0.171***	-0.09	0.06 ***	0.083***	0.071	-0.127***	-0.47 ***	-0.416***	-0.053***	-0.21 ***	-0.22 **
Eq (9)	0.018	0.018	-0.031	0.095***	0.117***	0.11	-0.141***	-0.392***	-0.536***	-0.068***	-0.188***	-0.177***
Eq (10)	0.008	0.012	-0.062	0.082***	0.103***	0.02	-0.159***	-0.431***	-0.476**	-0.152***	-0.321***	-0.453**
Eq (11)	0.018	0.029	-0.037	0.103***	0.122***	0.056	-0.141***	-0.401***	-0.397***	-0.157***	-0.336***	-0.414**
Eq (12)	0.005	0.007	0.005	0.102***	0.131***	0.212**	-0.08 ***	-0.285***	-0.253***	-0.031	-0.402***	-0.1

Source: Authors' estimates.

Note: See table 3.

Table 4b

Estimation Results for the Real Exchange Rate, 1999 to 2005												
Effective exchange rate						USD exchange rate						
Based on the PPI			Based on the non-oil PPI			Based on the PPI			Based on the non-oil PPI			
EG	DOLS	BTA	EG	DOLS	BTA	EG	DOLS	BTA	EG	DOLS	BTA	
Coefficient estimates of the USD revenues of oil production (volume times price)												
Eq (7)	-0.041**	-0.053**	-0.185**	0.068***	0.079***	0.087	-0.19***	-0.366***	-0.393***	-0.093***	-0.134***	-0.106
Eq (8)	-0.095***	-0.183***	-0.232***	0.04 ***	0.049***	0.032	-0.212***	-0.356***	-0.439***	-0.091***	-0.128***	-0.127
Eq (9)	-0.046**	-0.059***	-0.142	0.069***	0.077***	0.061	-0.191***	-0.319***	-0.419***	-0.091***	-0.13 ***	-0.108
Eq (10)	-0.013	-0.048***	-0.084**	0.073***	0.09 ***	0.071	-0.172***	-0.312***	-0.362***	-0.098***	-0.146***	-0.111
Eq (11)	0.011	0.007	0.007	0.085***	0.098***	0.11 **	-0.13 ***	-0.269***	-0.263***	-0.085***	-0.132***	-0.093
Eq (12)	0.024	0.034*	0.01	0.085***	0.133***	0.166***	-0.137***	-0.213***	-0.275***	-0.079***	-0.122***	-0.07

Source: Authors' estimates.

Note: See table 3.

not large and prolonged enough to show up in statistically significant and negative coefficient estimates for the non-oil sector. Still, an increase in oil revenues causes a real appreciation of the open sector via the positive inflation differential (owing to a rise in oil prices).

5 Conclusions

This study sought to uncover whether or not the Dutch disease is at work in Kazakhstan. We first identified the mechanism through which fluctuations in the price of oil could possibly damage the non-oil manufacturing industry and thus the long-term growth perspectives of an economy that relies heavily on oil production. In a second step, we sought to empirically analyze the specific chains of this transmission mechanism in Kazakhstan. The analysis of highly disaggregated annual data from 1998 to 2005 suggests that non-oil manufacturing has so far been spared the perverse effects of oil price increases. Our econometric estimations show that this is mainly because the real exchange rate of the non-oil open sector is not linked to the real price of oil, implying that oil price increases do not lead to a real appreciation of this sector's exchange rate.

Estimations based on the monetary model of the exchange rate carried out for the period from 1994 and 1999, respectively, to 2005 using monthly data indicate that the rise in the nominal price of oil and in nominal oil revenues might be linked with an appreciation of the nominal exchange rate, in particular vis-à-vis the U.S. dollar but less so for the effective nominal exchange rate.

Notwithstanding this relationship between the nominal variables, the real exchange rate models indicate that only the real exchange rate of the entire tradable sector including oil production (but not that of the tradable sector excluding oil production) appreciated following a rise in the oil variable during the period under study. The reason for this is that prices did not rise more in Kazakh non-oil manufacturing than they did abroad and that the appreciation of the nominal effective exchange rate was not large and prolonged enough to have an effect on the non-oil sector.

This result makes us cautious about the use of aggregated data when studying the Dutch disease, because an apparent link between oil prices and the overall real exchange rate, which was also identified by Kutan and Wyzan (2005), does not automatically imply the existence of a relationship between oil prices and the non-oil open sector's real exchange rate.

However, our results, which indicate that non-oil manufacturing has so far been spared the negative effects of oil price increases, may provide only temporary relief for policymakers in Kazakhstan. If oil prices remain high in the future, the nominal and real exchange rates will continue to appreciate, thus putting pressure on non-oil industries. Against this background, policymakers would be well advised to implement structural measures aimed at improving competitiveness to counteract possible exchange rate appreciations in the future.

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Appendix

Data Sources and Definitions

Monetary model (monthly data if not indicated otherwise)

Nominal exchange rates of the Kazakh tenge:

against the U.S. dollar: period average (IFS/IMF via Datastream: KZI..RF)

against the euro: computed using the USD/EUR cross rate (Datastream code: EMEBXUSD)

against the Russian ruble: computed using the RUB/USD cross rate (Datastream code: RSXRUSD).

Nominal GDP (annualized and interpolated linearly from quarterly to monthly frequency):

Kazakhstan: KZI99B..A

U.S. economy: Main Economic Indicators/OECD via Datastream: USI99B. CB

Euro area: Eurostat via Datastream: EMESNGDPB

Russia: Datastream: RSOSN014B.

Industrial production:

Kazakhstan: Datastream: KZIPTOTQA; nominal quarterly data interpolated to monthly frequency and deflated by the PPI

U.S. economy: Main Economic Indicators/OECD via Datastream: USOPRI38G

Euro area: Eurostat via Datastream: EMESINPRG

Russia: IMF/IFS via Datastream: RSIPTOT.H.

Money supply (M2):

Kazakhstan: Datastream: KZM3....A
U.S. economy: FED via Datastream: USM2....B
Euro area: ECB via Datastream: EMECBM2.B
Russia: Datastream: RSOMA002B.

Short-term interest rates:

Kazakhstan: money market rate, Central Bank of Kazakhstan
U.S. economy: treasury bill rate; IFS/IMF via Datastream: USI60C..
Euro area: three-month money market rate; Eurostat via Datastream:
EMESSFON
Russia: three-month interbank rate; Datastream RSINTER3.

Real exchange rate models (monthly data if not indicated otherwise)

Productivity:

Industrial production (quarterly data interpolated to monthly frequency) divided by employment figures in industry or manufacturing. As data are not available for services, productivity in this sector is assumed to be equal to 0 in all four economies. If productivity gains are comparable in the four economies, this zero growth assumption has little effect on the variable.

Employment in industry (quarterly data interpolated to monthly frequency):

Kazakhstan: IFS/IMF via Datastream: KZI67...F
U.S. economy: Bureau of Labor Statistics via Datastream: USEMPMANO
Euro area: Eurostat via Datastream: EMESEMPIH
Russia: IFS/IMF via Datastream: RSI67...F.

Real exchange rate (nominal exchange rate multiplied by foreign prices over domestic prices):

Real exchange rate, whole economy: CPI
Real exchange rate, tradables: PPI is used as a proxy for tradable price inflation
Real exchange rate, non-oil manufacturing/tradables: PPI excluding oil prices.

CPI:

Kazakhstan: Statistical Agency of the Republic of Kazakhstan via Datastream: KZCONPRCF
U.S.economy: Main Economic Indicators/OECD via Datastream: USOCP009E
Euro area: Eurostat via Datastream: EMCONPRCF
Russia: wiiw via Datastream: RSCONPR2F.

PPI:

Kazakhstan: overall PPI: Statistical Agency of the Republic of Kazakhstan via Datastream: KZPROPRCF; non-oil PPI: Statistical Agency of the Republic of Kazakhstan; constructed on the basis of the PPI series for food processing; textile and sewing industry; chemical industry; rubber and plastic products; and machinery and equipments. As no weights are available, an arithmetic average is taken.
U.S.economy: Main Economic Indicators/OECD via Datastream: USOPP019F

Euro area: Eurostat via Datastream: EMESPPIIF
Russia: WIIW via Datastream: RSPROPRCF.

Relative prices: CPI-to-PPI ratio

Terms of trade: Statistical Agency of the Republic of Kazakhstan

Openness: Statistical Agency of the Republic of Kazakhstan; export and imports of goods over nominal GDP

Public debt to GDP: cumulated government deficit to GDP; Datastream: KZQ80...A; (quarterly data interpolated to monthly frequency).

Net foreign assets: cumulated current account deficits; Statistical Agency of the Republic of Kazakhstan

Public expenditure to GDP: Datastream: KZQ82...A; (quarterly data interpolated to monthly frequency)

Urals crude: Datastream: OILURAL

Oil revenues: selling price of oil multiplied by quantity; Statistical Agency of the Republic of Kazakhstan.

The effective variables are computed as the weighted average of the three series (U.S., euro area and Russia) based on constant weights derived from foreign trade shares.

Serbia: Country Profile and Recent Economic Developments

This study provides an overview of economic developments in the Republic of Serbia since the end of the Milošević regime in the fall of 2000. Starting from a short review of the political context, the study reports on Serbia's relations with the EU and the IMF as well as the Paris and the London Clubs. Subsequently, the most important structural reform measures are presented. The article then turns to macroeconomic developments, focusing on GDP growth, the labor market, inflation, monetary policy, fiscal policy and the external sector. Based on this discussion, the paper concludes that after a lost decade Serbia has embarked on a fairly dynamic transition path and has achieved substantial progress in recent years. At the same time, however, the Serbian authorities are still facing a set of key challenges at the current juncture, such as high inflation and unemployment or the high current account deficit. Other major tasks include further advancing the privatization process and combating corruption. On the political front, further progress in the cooperation with the International Criminal Tribunal for the Former Yugoslavia (ICTY) in The Hague is needed, also with a view to promoting negotiations with the EU on a Stabilisation and Association Agreement. Given that Serbia's economic weight is comparatively large in the Western Balkans, a successful completion of the transformation process in Serbia is important also from a regional perspective.

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1 Political and Economic Framework, International Relations and Structural Reforms

1.1 Political Overview

The Federal Republic of Yugoslavia (FRY)⁴ was the last Southeastern European (SEE) country to start a comprehensive economic reform process in late 2000. After a decade of political and military conflict that peaked in the Kosovo war in 1999, the Milošević regime was overthrown on October 6, 2000. After democratic parliamentary elections, Vojislav Koštunica (now Serbian Prime Minister) became the new President of the FRY.

In February 2003, the parliament of the FRY ratified a constitutional charter, thus formally founding a new state union called Federation of Serbia and Montenegro. This constitutional charter established far-reaching competences for the two parts of the federation in the areas of monetary, fiscal, trade and customs policy. Furthermore, it instituted the possibility of a separation after a three-year period. In March 2003, the Serbian Prime Minister Zoran Djindjic was assassinated. The death of this pro-Western reformer slowed down the transformation process and led to early parliamentary elections.

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³ The authors gratefully acknowledge comments by two anonymous referees and by Doris Ritzberger-Grünwald, Peter Backé, Thomas Reiningger and Balázs Égert of the OeNB's Foreign Research Division. We would like to thank Irene Popenberger for language advice. The present study continues a series of country studies published in the OeNB's Focus on European Economic Integration (FEEI), most recently on Albania (FEEI 1/05) and on Ukraine (FEEI 1/06).

⁴ The Federal Republic of Yugoslavia existed until February 3, 2003, when it was transformed into the Federation of Serbia and Montenegro. When Montenegro declared its independence from the federation on June 3, 2006, two separate states emerged.

The new minority government – led by Koštunica and supported by the former party of Slobodan Milošević – continued the reform process. It improved the cooperation with the ICTY, which was rewarded by the opening of talks with the European Commission about a Stabilisation and Association Agreement (SAA) on October 7, 2005. However, the negotiations were temporarily suspended on May 3, 2006, after Serbia's government had let elapse the (extended) deadline to hand over the former Bosnian Serb military commander Ratko Mladić to the ICTY. Talks have not been resumed yet, despite the presentation of an action plan to capture Mladić by the Serbian government. The former political leader of Republika Srpska in Bosnia, Radovan Karadžić, has not yet been arrested, either (European Commission, 2006a).

Montenegro held a referendum about its independence from the Federation of Serbia and Montenegro on May 21, 2006, and voted for sovereignty. The result was internationally accepted. The Republic of Montenegro declared itself independent on June 3, 2006, and became a member of the United Nations on June 28, 2006. From an economic point of view, the independence of Montenegro has limited consequences, as Serbia and Montenegro had already been separate economic entities before the referendum.

Negotiations on the final status of Kosovo (still a Serbian province, but under UN control) started in Vienna in November 2005. So far, several rounds of talks have led to no result regarding Kosovo's final status. If the two parties fail to come up with an adequate compromise, the UN Security Council may take a final decision on the Kosovo issue.⁵

In October 2006, the Serbian parliament passed a new constitution which declares Kosovo a part of Serbia. This new constitution was accepted in a referendum in late October by a relatively narrow majority. The next parliamentary elections are due in the fall of 2007, but will presumably be held earlier.

1.2 International Economic Relations – A Driving Factor in the Reform Process

1.2.1 European Union

In a first step after the end of the Milošević regime, the FRY joined the EU-initiated Stability Pact for Southeastern Europe, which provides a long-term conflict prevention strategy based on security, democratic stability, and economic and social well-being.

In December 2000, the European Council decided to lift all sanctions against the FRY and to allow the country to benefit from Community Assistance for Reconstruction, Development and Stabilisation (CARDS). Since then, over EUR 2.5 billion have been allocated to Serbia⁶ (European Commission, 2006b). In April 2004, the European Commission published a feasibility report on the preparedness of Serbia and Montenegro to negotiate an SAA with the EU. This report was approved by the European Council in June 2004 and

⁵ Kosovo uses the euro as its legal tender, has its own separate monetary sector and collects official data on a euro basis. This study focuses only on the Republic of Serbia, excluding Kosovo.

⁶ Serbia includes the Republic of Serbia, the Republic of Montenegro and the Province of Kosovo.

serves as a benchmark for the further transformation process. It includes a detailed assessment of the political situation (democracy and rule of law, human rights and protection of minorities, regional and international cooperation/obligations), the economic situation (market economy and structural reforms, management of public finances) and the state of convergence with EU policies (internal market and trade, sector policies, cooperation in justice and home affairs). The negotiations, which started in October 2005, have been interrupted owing to Serbia's insufficient cooperation with the ICTY.

1.2.2 International Monetary Fund

In May 2001 the International Monetary Fund (IMF) implemented the first Stand-By Arrangement with the FRY since the early 1990s. When this arrangement expired one year later, an Extended Arrangement was launched in May 2002. The IMF completed the sixth and last review under this arrangement in February 2006 after a delay owing to insufficient progress of several reform projects such as the privatization of the state-owned oil and gas company NIS and the reform of the pension system. Serbia adopted legal regulations for the privatization of the oil industry and a new pension law in September 2005. The country received SDR 650 million from the IMF between 2002 and 2006.

Serbian officials are considering starting negotiations on a new Stand-By Arrangement with the IMF. If and when they will actually do so remains to be seen.

1.2.3 Paris Club and London Club

In 1984, the then Socialist Federal Republic of Yugoslavia started negotiations with the Paris Club, which granted its latest debt reduction agreement to the FYR in November 2001; it included a 66% relief of the country's long-term debts (with a payment period of more than 12 months) in two steps. The first debt tranche of 51 percentage points (around USD 2.2 billion) was cancelled in March 2002 upon the successful completion of the first Stand-By Arrangement with the IMF. The remaining debt portion of 15 percentage points (around USD 650 million) was relieved after the completion of the IMF agreement in February 2006.

In July 2004, the government of Serbia signed an agreement with the London Club that included a write-off of about 62% of the country's net present debt value and the exchange of the Republic of Serbia's remaining debt into bonds. This arrangement prompted Standard&Poor's to assign a credit rating of B+ to Serbia and Montenegro, which was upgraded to BB- in June 2005.⁷

1.3 Structural Reforms and Privatization Process

In its latest Transition Report, the European Bank for Reconstruction and Development (EBRD) diagnosed an overall slowdown in the privatization process in the SEE region (EBRD, 2005). Despite some setbacks, the Federation of Serbia and Montenegro was an exception as four out of the nine

⁷ Fitch Ratings assigned a BB+ rating to Serbia, while no rating is available from Moody's.

EBRD transition indicators were upgraded. The state union was able to make progress in the following areas: large-scale privatization, governance and enterprise restructuring, trade and foreign exchange liberalization and banking reform.

1.3.1 Structural Reforms – Fast Development but Slow Implementation

The country successfully implemented several structural reforms to reduce its high budget deficit. Despite some delays in their implementation, these measures have been a motor for the privatization process.

The tax reform was enacted in three steps. First, the overall tax system was simplified in 2001. This step resulted in the reduction of the average effective tax burden on wages and salaries (including social security contributions) by 7 percentage points from 38% to 31% in 2002. The second step, which was taken in 2002, aimed at making the tax system more supportive to investment and employment. It included the reduction of the corporate tax rate from 20% to 14% (January 2003) and then to 10% (August 2004). A 14% flat tax was introduced by the new personal income tax law (adopted in November 2002 and effective from January 2003). As a consequence, both tax rates are now among the lowest in Europe. These measures are likely to have helped contain the shadow economy and resulted in an improvement of tax compliance and tax collection (World Bank, 2006; Foundation for the Advancement of Economics, 2006).

The third corner stone of the tax reform was the introduction of a new value-added tax (VAT) regime with a regular VAT rate of 18% and a reduced rate of 8% for basic food, certain medical supplies, teaching material, etc. in January 2005 to replace the sales tax. At the same time, an import tax was introduced. The VAT implementation was a success: VAT revenues have increased significantly as a result of this reform step – a phenomenon which is again probably attributable to the fact that it has helped contain the shadow economy and the concomitant tax evasion (World Bank, 2006).

One main step to reduce fiscal expenditure was the start of the pension reform in 2005. The IMF had put increasing pressure on the Serbian authorities, as the deficit of the pension funds for employees, farmers and the self-employed had reached over 5% of GDP in 2004 (World Bank, 2006). The reform, based on the pension law of September 2005, included an increase of the retirement age and changes to the pension indexation formula. These measures aim at reducing the deficit of the pension funds from 2007 onward (IMF, 2006a). However, the deficit will be reduced only gradually. Finally, the adoption of a new health insurance law in November 2005 laid the basis for a rationalization of the health care system.

The process of harmonizing the foreign trade system with standards of the EU and the World Trade Organization (WTO), which started in 2003, is already well advanced. The law on customs tariffs (July 2005) and the foreign trade law (November 2005) have made the Serbian tariff system compatible with international regulations. Furthermore, the Federation concluded bilateral free trade agreements (FTAs) with all Western Balkan states, Bulgaria, Romania and Moldova. Under the auspices of the Stability Pact for South Eastern Europe, Serbia is expected to join the Central European Free Trade

Agreement (CEFTA) in the near future, alongside with the other SEE countries (Stability Pact for South Eastern Europe, 2006). Moreover, Serbia is the only SEE country that has been able to conclude an FTA with the Russian Federation. Serbia applied for WTO membership in December 2004, and the government expects accession to the WTO in 2008.

The country's legal tender, the dinar,⁸ became fully convertible for current account transactions in May 2002 (IMF Article VIII status), while capital transactions are only partly and gradually liberalized (for details see IMF, 2005c).

The agricultural sector still plays a crucial role in the Serbian economy. A reform of this highly indebted sector started in 2003. Since then, the country's budget expenditure for agricultural production has increased, while the funds directed to price support have decreased. The available funds have been used to raise the efficiency and competitiveness of the agricultural sector, to encourage sustainable rural development and to provide financial support to farmers. This development strategy aims to bring regulations in line with the EU's Common Agricultural Policy (CAP).⁹

In the sector of competition policy, the EBRD awarded the lowest possible grade of 1, which implies that no competition legislation and institutions exist (EBRD, 2005, p. 203). However, the government has recently taken action in this field, e.g. by introducing a competition law in end-2005 and establishing a competition agency in early-2006. The effect of these measures remains to be seen.

The government agreed on a national anti-corruption strategy, with technical assistance from the Organization for Security and Co-operation in Europe (OSCE) and the Stability Pact for South Eastern Europe in 2005 (World Bank, 2006). However, corruption is still a pressing problem in Serbia. More generally, the judiciary system is not yet functioning in a satisfactory manner, and thus contract enforcement remains a problem (EBRD, 2005, p. 10).

1.3.2 Privatization Process of State-Owned Enterprises

The privatization law, which was adopted in June 2001 and amended in May 2005, established the key principles of the privatization process in Serbia. It envisages three principal ways of privatization and reconstruction. Large enterprises shall be offered to strategic investors via tenders, while medium-size firms are to be sold via auctions. Finally, large loss-making companies should be reconstructed and subsequently sold via tenders and/or auctions. The sale of state-owned companies has proceeded: the private sector's share in GDP climbed from 40% in 2000 to 55% in 2005 (IMF, 2006a).

Based on the bankruptcy law, which was adopted in July 2004, unsellable companies have been declared bankrupt. The law on accounting and auditing December 2002 aimed at implementing the International Accounting Standards

⁸ The international currency code for the Serbian dinar is CSD; it is to be altered to RSD. From 1994 to 2003, the New dinar (YUM) was the currency of Serbia (except Kosovo). To improve the readability of this study, we will mostly refer to the Serbian currency as the dinar (CSD).

⁹ In this context, it is worth to note that agricultural land can be owned privately, whereas urban construction land cannot; this situation will change when the new constitution enters into force (World Bank, 2006).

(IAS). Banks and large enterprises have had to publish IAS-conform financial statements since 2004 and 2005, respectively.

A reconstruction program was developed for the eight largest, socially-owned enterprises in the electricity, petroleum, railway, postal, telecommunications, airline, airport and forestry sectors (IMF, 2005). This program includes cost rationalization in the form of e.g. spin-offs of non-core entities as well as reorganization measures. Furthermore, international economic advisors are being hired with the aim to ensure the smooth and transparent privatization of these companies.

By adopting a law on energy in August 2004, the legal prerequisites for an energy sector reform were put in place. They comprise the establishment of an independent energy regulator and the restructuring of the energy company Elektroprivreda Srbije (EPS). This restructuring entails selling off non-core activities and splitting the company into two parts, downsizing its core employment structure and fully servicing its debt to the Serbian government. Furthermore, it was decided that the company should not receive any state subsidies in 2004 and 2005 (IMF, 2004, p. 70).

Serbia's major oil company Naftna Industrija Srbije (NIS) is one of the largest state-owned enterprises that is scheduled to be sold in two steps. First, a minority stake is to be offered to a strategic investor in 2006, and after at least three years, a majority (and consequently managing) control will be sold in a second step. The Serbian state is planning to keep a minority share of 25%.

Mobi63 (formerly Mobtel) is the biggest mobile telecommunications provider in Serbia. In August 2006, the state-owned share of 70% was sold for EUR 1.5 billion to the Norwegian company Telenor, which outbid the Austrian Mobilkom and the Egyptian Orascom. This has been the largest privatization in Serbia so far. The remaining 30% share in Mobi63 is held by a consortium of Austrian investors.

Serbia's financial sector is mostly bank-dominated. While the country's capital market is still at an early stage of development, the privatization process of the financial sector is fairly advanced. The number of banks was reduced from over 80 in 2000 to 38 in mid-2006 mainly as a result of closing insolvent banks, including the country's four largest banks Beobanka, Beogradska banka, Investbanka and Jugobanka (IMF, 2002). Other banks have been privatized continuously. By mid-2006, 47% of Serbian banks were foreign-owned (NBS, 2005a). Financial stability has been improved by raising the supervision rights of the Narodna banka Srbije (NBS). The new banking law adopted in November 2005 aligns key areas of legislation with the Basel Core Principles for Effective Banking Supervision (IMF, 2006a, p. 72).¹⁰

The ambitious reform process in combination with financial sector stabilization and privatizations in several economic sectors have led to a significant increase in the inflow of foreign direct investment (FDI) in Serbia.

¹⁰ For more information on the financial sector in SEE, see the study on "Bank Intermediation in Southeastern Europe: Depth and Structure" in this issue of *Focus on European Economic Integration*. For an analysis of the transformation of the Serbian banking sector, see Zdrale (2006).

In the period from 2000 to November 2005, top investors in Serbia have been companies with headquarters in the Netherlands, Austria and Germany.

2 Economic Developments

In the following, we intend to expound the economic developments in Serbia during the transition process, with a major focus on the most recent years. However, it should be borne in mind that our analysis is inevitably limited by data availability and reliability problems, which also pertain to some basic macroeconomic data series.

2.1 Economic Growth Robust Despite Recent Slowdown

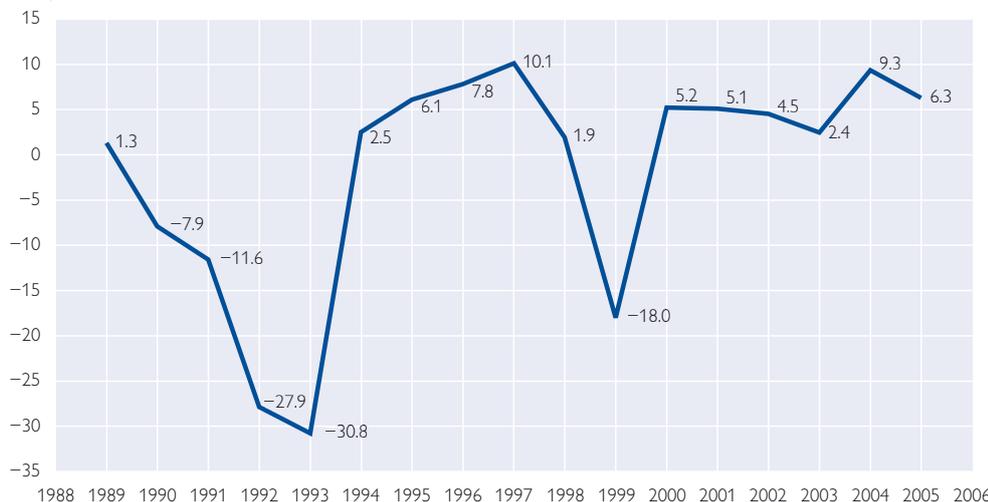
In 2005, the Serbian economy grew strongly at 6.3%, and it continued at the same pace also in early 2006.

Chart 1 shows that Serbia's economic growth – after having regained momentum after the Kosovo war – nearly halved in 2003 (2.4%) in the wake of the aforementioned political changes. In 2004, the growth rate almost quadrupled to 9.3% and slowed down again somewhat in 2005, when GDP per capita at market exchange rates amounted to USD 2,880, while coming to USD 5,348 measured at PPP (IMF, 2006b). In both cases, this is about 30% of the level observed in the five new EU Member States (NMS-5: Czech Republic, Hungary, Poland, Slovenia and Slovakia).

Chart 1

Gross Domestic Product – Real Change

first quarter of 1999 = 100



Source: EBRD (1989–1999), Statistical Office of Serbia (2000–2004).

Note: Data from 1999 onward exclude Kosovo, data from 2000 onward exclude Kosovo and Montenegro.

Table 1 evidences that GDP growth in Serbia has been driven predominantly by robust domestic demand. In 2005, a strong real increase in private consumption (4.4%), which accounts for almost 100% of GDP in real terms, was the major contributing force. This strong performance was complemented by a considerable improvement in net exports. Although the level of exports

was still less than half that of imports, the gap has narrowed by more than 6 percentage points.

On the supply side, industrial production and the service sector jointly produce almost two-thirds of Serbian output, while agricultural production represents the third largest sector. As such, it was among the leading forces behind the strong economic performance recorded in 2004, which was mostly attributable to favorable weather conditions. In the following year, however, GDP growth decelerated, as the strong expansion in the service sector could only partially make up for the decline in agriculture, construction and also in industrial production (whose growth almost came to a halt after having gained momentum in 2004).

2.1.1 Expenditure Side Dominated by Domestic Demand

A closer look at the expenditure side (see table 1) shows that the share of private sector consumption in GDP has gradually trended upward between 2000 and 2004 at both current and constant prices, while it dropped marginally in 2005. The more pronounced increases in current prices in the first years of this decade might reflect the impact of early liberalization and reform efforts. In particular, the increase in 2002 and 2003 possibly mirrors the strong rise in real net wages in those years that resulted from the above-mentioned tax reform and strong disinflation at the time.¹¹ To put things in perspective, the share of private consumption in GDP is significantly higher in Serbia than in the NMS-5, where it amounts to about 55% of GDP.

Table 1

GDP Components (Expenditure Side)

Current prices in % of GDP

	2000	2001	2002	2003	2004	2005			
Private consumption	75.1	81.2	85.3	86.6	89.8	98.4	89.1	96.7	4.4
Public consumption	22.1	27.0	20.0	20.5	18.6	19.7	17.8	18.9	1.5
Domestic consumption	97.2	108.2	105.3	107.1	108.4	118.2	106.9	115.6	3.9
Gross fixed capital formation	13.8	9.2	13.1	14.1	19.3	13.9	17.1	12.7	-2.8
Stock changes	-6.4	5.3	2.1	0.7	3.3	3.9	1.1	1.4	-60.3
Gross capital formation	7.4	14.6	15.2	14.8	22.7	17.8	18.2	14.2	-15.3
Domestic demand	104.6	122.8	120.6	121.9	131.1	136.0	125.1	129.7	1.4
Exports	14.8	25.4	25.9	23.5	23.2	22.0	25.5	23.2	12.2
Imports	19.6	48.3	46.4	45.3	54.2	57.9	50.6	52.9	-2.9
Net exports	-4.8	-22.9	-20.6	-21.9	-31.1	-36.0	-25.1	-29.7	-12.1

Source: Statistical Office of Serbia, wiw.

Note: The second columns of 2004 and 2005 reflect constant (2002) prices, the third column of 2005 reflects year-on-year changes in % based on constant (2002) prices.

Despite an increase in public consumption by 1.5% in 2005 (measured at constant 2000 prices), its share in GDP has been declining steadily since 2002 at both current and constant prices. The Extended Arrangement with the IMF was approved in May 2002. Since then, the government has pursued a somewhat tighter fiscal policy than agreed with the IMF to compensate for the worse-than-expected private sector savings/investment balances.

¹¹ As will be elaborated in later sections, inflation fell from over 90% in 2001 to less than 10% in 2003.

Notwithstanding recovering FDI flows, gross fixed capital formation (GFCF) – measured at constant 2000 prices – contracted by almost 3% in 2005. Hence, after increasing somewhat in 2004, the share of GFCF in national output dropped again below the 2002 level. Nevertheless, important investment activities in the fields of transport, infrastructure and construction have been undertaken (NBS, 2005, p. 17). Furthermore, the government has adopted several measures to attract foreign investors, e.g. the corporate or income tax reforms described above. In addition, in early 2006 the authorities announced a plan to invest about EUR 1.3 billion from privatization proceeds in infrastructure projects, thus creating further incentives for investors. If we compare the Serbian GFCF-to-GDP ratio (at current prices) with that in the NMS-5, it turns out that at 17% of GDP in 2005, GFCF in Serbia is still lagging behind the NMS-5, where GFCF typically amounts to about 23% of GDP. Hence, raising the investment ratio will be essential if Serbia's GDP growth dynamics are to be sustained also in the longer run.

Although exports grew by more than 12% and imports declined by nearly 3% in real terms in 2005, the level of exports is still rather low at less than half the level of imports, which suggests a persistent need for restructuring in the economy.

As a result of the comprehensive price and foreign trade liberalization in late 2000, the share of exports in GDP at current prices roughly doubled to 25% within one year, while the share of imports jumped to almost 50% of GDP. Ever since, Serbia has not been able to substantially reduce the resulting large negative trade balance. This development is in part attributable to strong domestic demand for foreign consumer goods in combination with a lack of competitiveness of the traditional and some of the newly established domestic private companies.

The country's main import goods are petroleum products followed by road vehicles and industrial machinery (NBS, 2006b). The significant increase in FDI since 2003 is expected to boost the country's export performance in the future. So far, iron, steel and agricultural products have been the major export items. Concerning the regional structure of Serbia's trade, the bulk of exports in 2005 went to Bosnia and Herzegovina, Italy and Germany, while the most important import partner was the Russian Federation (owing to the high oil bill), followed by Italy. The European Union as a whole accounted for about one-half of total foreign trade in 2005 (NBS, 2006a).¹²

2.1.2 Production Side – Expanding Services versus Contracting Agriculture and Industry

Despite a slight decline in 2005, the agricultural sector is still the third largest sector, retaining its high relevance for Serbian output at 12.6% of GDP in 2005 (compared with 3% in the NMS-5). Agricultural output has been fairly volatile in recent years, largely due to changing weather conditions.

The contribution of the industrial sector to GDP declined sharply from about 27% in 2000 to 20% five years later. This drop is chiefly ascribable to a decline in the manufacturing sector, which accounts for more than three-

¹² For an analysis of trade integration in SEE, see Lamotte (2006).

Table 2

GDP Components (Production Side)														
Constant 2002 prices in % of GDP														
	2000	2001		2002		2003		2004		2005 P		Q1 2006 E		
Gross domestic product (GDP)		5.2		5.1		4.5		2.4		9.3		6.3		6.3
Agriculture	13.8	-12.4	15.4	17.4	14.3	-3.2	13.0	-7.0	14.1	19.0	12.6	-5.2	5.5	-4.6
Industry	26.9	12.9	24.8	-3.1	23.1	-2.5	21.7	-3.8	21.2	6.8	20.1	0.7	11.9	6.0
Construction	4.5	16.8	3.7	-14.3	3.3	-7.4	3.5	10.8	3.3	3.5	2.9	-7.0	1.3	5.4
Services	43.4	5.6	43.0	4.1	43.3	5.2	44.6	5.6	44.2	8.2	46.6	12.2	29.7	11.1
Taxes minus subsidies on products	11.4	8.3	13.1	20.8	16.1	27.9	17.2	9.5	17.2	9.3	17.8	10.1	9.9	0.0

Source: Statistical Office of Serbia.

Note: P stands for preliminary results, E for estimated results. The second column of each year reflects year-on-year changes in %.

quarters of industrial production. However, the country's overall industrial performance recovered slightly in annual average terms, given that (1) the electricity, gas and water supply sectors (which account for about 15% of industrial output) grew rather strongly throughout 2005 and (2) the manufacturing sector regained momentum in the last two quarters of 2005. In particular, manufacturing seems to have re-embarked on a strong growth path since the second half of 2005, as the effects of extensive privatization and structural reforms seem to start kicking in.

After the value of construction works had fallen from 4.5% to 3.3% of GDP between 2000 and 2002, the Serbian government implemented a new planning and construction law aimed at creating better conditions for higher and more efficient investment in this sector. The effect was mixed, though. On the one hand, the total amount of construction activities increased by over 10% in 2003. On the other hand, however, this performance could not be maintained and, after a considerable growth slowdown in the following year, the construction sector shrank by 7% in 2005.

The service sector made the biggest contribution to GDP in Serbia, amounting to nearly 47% of GDP in 2005. Between 2000 and 2005, this sector showed the most stable performance among the major supply-side components of GDP, growing at an average annual rate of almost 7% in real terms. Compared with 2004, service sector growth accelerated by 4 percentage points in 2005, recording a 12% annual rate. This strong performance has helped considerably to make up for the decline in the agricultural and construction sectors, and it is likely to increase even further in 2006. The main driving subsectors were financial services, wholesale and retail trade as well as transportation.

2.2 Labor Market Plagued by High Unemployment

Table 3 shows that in 2005, the number of registered unemployed persons increased by 50,000 to a total of nearly 1 million. The official unemployment rate thus climbed by 1 percentage point to 32.6% and remained at similar levels in 2006. The high unemployment is one of the key challenges for the Serbian authorities; only two other transition countries in Central and

Table 3

Labor Market Indicators						
	2000	2001	2002	2003	2004	2005
Registered data						
Employment (thousands)	2,097	2,102	2,059	2,034	2,039	2,048
Unemployment (thousands)	722	769	843	947	945	992
Unemployment rate (% of the registered labor force)	25.6	26.8	29.0	31.8	31.7	32.6
Labour Force Survey						
Employed (thousands)	3,094	3,106	3,000	2,919	2,931	2,733
Unemployed (thousands)	426	433	460	500	665	720
Unemployment rate (in %)	12.1	12.2	13.3	14.6	18.5	20.8
Monthly economy net wages (annual average, EUR)	41	90	150	169	179	204
Economy net wages, (year-on-year changes in % based on CSD)	89.5	125.8	71.0	24.9	22.6	23.8
Economy net wages deflated by CPI (year-on-year changes in %)	10.7	15.8	43.1	13.7	10.4	6.6
Monthly economy gross wages (average, EUR)	64.9	145.9	216.2	243.6	260.8	299.0
Economy gross wages (year-on-year changes in % based on CSD)	91.1	128.9	52.6	25.1	23.7	24.3
Total economy gross wages deflated by CPI (year-on-year changes in %)	11.6	17.4	27.7	13.9	11.4	7.0
Average effective tax rate (% of gross wages)	37.2	38.1	30.6	30.8	31.4	31.6

Source: Statistical Office of Serbia, Narodna banka Srbije.

Southeastern Europe – Bosnia and Herzegovina, and Macedonia – face higher unemployment levels.

After recording an average ratio of about 25% between 1997 and 2000, the unemployment rate has been steadily rising since the onset of economic reforms in late 2000. However, according to the Labour Force Survey (LFS), the unemployment rate is noticeably lower at around 20%, as many people who found informal employment do not define themselves as job seekers. The NBS estimated that in 2003, 600,000 to 800,000 persons in Serbia (8%–10% of the total population) worked without being registered. These numbers indicate that the shadow economy is still a big problem. At the same time, however, the registered unemployment rate declined only marginally in 2004 (the year of record GDP growth).¹³ The number of those who did not work at all, not even on the shadow market, was estimated at 500,000.

According to the NBS, it takes four years on average until an unemployed person finds a new job. This suggests that a considerable part of the high unemployment figures is of a structural nature (e.g. attributable to skill mismatches). Moreover, around 150,000 of those unemployed are aged 50+.

This development prompted the Serbian authorities to adopt a new law on employment and unemployment insurance in 2003, which focuses on a more active involvement of unemployed persons, particularly older ones. At the same time, the law raised the fines for those who employ unregistered workers.

Massive emigration of skilled workers – driven by both internal and external factors – is another problem for transition countries in general, and

¹³ The LFS-based rate even increased substantially in the same period as a result of harmonizing of the methodology with ILO standards.

those in Southeastern Europe in particular. Besides escaping low economic standards in their countries of origin, highly skilled professionals are also attracted by the new immigration policies of some OECD countries designed to respond to the demands of their domestic labor markets. In general, this brain drain entails serious losses for the source countries, especially when they are small and highly skilled labor is scarce, even if this effect is tempered by substantial remittances (for details see e.g. OECD, 2006).

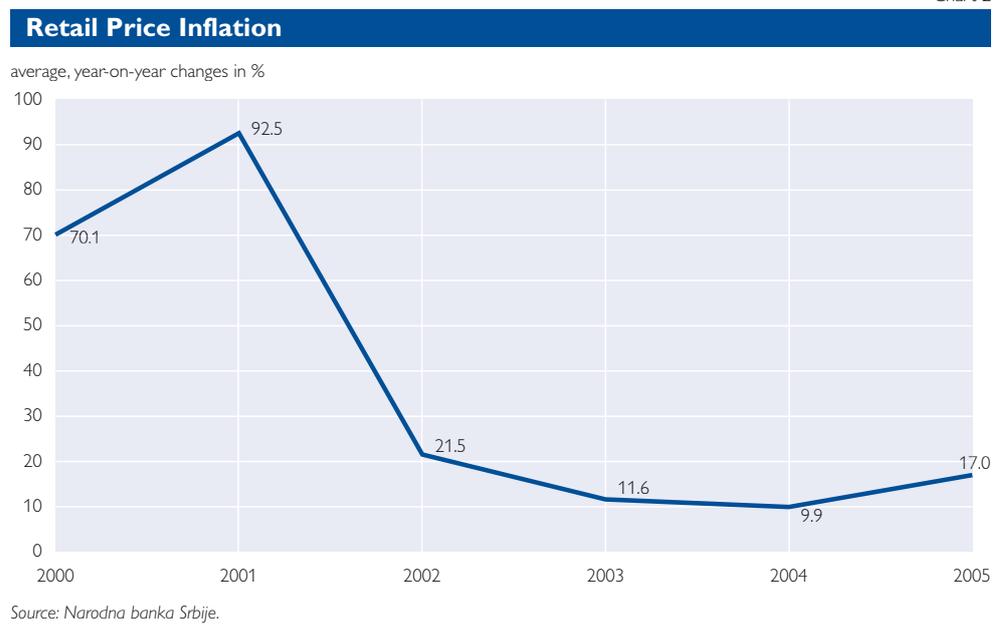
The strong economic growth in recent years in Serbia has been mirrored in rising real wages and, consequently, climbing average living standards. In particular in 2002, household incomes went up considerably. Within one year, average net wages soared by over 40% in real terms as a result of a substantial increase in gross wages combined with the aforementioned reduction of the average tax burden by 8 percentage points. This wage development was apparently attributable to a large extent to an increase in public sector wages. The growth rate of real net earnings has slowed down since then (to 6.6% in 2005). These numbers reflect, inter alia, the authorities' commitment to a stricter incomes policy aimed to contain demand and improve competitiveness in light of the excessive public sector wage increases earlier in the decade.

2.3 Inflation – Another Key Challenge

In 2005, the country's annual average inflation measured at retail prices accelerated to 17%. In the first half of 2006, it eased somewhat, ranging between 14% and 16%. However, year-on-year inflation dropped to 12.7% in July (see chart 2). The price level in Serbia amounted to about 41% of the EU-25 in 2005.

Retail price inflation surged from 40% in 1999 to above 90% in 2001 owing to (1) the economic crisis in 1999 in the wake of the Kosovo war, (2) comprehensive price liberalization and (3) the devaluation of the dinar in late

Chart 2



2000. However, average retail price inflation slowed down to single-digit levels in 2004 (9.4%) as a result of several factors: first, the NBS held the nominal exchange rate stable until end-2002 after the depreciation in late 2000; second, fiscal deficits were reduced and financed by debt issuance and privatization receipts instead of being monetized (as was the case earlier); and third, administered prices were introduced in the run-up to the elections at end-2003. The price index has surged since owing to a combination of adverse global and domestic factors. The former included rising energy prices and ensuing increases in administered energy prices and in the cost of energy production, while the latter included strong domestic demand fueled by rapid credit growth, exchange rate depreciation in combination with extensive exchange rate indexation of prices and, in addition, the one-off impact of VAT introduction in January 2005.

For 2006 the NBS expects the disinflationary trend to continue, while increased government spending¹⁴ and rising wages in the private sector are expected to pose key risks to price stability. In addition, severe floods followed by an extended period of droughts in the first half of 2006 are likely to have adversely affected agricultural production, which will be reflected in rising prices. By contrast, however, nominal exchange rate stability (in fact a real appreciation) vis-à-vis the euro as well as declining short-term inflation expectations and tight monetary policy are expected to help contain inflation pressures. However, it should be borne in mind that, in particular in the short run, the NBS can effectively control only the part of inflation that is market-determined, while the Serbian government has power over the part of inflation stemming from adjustments in administered prices and tariffs.

2.4 Monetary Sector

2.4.1 Narodna banka Srbije's Monetary and Exchange Rate Policy

According to the Law on the National Bank of Serbia, adopted in mid-2003, the primary objective of Narodna banka Srbije (NBS) is to achieve and maintain price stability. In addition to that, the central bank shall also strive for maintaining financial stability. After the new government had come to power in October 2000 and the dinar had devalued by 80% against the euro by December 2000, the authorities tightened fiscal and monetary policies. The NBS ensured a stable exchange rate against the euro until end-2002. Since then, the dinar has been devaluing steadily and gradually under a managed-float regime. The central bank drastically limited refinancing to banks and net lending to the government. Its net claims on the general government slumped and turned into net liabilities. In parallel to these restrictive measures, increasing net foreign assets became the NBS's third main goal. Rising net foreign assets have also been the exclusive source of monetary base creation in recent years.

¹⁴ Despite the downward trend of the share of government expenditures in GDP and a budget surplus in 2005 (see section 2.5).

2.4.2 Main Monetary Policy Instruments

Unlike many other central banks, the NBS has not used a short-term reference interest rate as its operating target, at least until recently. Instead, excess liquidity and reserve money (net foreign and domestic assets) have been employed as control variables. These variables are relatively easy to control, but rather distant from monetary and financial stability objectives. The NBS's intermediate target is a monetary aggregate target. In practice, the exchange rate also seems to play a role as a de facto intermediate target in Serbia.

Table 4

Balance Sheet of Narodna banka Srbije												
year-on-year changes in %												
	2000	2001	2002	2003	2004	2005						
Monetary base	254.3	254.3	43.0	43.0	22.1	22.1	14.1	14.1	28.3	28.3	67.0	67.0
Net foreign assets	-556.0	167.8	-23.3	-9.1	390.2	81.2	47.0	39.3	36.1	38.8	94.9	108.4
Domestic claims	315.2	706.0	8.6	22.5	-89.0	-177.3	-134.5	-24.1	6.7	-0.4	504.3	-22.8
of which: net claims on government	55.3	16.3	59.2	7.6	-20.2	-2.9	-226.1	-21.2	-4.3	0.4	282.8	-21.8
credit to banks	352.1	683.7	6.1	15.2	-95.3	-175.3	-23.2	-1.6	-16.3	-0.8	-32.0	-1.0
credit to other sectors	1,383.1	6.0	-16.4	-0.3	81.7	0.9	-84.7	-1.3	-18.9	0.0	49.0	0.1
Other assets	1,135.1	-481.9	-41.4	61.2	-144.2	87.5	-34.8	-7.6	58.7	7.4	3.7	0.6
Other liabilities	267.9	137.6	59.3	31.6	-51.8	-30.7	-28.1	-6.6	118.9	17.6	76.1	19.2
of which: NBS bills	29.7	0.8	30.5	0.3	114.0	1.0	43.5	0.7	-21.2	-0.4	38.1	0.4
deposits of banks undergoing liquidation	-59.9	-0.5	1,656.1	1.6	106.2	1.3	-16.9	-0.3	-70.8	-1.0	12.2	0.0
capital and reserves	205.2	27.2	28.9	3.3	-74.7	-7.7	27.5	0.6	468.2	11.1	43.4	4.6
other liabilities	317.9	1,10.2	64.6	26.4	-53.8	-25.3	-42.2	-7.5	87.4	7.9	33.9	4.5
Net other assets	660.3	-619.5	-14.7	29.6	-98.5	118.2	68.7	-1.0	457.0	-10.2	191.9	-18.6
Monetary base	254.3	254.3	43.0	43.0	22.1	22.1	14.1	14.1	28.3	28.3	67.0	67.0
Local currency-denominated	118.6	62.7	119.0	38.8	67.0	33.4	4.0	2.7	14.0	8.7	21.9	12.1
of which: currency in circulation	63.0	25.7	131.1	24.6	73.0	22.1	-1.7	-0.7	5.1	1.9	18.8	5.7
required reserves	205.7	15.2	116.0	7.4	42.9	4.1	41.4	4.7	29.2	4.1	24.3	3.4
excess reserves	503.8	20.7	99.6	7.0	73.3	7.2	-23.6	-3.3	0.4	0.0	33.8	2.5
other dinar deposits	179.4	1.1	-29.8	-0.1	14.5	0.0	906.6	2.0	136.7	2.7	15.4	0.6
Foreign currency-denominated	406.3	191.7	6.3	4.2	-22.6	-11.3	36.0	11.4	51.7	19.6	122.6	54.9
of which: OFIs foreign currency deposits	..	..	..	..	..	..	..	0.6	39.1	0.2	27.8	0.2
of which: banks' foreign currency deposits	406.3	191.7	6.3	4.2	-22.6	-11.3	34.0	10.8	51.9	19.4	123.9	54.7

Source: Narodna banka Srbije.

Note: The second column of each year reflects the contribution to changes in the monetary base in percentage points.

The reserve requirements are among the principal instruments the NBS utilizes. The central bank introduced a reserve requirement model which calculates the required reserves with respect to commercial banks' domestic and foreign currency liabilities in early 2004. As commercial banks have found ways to circumvent the reserve requirements, excess liquidity in the economy has been rising persistently. The NBS reacted by selling government bonds and newly issued NBS bonds and by adjusting reserve requirements in several steps in 2005 and early 2006. As a result, the reserve requirement now amounts to 60% on all deposits, loans and other funds received from abroad with a maturity of up to two years and to 40% on those with a repayment period of over two years, regardless of the currency in which they are denominated. The

reserve requirement ratio on foreign exchange deposits in Serbia is 40%, while it is 18% for domestic deposits denominated in dinar. The fact that the reserve requirement rate for foreign currency deposits exceeds that for dinar deposits should help develop the dinar market. Despite actions set by the NBS to rebuild trust in the local currency, foreign currency deposits (51%) continued to grow faster in 2005 than dinar-denominated deposits (38%), although the gap between growth rates has shrunk substantially compared with previous years (NBS, 2006c, p. 25).

The NBS conducts open market operations to fine-tune the liquidity of the banking system. In addition, they also serve as a tool for impinging on the structure and level of money market interest rates. In line with the IMF recommendation, the interest rate on two-week repo operations has been assigned the role of the reference rate to improve the signaling of the monetary policy stance to the public (IMF, 2006a). The weighted average interest rate recorded at auctions for repo transactions with a 14-day maturity was 20.13% in July 2006.

After being reduced steadily from 33% in the second half of the 1990s, the discount rate has amounted to 8.5% since January 2004. In recent years, it has thus remained negative in real terms. However, this probably has had no major refinancing impact, as refinancing to banks has been virtually stagnant since 2002.

Interest the NBS pays to banks on the average daily balance of the allocated dinar reserve requirement that does not exceed the amount of calculated dinar reserve requirements in the maintenance period was raised to 3% in September 2006, after having amounted to 2.975% for one and a half years.

2.4.3 Market Interest Rate

Nominal weighted deposit rates of commercial banks have decreased over the last years in parallel to the discount rate development. The NBS distinguishes between household and enterprise deposit rates. Corporate deposit rates are usually lower on long-term deposits, while households earn less on short-term deposits. The rates on six- to 12-month corporate deposits fell from 22.5% in 2000 to 17.1% in 2001, which marked the beginning of a steady decline. The rate reached 7.0% in 2005 and increased only gradually in 2006. However, it should be borne in mind that the real interest rate on deposits has been negative over the whole period under review.

2.4.4 Monetary Developments – Rapid Growth of Money Supply

The monetary base grew by 67% in 2005, which is a very brisk growth rate given the principal monetary policy objectives (see table 4). This growth was entirely attributable to increases in net foreign assets, as the NBS tried to absorb large foreign exchange inflows from banks' external borrowing, FDI, privatization proceeds and foreign exchange deposits of the private sector. The NBS' net foreign assets nearly doubled in 2005. By contrast, domestic claims – negative since 2003 – swelled sixfold, thus making a large negative contribution, as did net other assets. These figures suggest intense activity by the NBS as a buyer in the foreign exchange market and, in parallel, its

Table 5

Monetary Developments												
Year-on-year changes of broad money in percentage points												
	2000		2001		2002		2003		2004		2005	
Broad money	161.4	161.4	92.9	92.9	53.1	53.1	27.2	27.2	32.0	32.0	42.0	42.0
Net foreign assets	243.7	-301.0	17.2	-27.9	-192.4	189.8	31.8	18.7	-5.1	-3.1	43.0	19.1
Domestic claims	332.5	1,366.6	4.1	27.7	-66.3	-243.1	6.2	5.0	62.4	42.1	42.9	35.6
of which: claims on general government (net)	365.3	729.1	-4.6	-16.4	-100.6	-176.8	413.9	-2.9	-190.1	5.5	-543.7	-10.6
claims on the corporate sector	305.1	616.8	10.3	32.2	-39.2	-70.1	3.8	2.7	37.7	21.9	44.4	26.9
claims on households	221.3	20.6	103.6	11.9	31.2	3.8	50.8	5.2	119.9	14.7	94.6	19.3
Net other assets	482.1	-904.1	-22.3	93.2	-64.3	108.1	-5.7	2.2	23.8	-6.9	49.2	-13.4
Claims on the nonbank nongovernment sector	301.4	637.4	13.6	44.1	-34.7	-66.4	9.8	7.9	52.1	36.6	57.0	46.2

Source: Narodna banka Srbije.

Note: The second column of each year reflects the contribution to the year-on-year change of broad money in percentage points.

determined sterilization efforts which, however, have not been entirely successful.

The vast capital inflows to the Serbian economy were reflected also in the structure of the monetary base as banks' foreign currency deposits more than doubled in 2005, thus contributing substantially to monetary base growth. Bank's dinar-denominated excess reserves increased by one-third as banks returned some of the securities they had previously purchased from the central bank (NBS, 2006b).

A longer-term analysis reveals that the pace of monetary base growth has picked up again after a significant slowdown from 43% in 2001 to 14% in 2003. Net foreign assets have risen twentyfold since 2001 owing to intensified capital inflows. In parallel, domestic claims have fallen substantially over the same period. This decline was attributable to the 2002 banking sector reform on the one hand and to the dramatic cut in net claims on the government in 2003 (when central bank lending to the government was forbidden) on the other. Subsequently, the net government position with the NBS dropped fourfold in 2005. The reason was a rise in dinar and foreign exchange deposits coming mainly from privatization proceeds and the newly introduced VAT.

Robust monetary base growth was also reflected in the development of money supply: Broad money (M3) climbed by 42% in 2005 and thus substantially contributed to inflation acceleration (see table 5). However, in contrast to the monetary base, the creation of money supply stemmed from both net foreign and domestic assets that went up by about 43%. Driven by a steady rise of credits to the household and corporate sectors (over +57%), domestic assets were the major contributor to broad money growth.

Lending to the private sector has recently grown dynamically in a number of transition economies, promoted by macroeconomic stabilization, privatization and comprehensive reforms. In those countries that recorded fast and persistent private sector credit growth, current account deficits have moved above levels that are sustainable over a longer period of time. Related analyses conducted recently by the OeNB corroborate the case for keeping

macroeconomic vulnerabilities in check by containing domestic demand growth and current account deficits at sustainable levels over the medium term in the countries concerned (see Backé and Zumer, 2005, or Backé et al., 2006).¹⁵

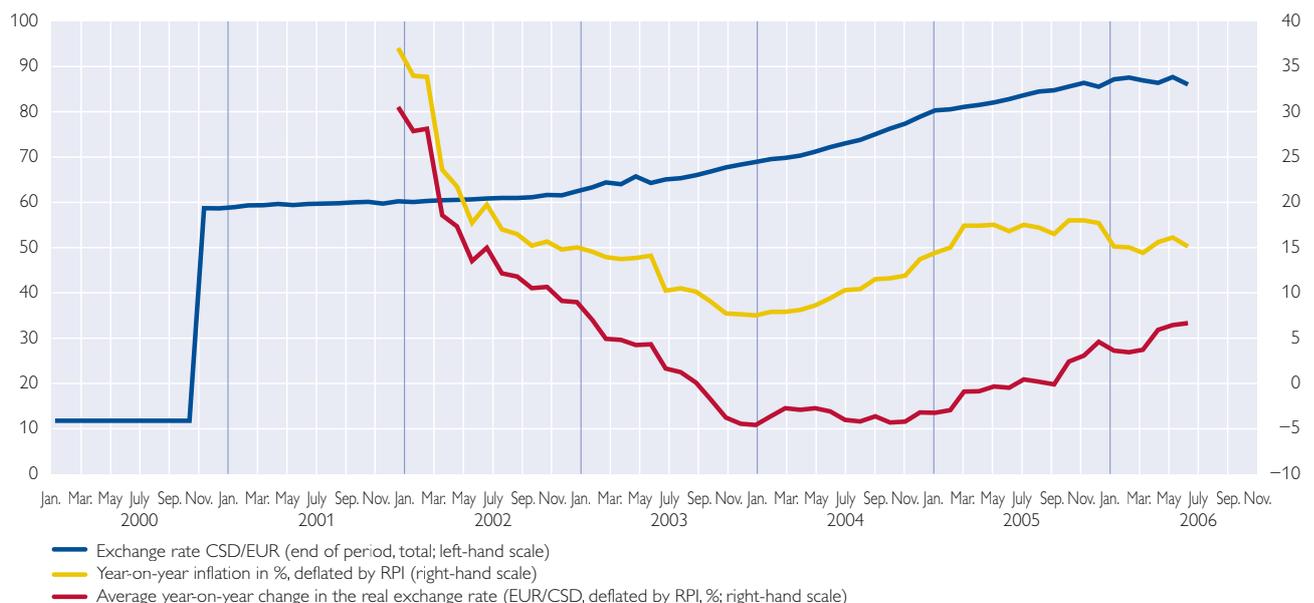
Money supply growth has mirrored the development of the monetary base also in the long term. Having slowed down between 2001 and 2003, it has gathered speed since. The year 2002 was a year of major structural changes. While loans to households grew only moderately, credit to the corporate sector declined by 40% and the (until then sizeable) credits to the government turned into liabilities. From 2003 on, the growth of loans to the private sector has been accelerating. The contribution of household credits to broad money growth thus rose from less than one-fifth in 2003 to almost one-half in 2005. Nevertheless, the overall credit-to-GDP ratio stood at about 40% at end-2005, not much below the average level in the NMS-5 (about 53%). These figures suggest that the measures taken by the NBS to contain rapid growth and in particular the increase in reserve requirements have only been partly successful so far.

2.4.5 Exchange Rate Developments – Nominal Depreciation Has Come To a Halt

In December 2000, right after the regime change, the National Bank of Yugoslavia (now NBS) devalued the dinar by more than 400% from YUM/EUR 11.7 to YUM/EUR 58.7 (see chart 3). Within the framework of an exchange rate-based stabilization program, this rate remained approximately stable until end-2002, which substantially helped curb inflation. From early

Chart 3

Exchange Rate of the Serbian Dinar and Retail Price Inflation



Source: Narodna banka Srbije.

¹⁵ For a more detailed analysis of credit expansion in SEE, see Kraft (2006).

2003 onward, the dinar constantly devalued until it stood at about CSD/EUR 87 in early 2006. Since then, the devaluation has come to a hold owing to increasing capital inflows – the dinar even appreciated a bit to CSD/EUR 83 in July. The NBS has reacted to the stronger appreciation pressures stemming from capital inflows by intensive foreign exchange interventions.

The real exchange rate appreciated until September 2003. The appreciation pace slowed down in parallel to the disinflation process. The dinar devalued in real terms over the next two years, but this tendency was reversed in the second half of 2005. This last turn has happened on the back of the aforementioned inflation acceleration on the one hand and a broad stabilization of the nominal exchange rate on the other.

2.5 Public Finance – Serbia’s Budget Deficit Has Turned Into a Surplus

Table 6 shows that the general government budget recorded an estimated surplus of 1.6% to 2.0% of GDP in 2005, after posting deficits for many years until 2004 (NBS, 2006b; European Commission, 2006a). This result is attributable to a substantial overhaul of public finances in Serbia on both the revenue and the expenditure sides in the first half of this decade. The basic and most essential act of the reform was the adoption of a law on the budget system in 2002, which governs public finances at all levels. However, it should be

Table 6

General Government Finances								
% of GDP	2001		2002		2003		2004	
Revenue	39.1	..	44.3	47.1	43.1	15.9	45.0	24.9
Expenditure	40.7	..	48.0	53.0	47.3	17.5	46.5	17.6
Balance (ESA)	-1.6	..	-3.7	193.2	-4.2	37.1	-1.5	-57.0

Source: wiiw.
Note: The second column of each year reflects year-on-year changes in %. No data were available for 2005.

noted that the long-term fiscal prospects are not unambiguous. On the one hand, rationalization measures that address the army, the health and education systems, and public administration are acclaimed as steps that pave the way to permanent expenditure savings. On the other hand, the IMF (2006) expresses concerns about the government’s initiatives toward public-private partnerships in the construction of toll highways at an estimated total cost of close to 6% of GDP over three years. Moreover, the Vienna Institute for International Economic Studies (wiiw, 2006) suspects that the 2005 surplus was mainly ascribable to accelerating inflation. This allowed the government to step up its spending, but only at a rate below GDP growth, so that it still recorded a falling public-to-GDP ratio. According to the wiiw, if inflation is brought down too quickly in the short run, the fiscal balance will again fall into deficit, especially if the quasi-fiscal deficit is included.

2.5.1 Budget Revenues

As described above, the reform of the tax system, which began in 2001, has made the public revenue system simpler and more transparent. Although the

fiscal burden on taxpayers has been reduced, tax revenues have not declined.¹⁶ As a matter of fact, after surging to 44% in 2002, the ratio of public revenues to GDP oscillated around that level in the following years (see also NBS, 2006b).

The bulk of public revenues has been collected from the sales tax, which was replaced by the new VAT in January 2005. Social security contributions, personal income tax and excise tax follow as the next largest positions on the revenue side. Although the VAT reform did not affect this ranking of contributing items, the composition of public revenues has shifted significantly from direct to indirect taxes.

2.5.2 Budget Expenditures

Expenditures climbed by nearly 8 percentage points to 48% of GDP in 2002. This growth was substantially higher than that registered in revenues. Since 2002, however, the expenditure ratio has continuously declined to reach an estimated 41.1% in 2005 (NBS, 2006b). Substantial changes have been implemented also on the expenditure side, particularly for the two major expenditure items – wages of public sector employees and pensions. In addition to the above-mentioned overhauls of the pension and health care systems, a major reform of public administration and services was initiated in 2005. It provides for streamlining the pay bill and cutting the number of government employees (including the army and health care system) by 10%.

It is noteworthy that expenditures relative to GDP were reduced also in 2003, a year of relative economic slowdown. Moreover, in 2004, the economic upswing was accompanied by the implementation of a countercyclical fiscal policy.

2.5.3 Budget Deficit and Government Debt

In sum, the general budget deficit increased until 2003 owing to (1) a rise in spending that was higher than the growth in revenues in 2002 and (2) lower GDP growth in 2003. However, thanks to the combined effects of economic recovery and fiscal reforms, the deficit dropped to a mere 1.5% of GDP in 2004 and turned into a surplus in 2005.

In accordance with the positive development of the general government budget, general government debt was also cut substantially from over 85% of GDP in 2001 to an expected 52% in 2005 (European Commission, 2006a). The completion of the Extended Arrangement with the IMF in February 2006 paved the way for an additional 15% write-off of the debt to the Paris Club, so that the ratio of public debt to GDP declined to an estimated 44% at end-2006 according to Serbia's Ministry of Finance. Moreover, the government announced that privatization proceeds exceeding the minimum expected amount of EUR 1.3 billion in 2006 will be used to repay external debt.

¹⁶ The obvious reason is that the tax base has been enlarged and, apparently, the shadow economy and tax evasion have been contained.

2.6 Positive Signs in the External Sector

2.6.1 Current Account

Following the liberalization measures of 2000, the trade deficit expressed as a percentage of GDP more than tripled to 31% within one year. In the following years, it improved slightly in parallel to the slowdown of real exchange rate appreciation. In 2004, however, the Serbian trade balance worsened again and reached a record deficit of close to 34% of GDP. The deterioration was brought about in particular by the rising raw material prices, especially for oil and gas, and by an accelerated accumulation of imports in anticipation of the VAT introduction in January 2005. By contrast, goods exports expanded by 20% in 2005 owing to the kick-in of structural reforms and the good harvest of 2004. At the same time, the VAT introduction was the major factor curbing imports. Hence, the overall trade deficit declined by 10 percentage points to 23% of GDP as imports went down by 6%, although goods exports grew at no more than half the pace of 2004 (20% vs. 42%). Unfortunately, the latest data suggest that this positive trend might prove only temporary. In the first quarter of 2006, year-on-year import growth (44%) outpaced that of exports nearly by a factor of two (23%).

The traditional surplus of the services balance deteriorated and shrank from 2% of GDP in 2004 to merely 0.1% in 2005, as services imports expanded much more strongly than services exports. However, while the total volume of foreign trade stagnated for goods compared with 2004, it widened by 25% for services. The first quarter of 2006 might not have changed much on the services

Table 7

Balance of Payments												
% of GDP												
	2000	2001	2002	2003	2004	2005						
Goods exports	27.9	7.3	18.9	32.8	17.0	13.7	13.7	-13.9	18.8	42.7	20.0	19.9
Goods imports	59.5	16.6	45.5	49.9	44.7	23.5	40.3	-3.3	52.8	35.8	44.1	-5.8
Trade balance	-31.7	26.3	-26.7	65.0	-27.6	30.5	-26.6	3.2	-33.9	32.3	-24.1	-20.1
Services exports	8.1	11.3	7.1	72.2	5.7	0.1	5.5	4.9	7.2	34.3	7.0	9.4
Services imports	5.2	39.2	3.0	13.9	3.8	56.6	3.9	11.6	5.2	37.6	6.9	48.7
Services balance	2.9	-18.5	4.1	178.2	1.9	-41.9	1.6	-8.6	2.0	26.1	0.1	-95.8
Goods and services exports	36.0	8.2	26.0	41.6	22.7	10.0	19.2	-9.2	26.0	40.3	27.0	17.0
Goods and services imports	64.8	18.2	48.6	47.0	48.4	25.6	44.2	-2.1	58.0	36.0	51.0	-0.9
Goods and services balance	-28.8	33.6	-22.6	53.7	-25.7	43.6	-25.0	4.1	-32.0	32.7	-24.0	-15.5
Income balance (net)	0.0	-114.4	-0.2	2,628.0	-0.7	229.1	-0.8	35.9	-1.0	30.4	-1.3	43.8
Transfers (net)	18.2	75.9	11.7	25.8	10.6	14.7	12.6	27.3	16.5	35.7	14.8	1.0
Unclassified (net)	4.8	0.0	5.2	111.9	3.5	-16.5	2.6	-18.4	2.5	-0.7	1.4	-36.0
Current account	-5.8	-47.9	-5.9	100.7	-12.3	161.8	-10.6	-7.9	-14.0	37.2	-9.1	-26.9
Capital account	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Financial account balance	6.5	110.6	6.5	95.5	15.0	191.0	14.1	1.2	15.1	11.0	19.1	42.1
of which: FDI (net total including intercompany lending)	0.9	-48.5	1.6	240.6	3.3	171.2	7.4	138.7	4.6	-35.5	6.4	55.5
portfolio investment (net)	0.9	88.6	5.9	1,220.7	6.8	45.4	1.6	-74.5	1.4	-12.0	1.9	52.1
other investments (net)	4.7	434.7	-1.0	-140.9	4.8	-713.8	5.1	13.1	9.1	86.8	10.8	33.9
Change in reserves as a percentage of GDP	-4.1		-3.4		-7.9		-7.0		-3.3		-8.9	

Source: Narodna banka Srbije.

Note: The second column of each year reflects year-on-year changes in %. Changes in reserves: A minus sign indicates an increase in reserves.

trade balance from end-2005, as both exports and imports went up at nearly equal annualized rates (about 20%).

The bulk of the deficit on the goods and services balance is offset by receipts from current transfers, consisting largely of remittances of Serbs working abroad (over 15% of GDP in 2004 according to the IMF). Although the surplus of current transfers declined by 2 percentage points to 14.6% of GDP during 2005, the resulting current account deficit of 8.8% of GDP is the lowest since 2001, down by 6 percentage points from previous year's perilous level of 14%. The reason is that the overall goods and services deficit declined by 8 percentage points, driven by a substantial trade balance improvement. Hence, the long-term trend of persistently high (and mostly widening) current account deficits might have been reversed.

2.6.2 Financial Account

In 2005, the expansion rate of the financial account surplus nearly quadrupled at 42% against the previous year. The surplus thus amounted to almost 19% of GDP, which is three times higher than in 2001. Capital inflows were primarily attracted by higher interest rate margins, declining risk and strong demand for capital.

The reform process in combination with financial sector stabilization and privatizations in several economic sectors have led to a significant recovery of FDI inflows in Serbia. Foreign direct investment – starting from a low level in 2000 (net inflow of EUR 54 million) – more than tripled in 2001 and then more than doubled in each of the two following years. The share of FDI in GDP developed along the same trajectory, recording a transition period peak at 7.4% in 2003. After a substantial decline caused by a privatization slowdown in 2004, foreign investors rediscovered the Serbian market in 2005. Net FDI inflows thus came to EUR 1.2 billion and, at 6.4% of GDP, accounted for 72% of the current account deficit in 2005. This favorable development mirrors the ongoing transformation process and in particular privatization, to which most of the investments were related.

Foreign loans have been the second major part of financial inflows. Boosted by Serbia's reintegration into the international financial markets, their share in GDP has doubled since 2003 and stood at over 10% in 2005. As expounded in previous sections, the surge in external borrowing was primarily stimulated by buoyant growth of credit to the private sector which was partly financed by commercial banks' borrowing from abroad (to a large extent from their parent banks). The share of credit to the private sector in total external debt climbed by 10 percentage points to 41% in the course of 2005.

2.6.3 Official Reserves and Foreign Debt

Despite current account deficits, the official reserves of the NBS have continuously grown since 2000, given that the financial account surplus has constantly exceeded the current account deficit. In 2005, the NBS added a further EUR 1.6 billion to its stocks, as it intervened heavily in the foreign exchange market to counteract dinar appreciation pressures stemming from strong capital inflows. The foreign exchange reserves thus amounted to about 5.9 months' worth of imports. Reserves continued to grow also in early 2006,

amounting to about EUR 6.3 billion at the end of June (+ EUR 1.3 billion compared with end-2005).

After four years of continuous decline, Serbia's external debt rose by 8 percentage points in 2005, coming to 64% of GDP at year-end. As a consequence of debt relief (see section 1.2.3), the external debt structure broken down by creditors shifted from debts granted by the Paris and London Clubs toward international financial institutions (for more details, see NBS, 2006c).

3 Conclusions

In October 2000 the Milošević regime was overthrown. Under the new President and later Prime Minister Vojislav Koštunica, the Federal Republic of Yugoslavia (which was transformed into the Federation of Serbia and Montenegro and later into the independent state of Serbia) has embarked on a comprehensive transformation process toward a market-oriented economy.

Despite the difficult political situation, the Serbian authorities have been able to achieve considerable progress in macroeconomic stabilization owing to prudent fiscal and tight monetary policies: Prices, external trade and foreign exchange have been liberalized. Reintegration into the international financial system has been achieved. Fiscal transparency and modern budgetary planning have been introduced in the public finance sector. The reform steps have enhanced public confidence remarkably and provided a better environment for investment, as evidenced by recovering FDI inflows. Austria is among the top investors in Serbia.

However, challenges still lie ahead on both economic and political fronts. First of all, despite a clear progress in combating inflation, price increases fueled by rapid credit growth and external shocks have accelerated recently and remain a key challenge for policymakers. Similarly, the unemployment rate remains high at socially unacceptable levels, as does the current account deficit at nearly 9% of GDP, despite a significant cut in 2005.

The Federation of Serbia and Montenegro was given the perspective of eventual EU membership at the Thessaloniki Summit in June 2003. The European Union opened negotiations on a Stabilisation and Association Agreement (SAA) in October 2005. However, in its underlying assessment, the European Commission recommends a further rationalization of public administration in combination with curbing the shadow economy. The privatization of banks, nonbank financial institutions and large companies should be completed to support the country's competitiveness and its external sector. Finally, the Commission calls for a fight against organized crime, money laundering and corruption. At this stage, however, the country's insufficient cooperation with the ICTY is a major obstacle to further progress in Serbia's European integration process. Improving this cooperation is the key prerequisite for the European Commission to resume negotiations with Serbia on the SAA, which were interrupted in May 2006.

Overall, however, it has to be acknowledged that after a lost decade Serbia has embarked on a fairly dynamic transition path and has achieved substantial progress in recent years. Given that Serbia's economic weight is comparatively

large in the Western Balkans, a successful completion of the transformation process in Serbia is important also from a regional perspective.

Cutoff date for data: October 30, 2006.

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The Financial Situation and Financing of Nonfinancial Corporations in the Ten New EU Member States – A First Empirical Orientation

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This paper provides a first stocktaking of the available data on the financial situation and the financing of nonfinancial corporations (NFCs) in the ten new EU Member States (NMS-10). It focuses on comparing the situation in the NMS-10 with the status quo in the euro area. For most indicators of financial results and of the structure of liabilities and financial assets, the range between the minimum and the maximum within the euro area was sufficiently wide to embrace the corresponding NMS-10 values. Thus, the two groups are not very different from each other in this respect. Still, there are some differences between them that tend to be typical and are primarily attributable to the ongoing catching-up process of the NMS-10 economies and the more prominent role of inward FDI as well as the still minor role of outward FDI in their economic structure.

1 Introduction

In this paper, we take stock of the available data on the financial situation and the financing (in terms of stocks) of nonfinancial corporations (NFCs) in the ten new EU Member States. For this purpose, we will first give a selective overview of the related literature and then outline our own approach. By no means does our paper intend to present an in-depth analysis of the underlying economic relations that drive the financial results and the financing of NFCs in the NMS-10; instead, it aims to provide a first descriptive overview.

On the topic of financing NFCs in the euro area, the Eurosystem compiled a comprehensive report on financial structures already in 2002, with data relating mostly to the year 2000 (ECB, 2002). The report covers the financing structures of the various economic sectors in the individual countries, focusing mainly on financial intermediaries and markets in the individual countries. It has a less comparative approach than this paper, and it does not look at sector national accounts other than financial accounts. In particular, it does not track the NFCs' financial results.

Several papers examine the financial integration of the new EU Member States with the euro area (e.g. Cappiello et al., 2006; Reininger and Walko, 2006). These papers focus on the links between the new EU Member States and the euro area and relate primarily to the capital (bond and equity) markets. Moreover, there are several studies on financial development in the NMS-10 (Arpa, Reininger and Walko, 2005; Backé and Zumer, 2005; Backé, Égert and Zumer, 2006; Boissay Calvo-Gonzalez and Kozluk, 2006; ECB, 2006a; Kiss, Nagy and Vonnák, 2006). These studies focus on the development of domestic credit to the private sector (covering households, nonfinancial corporations and other financial institutions). Some of them also include a brief analysis of

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the banking sector's external financial linkages, while cross-border credit to the private nonbank sector receives less attention. They investigate the appropriateness of the speed of credit growth compared with the economic fundamentals. In particular, some of them estimate equilibrium (domestic) credit-to-GDP ratios and try to disentangle the equilibrium trend and the cyclical (possibly excess) component of observed credit growth. Ultimately, these papers are also related to the issues of macroeconomic and financial stability.

A descriptive review of the financing structure of NFCs in the large new EU Member States can be found in an early paper that was, however, confined to external (versus internal) financing based on data of domestic and cross-border debt and equity (Reininger, Schardax and Summer, 2002).

De Haas (2005) covers a range of issues related to financing in the NMS-10 and in Bulgaria and Romania. Against the background of financial integration between the NMS-10 and the euro area in the banking sector, his contribution discusses the role of cross-border credit versus local credit and credit stability. On the basis of firm-level data, De Haas performs a detailed analysis of the capital structure of firms.

For general information on the NMS-10 and, more specifically, on structural features of these economies, the interested reader is referred, in particular, to the specialized information made available by The Vienna Institute for International Economic Studies – wiiw (wiiw, 2006, 2005). The European institutions provide another source of helpful comparative overviews (ECB Occasional Paper by Backé et al., 2004; ECB, 2006b; European Commission, 2006). Moreover, regular publications by international organizations (e.g. World Bank, 2006) often include an analysis of special structural topics in addition to regular reporting.

To the best of our knowledge, this paper provides the first comprehensive overview of NFCs' financial results, financing and financial investment structures in the NMS-10. Moreover, we focus on comparing the situation in the NMS-10 with the status quo in the euro area² with regard to both the financial results and the financing of NFCs. Given the restrictions on space, we refrain from elaborating extensively on developments over time. The flow data on the financial results describe the situation in the most recent full year available (mostly 2003 or 2004). Furthermore, we evaluated the situation also on the basis of a multi-year average (using the last four years available), so as to provide a robustness check. Its results confirm our main finding obtained on the basis of the most recent year available. Nevertheless, we report major differences between the multi-year average and the most recent annual values. Regarding stock data, we briefly mention the most important changes that occurred during the three-year period up to the most recent year-end data available (usually 2004).³ This stocktaking may form the basis for a more sophisticated approach to analyzing developments over time and estimating the underlying economic relations with econometric techniques. In general, it

² As the data in this paper relate to the period prior to January 1, 2007, the euro area does not include Slovenia.

³ For Latvia and Estonia, we could evaluate only the changes during a two-year and one-year period, respectively, due to the lack of available data.

has to be emphasized that the analysis of the financial situation and the financing of NFCs in the NMS-10 is limited, given the lack of data availability.⁴ More timely and comprehensive data sets would be highly welcome.

The paper is structured as follows. Section 2 provides a comparative analysis of NFCs' financial results in the NMS-10 and the euro area, focusing on the most recent full year available. Section 3 provides a comparative view of NFCs' financial items in the most recent closing balance sheet in the NMS-10 and the euro area, comprising the liability side (financing), the asset side (financial assets) and financial net wealth. Finally, section 4 summarizes the results and concludes.

2 Financial Results, Saving, Investment and the Financing Needs of NFCs

2.1 Profitability of NFCs

Looking at the financial results of NFCs in the most recent full year available, i.e. 2004 or 2003 (see table 1), both *operating surplus and entrepreneurial income*⁵ as a percentage of GDP were clearly highest in Lithuania and Latvia, followed by Estonia and the Czech Republic. The high profitability of NFCs in these countries was in line with their comparatively high total GDP growth. However, only the ratios in Lithuania and Latvia consistently exceeded the maximum ratios in the euro area. As expected for catching-up economies, most NMS-10 had profitability ratios above the euro area average and none of them recorded profitability ratios below the euro area minimum. Compared with the multi-year average, these performance indicators showed major changes only for Poland, where they increased from a low level related to the pronounced downturn of GDP growth in the early years of the decade.

A roughly similar ranking emerges when we relate *operating surplus and entrepreneurial income* to the *stock of shares and other equity* on the liabilities side of the NFCs' balance sheet or to their *total liabilities*. The lowest NMS-10 ratio equaled the euro area median value. Compared with the multi-year average, both indicators rose substantially in Poland. The indicator in relation to shares and other equity declined in Lithuania, as the increase in NFCs' operating surplus nearly matched the rise in their total liabilities, but fell short of the rise in shares and other equity.

⁴ As of mid-July 2006, the following were the most recent data available from the Eurostat database at that time: On both financial accounts stocks and transactions of NFCs, it was 2005 data for Hungary and Slovenia, 2004 data for Estonia, Latvia, Lithuania and Poland, and 2003 data for the Czech Republic and Cyprus. No data were provided for Malta and Slovakia. On the other sector national accounts of the NFCs, 2005 data were not available for any of the NMS-10, but 2004 data were available for Latvia, Lithuania and Poland, and 2003 data for the Czech Republic, Estonia and Slovakia. No data were provided for Cyprus, Hungary, Malta and Slovenia. Thus, both data sets were available only for five of the NMS-10 (the Czech Republic, Estonia, Latvia, Lithuania and Poland). However, just a small number of indicators involve both data sets. For the euro area countries (apart from Ireland and Luxembourg), financial accounts data were generally available for 2005, except for Germany, France and Finland (2004 data). Sector national accounts data were available for 2004, except for Portugal (2003 data).

⁵ *Entrepreneurial income* is defined as the operating surplus plus net property income before the allocation of other primary income to the respective account (i.e. before the deduction of distributed income and reinvested earnings on FDI in the reporting country). Thus, it is operating surplus minus the interest burden plus net other property income before the allocation of other primary income account.

Table 1

Profitability of NFCs in the NMS-10

Country	Year	Operating surplus		Entrepreneurial income		Operating surplus		Entrepreneurial income	
		gross	net	gross	net	gross	net	gross	net
		in % of GDP				in % of "shares and other equity" (stock)			
Czech Republic	2003	26.3	15.1	24.3	13.2	33.7	19.4	31.2	16.9
Estonia	2003	26.8	18.3	25.9	17.4	22.1	15.1	21.4	14.3
Cyprus	..	..	..	..	..	..	..	..	..
Lithuania	2004	33.0	25.3	32.2	24.5	34.4	26.4	33.6	25.6
Latvia	2004	32.3	20.5	34.9	23.2	48.8	31.1	52.8	35.1
Hungary	..	..	..	..	..	..	..	..	..
Malta	..	..	..	..	..	..	..	..	..
Poland	2004	19.1	10.3	18.3	9.5	26.1	14.1	25.0	13.0
Slovenia	..	..	..	..	..	..	..	..	..
Slovakia	2003	21.0	8.6	19.9	7.5	..	..	..	..
<i>Memorandum items</i>									
EU-12	2004	20.0	12.1	21.1	13.2	17.2	10.4	18.1	11.3
EU-12 median		20.9	12.4	21.0	13.1	18.9	12.3	19.9	13.9
EU-12 minimum		15.4	5.7	14.3	4.5	8.3	4.4	10.6	3.7
EU-12 maximum		25.3	17.1	27.9	19.7	42.8	24.8	44.6	26.6

Source: ECB and Eurostat, Eurostat, OeNB calculations.

2.2 Gross Value Added of NFCs

Turning to further components of NFCs' gross value added, *compensation of employees* as a percentage of the gross operating surplus in all NMS-10 (for which data were available) stood between the euro area minimum and average values, mostly considerably below the euro area average (see table 2). Also the subitem *employers' social contributions* in the NMS-10 was below the euro area median and in some cases (Lithuania, Latvia, Poland) even below the euro area minimum. The comparatively low share of compensation of employees in total gross value added suggests that the average level of labor productivity surpasses the average level of labor costs in the NMS-10 by more than it does on average in the euro area. This is in line with the data on macrocompetitiveness which The Vienna Institute for International Economic Studies publishes, which show comparative unit labor cost levels in the NMS-10 to be far lower than in Austria (wiiw, 2006). This may partly reflect the activity of (often mainly export-oriented) foreign enterprises that caused the average level of productivity to increase (owing to their know-how and technology) in the NMS-10, while having a lesser impact on the average wage level. Compared with the multi-year average, a major change occurred only in Poland, where the share of compensation of employees in gross value added was initially the highest among the NMS-10 (slightly above the euro area median) and fell sharply thereafter, partly reflecting the increase in unemployment during the pronounced downturn of GDP growth. The parallel rise in the share of operating surplus is consistent with the nominal decline of unit labor costs in industry (as opposed to producer price increases) during that period.

Subsidies exceeded other taxes on production only in the Czech Republic and Slovakia, while net other taxes on production in the NMS-10 had the same median as in the euro area (where the maximum value is an outlier). In Poland, the NFCs have the highest burden of net other taxes on production among the

Table 2

Gross Value Added of NFCs in the NMS-10								
Country	Year	Value added, gross	Compensation of employees	Other taxes on production minus subsidies	Operating surplus, gross	Compensation of employees	Other taxes on production minus subsidies	Operating surplus, gross
		1=2+3+4	2	3	4	5	6	7
		Flow items in % of gross value added				Flow items in % of gross operating surplus		
Czech Republic	2003	100.0	54.9	-1.4	46.6	117.8	-3.1	100.0
Estonia	2003	100.0	55.5	0.7	43.8	126.6	1.6	100.0
Cyprus	..	..	..	..	..	..	..	100.0
Lithuania	2004	100.0	43.4	0.1	56.4	77.0	0.2	100.0
Latvia	2004	100.0	46.0	1.5	52.5	87.7	2.8	100.0
Hungary	..	..	..	..	..	..	..	100.0
Malta	..	..	..	..	..	..	..	100.0
Poland	2004	100.0	51.2	1.9	46.9	109.1	4.1	100.0
Slovenia	..	..	..	..	..	..	..	100.0
Slovakia	2003	100.0	52.7	-1.0	48.3	109.2	-2.0	100.0
<i>Memorandum items</i>								
EU-12	2004	100.0	59.3	1.6	39.1	151.6	4.1	100.0
EU-12 median		100.0	60.6	0.4	39.0	155.6	0.9	100.0
EU-12 minimum		100.0	43.5	-0.1	30.8	77.6	-0.3	100.0
EU-12 maximum		100.0	65.1	4.1	56.1	211.3	13.4	100.0

Source: ECB and Eurostat, Eurostat; OeNB calculations.

NMS-10, which, however, does not exceed the corresponding burden in the euro area aggregate.

2.3 Deriving Net Saving of NFCs

Consumption of fixed capital (as a percentage of the gross operating surplus, see table 3), i.e. the depreciation ratio, was the most important factor in explaining the difference between the gross operating surplus (equal to 100%) and net saving (as a percentage of the gross operating surplus, see tables 3 and 4) in most of the NMS-10 for which data were available. This was also the case in the majority of euro area countries. Similarly, the allocation of other primary income was generally the second-most important factor both in the NMS-10 and in the euro area. Exceptions were Latvia and Lithuania, where (like in the minority of euro area countries) the depreciation ratio was relatively low and/or distributed income relatively high. Compared with the multi-year average, a major change occurred only in Poland, where the depreciation ratio was initially as high as in Slovakia. During these years, it declined as a result not only of the sharp rise in the operating surplus, but also of the nominal decrease in fixed capital consumption that reflected the sharp nominal (and real) decline of real investment between 2000 and 2004.

The *interest burden* as a percentage of gross operating surplus in the NMS-10 was mostly between the euro area minimum and median values. This is in line with the comparatively lower share of debt financing in total financing in the NMS-10. Moreover, the somewhat lower interest burden in most NMS-10 compared with the euro area may be partly attributable to the rather high share in total outstanding loans of cross-border (and, in particular, inter-

company) debt financing at relatively low foreign interest rates (given the actual exchange rate developments). Latvia was an exception, as it had a negative burden, whereas the value for the Czech Republic exceeded the euro area median. Similarly, the implicit average interest rate on gross debt stood outside the full euro area range only in Latvia (on the downside) and in the Czech Republic (on the upside). Thus, the Czech interest burden remained below the euro area maximum value only thanks to the relatively low share of debt financing in total financing. On the basis of the multi-year average, we observed an interest burden on NFCs above the euro area median not only in the Czech Republic, but also in Poland and Slovakia. This reflects primarily the fact that interest rates and interest margins in these two countries were higher in previous years than in the most recent year available.

Net other property income in the NMS-10 was rather close to the minimum value recorded in the euro area, where this income constituted a sizeable source of entrepreneurial income. Only in Latvia was this income non-negligible, but still below the euro area median. This may be considered a typical special feature of the NMS-10, as the NFCs in these countries started to accumulate financial assets at a much later point in time than those in the euro area countries. In particular, we may assume that the number and size of NFCs' participations in other domestic and foreign companies is considerably lower in the NMS-10 than on average in the euro area. This can be seen most clearly from the relatively low volumes of active (i.e. outward) FDI of these economies. Another indication of this is the lower share of equity in total financial assets (see section 3.2) coupled with the significantly lower ratio of total financial assets to operating surplus.

The *allocation of other primary income* (i.e. distributed income and reinvested earnings on FDI in the reporting country) had a very wide range in the NMS-10, but still remained within the corresponding euro area range. Interestingly, however, the share of *reinvested earnings on FDI in the reporting country* in the total allocation of other primary income amounted to between –2.5% and +7% in the euro area countries and to less than 2% in the euro area aggregate, while it was between 10% and 41% in the NMS-10 for which data were available. This is another special feature of NFCs in the NMS-10, which again relates to the role of FDI in these economies, as it reflects the great importance of passive (i.e. inward) FDIs in these economies. By contrast, in the NMS-10 except Latvia and Lithuania, the ratio of NFCs' *distributed income* (which excludes reinvested earnings on FDI in the reporting country) to gross operating surplus was below the second-lowest euro area value, with the euro area minimum being a clear outlier. This implies – *ceteris paribus* – a strengthening of the NFCs' internal financing in these countries and of the overall catching-up process. Compared with the multi-year average, the interest burden in the Czech Republic, Poland and Slovakia decreased by between 3 and 4.5 percentage points of the gross operating surplus and switched to a negative interest burden in Latvia. These changes fully translated into an increase in the allocation of other primary income. While it was mainly in the form of higher distributed income in the Czech Republic and Slovakia, it was mainly in the form of higher reinvested earnings on FDI in Latvia and exclusively in the form of higher reinvested earnings on FDI in Poland.

Table 3

Deriving Net Saving of NFCs in the NMS-10										
Cost Factors, Other Property Income, Allocation of Other Primary Income and Current Transfers										
Country	Year	Operating surplus, gross	Net interest payments	Net other property income	Entrepreneurial income, gross	Allocation of other primary income account	Current taxes on income and wealth	Net other current transfers	Consumption of fixed capital	Net saving
		1	2	3	4 = 1-2+3	5	6	7	8	9 = 1-2+3-5-6+7-8
Flow items in % of gross operating surplus										
Czech Republic	2003	100.0	8.3	1.0	92.7	24.7	14.9	-0.2	42.4	10.4
Estonia	2003	100.0	5.5	2.1	96.7	28.4	5.6	-25.2	31.9	5.5
Cyprus	..	..	..	..	..	..	..	..	..	..
Lithuania	2004	100.0	1.9	-0.5	97.7	54.3	5.4	0.2	23.3	14.7
Latvia	2004	100.0	-1.2	7.0	108.2	52.1	5.6	-2.4	36.3	11.7
Hungary	..	..	..	..	..	..	..	..	..	..
Malta	..	..	..	..	..	..	..	..	..	..
Poland	2004	100.0	4.1	-0.2	95.7	30.8	9.0	-0.3	45.9	9.7
Slovenia	..	..	..	..	..	..	..	..	..	..
Slovakia	2003	100.0	6.1	1.0	94.9	12.7	13.8	0.9	59.1	10.2
Memorandum items										
EU-12	2004	100.0	6.1	11.6	105.4	48.1	8.1	-3.0	39.6	6.5
EU-12 median		100.0	6.6	12.1	101.8	37.3	11.9	-1.5	39.9	5.2
EU-12 minimum		100.0	1.5	0.3	91.5	7.1	2.8	-11.2	23.6	-12.9
EU-12 maximum		100.0	16.1	34.6	127.5	57.6	17.9	0.7	63.0	43.8

Source: ECB and Eurostat, Eurostat, OeNB calculations.

Notes: Net interest payments: interest burden, i.e. interest paid minus interest received.

(Net) other property income: excluding allocation of other primary income account, i.e. excluding distributed income and reinvested earnings on FDI in the reporting country.

Allocation of other primary income account: distributed income and reinvested earnings on FDI in the reporting country.

In the NMS-10, the *tax burden* (current taxes on income and wealth as a percentage of the gross operating surplus) ranged from values close to the euro area minimum in the Baltic countries up to 14% to 15% in the Czech Republic and Slovakia, which is above the euro area median. Thus, four out of the six NMS-10 for which data were available showed tax ratios below the EU-12 median, and three of these six countries had tax ratios below the tax ratio in the euro area aggregate. However, in all NMS-10 for which data were available, tax ratios were above the euro area minimum.

2.4 NFCs' Saving-Investment Balance and Financing Needs

Net saving, which excludes reinvested earnings on FDI in the reporting country, was at or (in most cases) above the euro area average in all NMS-10 for which data were available, both as a percentage of the gross operating surplus and as a percentage of GDP (see table 4). The same is true of gross saving, with the exception of gross saving as a percentage of the gross operating surplus in Estonia and Lithuania (due to the comparatively low ratio of fixed-capital consumption to GDP in these two countries). Compared with the multi-year average, a major change in net saving occurred only in Poland, where net saving was initially even slightly negative. The sharp increase in net saving as a percentage of the gross operating surplus (to values above the euro area median) was primarily attributable to the decline in the consumption of fixed capital.

Relative to GDP, the increase in net saving reflected the rise in the gross operating surplus. Thus, gross saving remained stable relative to the gross operating surplus in Poland, but increased relative to GDP. The value of *net capital transfers* received was mostly in line with the euro area median, with a somewhat higher value only in Latvia.

Gross fixed capital formation (GFCF) as a percentage of the gross operating surplus in the NMS-10 was within the euro area range, with below-median ratios only in Lithuania and – to a lesser extent – in Poland. However, the *GFCF-to-GDP ratio* (see table 4, bottom) was close to the euro area maximum in Lithuania and above this maximum ratio in all other NMS-10 (except Poland). This confirms the strong catching-up process in these economies. By contrast, in Poland, the rather low ratio of GFCF to the gross operating surplus was coupled with a comparatively low ratio of the gross operating surplus to GDP (even though the latter ratio rose compared with the multi-year average). Thus, the GFCF-to-GDP ratio in Poland was the lowest among the NMS-10 and close to the euro area minimum – which is at odds with the country's status of a catching-up economy. Compared with the multi-year average, gross (fixed) capital formation declined relative to the gross operating surplus and to GDP. It has to be mentioned, however, that Poland witnessed very high investment growth in 2005 and 2006 that has changed this situation at least to some extent.

Net borrowing (which implies the net incurrence of liabilities for real investment) *as a percentage of the gross operating surplus* was most pronounced in Estonia and Latvia, exceeding that of any euro area country. In most other NMS-10, this ratio was in a range quite close to the euro area average. Relative to GDP, however, net borrowing requirements of NFCs in the NMS-10 were typically larger (in most cases considerably) than the euro area average, as would be expected for catching-up economies. This is attributable to the fact that investment in most NMS-10 was above the euro area maximum, while saving remained below the euro area maximum (with the exception of Latvia), but above the average. Exceptions were NFCs in Slovakia, where the ratio of net borrowing to GDP was at the euro area average level, and in Poland, where NFCs were net lenders. Net borrowing requirements relative to GDP were larger in Estonia and Latvia (and, to a significantly lesser extent, in Hungary and Slovenia) than in any euro area country. In Estonia, high net borrowing was ascribable not only to a very high gross investment ratio (like in Latvia), but also to a relatively low gross saving ratio (owing to a small depreciation ratio). From a macroeconomic viewpoint, the saving-investment imbalance of NFCs contributed significantly to the sizeable current account deficit in Estonia and Latvia. Compared with the multi-year average, NFCs' gross saving was rather stable in these two countries, while investment increased so that their net borrowing ratio was more negative in the most recent year for which data were available. By contrast, in Poland, NFCs were net lenders: (more or less average) gross saving (including net capital transfers) exceeded relatively low gross capital formation – a situation that is similar to the one observed in some euro area countries, but not in line with the status of Poland as a catching-up economy. On the basis of the multi-year average, the NFCs in Poland were still net borrowers, while the NFCs in Slovakia had net lender status. However,

Table 4

Saving, Investment and the Financing Needs of NFCs in the NMS-10									
Country	Year	Net saving	Net capital transfers	Gross saving	Gross fixed capital formation	Gross other capital formation	Net lending (+) / net borrowing (-)	Net acquisition of financial assets	Net incurrence of liabilities
		1	2	3	4	5	6 = 3-4-5	7	8 = 6-7
Flow items in % of the gross operating surplus									
Czech Republic	2003	10.4	4.6	57.4	67.2	1.9	-12.4	33.3	-45.7
Estonia	2003	5.5	2.2	39.6	75.1	..	-51.2	35.0	-86.2
Cyprus	..	..	..	..	..	..	..	..	..
Lithuania	2004	14.7	0.7	38.7	41.5	6.1	-9.8	9.2	-19.0
Latvia	2004	11.7	8.0	56.0	75.8	16.8	-36.7	38.9	-75.6
Hungary	..	..	..	..	..	..	..	..	..
Malta	..	..	..	..	..	..	..	..	..
Poland	2004	9.7	3.2	58.8	48.5	8.0	2.4	39.2	-36.9
Slovenia	..	..	..	..	..	..	..	..	..
Slovakia	2003	10.2	2.8	72.0	75.7	-1.1	-3.9	..	..
Memorandum items									
EU-12	2004	6.5	3.6	49.7	54.9	1.1	-6.4	28.8	-35.1
EU-12 median		5.2	3.8	62.6	57.5	0.9	-10.6	37.4	-29.2
EU-12 minimum		-12.9	0.4	33.9	37.4	-0.9	-26.8	-4.7	-118.5
EU-12 maximum		43.8	19.1	79.9	93.7	6.0	38.1	91.7	6.7
Flow items in % of GDP									
Czech Republic	2003	2.7	1.2	15.1	17.6	0.5	-3.3	8.7	-12.0
Estonia	2003	1.5	0.6	10.6	20.1	..	-13.7	9.4	-23.1
Cyprus	2003	..	..	..	..	..	-3.7	11.0	-14.7
Lithuania	2004	4.9	0.2	12.8	13.7	2.0	-3.2	3.0	-6.3
Latvia	2004	3.8	2.6	18.1	24.5	5.4	-11.8	12.6	-24.4
Hungary	2005	..	..	..	..	..	-5.7	9.3	-15.0
Malta	..	..	..	..	..	..	..	..	..
Poland	2004	1.8	0.6	11.3	9.3	1.5	0.5	7.5	-7.1
Slovenia	2005	..	..	..	..	..	-4.9	9.3	-14.2
Slovakia	2003	2.1	0.6	15.1	15.9	-0.2	-0.8	..	..
Memorandum items:									
EU-12	2004	1.3	0.7	10.0	11.0	0.2	-1.3	5.8	-7.0
EU-12 median		1.0	0.8	11.1	10.2	0.2	-0.3	5.6	-5.9
EU-12 minimum		-2.0	0.1	7.4	8.6	-0.2	-4.6	-1.0	-20.4
EU-12 maximum		9.0	3.0	17.2	15.0	1.2	8.2	15.8	1.5

Source: ECB and Eurostat, Eurostat, OeNB calculations.

Notes: Gross saving: net saving plus net capital transfers plus consumption of fixed assets.

Net lending (+) / net borrowing (-): ratio derived from published data for net lending / net borrowing or from data for net financial transactions.

(The latter approach was chosen in the case of Cyprus, Hungary and Slovenia due to lack of recent data on sector national accounts.)

Net incurrence of liabilities: ratio derived as difference of the ratios of net lending / net borrowing minus net acquisition of financial assets.

in Slovakia, this situation was ascribable to exceptionally high gross saving of NFCs (mainly due to very high net capital transfers in the years 2000 to 2002): NFCs' gross saving was higher than in all other NMS-10 and in all euro area countries; NFCs' gross (fixed) capital formation was also the highest among the NMS-10. In Poland, NFCs had achieved net lender status already by 2003 as a result of relatively stable gross saving (that even increased relative to GDP) and sharply declining investment. As pointed out above, however, this situation has changed in the meantime in Poland as well.

The net acquisition of financial assets (which implies the net incurrence of liabilities for net financial investment) in the NMS-10 was mostly close to the euro area median as a percentage of the gross operating surplus and generally

above the median when measured relative to GDP (with Lithuania as the only exception). Given the already relatively high net borrowing requirements in the NMS-10 (with the exception of Poland and, to a lesser extent, Slovakia), the generally considerable level of net financial investment signals that, on average, NFCs in the NMS-10 did not face serious constraints in incurring financial liabilities. However, while in some euro area countries net financial investment even exceeded real investment, i.e. gross capital formation, this was not the case in any of the NMS-10 for which data were available. Moreover, the net acquisition of financial assets was even lower than net borrowing in Lithuania (owing to its low net financial investment) and in Estonia (given its high net borrowing). We observed such a constellation also in two euro area countries.

In Estonia and Latvia, the *total net incurrence of liabilities as a percentage of the gross operating surplus* was far larger than the corresponding euro area median, reflecting the exceptionally high net borrowing requirements in these countries. Relative to GDP, the buildup of liabilities in Estonia and Latvia even exceeded the euro area maximum, and it was higher in all NMS-10 (for which data were available) than the euro area median, which is attributable to both larger net borrowing ratios (with the exception of Poland) and larger net financial investment. The relatively low value in Lithuania resulted from the fact that the net acquisition of financial assets by NFCs was below average.

3 Financing and Financial Assets of NFCs

3.1 Structure of NFCs' Liabilities

Turning to the balance sheet of NFCs, in particular to the stock data on financing and financial investment, we find that on the liabilities side, the share of the loan stock in total liabilities ranged roughly from 20% to 30% in the NMS-10 for which data were available. The top of this range was close to the euro area average (see table 5). Not surprisingly, Estonia and Latvia recorded the highest ratios among the NMS-10 (apart from Cyprus). This is in line with their very high growth rates of domestic credit to NFCs. For several NMS-10 (in particular the Czech Republic and Poland), the relatively low share of loans in total liabilities may be interpreted as an indication that there is room for further comparatively high growth of (domestic) credit to NFCs. This assumption is in line with what rather low ratios of private credit stock to GDP suggest (Backé and Zumer, 2005; Backé, Égert and Zumer, 2006; Arpa, Reininger and Walko, 2005) and also with the rather low outstanding volume of debt securities (see below). The stepwise transformation into loans of current liabilities in the form of domestic trade credit between companies, which is at present probably partly included in the position other accounts payable (see below), may lead to a larger share of loans in total liabilities. Such a transformation results in a “financialization” of the liabilities structure. The change in the structure of liabilities over the last three years for which data were available also constituted such a deepening of financial intermediation: The share of other accounts payable declined in most of the NMS-10, while in some countries we observe an increase mainly in the share of loans and in others an increase in the share of shares and other equity. NFCs in the Czech

Republic were the only exception, with a decrease in the share of loans and an increase in the share of other accounts payable.

The financial accounts available via Eurostat do not provide a structural breakdown of these loans. However, estimates on the basis of MFI (monetary financial institute) statistics and of data on the international investment position indicate that in most NMS-10, *domestic MFI loans* accounted for between 50% and 55% of the total loan stock, while *cross-border bank loans* made up between 20% and 33% and *cross-border intercompany loans* (i.e. loans related to FDIs) between 15% and 25%. These three subitems add up to almost 100% of the total loan stock in all NMS-10 except Estonia. The relatively high share of total cross-border loans (bank and intercompany loans) implies that in all NMS-10 the share of domestic MFI loans is lower than the corresponding share in the euro area. This suggests that nonfinancial corporations in the NMS-10 are to a significant degree already financially integrated with foreign sources of financing. Over the last three years for which data were available, the share of cross-border loans increased further in the Central European new member countries, while some substitution by domestic credit took place in the Baltic countries and in Cyprus.

Debt securities in total liabilities achieved a maximum share of about 2% in the NMS-10, which was considerably below the average share in the euro area. This may be interpreted as signaling a largely untapped potential for the corporate bond market. However, only two of the NMS-10 recorded a share below the euro area minimum. In some countries, like Hungary and Poland, a considerable part of debt securities are most probably held by foreign investors, as a substantial portion of debt securities was issued abroad (in foreign currency).

Table 5

Liabilities of NFCs in the NMS-10									
Country	Year	Loans	Debt securities (excluding financial derivatives)	Shares and other equity	thereof (in % of shares and equity): quoted shares	Other accounts payable (including financial derivatives)	Net other accounts payable (including financial derivatives)	Total financial liabilities	
		Stock items in % of total liabilities at year-end							in % of GDP at year-end
Czech Republic	2003	19.3	1.9	43.3	12.4	35.5	-0.2	180.0	
Estonia	2004	29.8	1.4	47.8	15.4	21.1	3.3	264.5	
Cyprus	2003	30.0	0.8	53.4	9.9	15.8	-1.9	277.4	
Lithuania	2004	20.6	0.1	60.7	32.9	18.6	5.1	157.9	
Latvia	2004	32.4	0.1	42.8	..	24.7	3.5	154.4	
Hungary	2005	23.7	0.5	55.2	18.4	20.5	-0.2	210.5	
Malta	..	..	..	..	..	..	..	..
Poland	2004	19.5	2.4	47.3	16.8	30.8	4.8	154.6	
Slovenia	2005	29.0	0.8	51.0	19.7	19.2	-0.4	228.8	
Slovakia	..	..	..	..	..	..	..	..
<i>Memorandum items</i>									
EU-12	2004	30.4	3.6	51.2	33.1	12.9	-0.3	227.6	
EU-12 median		32.6	3.7	50.2	30.4	10.3	-0.2	261.4	
EU-12 minimum		21.6	0.4	42.3	17.4	3.1	-3.2	143.1	
EU-12 maximum		47.0	7.6	59.2	63.9	22.2	4.9	387.7	

Source: ECB and Eurostat, Eurostat; OeNB calculations.

Shares and other equity in total liabilities were in a range from 43% to 61% in the NMS-10, similar to that in the euro area. Of the total stock of shares and other equity, *quoted shares* accounted for 10% to 33%, with the majority of countries close to the lowest corresponding ratio in the euro area (notwithstanding the rise of this share in the NMS-10 over the last three years for which data were available). This reflects – inter alia – the fact that in the NMS-10, FDI inflows in general and reinvested earnings in particular have been playing a more prominent role in building up financing via shares and other equity. In the NMS-10, total equity financing (including equity financing related to FDI) constituted a more important source of financing than total debt financing (via loans, including debt financing related to FDI and securities), as was the case in the euro area.

While in some NMS-10 the share of equity financing was higher than the euro area average, both the share of debt financing and the sum of debt and equity financing were lower in all NMS-10 for which data were available than the euro area average and in nearly all individual euro area countries. It follows that the main remaining source of financing – other accounts payable – played a more important role in the NMS-10 than in the euro area.⁶

3.2 Structure of NFCs' Financial Assets

The bulk of NFCs' *financial assets* in most of the NMS-10 consisted of *other accounts receivable*, mostly trade credit to other domestic companies or companies abroad (see table 6). The exceptions were Slovenia and, above all, Cyprus, where financial assets are dominated by shares and other equity, while other accounts receivable come only second, as in the euro area. Both these items accounted for 66% to 79% of NFCs' total financial assets in the NMS-10 and for 71% on average in the euro area. The clear majority of the remainder consisted of deposits in the NMS-10, with the exception of Estonia and Slovenia, where – like in the euro area – the share of deposits was about equal to the sum of *debt securities and loans*. The generally higher share of loans in the euro area (countries) reflects the fact that in the NMS-10, the stock of outward direct investment (and thus of related cross-border intercompany loans) is still considerably lower than in the euro area. Given the relatively high share of deposits in the NMS-10, the *short-term liquidity* ratio in the NMS-10 is mostly at or above the top of the range in the euro area. Looking at the change in the structure of financial assets over the last three years for which data were available, the decline in the share of other accounts receivable in most of the

⁶ *The share of other accounts payable in total liabilities ranged from 16% (Cyprus) to 31% to 36% (Czech Republic, Poland), with the share of its subitem trade credit ranging from 12% (Hungary) to 18% (Poland) to 28% (Czech Republic) of total liabilities. These values were considerably higher than in most euro area countries. In most of the NMS-10, cross-border trade credit (derived from the international investment position) amounts to only a small fraction of total trade credit, indicating that in these countries the subitem trade credit includes a considerable portion of domestic trade credit between companies. In fact, the statistical coverage and inclusion of domestic trade credit seems to be quite heterogeneous among EU countries. In this context, it should be noted that the definition and statistical coverage of the total liabilities aggregate influence any cross-country comparison of indicators relating to this aggregate, such as the shares of debt and equity financing, which decrease when we apply a more comprehensive definition of total liabilities. Looking at net other accounts payable, the Baltic countries and Poland recorded a high net payable position that is comparable with that of two outliers in the euro area, while the other NMS-10 recorded a net receivable position, as did roughly half of the euro area countries.*

Table 6

Financial Assets of NFCs in the NMS-10 and the Short-Term Liquidity Ratio									
Country	Year	Deposits	Debt securities (excluding financial derivatives)	Loans	Shares and other equity	Other accounts receivable (including financial derivatives)	Total financial assets	Net financial assets	Short-term liquidity ratio
Stock items in % of total financial assets at year-end							In % of GDP at year-end	Short-term assets to short-term debt	
Czech Republic	2003	17.5	2.6	5.4	12.0	61.7	104.3	-75.6	2.2
Estonia	2004	15.9	0.3	17.5	23.6	42.0	112.2	-152.3	1.9
Cyprus	2003	21.7	1.2	0.0	50.5	26.3	185.9	-91.5	..
Lithuania	2004	27.2	0.3	1.7	29.2	41.0	52.0	-105.9	2.9
Latvia	2004	18.8	0.6	8.8	24.6	46.5	70.3	-84.1	..
Hungary	2005	14.7	1.7	10.3	30.9	41.9	103.8	-106.7	1.6
Malta	..	..	..	..	..	..	..	..	..
Poland	2004	13.2	5.0	1.7	32.1	46.9	85.6	-69.0	1.7
Slovenia	2005	9.3	1.5	9.1	43.7	35.5	126.7	-102.0	0.8
Slovakia	..	..	..	..	..	..	..	..	..
<i>Memorandum items</i>									
EU-12	2004	11.5	3.0	14.1	48.9	21.4	141.0	-86.6	1.2
EU-12 median		15.3	3.2	10.1	49.2	18.9	146.6	-93.4	1.1
EU-12 minimum		4.9	1.8	0.6	25.0	-2.2	56.9	-128.1	0.7
EU-12 maximum		37.6	6.5	41.7	58.5	35.2	291.1	-64.0	1.8

Source: ECB and Eurostat, Eurostat, OeNB calculations.

NMS-10 (except Estonia and Cyprus) was accompanied by an increase in the share of the item shares and other equity or (in the Czech Republic) in the share of deposits.

3.3 NFCs' Financial Net Worth

Total *financial assets* (as a percentage of GDP) ranged from 50% to 130% in the NMS-10 (except Cyprus), which is still below the euro area average of about 145% (see table 6). Total *liabilities* (as a percentage of GDP) ranged from 155% to 280%, with only the two highest values (Estonia, Cyprus) being higher than the euro area median of 260% and the third-highest value (Slovakia) being close to the liabilities ratio in the euro area of 230% (see table 5). Regarding these ratios, all NMS-10 lay within the range of the euro area countries (except for the ratio of financial assets to GDP in Lithuania, which was slightly below the euro area minimum). Typically, they were below the euro area average, reflecting the fact that (1) a proper process of accumulating assets and liabilities in the NMS-10 started only with the systemic transition in the early 1990s, that (2) high inflation in the early phase of this transition reduced the value of existing stocks of assets and liabilities, and that (3) a cleaning of the balance sheets took place in many established corporations in most countries during the transition process. Over the last three years for which data were available, both the financial asset, ratio and the liability ratio increased in all the NMS-10 with the exception of the Czech Republic and Cyprus, where these ratios declined somewhat.

Net financial assets (i.e. financial net wealth) as a percentage of GDP in the NMS-10 were also within the euro area range (see table 6), except for the more negative value in Estonia (which resulted from a sizeable liability ratio). In three out of the remaining seven NMS-10 for which data were available, the ratio of financial net wealth to GDP was more negative than both the corresponding ratio in the euro area and the euro area median. In the last three years for which data were available, the financial net wealth ratio became more negative in five of the NMS-10, while it was stable in Estonia and Poland and became less negative in the Czech Republic and Cyprus. It should be noted that since total (financial and nonfinancial) assets are not necessarily equal to total liabilities, the size of financial net wealth does not allow definite conclusions on the size of the stock of nonfinancial assets, which has been created partly with the help of net financial liabilities. Rather, as outlined in the appendix, the difference between total assets and liabilities is equal to (total) net worth, which is usually different from zero.

4 Summary and Conclusions

This paper provides a first stocktaking of the available data on the financial situation and the financing of nonfinancial corporations (NFCs) in the ten new EU Member States (NMS-10). It focuses on comparing the situation in the NMS-10 with the status quo in the euro area. This paper does not intend to present an in-depth analysis of the underlying economic relations driving the financial results and the financing of NFCs in the NMS-10, but rather aims to provide a first descriptive overview.

We examined the structure of the stock of NFCs' liabilities and financial assets at the most recent year-end for which data were available and found that the ratios in the NMS-10 were generally within the range of the ratios in the euro area countries. Above all, this reflects a considerable degree of heterogeneity of NFCs' balance sheet structures across countries within the single currency area at present. However, we identified several differences between the NMS-10 and the euro area that tend to be typical, in particular when we look at the majority of NMS-10 countries compared with the euro area aggregate and the euro area median. First, the share of the total loan stock in total liabilities tends to be lower in the NMS-10, with a relatively high share of cross-border loans in total loans, reflecting – inter alia – high FDI levels in the NMS-10. The relatively low share of loans in most NMS-10 indicates that there is room for further high growth of credit to NFCs in these economies, possibly at the expense of the relatively high share of other accounts payable. Second, in all NMS-10, the share of debt securities was considerably lower than in nearly all euro area countries, signaling a largely untapped potential for the corporate bond market. Third, in the share of shares and other equity, quoted shares play a less important role in most NMS-10 than in all euro area countries. This again reflects, among other things, the more prominent role of inward FDI in the NMS-10. Fourth, on the financial asset side, NFCs in the NMS-10 tend to have a higher share of deposits (and hence a higher short-term liquidity ratio) than those in the euro area. Fifth, the ratio of liabilities and (net) financial assets to GDP in the NMS-10 was also within the euro area range. However, while the ratios of liabilities and financial assets

to GDP were typically below the euro area average, the ratio of financial net wealth to GDP in more than half of the NMS-10 was (somewhat) more negative than the corresponding ratio in the euro area aggregate.

Evaluating the financial results of NFCs in the most recent full year available,⁷ we found again that the range in the euro area was sufficiently wide to embrace the NMS-10 range for most indicators. As expected for catching-up economies, most NMS-10 had profitability ratios above the euro area average; in all NMS-10 for which data were available, profitability ratios were above the euro area minimum. By contrast, in all NMS-10, compensation of employees and employers' social contributions were below the euro area median and in some cases below the euro area minimum. The relatively higher share of gross operating surplus in total gross value added in the NMS-10 is in line with the data on macrocompetitiveness that show comparative unit labor cost levels in the NMS-10 to be far lower than those in the euro area. It may be partly explained by the presumably more pronounced impact of inward FDI on average productivity levels than on average wage levels.

Both net other taxes on production and the income and wealth tax burden were above the euro area minimum in all NMS-10 for which data were available except the Czech Republic and Slovakia, where net other taxes on production were negative (implying subsidies exceeding other taxes on production), but the income and wealth tax burden was clearly higher than the euro area median. In three of the six NMS-10 for which data were available, NFCs had a higher income and wealth tax burden ratio than the corresponding ratio in the euro area aggregate, while in the other half of these six countries, NFCs had a tax burden somewhat above the euro area minimum.

For property income, we found that on the one hand, the interest burden was typically lower in the NMS-10 than the euro area median (which is in line with the lower share of debt financing in total financing). On the other hand, net other property income constituted a rather negligible source of entrepreneurial income in the NMS-10 (as opposed to the euro area). This is attributable to the fact that the level of financial assets and that of shares and other equity on the asset side has been comparatively lower in these economies, as has the degree of intercompany linkages in general and that of outward FDI in particular.

Reflecting the great importance of inward FDIs in the NMS-10, reinvested earnings on FDI in the reporting country play a far more important role in the NMS-10 than in the euro area, while NFCs' distributed income was close to the euro area minimum. This implies – *ceteris paribus* – a strengthening of the NFCs' internal financing in these countries and of the overall catching-up process.

It is noteworthy that in the NMS-10, both net saving and gross saving by NFCs (which do not include reinvested earnings on FDI in the reporting country) were at or in most cases above the euro area average when measured as a ratio to GDP. At the same time, NFCs' investment-to-GDP ratio was at or

⁷ As mentioned in the introduction, we evaluated the situation also on the basis of a multi-year average (using the last four years available), so as to provide a robustness check. Its results confirm our main findings, which were obtained on the basis of the most recent year.

in most cases above the euro area maximum ratio in all NMS-10 (except in Poland), in line with the status as catching-up economies. Consequently, NFCs' net borrowing relative to GDP exceeded the euro area average (in most cases considerably) in all NMS-10 except Slovakia, where it was at the euro area average level, and Poland, where NFCs were even net lenders. Given the already relatively high net borrowing requirements in the NMS-10 (with the exception of Slovakia and Poland), the generally high level of net financial investment (except in Lithuania) signals that, on average, NFCs in the NMS-10 did not face serious constraints in incurring net financial liabilities. However, real investment was higher than net financial investment in all NMS-10 for which data were available.

All in all, we did not find evidence that the NMS-10 as a group are very different from the euro area countries as a group for many indicators of the financing structure and the financial situation of the NFCs. Still, we identified several differences between these groups that tend to be typical; they stem primarily from the ongoing catching-up process of the NMS-10 economies and from the more prominent role of inward FDI as well as the still minor role of outward FDI in the economic structure of the NMS-10.

Appendix

Basic Concepts of the System of National Accounts

Before comparing the data for the NMS-10 and the euro area, it may be useful to briefly outline the basic concepts of national accounts in a first step. The European system of national and regional accounts, as defined by Council Regulation (EC) No 2223/96 of 25 June 1996 (European Union, 2003), comprises a full sequence of accounts both for the whole economy and for the various economic sectors, e.g. nonfinancial corporations; they consist mainly of the production account, income accounts, accumulation accounts and balance sheets.

In the production account, gross value added of NFCs (their contribution to the gross value added of the whole economy) is derived as the difference of gross output and intermediate consumption.

In income accounts, gross value added constitutes the resource that feeds into a cascade of income accounts (generation, allocation and distribution of income). In the generation of primary income account, gross value added is used to cover the compensation of employees (including employers' social contributions), other taxes on production (i.e. indirect taxes other than VAT and import duties) less subsidies on production and the gross operating surplus. Next, primary income is allocated in two steps. First, the gross entrepreneurial income of the NFCs is compiled by adding up the gross operating surplus and resources due to property income received by the NFCs (interest, distributed income of corporations, reinvested earnings on FDI held abroad and rent) and deducting interest and rent paid out by the NFCs. Second, the balance of gross primary incomes (nondistributed income) of NFCs is derived by subtracting the distributed income of NFCs and the reinvested earnings on FDI in the reporting country of the NFCs from gross entrepreneurial income. Next, in

the secondary distribution of income account, the balance of gross primary incomes is transformed into gross disposable income by subtracting current taxes on income and wealth (mainly corporate income tax) and adding net other current transfers (mainly nonlife insurance claims minus premiums). The result is equal to gross saving, as consumption by NFCs does not exist. Thus, when subtracting so-called consumption of fixed capital, one gets net disposable income and net saving.

Accumulation accounts are the third group of accounts; they mainly comprise the capital account, the financial account and the revaluation account. In the capital account, net saving and net capital transfers – like investment grants received – are considered to change the NFCs' net worth, as they allow (real) assets to be built up without increasing (financial) liabilities. Above all, this funding is used for real investment, i.e. net fixed capital formation and changes in inventories. The balance of gross or net saving plus net capital transfers minus gross or net investment is called net lending (if it is positive) or net borrowing (if it is negative). In the financial transactions account – which is sometimes simply referred to as the financial account – the net incurrence of liabilities (plus net lending) allows for financing the net acquisition of financial assets (plus net borrowing).

Finally, the above-mentioned flow accounts are linked to the group of balance sheets (opening and closing balance sheet and changes in balance sheet). The NFCs' balance sheet comprises nonfinancial and financial assets as well as liabilities. All NFCs' liabilities are considered to be financial liabilities. The net worth of NFCs is the difference between assets and liabilities, while the difference between financial assets and liabilities may be termed the NFCs' financial net worth (or financial net wealth). Changes in the NFCs' net worth are caused by net saving (plus net capital transfers) and revaluation changes (in particular of tangible nonproduced assets, e.g. land, and of financial assets or liabilities).

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Statistical data on the monetary sector and on the international investment position, available on the websites of the national central banks of the ten new EU Member States, were used as an important complementary source of information.

A useful source of information on structural features of the economies of the new EU Member States is the website of The Vienna Institute for International Economic Studies at <http://www.wiiw.ac.at/e/home.htm>.

HIGHLIGHTS

The CEEC Website

We hope that you will find this website useful and that you will stay in touch with us: Go to <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.

The screenshot shows the OeNB website interface. At the top, the OeNB logo and name 'ÖSTERREICHISCHE NATIONALBANK' are visible. Below the logo is a navigation bar with links for 'Home', 'History', 'Feedback', 'Contact', 'Copyright and Disclaimer', 'Sitemap', and 'Deutsche Version'. A search bar is located on the right side of the navigation bar. The main content area is titled 'Central and Eastern Europe'. On the left, there is a sidebar menu with categories like 'About the OeNB', 'Monetary Policy and Economics', and 'Financial Market and Stability'. The main content area includes a 'CEEC Research Platform' section, a 'Focus on European Economic Integration' section with a map of Europe, a 'Financial Stability Report' section, and an 'Olga Radzyner Award' section. A large red watermark 'http://ceec.oenb.at' is overlaid diagonally across the page.

The “East Jour Fixe” of the Oesterreichische Nationalbank

57th East Jour Fixe

Economic and Monetary Challenges in Southeastern Europe

The East Jour Fixe of the Oesterreichische Nationalbank (OeNB) was initiated in 1991 as a forum in which central bankers, government officials, members of academia and other experts on Eastern Europe meet to discuss specific transition issues. Bringing together the chief economists of Southeastern European central banks, the 57th East Jour Fixe on June 9, 2006, was another special event in this series of meetings. It was a follow-up to the first Special East Jour Fixe of that kind and composition, which had taken place on May 30, 2005.

While the first Special East Jour Fixe on Southeastern Europe (SEE) had dealt primarily with exchange rate policy, this year’s event addressed monetary and economic challenges in SEE. The workshop was organized in two sessions. In his introductory statement, Peter Mooslechner, Director of the OeNB’s Economic Analysis and Research Section, stressed the substantial progress the countries in the region have achieved in recent years. At an average real GDP growth rate of 5% in 2005, the economies in question continue to perform robustly compared with most other regions of the world. After a significant drop of foreign direct investment (FDI) flows in 2004, the SEE countries managed to attract more FDI again in 2005. Despite a broad range of different monetary and exchange rate strategies, most SEE countries have been remarkably successful in bringing down inflation. A useful strategy in many cases has been to use the euro as a nominal anchor, reference currency or legal tender. Mooslechner pointed out that, at the same time, a number of risks still persist. Most SEE countries continue to record high and rising trade and current account deficits. Up to a point, these external imbalances are to be seen as a corollary of the catching-up process. Partially, however, they also reflect buoyant domestic demand supported by rapid credit growth. To finance trade deficits, many countries strongly depend on workers’ remittances, FDI and foreign financial assistance.

The primary objective of the first roundtable session chaired by Peter Mooslechner was to provide information on recent economic developments and on policy measures that have been taken since the last meeting in May 2005. Gramoz Kolasi, Head of the Monetary Policy Department of Banka e Shqipërisë (Bank of Albania), reported a continuation of robust economic growth, a slight appreciation of the Albanian lek in both nominal and real terms as well as low and stable inflation (within the target band of 2% to 4% for the last two years). Moreover, credit growth picked up substantially in the almost entirely privatized banking sector. In addition, as the Albanian economy progresses through transition, the country risk – and thus the risk premium required by private savers – has declined. But Kolasi also stressed some challenges his country has been facing. Although the economy grew robustly at 5.5% in 2005, growth was slowed down by severe electric energy blackouts. Persisting problems in the energy infrastructure have forced Banka e Shqipërisë to revise its growth forecast for 2006 downward to 5%. On the fiscal front, despite improvements in reducing public debt from 68% of GDP in 2001 to

55% of GDP in 2005, public debt is still hovering at relatively high levels. In the short run, Kolasi sees potential threats mainly in the interruption of structural reforms, the skyrocketing credit growth (at an annual rate of 70% over the last ten months, although starting from a low level) and the increasing pace of consumer loan growth, which fuels the current account deficit (expected to reach 8.1% of GDP in 2006, up from 7% in 2005). Therefore, Banka e Shqipërisë intends to monitor the development and driving forces of these variables in more detail and to adopt counteracting measures if necessary.

The Head of the Economic Research and Statistics Department of Centralna banka Bosne i Hercegovine (CBBH), Amir Hadziomeragic, said that one of the greatest achievements of his country was the start of negotiations on a Stabilisation and Association Agreement with the EU in November 2005. The economy in Bosnia and Herzegovina (BiH) grew robustly at about 5% in 2005, and Hadziomeragic was confident that the sustainability of growth was guaranteed by a mix of prudent macroeconomic policies. In the wake of a successful tax reform, the efficiency of tax collection increased and, as a consequence, a fiscal surplus was recorded in 2005. According to Hadziomeragic, financial intermediation has also improved considerably in BiH. Foreign banks dominate the sector, and this trend is projected to continue. The potentially worrying implication of this development is rapid credit growth. The other major risks are large trade and current account deficits and the vital role of remittances. The good news Hadziomeragic could convey in this context was that foreign reserves have been continuously growing despite external imbalances and that exports are rising encouragingly. To address the rapid credit growth, the CBBH intends to improve financial surveillance, and the reserve requirement rate for commercial banks has been increased from 10% to 15%. Hadziomeragic also expressed concerns that structural reforms are not proceeding as quickly as envisaged.

Mariella Nenova-Amar, Director of the Economic Research and Projections Directorate of the Bulgarian National Bank (BNB), reported continuing high GDP growth in 2005 (5.5%) and highlighted three major driving forces behind the robust growth Bulgaria has experienced since 1997: Apart from the currency board arrangement, she assigns a major role to structural reforms and an extremely prudent fiscal policy. She voiced the BNB's determination to enter into ERM II immediately after joining the EU. Like other countries in the region, Bulgaria faces rising trade and current account deficits. The latter almost doubled in 2005 and are expected to deteriorate further in 2006 and to slightly improve after that. The main reason for the external imbalances is the inflow of capital to Bulgaria, financing a two-digit real growth rate of fixed capital formation, accompanied by the import of investment goods. Part of the capital inflows was channeled through the domestic banking system, leading to a relatively high growth rate of banking credit in the period from 2003 to 2004. By introducing administrative measures such as a limit on the quarterly growth rate of claims on the nongovernment sector, an excess of which is penalized by additional minimum reserve requirements, the BNB managed to moderate credit growth to 30% in 2005, and another slowdown to 20% is

expected for 2006. As banks seem to have found ways to circumvent restrictions, the BNB considers alleviating these measures.

The Executive Director of the Research and Statistics Area of Hrvatska narodna banka (HNB), Ljubinko Jankov, emphasized the beneficial effect of the EU integration process for Croatia and its economy. He said there was a broad consensus that the integration process helped the country move into the right direction. In his presentation, Jankov also focused on the challenges his country still faces. Croatia looks back on persistently high budget deficits and, despite recent improvements, the fiscal imbalance is still elevated, e.g. due to subsidies to the ship industry. Owing to a lending boom encouraged inter alia by large bank privatizations, the current account deficit is rising. It stood at 6% of GDP in 2005 and is projected to reach 7% in 2006. Moreover, external debt has reached worryingly high levels of more than 82% of GDP. The HNB has tried to counteract the lending boom with various tools, including administrative instruments. Although the latter were supposed to make borrowing abroad and lending at higher rates at home substantially less profitable, banks continued to borrow from abroad and relend domestically. This behavior might be explained by some inertia and the hope that restrictions may be alleviated soon. However, according to Jankov, this development also suggests that banks are not solely profit-oriented. On the contrary, for the sake of defending or expanding their market shares, they are willing to accept lower profits.

Aneta Krstevska, Director of the Research Department of the National Bank of the Republic of Macedonia (NBRM), underscored that for her country the year 2005 was one of the most successful years on record. While the economy grew at almost the same pace as in 2004 (by about 4%), the high current account deficit recorded in 2004 (almost 8% of GDP) was dramatically reduced to less than 2% of GDP. Traditionally, the current account deficit was financed chiefly by private transfers. The relatively low contribution of FDI is expected to increase in 2006 in the wake of a large power company privatization. Interest rates have been declining since the NBRM switched from volume to interest rate tenders. Unlike in other countries in the region, credit growth is not a big issue in the Republic of Macedonia, as it has been rather gradual. The financial markets have undergone substantial improvements, as e.g. market makers were introduced on the foreign exchange market and a second pillar was established for the pension system. This sound economic policy also gained the country EU candidate status at the end of 2005. According to Aneta Krstevska, it will be crucial for sustainable success to continue the sound macroeconomic policy stance, proceed further with structural reforms and keep up the gradual liberalization of the capital account. Private transfers, which reached the equivalent of 80% of the trade deficit in 2005, and their sterilization will also be a major challenge.

Nicola Fabris, Chief Economist of Centralna banka Crne Gore (CBCG), presented the most recent economic developments in Montenegro. The economy grew by 6.8% year on year in the first quarter of 2006. Although all branches of the economy expanded substantially, growth was most significant in construction and forestry, as they started from a low level. Also services, particularly tourism, recorded strong increases. The banking sector was

characterized by a mixture of positive and negative trends. On the one hand, savings and banks' total assets went up strongly. Deposits and granted loans also rose, but the increase of the former was more pronounced. On the other hand, average weighted effective interest rates were extremely high, amounting to 12.04% at the end of the third quarter of 2005. Foreign direct investment recorded an unprecedented increase. Due to broad privatization, FDI inflows in 2005 were more than twice as high as cumulated FDI in the period from 2002 to 2004. Although current data are not yet available, the CBCG expects the current account deficit for 2005 to come to about 11% of GDP. A certain deterioration is expected *inter alia* because of high oil prices, a high level of FDI and increased aggregate demand.

Cezar Botel, Director of the Macroeconomic Modeling and Forecasting Department at Banca Națională a României (BNR), focused on the challenges his country needs to deal with. On the one hand, at the end of 2005 foreign exchange-denominated credit accumulated to 54% of total nongovernment credit, which considerably undermines monetary policy effectiveness. On the other hand, the BNR has been facing the so-called Tosovsky dilemma: Lower interest rates are needed to prevent high speculative capital inflows, but higher interest rates are required to sterilize the incoming flows and keep inflation in check. Moreover, adverse supply-side shocks stemming from the adjustment of administered prices (23% of all prices), the high oil price and natural calamities put additional pressure on monetary authorities. Whereas the BNR initially used its instruments to address speculative capital inflows, in October 2005 the focus shifted back to fighting inflation and the BNR raised its key interest rates. The side effect of currency appreciation is a welcome additional instrument to contain inflation. Reserve requirements have been adjusted so as to induce the substitution of domestic currency credit for foreign currency credit. As a result, domestic currency credit growth overtook foreign exchange credit growth in late 2005 while the share of foreign exchange credit in total credit dropped under 50% in March 2006 and declined further thereafter. In 2006, the BNR is likely to be challenged by the inflationary impact of several adverse factor such as the newly introduced indirect taxes, an upward revision of the budget deficit, fast credit expansion or substantial capital inflows.

The Director of Research of Narodna banka Srbije (NBS), Milan Sojic, considered the general situation in Serbia relatively positive and expected the economy to grow at a robust rate of 5% in 2006. He praised the good cooperation of his country with the IMF and the World Bank and emphasized the fact that Serbia attracted FDI worth 6.2% of GDP in 2005. However, he expressed his dissatisfaction with high inflation in his country and announced that the NBS planned to reduce inflation over the next four years. An additional concern Sojic pointed to was the country's high foreign debt, which amounts to more than 60% of GDP (although public debt reaches only 46% of GDP). Another major challenge is the current account deficit, which came to 8.5% of GDP in 2005.

Ahmet Nuri Kipici, General Manager of the Research and Monetary Policy Department of Türkiye Cumhuriyet Merkez Bankası, structured his presentation around five topics. First, on the basis of the relevant figures Kipici, provided evidence of a rising involvement of nonresidents in the Turkish

economy. For example, the shares of nonresidents in domestic debt and in the Istanbul Stock Exchange as well as FDI flows and foreign participation in the banking sector have increased considerably. At the same time, fundamental developments were broadly positive until early 2006. Apart from general political stabilization, the strong disinflation trend was sustained and the successful effort to reduce public debt levels (the gross public debt-to-GDP ratio declined from a peak of 107.5% in 2001 to 61.2% in 2005) continued. Kipici then drew the audience’s attention to recent turbulences on the Turkish foreign exchange and bond markets. He emphasized, however, that despite a sizeable depreciation of the Turkish lira in the last couple of weeks before the East Jour Fixe meeting and despite rising bond spreads, financial stability and the process of further stabilization were not endangered. In the last section of his speech, Kipici sketched the challenges the Turkish authorities will have to face. In his own words, there is still a long and cumbersome way to go toward Basel II. In addition, the privatization of the banking sector has to be completed, and the central bank will have to cautiously watch the increasing danger of asset price bubbles and volatile commodity prices.

The second session on the agenda addressed the main focus of the 57th East Jour Fixe and was entitled “Inflation and Economic Policy Challenges.” It was chaired by Doris Ritzberger-Grünwald, Head of the OeNB’s Foreign Research Division. After an introductory statement by Ritzberger-Grünwald on inflation developments and the major driving forces of inflation in the region, Adalbert Winkler, Deputy Head of the EU Neighbouring Regions Division at the ECB, delivered a kick-off speech on this topic. He started off by presenting inflation records and trends in recent years. Whereas one could observe strong disinflation in the early 2000s, prices have picked up since 2004. The SEE countries operate a diversity of exchange rate regimes, ranging from using the euro as legal tender to applying a floating exchange rate regime. The ECB speaker pointed out that hard pegs tended to be associated with lower inflation over the whole period. With the exception of Serbia, however, recent evidence indicates a pick-up in inflation in countries with hard-peg arrangements. Under closer scrutiny it turns out that both demand- and supply-side factors have been driving inflation. In most SEE countries, domestic demand has been fostered by substantial capital inflows and private sector credit growth, amplifying the effect of soaring oil prices. According to Winkler, the major challenge for monetary authorities in the SEE countries is to contain inflation in an environment of limited monetary policy options, high capital inflows and strong credit growth. In this respect, he noted that the administrative measures implemented by several central banks in the region to limit the pace of credit growth might have the desired effects only temporarily, while creating distortions in the financial sector in the long run. Thus, under the given conditions, fiscal policy remains the major macroeconomic stabilization tool.

The session on inflation approached the issue from three different perspectives, and the nine countries were thus clustered around three distinct subtopics. The first subgroup included Romania, Serbia and Turkey, i.e. the three countries which until recently found themselves most distinctly “on the disinflation road,” as the subsession was entitled. Romania’s representative Cezar Botel spoke primarily about challenges to further disinflation on both

the supply and demand side. Among the former, the first and foremost listed administered price adjustments and volatile price shocks, such as those of fuel, fruits or vegetables. These price shocks are of a substantial magnitude, and the uncertainty about their future paths prevents inflation expectations from stabilizing. On the demand side, the BNR faces persistent excess demand pressure, which chiefly stems from continuing consumer credit expansion, substantial capital inflows induced by interest rate differentials and unsteady wage-setting procedures. In addition, further fiscal tightening seems rather limited for a plethora of reasons. Hence, according to Botel, prudent wage policies and improved efficiency of public spending are crucial complementary factors in any monetary policy efforts geared at continuing disinflation.

In his second presentation, Kipici concentrated on the history of inflation targeting in Turkey. Inflation targeting was adopted after the stabilization strategy that was based on the crawling exchange rate peg ended in the deepest financial crisis on record. An inflation rate of 68% and generally poor economic conditions in the aftermath of the crisis called for an alternative regime. The major challenge for Türkiye Cumhuriyet Merkez Bankası was thus to establish credibility and communicate the medium-term outlook. Hence, a new Central Bank Law was adopted that opened the door for central bank independence and implicit inflation targeting. As Kipici expounded, this means that the strategy of monetary policy was set to gradually converge to inflation targeting. In the meantime, structural reforms to rehabilitate the financial system, the competition environment and public finances were introduced. As two major anchors, Turkey’s IMF program and the EU played an essential role in this process. As a result, inflation has not only declined from 80% to 8% over the last four years, but has also outperformed the inflation target, while the real GDP growth rate averaged 7.5%. Among many possible explanations for this performance, Kipici cited the central bank’s independence and strong political support as the major ones. Moreover, the gradual rather than full-fledged implementation of inflation targeting, which was further developed into an explicit inflation targeting strategy in late 2005, seems to have been a wise approach. In Serbia, Narodna banka Srbije was not independent until late 2000, which implied the monetization of fiscal deficits, buoyant inflation expectations as well as high inflation despite strong price regulation. Political changes and sharp price liberalization led to a surge in inflation (27% month on month in October 2000 alone). The fiscal deficit has been reduced since then, however, and has been financed mostly from “real” sources. After a strong devaluation, the exchange rate against the Deutsche mark (and later vis-à-vis the euro) was stabilized with the help of interventions, and these moves increased public confidence in the domestic currency. As a result of these measures, inflation went down from 111.9% in 2000 to 7.8% in 2003, with core inflation decreasing even more. Sizeable real depreciation following a relaxation of the exchange rate regime in mid-2002 – combined with surging oil prices and recently also a strong credit boom – caused inflation to gradually rise to more than 16% in 2005. Sojic said he was optimistic nevertheless, as core inflation has, in general, shown a downward trend since last year. This trend is likely to continue throughout the year 2006, owing to stabilizing supply- and demand-side factors, among which Sojic listed a relatively stable

exchange rate, low inflation expectations, a fiscal surplus and lower inflationary impacts of economic growth. A tight monetary policy stance also helps to maintain the encouraging development of core inflation. But of course there are also risks, such as higher government spending and wage growth in the private sector, which potentially endanger the disinflation path. In the ensuing discussion, participants pointed out that the impressive disinflation performance particularly in Turkey might have been helped by strong global disinflationary trends. Some participants asked whether inflation targets in Turkey and Romania were not too ambitious. Kipici and Botel objected and said the Turkish and Romanian monetary authorities would not change the target for the sake of credibility and that they would rather try to persuade the government to gradually change administered prices in a stability-oriented manner.

Bulgaria, Bosnia and Herzegovina, and Macedonia were grouped under the headline of “Inflation developments: cyclical and one-off aspects.” The BNB’s Mariella Nenova-Amar argued that the government’s initial attempt to contain hyperinflation in the second half of the 1990s by extending price regulations was a wrong step. In her opinion, both the adoption of the currency board arrangement and substantial market reforms were the crucial measures that curbed skyrocketing inflation. Nowadays, the most pronounced price pressures stem from oil prices, from the need to increase excise duties to minimum EU levels and from the deregulation of administered prices. Nenova-Amar also emphasized that the Bulgarian inflation index was not completely harmonized with respect to the consumption basket despite being published as such by Eurostat. If the remaining differences were adjusted for, inflation would be noticeably lower. As Bulgaria intends to adopt the euro as soon as possible after EU accession, the BNB and the Bulgarian government are determined to frontload all adjustments of excise duties that may cause inflationary pressure before EU accession. In Bosnia and Herzegovina, as Amir Hadziomeragic argued, the currency board arrangement also helped to contain inflation, which has been low and stable over the past years. In 2005, the inflation rate climbed to 3.6% chiefly due to surging oil prices and the upcoming introduction of a single VAT rate of 17%. Although the tax rate declined for some products, such as tobacco, the downward price adjustment seems rather rigid. However, after some overshooting in January 2006 (6.7%) in the context of VAT reform, inflation declined slightly later in the year. Hadziomeragic stressed that the recent rise in inflation was a one-off effect with no ramifications for the CBBH’s credibility or for long-term inflation expectations. Hence, Hadziomeragic did not see any major inflation risk for the time being. Owing to the high unemployment rate, there did not seem to be any serious danger of increasing pressure on wages. Aneta Krstevska presented a similar case of inflation development and its driving forces in the Republic of Macedonia. Price increases have been low and stable (2.2% on average over the last ten years), mainly influenced by administrative and external factors rather than cyclical developments. As a result, economic agents have built stable inflation expectations. For the future, Aneta Krstevska sees potential risks of higher inflation rates in the necessary adjustment of administrative prices and the eventually emerging Balassa-Samuelson effect.

In the final subpanel discussion, the representatives of the central banks of Albania, Croatia and Montenegro gathered to exchange their views on “Inflation and monetary policy under different exchange rate arrangements.” According to Gramoz Kolasi, the Albanian economy has been characterized by remarkably low and stable inflation rates since 1999 (2.4% in 2005) despite, or thanks to, a flexible exchange rate setting. Albania owes this admirable performance to its tight monetary policy and the slight but continuous appreciation of the Albanian lek in nominal terms. This encouraging exchange rate development boosts public confidence and has started to induce a shift from foreign currency- to Albanian lek-denominated assets in agents’ portfolios. As the main driving forces of inflation, Kolasi cited skyrocketing oil and food prices – as in other countries in the region. By contrast, there is little pressure on prices via wage demand, as the Albanian labor market is extraordinarily flexible. According to Ljubinko Jankov of the HNB, inflation in Croatia has been driven particularly by (first-round) oil price hikes. He believes that the spillover from oil prices to other prices is moderate, as is inflationary pressure from aggregate demand. Owing to the high unemployment rate and the strict wage policy in the public sector, wage increases are also moderate. The HNB operates a successful exchange rate targeting regime and does not feel any need to switch to inflation targets. The exchange rate plays a crucial role in the highly euroized Croatian economy, and so far there has been no trade-off between exchange rate stability and inflation. Montenegro is also a euroized economy, as Nicola Fabris explained. However – unlike Croatia – it is euroized *de jure*, as it adopted the euro as its exclusive legal tender after a period in which the Deutsche mark/euro was used as a parallel currency to the Yugoslav dinar. With the import of credibility, inflation declined from 128% in 1999 to a mere 1.8% in 2005. Fabris stressed that despite, or thanks to, the very limited range of monetary policy instruments, the CBCG pays great attention to transparency and accountability, as it believes that these have significantly contributed to low rates of inflation. For 2006, the CBCG expects inflation to rise slightly to about 2.9% for several reasons such as, above all, the introduction of VAT on products previously exempt from taxes, high oil prices, the inadequate implementation of competition regulations, but also an increase in aggregate demand brought about by rises in salaries, loans, transfers from abroad and privatization revenues.

The ensuing discussion focused on a number of issues, ranging from the composition of consumer price indices to the limitations to monetary policy in most countries of the region to driving forces of inflation not explicitly mentioned during previous discussions, such as the depreciation in Serbia between 2003 and 2005.

58th East Jour Fixe**Slovenia: Economic and Monetary Integration**

On June 26, 2006, the 58th East Jour Fixe of the Oesterreichische Nationalbank (OeNB) took place. The event was organized under the title "Slovenia: Economic and Monetary Integration." The objective of this meeting was straightforward: As Slovenia is the first country among the new Member States to adopt the euro, the 58th East Jour Fixe aimed to shed light on the factors and policies which laid the foundation for this achievement and to discuss future challenges for the country.

The event started with a kick-off statement by Peter Mooslechner, Director of the OeNB's Economic Analysis and Research Section. In his statement, he flagged the key features of Slovenia's economic performance. The country's economic transition took off from a relatively favorable starting point regarding economic structures and institutions. This and the rather swift establishment of broad macroeconomic stability allowed the country to follow a more gradual approach toward economic reform than other Eastern European countries. Already shortly after Slovenia's EU accession in 2004, the country displayed a strong commitment to achieving euro area entry and thus to fulfilling the Maastricht criteria. Its efforts have proved successful: On January 1, 2007, the country will be the first member of the 2004 enlargement round to adopt the euro. Nevertheless, the introduction of euro cash and the completion of interest rate convergence may still pose some challenges. Mooslechner concluded his statement by underlining the continuing need for structural reforms and enhanced flexibility of the Slovenian economy.

The first session of the East Jour Fixe was chaired by Doris Ritzberger-Grünwald, Head of the OeNB's Foreign Research Division, and started off with a presentation by Hermine Vidovic, Senior Economist at the Vienna Institute for International Economic Studies (wiiw). Vidovic provided an overview of the "Commonalities and Differences between Slovenia and other New Member States." She introduced the notion that "Slovenia is different" and went on to explain why this was the case: The Slovenian economy was characterized by stable and steady growth rates throughout the 1990s, quite unlike the other new Member States, which generally experienced periods of slower growth or even recessions. Another factor generally observed in the emerging economies of Eastern Europe, namely real appreciation, did not occur in Slovenia. This was mainly attributable to the country's managed floating exchange rate regime that was in place until Slovenia's ERM II entry in 2004. Gradual nominal depreciation helped stabilize the real exchange rate and thus supported the export sector. As Slovenia has a higher per-capita GDP than the other new Member States, it is not surprising that its exports per capita are also the highest among the new Member States, with exports going mainly to the rest of the EU. A substantial share, though, is also directed at the (other) markets of the former Yugoslavia. Slovenia's former exchange rate regime also had some drawbacks, however. As it helped shield the country's economy against foreign competition, productivity growth in Slovenia was thus generally lower than in the other new Member States, leading to unit labor costs in the manufacturing sector which are almost as high as in Austria.

The fact that Slovenia did not attract substantial amounts of foreign direct investment (FDI) may have played a role as well. Summing up, the country followed a more gradual approach to reforming its economy. Its reform course was characterized by steady and stable growth rates, external and internal equilibrium and political stability. In this sense, Slovenia can indeed be seen as different. Finally, Vidovic identified some challenges the country will have to face, such as a delay in structural reforms and privatizations. These challenges were discussed in more depth in the second session of the East Jour Fixe.

The second lecture of the first session was held by Boštjan Jazbec, Board Member of Banka Slovenije, Slovenia's central bank. He talked about Slovenia's path “From EU Accession to Euro Adoption.” In evaluating the country's transition process, Jazbec took a rather pragmatic stance. He said that Slovenia was luckier than other countries. Owing to the small size of its economy and the geographical proximity to the regions of the Balkan wars, Slovenia could not attract sizeable amounts of FDI throughout the 1990s. Radical restructuring therefore was not really an option for the country. Thus, it adopted a more gradual approach, which proved successful. Jazbec stated that, in this respect, he also considered Slovenia different from the other new Member States. He then went on to discuss the fulfillment of the Maastricht criteria. From 2003 on, Slovenia had succeeded in reducing inflation owing largely to the stabilization of the exchange rate. In June 2004 the country joined ERM II. Since then only minor fluctuations around the central parity have been observed. Fiscal soundness as stipulated by the Maastricht criteria was already achieved several years ago and has been maintained since then. Interest rate convergence does not pose a problem, as euro interest rates in Slovenia are already low thanks to the strong competition in the banking sector. The only exceptions are interest rates on housing loans, which still need to be adjusted to euro area levels. Jazbec also addressed the structural challenges for the Slovenian economy and stated that, by comparison, Slovenia's financial sector was underdeveloped. The financial sector is still very much bank based. Accordingly, the main future challenges Jazbec identified relate to further interest rate convergence and financial sector development.

The second session, chaired by Peter Backé, Head of the OeNB's Central and Eastern European Analysis Unit, opened with a presentation by Jože Damijan, professor at the University of Ljubljana and former Minister for Growth in Slovenia. He spoke about the “Conditions for a Continued Successful Performance of the Slovenian Economy.” In his lecture he strongly focused on the economic reform proposals which he helped develop during his time as President of the Economic Reforms Committee to the Slovenian Government and subsequently as Minister for Growth. First, he commented on the need for further reform in a country with seemingly sound fundamentals. He mainly identified two weaknesses in the Slovenian economy: First, the pace of restructuring is slow. Slovenia still has a comparatively high share of publicly owned companies, which is mainly attributable to the special path of transition the country took. Second, the competitiveness of the Slovenian economy is low. Labor costs per unit of GDP are the second highest in the European Union and the labor tax wedge is the greatest. The proposed key reforms for Slovenia include a simplified tax system which promotes more efficiency, the

restructuring of public finance, privatizations and a university reform which inter alia stresses the promotion of technological development. The tax reform is mainly based on the introduction of a flat tax on personal income and corporate profits, a single VAT rate and a stronger focus on indirect taxes. Public expenditure is scheduled to be gradually decreased by 2% of GDP by 2008. As far as privatization is concerned, the central strategy is to sell the shares in public shareholding companies held by the two state capital funds (KAD and SOD) and to transform the two funds into globally diversified portfolio investors. The university reform aims at a deregulation of the university system and the introduction of a voucher system. Knowledge accumulation should be supported by increasing the spending on R&D to 3% of GDP by 2010.

Matija Rojec of the University of Ljubljana, who is also affiliated with Slovenia's Institute of Macroeconomic Analysis and Development (IMAD), offered an analysis of the role of FDI in Slovenia and the potential for further economic integration between Slovenia and Austria. With respect to FDI, Slovenia's situation is special, as the country has attracted only small volumes of FDI in comparison with other new Member States. This is underlined by the fact that Slovenia even became a net exporter of FDI in 2005, with investments mainly directed to the countries of the former Yugoslavia. This does not mean, however, that foreign investment enterprises (FIEs) do not play an important role for the Slovenian economy. Although they only represent 5.3% of all enterprises (16.8% of all assets), they account for 34.7% of exports and 37.9% of operating profits. These data also indicate that FIEs in Slovenia strongly focus on serving export markets. It is also apparent that FIEs often operate in high-tech and medium-high-tech sectors, in which they contribute substantially to productivity increases. Looking at the motives of foreign investors in Slovenia, most of them name long-term cooperation, access to the Slovenian market, the quality of the labor force and access to Southeastern European markets to be important factors. The motivation is similar for Austrian investors, the only difference being that access to the markets of former Yugoslavia is of less importance. High taxes and social contributions, complex administrative procedures and the inefficient judiciary system are seen as barriers to FDI. When discussing the potential for further economic integration between Austria and Slovenia, Rojec mentioned a second wave of privatization, which is under way.

The seminar concluded with a presentation by Georg Krauchenberg, trade representative of the Austrian Chamber of Commerce in Slovenia, which was entitled "Doing Business in Slovenia: The Experience of Austrian Companies." Krauchenberg showed that the economic ties between Austria and Slovenia are indeed strong. Austria is the single most important investor in Slovenia; Slovenia in turn has the highest import per capita of Austrian products among all trading partners. Krauchenberg identified the legal situation as the biggest risk for investors on the Slovenian market, citing the very long duration of court cases and property reservations as examples. Other obstacles for companies doing business in the country include comparatively high salaries and strongly progressive taxation, difficulties in obtaining permits for business operations and the restrictive law on the use of the Slovenian language.

Krauchenberg, however, also stressed the new opportunities Slovenia's EU membership has opened up for Austrian companies. To illustrate his point, he mentioned logistically important facilities, like the harbor of Koper. In his opinion, also the border areas of the two countries will benefit from the new prospects associated with enhanced cooperation on the level of small and medium-sized enterprises. New business opportunities may arise from the comparatively high prices for a number of consumer products in Slovenia. Austrian companies could enter these markets quite successfully and exploit the limited competition and the relatively high margins.

In the general discussion that ensued, it was pointed out that the proposed reform measures conform to the standard prescriptions of international institutions that give policy and reform advice. All speakers agreed, however, that these measures were important to ensure continued favorable economic development for Slovenia. The questions raised during the discussion mainly related to the implementation of the measures. In this context, most discussants shared the opinion that only a part of the proposed measures will be implemented and that some of them will presumably be watered down in the political process.

In retrospect, the seminar provided an instructive overview of Slovenia's integration progress so far and, just as importantly, the challenges ahead. The latter include further restructuring and privatization, enhancing efficiency in various sectors (e.g. education), improving the court system, public expenditure and the tax system as well as promoting financial sector development.

59th East Jour Fixe**Monetary Transmission in
Central and Eastern European Countries**

The 59th East Jour Fixe of the Oesterreichische Nationalbank (OeNB) on September 15, 2006, was dedicated to the monetary transmission mechanism (MTM) in Central and Eastern European countries (CEECs). In particular, it aimed at answering the following questions: What do we know about the MTM in the CEECs and how does the MTM in the CEECs compare with that in the EU-15?

The first session was chaired by Doris Ritzberger-Grünwald, Head of the OeNB's Foreign Research Division. It aimed at providing an overview of the MTM in a number of countries by presenting three pertinent studies that had been published in the OeNB's Focus on European Economic Integration 1/06. The first paper, “Monetary Transmission Mechanism in Transition Economies: Gliding on a Wind of Change,” was presented by Balázs Égert of the OeNB's Foreign Research Division. This paper – coauthored by Fabrizio Coricelli (University of Siena) and Ronald MacDonald (University of Glasgow) – surveys recent advances in empirical studies of the monetary transmission mechanism (MTM) with a special focus on Central and Eastern Europe. In particular, it outlines the functioning of the separate channels in the MTM, explores possible interrelations between different channels and examines their impact on prices and the real economy. The empirical findings for Central and Eastern Europe are then briefly compared with the results for industrialized countries, especially for the euro area. The paper assesses the relative importance and potential development of the different channels, emphasizing the relevant asymmetries between the CEECs and the euro area.

The second paper, entitled “The Interest Rate Pass-Through in Central and Eastern Europe,” was presented by Jesús Crespo Cuaresma of the University of Vienna and Thomas Reininger of the OeNB's Foreign Research Division. This study (coauthored by Balázs Égert) highlights the interest rate pass-through in five Central and Eastern European countries – the Czech Republic, Hungary, Poland, Slovakia and Slovenia, the CEE-5. The presenters emphasized that their pass-through estimates for several retail rates were generally lower than those reported in the literature, given the absence of cointegration between policy rates and long- or even short-term market rates. In addition, the pass-through was found to be declining over time in the CEE-5 and, as the authors argued, is likely to decrease further in the future. Finally, the pass-through in the CEE-5 appears to be similar to that in Spain and higher than that in the core euro area countries (e.g. Austria and Germany). The authors concluded that euro adoption by the CEE-5 would not further increase heterogeneity within the euro area with regard to the interest rate pass-through.

Zsolt Darvas, Corvinus University Budapest, presented the third paper, “Monetary Transmission in the New EU Member States: Evidence from Time-Varying Coefficient Vector Autoregression,” which analyzes the transmission of monetary policy in selected new EU Member States with structural time-varying coefficient vector autoregressions (VAR) and compares the results

with those in the euro area. In line with the Lucas Critique, Darvas pointed out that reduced-form models, like standard vector autoregressions (VARs), were not invariant to changes in policy regimes. He argued that many of the new EU members have undergone changes in monetary policy regimes, which calls for the use of a time-varying parameter analysis. The results presented by Darvas indicate that some parameters changed significantly as a consequence of regime changes, thus altering the shape of the impulse response functions. Monetary policy is found to have the greatest impact in Poland (comparable in strength with that in the euro area) and the least impact in Hungary, while the impact of monetary policy in the Czech Republic lies in between. Darvas pointed to the credibility of monetary policy and openness to explain these results.

The three papers were discussed by Benoît Mojon, Principal Economist at the Directorate General Research of the European Central Bank, who emphasized the importance of tackling the “black box challenge,” i.e. of monetary policymakers reaching full understanding of the MTM. He noted that the black box remained fairly dark after the three presentations and that it was bound to remain so in the future. He underscored that the degree of measurement errors in the assessment of the MTM was high even in developed economies such as the euro area and the U.S.A. In particular, he highlighted the large margin of uncertainty in the impulse response functions drawn from VAR and Stochastic General Equilibrium models. Subsequently, Mojon compared the results of the three studies and pointed out that the results were reasonably in line with those of earlier studies. Next, he underlined that it was difficult to come to firm conclusions regarding country asymmetries in the MTM in the euro area. Nevertheless, he expressed the view that euro area participation was likely to increase the convergence of national practices regarding nominal wage setting and the terms of mortgage contracts, which could help reduce cross-country heterogeneity. Finally, he stressed the importance of relying on descriptive statistics so as to assess the importance of the individual channels. Mojon concluded by presenting the results of such an exercise for the current euro area member countries.

The second session was chaired by Peter Backé, Head of the Central and Eastern European Analysis Unit in the OeNB’s Foreign Research Division. It focused on country-specific aspects of the MTM. Adam Kot, Narodowy Bank Polski raised the question of the effectiveness of monetary policy in an increasingly globalized world (based on a study coauthored by Tomasz Chmielewski). In particular, Kot maintained that the relationship between economic slack and inflation had been getting vague and blurred recently in the monetary transmission models supporting the monetary policy decision-making process in the NBP. However, he showed that the relationship was still robust when inflation measures were corrected for the following groups of goods: textiles, footwear, audio appliances and telecom devices. The reason for this is that the prices of these four groups have exhibited a downward trend irrespective of the developments in the rest of the consumption process during the last five years. Kot presented supportive empirical evidence obtained from VAR models.

Lenno Uusküla, Bank of Estonia and European University Institute, presented two relevant working papers of the Bank of Estonia to provide an overview of the central bank’s monetary transmission research. The first paper on “The Importance of the Bank-Lending Channel in Estonia: Evidence from Micro-Economic Data” by Reimo Juks is an empirical analysis that provides evidence in favor of the existence of the bank lending channel in Estonia because (1) well-capitalized banks seem to experience a smaller outflow of deposits after a monetary contraction, and (2) the liquidity position of banks seems to be an important determinant of the loan supply, suggesting that more liquid banks are able to maintain their loan portfolios, while less liquid banks must reduce their loan supply after a monetary policy contraction. The paper concludes that this finding is consistent with the evidence for the euro area, where liquidity is also the most important determinant of loan supply. The second paper, which was authored by the speaker and Danny Pitzel, relies on a meta-analysis to explore the relationship between country-specific factors and the strength of monetary transmission. In particular, the paper aims to measure how financial development variables influence the strength of monetary transmission in Europe. The authors found some evidence that the transmission of monetary shocks is stronger in countries with greater financial depth. A greater relative importance of stock market capitalization compared to the debt level, however, decreases the effect of the shock. The statistical evidence on the relationship between financial depth and prices is not so clear, with the above-mentioned exception: The effect is negative for the relative size of stock market capitalization with respect to the debt level.

Anna Naszódi, Magyar Nemzeti Bank, analyzed the bank lending channel in Hungary (based on joint work with Csilla Horváth and Judit Krekó). The presenter first provided a brief overview of the theory and the empirical approaches used to investigate the existence of the bank lending channel. From the available methods, the authors chose the widely applied approach suggested by Kashyap and Stein (1995), which relies on discovering asymmetries in changes in the amount of loans to monetary actions in order to isolate supply and demand effects. Naszódi, Horváth and Krekó estimated an autoregressive distributed lag (ARDL) model where the asymmetric effects are captured by interaction terms. The results presented showed a significant asymmetric adjustment of loan quantities along certain bank characteristics. The existence of the bank lending channel – reflected in the loan supply decisions of banks – can explain these asymmetries. In addition, the authors could not find any sign of asymmetric adjustment in loan demand along these variables. The presenter concluded that, according to these findings, the existence of the bank lending channel in Hungary could not be ruled out.

Kateřina Šmídková, Executive Director of the Economic Research Department at the Czech National Bank, was the discussant of the second session. She pointed out that average inflation rates were different in countries at different stages of economic development (measured in terms of GDP per capita at purchasing power standards) and that this seemed to hold also for Central and Eastern Europe. This indeed indicates that the MTM functions differently in different countries. She highlighted three factors in the MTM that may be especially important in explaining the heterogeneity of the MTM

between Central and Eastern Europe and the euro area. First, credit-to-GDP ratios are lower in less developed economies but increase with income convergence. As a result, the credit channel may become more important over time. Second, capital markets in low-income countries are usually less developed than in high-income countries. Consequently, a successful catching-up process may lead to capital market deepening, which could strengthen the asset price channel. Third, Šmídková noted that the degree of openness (measured as the sum of exports and imports over GDP) was a crucial issue for the exchange rate pass-through, as highly open economies are more sensitive to exchange rate changes than less open economies. She concluded her presentation by stressing that (1) the relative importance of the individual transmission channels in the CEECs was different from that in the euro area, (2) in the CEECs, there were less data but more structural breaks than in the euro area, (3) the importance of channels changed fast over time with progressing real convergence, and (4) forecasting models that have been developed for industrialized countries (i.e. closed and not converging economies) should be applied with caution to the CEECs.

In the ensuing discussion, a number of issues was explored, for example the question whether the importance of the exchange rate channel has been reduced by the introduction of inflation targeting. Other issues were the impact of financial deepening, capital flows and currency substitution on the MTM in the CEECs.

Olga Radzyner Award for Scientific Work on European Integration

The Oesterreichische Nationalbank has established an award to commemorate Olga Radzyner, former Head of the Foreign Research Division, who died in a tragic accident in August 1999. The award is bestowed on young economists for excellent research focused on topics of European economic integration and is conferred annually. This year, three applicants received a single payment of EUR 3,000 each from an annual total of EUR 9,000.

The submitted work shall be in the form of a master's or doctoral thesis, a working paper or a scientific article, and shall be in English or in German. Authors shall submit the work before their 35th birthday and shall be citizens of any of the following countries: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, the Czech Republic, Estonia, the FYR of Macedonia, Hungary, Latvia, Lithuania, Poland, Romania, Serbia and Montenegro, Slovakia or Slovenia.

To identify their work as a submission, applicants shall mark the envelope with the reference "Olga Radzyner Award" and send it to the Oesterreichische Nationalbank, Foreign Research Division, Otto-Wagner-Platz 3, PO Box 61, AT 1011 Vienna. The Oesterreichische Nationalbank shall receive the work submitted for the award in 2007 by October 3, 2007, at the latest.

For detailed information, please visit our website at <http://ceec.oenb.at> or contact Ms. Sonja Pierron in the Foreign Research Division of the Oesterreichische Nationalbank either by e-mail (sonja.pierron@oenb.at) or by phone (+43 1 40420-5205).

STATISTICAL ANNEX

Statistical Annex

Table A1

Gross Domestic Product									
Annual real change in %	2003	2004	2005	2005 Q1	2005 Q2	2005 Q3	2005 Q4	2006 Q1	2006 Q2
Albania	5.7	5.9	5.5	x	x	x	x	x	x
Bosnia and Herzegovina	4.4	6.2	5.0	x	x	x	x	x	x
Bulgaria	4.5	5.7	5.5	5.9	6.5	4.6	5.5	5.6	6.6
Croatia	5.3	3.8	4.3	1.8	5.1	5.2	4.8	6.0	3.6
FYR Macedonia ¹	2.8	4.1	3.6	x	x	x	x	x	x
Romania	5.2	8.4	4.1	6.0	4.5	2.4	4.3	6.9	7.8
Russia	7.4	7.2	6.4	5.0	5.7	6.6	7.9	5.4	7.5
Serbia and Montenegro	2.4	9.3	6.3	x	x	x	x	x	x
Turkey	5.8	8.9	7.4	6.6	5.5	7.7	9.5	6.5	7.5
Ukraine	9.6	12.1	2.6	5.4	2.6	0.4	2.0	3.2	6.8

Source: Eurostat, wiw, IWF, national sources.

¹ Former Yugoslav Republic of Macedonia.

Table A2

Industrial Production									
Annual real change in %	2003	2004	2005	Apr. 06	May 06	June 06	July 06	Aug. 06	Sep. 06
Albania	2.7	3.1	4.0	x	x	x	x	x	x
Bosnia and Herzegovina	-7.8	9.0	5.1	10.4	5.1	-1.3	9.1	5.5	4.4
Bulgaria	14.1	17.1	6.7	2.7	10.3	5.7	3.0	10.5	..
Croatia	4.1	3.7	5.1	-3.2	4.1	-1.1	5.2	9.8	3.0
FYR Macedonia	4.1	-2.2	7.0	x	x	x	x	x	x
Romania	3.2	5.4	2.2	0.6	16.0	10.7	10.0	6.7	..
Russia	9.4	8.1	3.9	4.9	11.2	2.9	3.6	6.3	5.6
Serbia and Montenegro	-2.7	7.5	0.7	x	x	x	x	x	x
Turkey	9.3	10.6	4.8	..	..	9.4	..	..	..
Ukraine	15.8	12.5	3.1	0.5	10.0	9.6	11.4	9.1	6.2

Source: National sources, EBRD, wiw.

Table A3

Average Gross Wages									
Annual nominal change in %	2003	2004	2005	Apr. 06	May 06	June 06	July 06	Aug. 06	Sep. 06
Albania ¹	8.5	14.4	9.9	x	x	x	x	x	x
Bosnia and Herzegovina ²	8.4	8.6	6.4	13.0	12.1	11.6	11.4	11.4	..
Bulgaria ³	6.2	7.0	7.0	10.6	8.5	9.9	..	..	..
Croatia ⁴	5.9	5.9	4.9	4.8	5.6	4.7	4.7	4.9	..
FYR Macedonia ⁴	4.8	4.0	2.5	x	x	x	x	x	x
Romania ⁴	25.4	22.5	23.7	12.8	15.7	15.7	15.3	14.6	..
Russia ³	24.8	24.0	25.2	22.9	26.8	28.6	25.8	26.5	24.3
Serbia and Montenegro ⁴	24.9	22.9	24.1	x	x	x	x	x	x
Turkey ⁵	17.2	10.3	..	x	x	x	x	x	x
Ukraine ³	23.0	27.7	36.5	34.1	31.2	29.2	28.8	29.1	26.9

Source: National sources, wiw.

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, %

	2003	2004	2005	Apr. 06	May 06	June 06	July 06	Aug. 06	Sep. 06
Albania ¹	15.2	14.7	14.3	x	x	13.9	x	x	..
Bosnia and Herzegovina	42.0	43.9	45.4	..	..	..	..	..	..
Bulgaria ¹	14.3	12.7	11.5	10.2	9.6	9.2	9.0	8.7	..
Croatia ¹	19.2	18.0	17.9	17.6	16.7	16.0	15.7	15.7	16.1
FYR Macedonia ²	36.7	37.2	37.3	x	x	x	x	x	x
Romania ¹	7.6	6.8	5.8	5.9	5.5	5.3	5.1	5.1	..
Russia ²	8.6	8.2	7.6	7.7	7.5	7.4	7.3	7.2	7.1
Serbia and Montenegro ¹	31.8	31.7	32.6	33.5	33.3	33.2	33.3	..	..
Turkey ²	10.5	10.3	9.8	x	x	8.8	x	x	..
Ukraine ¹	3.7	3.6	3.1	3.1	2.9	2.7	2.5	2.5	2.4

Source: National sources, wiiv.

¹ Registered, period average.² Labor Force Survey, period average.

Table A5

Industrial Producer Price Index

Period average, annual change in %

	2003	2004	2005	Apr. 06	May 06	June 06	July 06	Aug. 06	Sep. 06
Albania	6.7	12.4	2.5	x	x	x	x	x	x
Bosnia and Herzegovina	-0.1	2.3	-0.4	3.7	4.4	5.0	6.2	5.8	6.4
Bulgaria	5.0	5.9	7.0	7.5	11.5	11.1	10.9	11.0	10.3
Croatia	1.9	3.6	3.1	3.4	3.7	3.7	3.0	3.1	2.0
FYR Macedonia	-0.3	0.9	3.2	x	x	x	x	x	x
Romania	19.6	19.1	10.8	10.6	11.7	12.7	12.9	13.0	..
Russia	15.6	24.0	20.7	13.1	12.1	12.9	14.2	14.4	12.9
Serbia and Montenegro	-3.8	4.0	4.5	x	x	x	x	x	x
Turkey	25.6	14.6	6.0	5.0	7.7	12.5	14.3	12.3	..
Ukraine	7.8	20.4	16.8	5.4	4.7	6.3	9.4	10.9	10.7

Source: EBRD, wiiv, national sources.

Table A6

Consumer Price Index

Period average, annual change in %

	2003	2004	2005	Apr. 06	May 06	June 06	July 06	Aug. 06	Sep. 06
Albania	2.3	2.9	2.4	2.0	3.1	2.4	3.2	2.8	2.6
Bosnia and Herzegovina ¹	0.7	0.3	3.0	6.2	6.9	7.5	6.7	6.3	6.2
Bulgaria	2.3	6.1	5.0	8.1	8.5	8.2	7.6	6.8	5.6
Croatia ²	1.8	2.1	3.4	3.5	4.0	4.0	3.4	3.4	2.8
FYR Macedonia ¹	2.4	0.9	2.1	x	x	x	x	x	x
Romania	15.3	11.9	9.1	7.0	7.3	7.2	6.2	6.1	5.5
Russia	13.6	11.0	12.5	9.9	9.6	9.2	9.5	9.8	9.6
Serbia and Montenegro	9.4	10.8	15.2	15.6	16.1	15.1	12.7	..	..
Turkey	25.6	10.1	8.1	8.5	9.2	9.8	11.4	10.1	10.2
Ukraine	5.2	9.0	13.5	7.4	7.3	6.8	7.4	7.4	9.1

Source: Eurostat, wiiv, national sources.

¹ Retail prices.² Retail prices until 2001.

Table A7

Trade Balance									
% of annual GDP									
	2003	2004	2005	2005 Q1	2005 Q2	2005 Q3	2005 Q4	2006 Q1	2006 Q2
Albania	x	x	x	x	x	x	x	x	x
Bosnia and Herzegovina	x	x	x	x	x	x	x	x	x
Bulgaria	-13.7	-15.1	-20.2	-15.7	-22.2	-19.3	-23.0	-20.7	-19.3
Croatia	-26.6	-23.7	-24.3	-23.3	-27.1	-21.8	-25.2	-24.4	-27.8
FYR Macedonia	x	x	x	x	x	x	x	x	x
Romania	-7.6	-8.7	-9.8	-7.7	-11.5	-7.8	-11.6	-9.9	-12.4
Russia	13.9	14.6	15.5	15.5	16.9	15.8	14.2	17.6	16.5
Serbia	-26.6	-33.9	-24.1	x	x	x	x	x	x
Turkey	-5.7	-8.0	-9.1	-8.8	-10.6	-8.5	-8.9	-10.6	-12.7
Ukraine	-0.4	5.8	-1.5	6.5	-1.3	-4.9	-3.2	-6.3	-3.6

Source: National central banks.

Table A8

Current Account Balance									
% of annual GDP									
	2003	2004	2005	2005 Q1	2005 Q2	2005 Q3	2005 Q4	2006 Q1	2006 Q2
Albania	-8.2	-6.1	-7.1	x	x	x	x	x	x
Bosnia and Herzegovina	-17.8	-17.3	-17.8	x	x	x	x	x	x
Bulgaria	-5.5	-5.8	-11.3	-12.1	-10.6	-2.5	-20.2	-22.3	-11.9
Croatia	-7.1	-4.9	-6.4	-22.9	-15.0	26.0	-19.3	-26.4	-15.1
FYR Macedonia	-3.2	-7.8	-1.3	x	x	x	x	x	x
Romania	-5.5	-8.4	-8.6	-7.1	-10.8	-6.7	-9.7	-9.3	-12.0
Russia	8.2	9.9	10.9	12.9	12.5	9.4	9.8	14.5	11.6
Serbia and Montenegro	-9.6	-12.5	-8.8	x	x	x	x	x	x
Turkey	-3.3	-5.2	-6.4	-8.7	-8.7	-2.4	-7.5	-10.5	-11.4
Ukraine	5.7	10.6	3.0	10.2	3.4	1.7	-0.4	-3.7	-0.2

Source: National central banks.

Table A9

Net Foreign Direct Investment									
% of annual GDP									
	2003	2004	2005	2005 Q1	2005 Q2	2005 Q3	2005 Q4	2006 Q1	2006 Q2
Albania	x	x	x	x	x	x	x	x	x
Bosnia and Herzegovina	x	x	x	x	x	x	x	x	x
Bulgaria	10.3	11.5	11.2	9.3	6.9	14.9	12.5	15.6	10.2
Croatia	6.4	2.5	3.9	2.6	8.4	3.8	0.9	4.3	9.2
FYR Macedonia	x	x	x	x	x	x	x	x	x
Romania	3.1	8.4	6.7	5.5	7.6	6.7	6.6	10.3	6.8
Russia	-0.4	0.3	0.2	1.7	1.8	1.9	-3.7	0.7	2.5
Serbia	7.4	4.6	6.4	x	x	x	x	x	x
Turkey	0.5	0.7	2.5	0.9	0.2	2.1	5.8	1.5	8.3
Ukraine	2.7	2.6	9.4	1.6	2.0	1.9	26.7	3.3	5.7

Source: National central banks.

Table A10

Reserve Assets Excluding Gold

End of period, % of annual GDP

	2003	2004	2005	2005 Q1	2005 Q2	2005 Q3	2005 Q4	2006 Q1	2006 Q2
Albania	18.0	18.5	..	x	x	x	x	x	x
Bosnia and Herzegovina	25.6	..	..	x	x	x	x	x	x
Bulgaria ¹	28.1	32.9	31.8	31.7	34.3	32.5	31.8	29.1	31.8
Croatia ¹	25.0	22.7	24.0	23.2	23.9	23.2	24.0	25.4	26.9
FYR Macedonia	19.4	16.9	..	x	x	x	x	x	x
Romania ¹	12.2	17.8	21.1	19.5	20.1	22.5	21.1	21.9	20.9
Russia ¹	15.3	18.7	24.1	20.8	23.4	22.9	24.1	27.3	29.0
Serbia and Montenegro	x	x	x	x	x	x	x	x	x
Turkey ¹	12.4	11.0	14.7	11.9	12.9	12.7	14.7	15.8	14.3
Ukraine	12.2	13.1	24.0	16.6	18.6	18.9	24.0	19.5	18.1

Source: IMF, wiiv.

¹ Quarterly data on the basis of rolling four-quarter GDP.

Table A11

Gross External Debt

End of period, % of annual GDP

	1999	2000	2001	2002	2003	2004	2005
Albania	32.3	44.4	29.3	26.3	24.7	22.0	20.0
Bosnia and Herzegovina	66.2	59.2	47.4	37.7	33.3	31.1	30.2
Bulgaria	89.2	86.7	78.3	64.9	60.0	64.2	67.7
Croatia	54.1	60.6	60.7	61.6	75.6	80.2	82.5
FYR Macedonia	40.6	43.2	43.5	43.5	39.5	38.3	39.7
Romania ¹	26.6	28.0	30.5	31.2	30.4	30.1	30.9
Russia	x	55.3	46.8	39.5	38.9	33.6	36.2
Serbia and Montenegro	61.8	164.0	103.5	76.4	69.1	61.4	61.7
Turkey	60.1	59.0	81.3	65.1	53.6	49.4	49.6
Ukraine	x	60.2	54.4	46.4	42.6	43.1	48.9

Source: National central banks, EBRD.

¹ Medium- and long-term debt.

Table A12

General Government Balance

% of GDP

	2003	2004	2005	2005 Q1	2005 Q2	2005 Q3	2005 Q4	2006 Q1	2006 Q2
Albania	-4.4	-5.0	-3.3	x	x	x	x	x	x
Bosnia and Herzegovina	-1.7	-1.9	0.1	x	x	x	x	x	x
Bulgaria	0.0	1.7	3.2	5.5	6.6	3.5	-1.7	4.4	8.5
Croatia ¹	-2.9	-4.3	-3.0	-12.1	-1.1	1.2	-1.5	-5.0	-1.1
FYR Macedonia	-1.0	0.1	0.4	x	x	x	x	x	x
Romania ¹	-1.5	-0.8	-0.8	-1.3	-0.1	1.4	-2.8	0.8	-1.2
Russia ¹	1.7	4.3	7.5	11.9	8.3	3.8	7.1	10.1	8.0
Serbia and Montenegro	-3.3	-0.3	0.9	x	x	x	x	x	x
Turkey	-11.1	-7.0	-2.0	-3.2	-0.8	-2.9	-1.2	-1.6	2.2
Ukraine	-0.2	-3.2	-1.8	3.5	-1.2	3.4	-11.0	0.4	-1.1

Source: National sources, EBRD, wiiv.

¹ Central government balance.

Table A13

Gross General Government Debt

% of annual GDP

	1999	2000	2001	2002	2003	2004	2005
Albania	72.7	71.3	66.8	64.8	60.6	55.6	54.8
Bosnia and Herzegovina	x	x	x	x	x	x	x
Bulgaria	x	x	x	53.7	46.0	38.4	29.8
Croatia ¹	x	x	x	x	40.9	43.7	44.2
FYR Macedonia	57.4	53.2	51.6	49.6	45.7	44.3	47.6
Romania	0.0	23.9	23.2	25.0	21.5	18.8	15.9
Russia	90.0	62.5	48.2	41.4	32.4	25.9	17.7
Serbia and Montenegro	x	x	x	x	x	x	x
Turkey	65.9	57.5	105.2	93.1	85.1	76.9	69.6
Ukraine	51.0	45.9	36.9	33.5	29.0	25.9	22.8

Source: Eurostat, EBRD.

¹ Central government debt.

Table A14

Broad Money

End of period, annual nominal change in %

	2003	2004	2005	Mrz. 06	Apr. 06	May 06	June 06	July 06	Aug. 06
Albania (M3)	7.6	13.1	14.0	11.3	11.0	10.5	9.7	9.9	10.4
Bosnia and Herzegovina (M2)	8.4	24.3	18.2	19.8	20.2	20.1	20.9	22.5	21.8
Bulgaria (M3)	19.6	23.1	23.9	10.1	17.1	18.4	20.9	21.4	22.5
Croatia (M4)	11.0	8.6	10.5	11.3	12.5	12.4	14.4	17.0	..
FYR Macedonia	18.0	17.0	15.9	x	x	x	x	x	x
Romania (M2)	23.3	39.9	33.9	28.8	27.4	27.5	28.1	29.4	x
Russia ¹	38.5	33.7	36.3	34.4	34.7	37.2	38.1	38.1	..
Serbia and Montenegro	27.9	32.1	32.8	x	x	x	x	x	x
Turkey ¹	14.6	22.1	25.4	x	x	x	x	x	x
Ukraine	46.5	32.4	54.3	39.4	37.4	40.2	37.0	39.2	37.4

Source: National sources, wiw.

¹ Monetary survey definition.

Table A15

Official Key Interest Rate

End of period, %

	2003	2004	2005	May 06	June 06	July 06	Aug. 06	Sep. 06	Oct. 06
Albania (repo rate) ¹	7.00	5.30	5.00	5.00	5.00	5.30	5.30	5.30	..
Bosnia and Herzegovina	x	x	x	x	x	x	x	x	x
Bulgaria (official refinancing rate) ²	2.83	2.37	2.05	2.57	2.56	2.69	2.80	2.94	2.98
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)	6.50	6.50	6.50	x	x	x	x	x	x
Romania (official refinancing rate) ⁴	20.41	17.96	7.50	8.50	8.75	8.75	8.75	8.75	..
Russia (official refinancing rate) ⁵	16.00	13.00	12.00	12.00	11.50	11.50	11.50	11.50	11.00
Serbia and Montenegro (discount rate)	9.00	8.50	8.50	x	x	x	x	x	x
Turkey (overnight deposit rate) ⁶	26.00	18.00	13.50	13.25	17.25	17.50	17.50	17.50	17.50
Ukraine (refinancing rate)	7.00	9.00	9.50	9.50	8.50	8.50	8.50	8.50	8.50

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, %

	2003	2004	2005	May 06	June 06	July 06	Aug. 06	Sep. 06	Oct. 06
Albania	x	x	x	x	x	x	x	x	x
Bosnia and Herzegovina	x	x	x	x	x	x	x	x	x
Bulgaria	3.50	3.64	3.60	3.58	3.61	3.65	3.74	3.74	3.83
Croatia	8.33	6.65	5.95	4.18	4.41	4.43	4.37	4.48	4.48
FYR Macedonia	x	x	x	x	x	x	x	x	x
Romania	22.31	17.19	7.63	8.59	8.96	9.36	9.23	9.18	9.19
Russia	6.20	6.16	7.33	5.98	6.42	6.05	5.68	5.84	6.76
Serbia and Montenegro	x	x	x	x	x	x	x	x	x
Turkey	26.00	23.00	14.40	13.50	13.50	13.50	13.50	13.50	21.25
Ukraine	4.75	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50

Source: Bloomberg, Thomson Financial.

¹ Ask rate.

Table A17

Exchange Rate

Period average, national currency per EUR

	2003	2004	2005	May 06	June 06	July 06	Aug. 06	Sep. 06	Oct. 06
Albania	137.58	127.61	124.00	123.15	123.18	122.70	122.46	123.19	123.26
Bosnia and Herzegovina	1.96	1.96	1.96	x	x	x	x	x	x
Bulgaria	1.95	1.95	1.96	1.96	1.96	1.96	1.96	1.96	..
Croatia	7.57	7.50	7.40	x	x	x	x	x	x
FYR Macedonia	61.26	61.34	61.30	x	x	x	x	x	x
Romania	3.75	4.05	3.62	3.51	3.55	3.57	3.53	3.53	..
Russia	34.69	35.81	35.22	34.52	34.21	34.16	34.27	34.09	33.90
Serbia and Montenegro	65.05	72.73	83.19	86.99	86.82	..	..	..	..
Turkey	1.70	1.78	1.68	1.84	2.03	1.97	1.88	1.89	..
Ukraine	6.02	6.61	6.39	6.43	6.40	6.40	6.47	6.43	..

Source: Eurostat, wiiv, national sources, Thomson Financial.

NOTES

Legend, Abbreviations and Definitions

Legend

- x = No data can be indicated for technical reasons
.. = Data not available at the reporting date
– = The numerical value is zero or smaller than half of the unit indicated
Discrepancies may arise from rounding.

Abbreviations

BGN	Bulgarian lev
BiH	Bosnia and Herzegovina
BIS	Bank for International Settlements
BNB	Bulgarian National Bank (Bălgarska Narodna Banka)
BNR	Banca Națională a României
BS	Banka Slovenije
CAR	capital adequacy ratio
CBBH	Centralna banka Bosne i Hercegovine
CBCG	Centralna banka Crne Gore
CBR	Central Bank of Russia
CEE	Central and Eastern Europe(ean)
CEE-5	Czech Republic, Hungary, Poland, Slovakia and Slovenia
CEE-8	Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia and Slovenia
CEECs	Central and Eastern European countries
CEEI	Conference on European Economic Integration (OeNB)
CIS	Commonwealth of Independent States
ČNB	Česka národní banka
CPI	consumer price index
CSD	Serbian dinar
CZK	Czech koruna
EBRD	European Bank for Reconstruction and Development
ECB	European Central Bank
Ecofin	Council of Economic and Finance Ministers
EDP	excessive deficit procedure
EMU	Economic and Monetary Union
ERM II	exchange rate mechanism II
ESA	European System of Accounts
ESCB	European System of Central Banks
EU	European Union
EUR	euro
FDI	foreign direct investment
FIE	foreign investment enterprise
FRY	Federal Republic of Yugoslavia
FYR Macedonia	Former Yugoslav Republic of Macedonia
GDP	gross domestic product
GFCF	gross fixed capital formation
HICP	Harmonised Index of Consumer Prices

HNB	Hrvatska narodna banka
HRK	Croatian kuna
HUF	Hungarian forint
IAS	International Accounting Standards
ICTY	International Criminal Tribunal for the Former Yugoslavia
IFS	international financial statistics (IMF)
ILO	International Labor Organization
IMF	International Monetary Fund
LFS	Labor Force Survey
MNB	Magyar Nemzeti Bank
MTM	monetary transmission mechanism
NATO	North Atlantic Treaty Organisation
NBP	Narodowy Bank Polski
NBRM	Narodna banka na Republika Makedonija/the National Bank of the Republic of Macedonia
NBS	Národná banka Slovenska
NBS	Narodna banka Srbije
NBU	National Bank of Ukraine
NCB	national central bank
NFC	nonfinancial corporation
NMS	new Member State(s) (EU)
NPISH	nonprofit institutions serving households
NPL	nonperforming loan
OCA	optimum currency area
OECD	Organisation for Economic Co-operation and Development
OeNB	Oesterreichische Nationalbank
OSCE	Organization for Security and Co-operation in Europe
PLN	Polish złoty
PPI	producer price index
PPP	purchasing power parity
ROE	return on equity
RON	Romanian leu
RUB	Russian ruble
SAA	Stabilisation and Association Agreement
SDR	Special Drawing Right
SEE	Southeastern Europe(an)
SGP	Stability and Growth Pact
SIT	Slovenian tolar
SKK	Slovak koruna
TCMB	Türkiye Cumhuriyet Merkez Bankası
TRL	Turkish lira
ULC	unit labor costs
UN	United Nations
USD	U.S. dollar
VAR	vector autoregression
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
WTO	World Trade Organization

Country Codes

AR	Argentina	JP	Japan
AT	Austria	KR	South Korea
AU	Australia	LT	Lithuania
BG	Bulgaria	LU	Luxembourg
BE	Belgium	LV	Latvia
BR	Brazil	MT	Malta
CA	Canada	MX	Mexico
CL	Chile	NL	Netherlands
CY	Cyprus	NO	Norway
CZ	Czech Republic	NZ	New Zealand
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FI	Finland	RU	Russia
FR	France	SE	Sweden
GR	Greece	SI	Slovenia
HR	Croatia	SK	Slovakia
HU	Hungary	TH	Thailand
ID	Indonesia	TR	Turkey
IE	Ireland	UA	Ukraine
IL	Israel	UK	United Kingdom
IN	India	US	U.S.A.
IT	Italy	ZA	South Africa

Definitions

Bulgaria is a candidate country within the EU enlargement process and will become an EU Member State on January 1, 2007, given that the Accession Treaty has been ratified by the 25 EU Member States and by Bulgaria and Romania.

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. (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.) Accession negotiations were opened on February 15, 2000. Negotiations were provisionally closed in December 2004, and the Accession Treaty was signed on April 25, 2005. Since the opening of accession negotiations, Bulgaria has been termed an accession country, and since the signing of the Accession Treaty, it has also been termed an acceding country.

Romania is a candidate country within the EU enlargement process and will become an EU Member State on January 1, 2007, given that the Accession Treaty has been ratified by the 25 EU Member States and by Bulgaria and Romania.

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. (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.) Negotiations were provisionally closed in December 2004, and the Accession Treaty was signed on April 2005. Since the opening of accession negotiations, Romania has been termed an accession country, and since the signing of the Accession Treaty, it has also been termed an acceding country.

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. Accession negotiations were opened on October 3, 2005.

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. As accession negotiations were opened on October 3, 2005, Turkey may be termed an accession country.

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. Accession negotiations were opened on October 3, 2005.

The *Former Yugoslav Republic of Macedonia* 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.

The Former Yugoslav Republic of Macedonia applied for EU membership on March 22, 2004, and was formally recognized as a candidate country at the Brussels European Council meeting on December 15 and 16, 2005.

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Interest Rate Pass-Through in Central and Eastern Europe:

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Jesús Crespo Cuaresma, Balázs Égert, Thomas Reininger

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Stephan Barisitz, Annemarie Pemmer

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.

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quarterly

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Imprint

Publisher and editor:

Oesterreichische Nationalbank

Otto-Wagner-Platz 3, AT 1090 Vienna

Günther Thonabauer, Communications Division

Internet: www.oenb.at

Printed by: Oesterreichische Nationalbank, AT 1090 Vienna

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DVR 0031577

Vienna, 2006



Geprüftes Umweltmanagement
A-000311