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Sandra Dvorsky

The paper measures the degree of legal and actual central bank independence (CBI) in five Central and Eastern European transition economies striving for EU accession, namely the Czech Republic, Hungary, Poland, Slovakia and Slovenia (CEEC-5). The degree of legal CBI is measured by applying the two most widely used indices, the Cukierman and the Grilli-Masciandaro-Tabellini (GMT) indices. Moreover, the turnover rate of central bank governors is used as a proxy to measure actual CBI. The paper gives an interpretation of computed results, comparing the findings with those of other authors and earlier calculations. Furthermore, the indices on legal and actual CBI themselves are critically reviewed, in particular against the background of the Maastricht Treaty requirements, which in practice constitute the driving force for any amendment of central bank laws in the CEEC-5. The paper concludes that the overall degree of legal CBI is comparatively high in all countries examined, while the measured turnover rates of governors do not seem to fully reflect the degree of actual CBI in the CEEC-5. A comparison of requirements imposed by the Cukierman index to the Maastricht Treaty requirements reveals potential implications for future measurement of legal CBI not only in the CEEC-5, but also in other EU accession countries, if the Cukierman methodology is applied.

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Stephan Barisitz

Banking reforms in independent Croatia have proceeded relatively slowly compared to the most advanced central European countries, but they have recently gained momentum. The delicate geopolitical situation of the country, its involvement in armed conflicts on its own territory and in adjacent parts of former Yugoslavia, Croatia's long-standing political isolation from the EU and other factors have not been conducive to structural reforms. The early years of independence featured major upheavals and losses for the banking business. In 1993, the authorities opted for a radical macroeconomic stabilization program that met with impressive success for some years. But a significant part of the banking sector was still ailing, and the government decided to bail out some of the largest banks by massive issues of government bonds. In the following years, some rapidly growing private banks attracted a large amount of foreign currency flowing back into the country. But imprudent lending brought them into difficulties, triggering a new banking crisis in 1998–99, which contributed to a mild recession. This time, the Croatian National Bank was equipped with enhanced legal authority and initiated bankruptcy proceedings in a number of cases. The year 2000 has seen a confluence of positive macroeconomic and structural changes, in particular a spate of transactions with foreign strategic investors purchasing stakes in leading banks.

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

The Oesterreichische Nationalbank's semiannual periodical Focus on Transition, first published in 1996, is addressed to all readers – researchers, policy-makers, analysts, students – with an interest in the analysis of developments in Central and Eastern Europe.

This volume of the Focus on Transition contains four parts: an update of recent economic developments in selected countries, a studies section with four studies, a summary of the latest activities of the Oesterreichische Nationalbank dealing with transition (lectures, discussions, technical cooperation) and a statistical annex.

The recently published regular reports 2000 on the progress of candidate countries toward EU accession illustrate that the differences among accession countries are significant. The reports stress that Estonia, Hungary and Poland as well as the Czech Republic and Slovenia are functioning market economies and should be able to cope with competitive pressure and market forces in the EU in the near term provided they maintain the current reform path (Estonia, Hungary and Poland) or complete and implement the remaining reforms (the Czech Republic and Slovenia). Latvia, Lithuania and Slovakia can be regarded as market economies, but need to make relatively more progress to cope with competitive pressure and market forces in the medium term. Bulgaria and Romania lag behind in the reform process. The update of *recent economic developments* in selected CEECs should specifically be seen in the light of these conclusions.

In economic theory, the *Optimum Currency Area (OCA)* theory considers a common currency optimal for countries which are exposed to mainly symmetric shocks or which have mechanisms in place for the adjustment to asymmetric shocks. According to the OCA theory, the latter include wage and price flexibility, factor mobility and/or fiscal transfers. The smaller the exposure to asymmetric shocks, the less need there is to resort to such adjustment mechanisms. In order to lower the probability of asymmetric shocks, it is crucial that the trade of participating countries be highly integrated and that the structure of exported goods and services be well diversified, which in turn will contribute to fostering business cycle synchronization. Furthermore, for the long-term success of a monetary union, the achievement of similar rates of inflation and a high degree of policy integration are crucial. The first study in this volume shows, among other things, that the advanced candidate countries have already achieved a high degree of trade integration with the EU and that intraindustry trade is rising dynamically. This implies that structural convergence is well under way. The authors further conclude that, in the medium term, advanced candidate countries will achieve a high degree of business cycle convergence with the EU and that some of them have in fact already attained a remarkably high correlation of industrial production. Regarding the issue of nominal convergence, the study finds that inflationary pressures in accession countries are likely to prevail over a prolonged period of time. However, insofar as these pressures are linked to the catching-up process, they will not have a negative impact on accession countries' competitiveness. The impact of higher inflation rates in the CEECs (after a hypothetical euro area enlargement) on

total euro area inflation will, however, be mitigated by low weightings in the HICP, different accession dates and progress in nominal and real convergence.

The European Union has made it very clear that unilateral *euroization* does not constitute a viable option for the monetary integration of candidate countries and that it would run counter to the underlying economic reasoning of EMU in the EC Treaty. The second study discusses the empirical nature of a hypothetical unilateral euroization and its final costs and benefits, focusing on the case of Poland. The paper arrives at the conclusion that the often cited benefits of unilateral euroization are much less clear-cut than they would appear to be at first glance, while the costs and risks are considerable. In general, a hypothetical euroization would be a risky venture for Poland that could delay the real convergence of the Polish economy rather than accelerate it.

The main purpose of the third study is to measure the degree of *central bank independence (CBI)* in five Central and Eastern European transition economies striving for EU accession, namely the Czech Republic, Hungary, Poland, Slovakia and Slovenia. The author establishes that the overall degree of legal CBI is comparatively high in all countries examined, while the still existing possibility of central bank credit to the government can be identified as the main weakness in all countries but Poland.

The last study analyzes the eventful history of the *Croatian banking sector* since the onset of transition. The author divides the development of the Croatian banking sector since independence into four periods, each of which – except the last – ended with a banking crisis and/or rehabilitation measures. But each period witnessed some qualitative improvements in the situation and partly also in the behavior of banks over the previous period. Finally, the author discusses the main challenges ahead, focusing on the need for further enterprise reforms which should accompany banking sector reform, the high indirect foreign currency exposure of banks, over-banking (in terms of assets-per-employee ratios) and shortcomings in the current deposit insurance scheme.

I would like to draw your special attention to a highlight of the OeNB's Central and Eastern European activities, namely the *East-West Conference*. This year's conference took place from November 5 to 7 at the Vienna Marriott Hotel and was entitled "Completing Transition: The Main Challenges." The Oesterreichische Nationalbank hosted this event together with the Joint Vienna Institute (JVI), the major training center for officials from Central and Eastern Europe as well as from the CIS countries and a strategic partner for the OeNB in many of its transition-related activities.

In the framework of the conference, the Olga Radzyner Award was granted for the first time. This award was established to commemorate Olga Radzyner, who headed the Bank's Foreign Research Division until her tragic death in August 1999 and who was the main driving force in building up and expanding the OeNB's array of transition- and accession-related activities. The award is bestowed on young economists for excellent research focused on monetary and finance issues in economics.

We invite you to address any comments or suggestions you may have about this publication or any of the studies in it to:

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Klaus Liebscher

Governor

RECENT ECONOMIC DEVELOPMENTS

Jarko Fidrmuc,
Stephan Barisitz
and Cezary Wójcik

I Introduction

In the first half of 2000, growth improved in all transition countries. According to the recently published Transition Report of the EBRD, real GDP is expected to advance by about 5% or more in Hungary, Slovenia and Poland.¹⁾ The economy in the Czech Republic and Slovakia also posted a turnaround in the first half of the year; GDP in both countries is expected to mount by about 2% on the average in 2000. The IMF fully shared this optimism in its most recent World Economic Outlook of October. External demand developed positively in all Central and Eastern European countries, but domestic demand also strengthened and is likely to play a more important role next year.

Less progress was made in the areas relevant to monetary policymaking. The surge in oil prices exerted new inflationary pressure on Central and Eastern European countries, especially in the second half of 2000. As a result, both the EBRD and the IMF expect inflation to outpace the previous year's level in the Czech Republic, Poland, Slovakia and Slovenia, and to remain flat in Hungary. Inflation will range between 4% and 12% in 2000.

Current account developments were diverse. According to the Transition Report and the World Economic Outlook, Slovakia's current account deficit is likely to contract further, while Hungary's and Slovenia's current account shortfall could more or less stagnate at moderate levels (about 3% of GDP). The Czech Republic's current account deficit will probably widen, but to a noncritical level of slightly more than 3% of GDP, while Poland still faces a persistent gap of about 7% of GDP. Thus, external developments still act as an important constraint on economic development.

The EU accession process advanced further during the review period. Accession negotiations with the Czech Republic, Hungary, Poland and Slovenia went on with the opening of further chapters and the preliminary closure of a few additional chapters. By June 2000, all chapters except for "Institutions" and "Other" had been opened. By mid-November, 14 chapters had been provisionally closed with Hungary, 13 chapters with the Czech Republic and Slovenia, and 12 chapters with Poland. For all four countries, the chapters provisionally closed also include the chapter on "EMU," which is of specific moment for central banks.

Accession negotiations between the EU and Slovakia were launched in February 2000, in line with the conclusions of the European Council in Helsinki in December 1999. By mid-November, 13 chapters had been opened, and 10 of them provisionally closed, with Slovakia.

The European Union, including the Eurosystem, has outlined a three-step approach to the monetary integration of the candidate countries from Central and Eastern Europe. The applicants will first join the EU, then enter the exchange rate mechanism (ERM II) of the European Union and finally, after fulfillment of the Maastricht convergence criteria, accede to the euro area, i.e. participate fully in Economic and Monetary Union (EMU).²⁾

¹ Unless stated otherwise, comparisons are year on year.

² See also the studies on euro area enlargement by Fidrmuc and Schardax as well as on unilateral euroization by Wójcik in this volume.

On November 7, 2000, the ECOFIN Council of the European Union discussed the framework of exchange rate strategies for accession countries. It confirmed the European Union's three-step approach towards the monetary integration of accession countries and stressed, in this context, that any unilateral adoption of the single currency by means of "euroization" would run counter to the underlying economic reasoning of EMU in the EC Treaty. In addition, the Council stated that the only clear incompatibilities vis-à-vis the ERM II that can be identified already at this stage are fully floating exchange rates, crawling pegs and pegs against anchors other than the euro.

The European Commission's 2000 Regular Reports

On November 8, 2000, the European Commission published this year's regular reports on the progress of the applicant countries on their way to EU accession. This annual review instrument, which assesses the applicants' performance in fulfilling the Copenhagen criteria for EU membership, was introduced by the European Council in Luxemburg in December 1997 as part of an enhanced preaccession strategy for the candidate countries. The regular reports 2000 contain the following main assessments and recommendations for Central and Eastern Europe:

- According to the Copenhagen **economic criteria** (see table below), the above-mentioned candidate countries in Central and Eastern Europe under review were classed into the following groups: a) Hungary, Poland (together with Estonia in this group), b) the Czech Republic and Slovenia, and c) Slovakia (together with Latvia and Lithuania).
- The European Commission proposes a "**road map**" in the form of a sequenced approach to the chapters in the negotiations, which should allow conclusion of the negotiations in the course of 2002.
- The **Czech Republic** has made progress in establishing the legal framework for regional government, but the reform of public administration has not advanced significantly. Macroeconomic stability has increased and growth has resumed while the external balance has been maintained. However, the sustainability of public finances in the medium term is not yet assured. Progress has been made on further restructuring and privatizing banks, but the efforts to privatize and restructure the state-owned enterprises must continue, and corporate governance must improve.
- **Hungary** has made considerable progress toward consolidating macroeconomic stability, enhancing current account sustainability and strengthening the institutional basis of the market economy. The creation of new enterprises, particularly those fostered by foreign direct investment, is strong. However, the slow progress towards price stability is cause for concern, and maintaining external competitiveness will require an appropriate policy mix, including continued fiscal consolidation.
- **Poland** has maintained adequate macroeconomic stability, and its growth performance has again been impressive. Despite delays in privatization in the steel sector and the restructuring of agriculture, the pace of privatization has been encouraging; there has also been further restructuring in sensitive sectors such as the coal and defense industries. However, a number of economic challenges have emerged, including a rise in inflation, fiscal sustainability, and a large current account deficit.
- **Slovakia** has made further strides in consolidating its democratic system and in establishing normally functioning institutions, although the speed of the reform process has lost some momentum in 2000. Macroeconomic stability has been restored. Price distortions are being eliminated. The authorities are making good progress in restructuring and privatizing the state-owned banks. However, the progress in macroeconomic stabilization will need to be consolidated by a continued prudent policy mix.
- **Slovenia** has achieved little progress in the reform of public administration since the last evaluation. Continued macroeconomic stability, with fiscal and external balances under control, has provided the basis for steady growth. However, the continued dominance of the financial sector by state-owned banks holds back development and competition.

Table 1

Fulfillment of the Economic Criteria by Selected Candidate Countries

A Comparison of the European Commission's Assessments of 1999 and 2000

Hungary and Poland (1999: ranked together with Slovenia)	... are functioning market economies	... should be able to cope with competitive pressure and market forces in the Union in the near term, provided they maintain their current reform path (1999: in the medium term)
Czech Republic and Slovenia	... can be regarded as functioning market economies	... should also be able to cope with competitive pressure and market forces in the Union in the near term, provided they complete and implement the remaining reforms (1999: in the medium term)
Slovakia	... can be regarded as a functioning market economy (1999: not yet evaluated as a fully functioning market economy)	... should be able to cope with competitive pressure and market forces in the Union in the medium term, provided that it implements current structural reform programs and undertakes further reforms where necessary (1999: in the medium term)

2 Individual Country Reports

2.1 The Czech Republic

After three years in which GDP declined, it recovered and posted 4.4% growth in the first quarter of 2000, although this figure partly reflects the low level of growth in the first quarter of 1999. Nevertheless, the rise has continued at a sustainable level (1.9%) in the second quarter. Throughout the first half of 2000, Czech GDP increased by 3.1%. This growth was driven mainly by external demand and investment. Exports of goods shot up (22.5% in real terms), while exports of services nearly stagnated (1.4%). However, imports of goods are booming again (19.4%), although imports of services declined by 4.5%. Imports seem to be driven by demand for capital investment (+3.8%), while private and public consumption advanced only moderately (about 1.4% for both aggregates). Industrial production gained 5.5% in the first three quarters of 2000. Corresponding to the revival of investment, construction output mounted by 3.5% between January and September 2000. Based on the figures for the first half of 2000, the Czech authorities revised forecasts for GDP growth to above 2.5% for the whole year.

Given the recovery of economic growth, unemployment declined slightly after it had peaked at 9.8% in January 2000. In the following months, the unemployment rate (8.5% in October 2000) even dropped below the level of the previous year (8.9% in the same month of the previous year). Real gross wages also recovered (2.2%) in industry (in the first three quarters of 2000). Nevertheless, real wage growth remained below the growth of labor productivity (9.0%) in industry.

Inflation was on an uptrend mainly because oil prices surged. Furthermore, food prices and a hike in administrative prices contributed to inflation in the course of 2000. In October 2000, annual inflation at 4.4% climbed to the highest level since December 1998.

In the first half of 2000, the current account deficit doubled to USD 0.7 billion from the previous year (USD 0.3 billion), which corresponds

to about 3.9% of GDP. This deterioration of the Czech external position can be pinpointed mainly to the widening of the trade deficit to USD 1.2 billion (against USD 0.6 billion in the analogous period of 1999). Net foreign direct investment inflows totaled USD 2.0 billion (USD 1.4 billion in the previous year), while net portfolio investment came to USD 0.7 billion and net flows of other investment to USD 0.1 billion. Official foreign exchange reserves declined marginally to USD 12.0 billion in October 2000 (about five months of imports). Gross external debt decreased by USD 2.2 billion to USD 20.619 billion in the first half of 2000. During the review period, the koruna was quite stable against the euro, oscillating around CZK 36/EUR.

The Czech National Bank (CNB) has followed a direct inflation targeting strategy since 1998; it targets net inflation.¹⁾ The end-2000 target for net inflation was set at 3.5% to 5.5%. As of October 2000, the CNB forecasts year-end net inflation at between 3.3% and 3.8%. With net inflation at 3.5% in October, the CNB will probably reach this target this year. In the two preceding years, the CNB had consistently undershot its net inflation target. The net inflation target for 2001 was set at 3% \pm 1 percentage point. Since November 1999, the CNB has kept its main interest rate, the two-week repo rate, constant at 5.25%. M2 expanded by 6.7% in the first three quarters of 2000.

Parliament adopted the central budget for 2000 in early March 2000. The budget envisaged a central government deficit of only 1.8% of GDP. However, the general government deficit will be significantly larger than the central government deficit; it will also be higher than projected in earlier forecasts. According to the Ministry of Finance, the deficit of the general government (including CZK 50 billion losses of Konsolidační banka originating from 1998 and 1999, and counting privatization receipts as revenues) is likely to reach CZK 99.8 billion (above 5% of GDP). Treating privatization receipts as financing items would result in a general government deficit of CZK 147.6 billion (nearly 8% of GDP).

Parliament has recently approved an amendment to the central bank act that had been rejected by the senate. The original draft of the amendment was aimed at adjusting this law further to EU standards. However, during the parliamentary process, a number of changes which put the aim of the original draft amendment into doubt and infringed on central bank independence were proposed.²⁾ In particular, the draft calls for the Czech National Bank to agree the inflation target and the exchange rate regime of the Czech currency vis-à-vis foreign currencies with the government. In November central bank governor Josef Tošovský retreated from his position to become the chairman of the BIS Financial Stability Institute.

During the review period, structural reforms continued to focus mainly on the banking sector. At present, an amendment to the Banking Act is in parliament. It will adjust the legal norms regulating banking activities to those valid in the EU. Furthermore, the amendment increases deposit insur-

1 The net inflation index excludes regulated prices and the impact of tax changes.

2 See also the study on central bank independence in this volume.

ance and extends it to deposits in foreign currencies. The amendment is expected to come into force in January 2001. This step is a reaction to the bankruptcies of several banks and nonbank saving institutions in the past. In June 2000, the central bank introduced forced administration in Investiční a Poštovní banka (IPB), which immediately after this step was merged with Československá obchodní banka (ČSOB). This transaction created the largest bank in the Czech Republic, which also takes a top rank in Central and Eastern Europe.

2.2 Hungary

The strong economic expansion since 1997 continued and accelerated in the first half of 2000. From January to June 2000, real GDP grew by 6.2% after expanding 4.5% in 1999. In the second quarter of 2000, the GDP growth rate was 5.9%. Growth has been mainly fueled by the powerful boost in industrial production, which surged by 20.8% in the first eight months of 2000 (1999 as a whole: +10.4%). This expansion is linked to booming exports (+19.0% in the period January to September),¹⁾ which have benefited from the economic upswing in the EU and the recovery in central and eastern European countries, including Russia. Given rising oil prices on the world market as well as a slight pickup of internal demand, imports also mounted substantially (+16.6% from January to September). Manufacturing industrial output climbed by 20.3% in the first nine months of 2000. Manufacturing export sales growth even surpassed 30%, being most notable in relatively advanced branches, like electrical machinery and optical equipment. For the entire year, GDP growth can be expected to come to around 5.5%.

Internal demand, on the whole, has been less dynamic. Gross fixed capital formation progressed by 6.1%, private consumption went up by 3.4% and public consumption rose by 0.9% in the first six months. Retail trade turnover grew by a moderate 2.4% in the first half. Real net wages increased 1.4% during the January to September 2000 period from the same period a year earlier. On the other hand, domestic industrial sales expanded by 10.6% in January to August 2000. While employment in industry advanced, industrial labor productivity grew by 19.1% in January to July, which further strengthened Hungary's competitiveness. The unemployment rate (ILO definition) amounted to 6.3% on the average during the third quarter of 2000, which is about 0.7% lower than a year ago.

Given a slight decline of the foreign trade deficit and a robust performance of tourism, which doubled net service receipts, the current account deficit contracted from USD 1.29 billion in January to September 1999 to USD 928 million in the corresponding period of 2000. After coming to 4.3% of GDP in 1999 as a whole, the current account shortfall is expected to narrow to about 3% of GDP in 2000. Profit repatriation was up again this year, but it was roughly offset by higher revenues from net transfers. Although most privatization activities in Hungary are over, foreign direct

1 Balance of payments statistics, measured in U.S. dollars.

investment remains sizeable. The current account deficit was covered by net FDI inflows, which came to more or less the same level as last year.

On the other hand, portfolio investment in equities shrank considerably. Whereas in the first nine months of 1999 net inflows had run to about USD 1.28 billion, this year outflows came to approximately USD 900 million. This substantial reversal of portfolio flows derives from foreign investors' partial withdrawal from the Budapest stock exchange. As the country's macroeconomic performance is good, foreign investors' emerging reluctance may be traced, among other things, to distrust triggered by recent government interventions in price formation in areas where state control is still strong (gas, medicine, etc.). The increases in the prices of such products have been kept lower than they would be under market conditions.

Despite these interventions, inflation (CPI, year on year), after edging down in the first half (to 9.1% in June), has been on the rise in recent months and reached 10.4% in October. This was mainly caused by increasing food and oil prices and by the strength of the U.S. dollar vis-à-vis the euro. In mid-August the finance ministry revised its forecast for annual inflation in 2000 to 8% to 9% (following an earlier revision in spring to 7% to 8%). The government's original projection, 6.3%, had been incorporated in the budget draft. Considering the latest developments, it appears very unlikely that the government's revised forecast will be met.

After some speculative capital inflows that had come to Hungary in the first months of the year had subsided, the central bank left its main interest rate, the two-week deposit rate, at 11% from April through the beginning of August. Following the publication of positive half-year current account data, the main interest rate was reduced by a quarter percentage point to 10.75% on August 8. But the inflationary pressure of recent months and the goal of maintaining positive real interest rates on household savings prompted the central bank to raise the main interest rate by a full percentage point to 11.75% on October 12. In October 2000, M3 growth amounted to 14.1%.

The exchange rate of the Hungarian forint has so far this year remained on or near the upper (stronger) limit of the fluctuation band of the existing crawling peg regime. In view of this fact and of the high level of inflation, the central bank has recently proposed to substantially widen the fluctuation band (of $\pm 2.25\%$ around a central parity to the euro). But the government does not favor such a move, since it fears that the probable appreciation of the Hungarian forint might reduce exports and growth and widen the current account deficit. Hungary's gross external debt amounted to USD 29.5 billion in mid-2000, which is approximately the same level as at end-1999 (USD 29.3 billion or 60.7% of GDP). In the first eight months of 2000 gross foreign currency reserves declined by about USD 0.6 billion to USD 10.4 billion at the end of August (about five months of imports).

The acceleration of economic growth and the underestimation of the inflation rate should have positive consequences for the budget balance in 2000. Whereas inflation tends to push up tax revenues quickly, expenditures of various categories (some of which may be nominally fixed) exhibit only slower growth. In the January to October 2000 period the budget deficit of the public sector (excluding municipal budgets) amounted to 42% of

the target for the entire year. The general government budget shortfall in 2000 is expected to be around 1% of GDP smaller than the originally planned 3.5% of GDP. At the beginning of September, the government adopted the framework and the most important elements of the draft budgets of 2001 and 2002. The deficits are scheduled to amount to 3.4% of GDP next year and 3.2% the year after. But this level is clearly above the target deficits of the consolidation path agreed upon with the European Commission (2.5% to 3% of GDP in 2001, 2% to 2.8% in 2002).

Privatizations and structural reforms continued in 2000, but like in 1999, did not show the same dynamics as in the years up to 1998. Currently, the privatization of the state TV company Antenna Hungaria and the state airline Malév is underway. An international investment bank (Credit Suisse First Boston) compiled a study on the future ownership structure of Postabank, which was nationalized in a “bailout” in 1998.¹⁾ Hungary remains one of the central and eastern European countries with the strongest presence of foreign-owned banks. In mid-2000, 32 of a total of 41 commercial banks in Hungary, or about two thirds of total banking capital in the country, were in foreign ownership. Health care, public administration and disability pensions are among areas cited to still be in need of substantial structural adjustment.

On November 14 the rating agency Moody’s upgraded Hungary’s long-term sovereign debt rating from Baa1 to A3. Moody’s sees Hungary as a “leading” country in conducting the reforms necessary for EU integration.

2.3 Poland

After GDP growth rates accelerated sharply to 6.2% in the last quarter of 1999, economic activity started to slow down more and more in the course of 2000. In the first quarter, economic growth came to 6.0%, in the second quarter to 5.2%. Industrial production, too, showed a declining trend. After growing by 10.7% in the first quarter of 2000, industrial output climbed by 9.6% in the next three months. Economic activity slowed down mainly because domestic demand lost considerable momentum, falling from a high of 5.6% in the last quarter of 1999 to 3.3% in the second quarter of 2000. In the first half of 2000, domestic demand augmented by 4.2%. In the same period private consumption was up by 3.6%, and gross capital formation rose by 8.6%, with the subcategory fixed investment going up by 4.0%.

Growth continued to lose pace. According to preliminary figures, GDP growth decelerated to 4.6% in the third quarter of the year. In the same period industrial output was up by 6.0%, bringing the cumulated growth of industrial production in the first nine months to 8.9%.

Robust but declining economic growth in 2000 was accompanied by a steady rise in registered unemployment. As of September, the jobless rate stood at 14% as compared to 12.1% in the same month of the previous year. To a large extent, this rise can be blamed on the ongoing restructuring of state-owned companies. An additional uptick in the level of unemployment mainly in the first months of the year may also be attributed to health care

¹ In November, the government authorized the state privatization agency to start exclusive negotiations with the country’s largest bank, OTP, to acquire Postabank.

reform, which increased jobless persons' incentives to register as unemployed in order to gain access to medical services.

Gross wages in the enterprise sector increased by 12.7% in the period from January to September 2000 (against the same period of 1999). The 16.2% rise in industrial labor productivity in the same period was accompanied by a 3.4% contraction of employment.

After having tumbled in the aftermath of the Russian crisis, inflation rates were on an uptrend. Inflation rebounded from a low of 5.6% in February 1999 to a high of 11.6% in July 2000. Recently, the speed of price increase has lost steam, with inflation falling to the single-digit level in October (9.9%).

Poland's current account deficit, which amounted to 7.6% of GDP at the end of 1999 and deteriorated further to about 8% of GDP in the first quarter of 2000, started to improve in the second and third quarters of 2000. In the first nine months of 2000, the current account deficit amounted to USD 7.9 billion. The improved performance resulted mainly from faster-rising exports and a slowdown in import growth. Over the first nine months of 2000, exports gained 4.2%, whereas imports, which were squeezed by cooling domestic demand, grew by just 3.2% (both in U.S. dollar terms). Export growth has been accelerating continuously in the course of 2000 and came to 15.4% in the third quarter. Imports rose by 4% year on year in the same period. The central bank's policymaking body, the Monetary Policy Council, forecasts a reduction in Poland's current account deficit to 7.2% of GDP at the end of 2000.

The current account shortfall was to a large extent financed by foreign direct investment. After the first three quarters of 2000, net foreign investment inflows amounted to USD 3.5 billion (end of 1999: USD 4.6 billion), which covered about 45% of the current account gap as compared to 57% at the end of 1999. Inflows of portfolio investment, which surged to USD 2.4 billion in the first quarter of 2000, abated considerably in the course of the next months. After the first nine months of 2000, cumulative net inflows of portfolio capital ran to USD 2.6 billion. Other investments posted net outflows of USD 1.6 billion in the same period.

Official reserves, which amounted to USD 25.3 billion in March, were virtually stable in the subsequent months.¹⁾ In October they amounted to USD 25.0 billion and covered almost seven months of imports. Poland's external debt stood at USD 65.5 billion (end-1999: USD 64.2 billion); USD 55.9 billion of this amount represented long-term obligations, USD 9.6 billion short-term debt. In October 2000 Poland bought back USD 943 million worth of its Brady bonds. The buyback was partly financed by revenues from the privatization of the state-owned telecom company TP SA.

The targets for the central budget deficit and the consolidated public sector deficit for 2000 were set at 2.3% and 2.7% of GDP, respectively.

¹ In May 2000, the NBP introduced a new category, "official reserve assets," which replaced the category "gross official reserves." The new category differs from the former in the treatment of repo transactions. Gross official reserves included the value of net repo transactions (difference between asset- and liability-side repo transactions), whereas official reserve assets include only asset-side repo transactions.

However, Poland's central budget deficit reached this figure already in October, because revenues were low at about 78.4% of the annual plan. Personal tax revenues were especially low (70.5% of the annual target). Expenditure was kept under control and reached 80.5% of the annual target.

On April 12, 2000, the National Bank of Poland (NBP) floated the zloty. This step ended the period in which the NBP had pursued a direct inflation targeting strategy while simultaneously retaining the crawling peg regime with wide fluctuation bands. The flotation of the Polish currency was envisaged in the Polish central bank's medium-term monetary strategy and was generally well received by market participants.

The introduction of the flexible exchange rate regime in April 2000 has not had any major impact on the Polish currency developments. Short-term volatility neither increased nor decreased markedly after the shift in the exchange rate regime. The exchange rate of the zloty has been affected by movements in the EUR/USD exchange rates. In the period between April 12 and November 15, the exchange rate vis-à-vis the euro remained nearly constant, while it depreciated by about 10% against the U.S. dollar.

The NBP targets consumer price inflation. The target for CPI inflation for end-2000 was set at 5.4% to 6.8%. In light of higher-than-expected inflation, the NBP admitted that the inflation target would probably be overshoot. As of November 2000, it expects year-on-year inflation to fall to 9% in December of the present year. In September the Monetary Policy Council (MPC) approved Monetary Policy Guidelines for the year 2001. The inflation target for the year 2001, year-on-year consumer price growth in December 2001, should amount to between 6% and 8%. The MPC maintained its medium-term inflation target of 4% in 2003. In the document it evaluated first experience with implementation of the Medium Term Monetary Strategy, adopted at the beginning of 1999. The MPC stated that the problems encountered in achieving annual inflation targets in 1999 and 2000 were largely the result of the "supply shocks" which had buffeted the Polish economy in recent years as well as increases in officially controlled prices.

Against the backdrop of quickening inflation, the NBP tightened its monetary stance in the course of 2000. After hiking interest rates by 100 basis points in February, the Monetary Policy Council raised interest rates again in August. The lombard rate was increased from 21.5% to 23.0%, the discount rate from 20.0% to 21.5%, and the reverse repo rate was set at a minimum rate of 19% (up from 17.5%). In November 2000, the key interest rates were about 600 basis points higher than in September 1999.

In the area of structural reforms, Poland continued to work on resolving some implementation problems which had emerged after sweeping reforms of the pension system, the health care system, the education system and the state administration had been implemented in the first months of 1999.

In September, the Polish Parliament passed a bill on the reform of the state-owned railway company.

Privatization revenues are projected to reach about USD 4.5 billion in 2000. The sale of a 35% stake in TP SA to France Telecom and the domestic capital group Kulczyk Holding was finalized in August.

In the banking sector, the privatization of PKO BP and BGZ Bank, the last two remaining state-owned banks and Poland's largest retail banks, which are burdened by large amounts of nonperforming loans, is still at an early stage, although it has advanced a bit in recent months. Privatization of PKO BP will, however, only be partial, as the government intends to retain the Treasury's dominant position in the bank's share capital. In November, the Polish Parliament passed a law on the cooperative and associating banks. It introduces a two-tier model of cooperative banking in place of the present three-tier system. Under the new regulations, BGZ will be an associating bank.

Other important developments in the Polish banking sector include Bank Austria Creditanstalt International's purchase of a 10.3% interest in Powszechny Bank Kredytowy from the Treasury, thus assuming control of the bank. Moreover, after a long struggle¹⁾ Deutsche Bank abandoned its attempts to assume control of private-owned BIG Bank; it sold its interest to Banco Comercial Português, which thus acquired control of the Polish bank. Furthermore, Citibank purchased a 66% stake in Bank Handlowy. As of June 30, 2000, foreign capital accounted for about 53% of the total equity of the Polish banking sector.

2.4 Slovakia

The Slovak economy is still negatively influenced by austerity measures introduced in January and May 1999.²⁾ Thus, real GDP growth in Slovakia remained below expectations in the first half of 2000, amounting to 1.7% as compared to 2.3% in the last quarter of 1999. This result was mainly influenced by a decline of private and public consumption by 7.1% and 6.0%, respectively. Gross capital formation, which had already contracted sharply in 1999 (-8.8%), diminished by 4.4% in the first half of 2000. Net exports, by contrast, had a substantially positive impact on growth: Real exports rose by 18.0%, while imports gained a relatively moderate 6.1%. Quarterly data showed only slight improvements in the second quarter (overall GDP growth ran to 1.9% in the second quarter against 1.5% in the first quarter of 2000), mainly because of the development of external demand. By contrast, all domestic demand components declined more strongly in the second quarter of 2000.

The recent downward revisions of major forecasts for 2000 reflected the lower-than-expected growth dynamics in Slovakia. The Slovak Statistical Office, whose forecast the Slovak Ministry of Finance uses, revised GDP growth in Slovakia from 2.5% at the beginning of the year to 1.6%. The recent forecast of the IMF is only slightly more optimistic (1.8%).

Industrial production was up 9.7% in the first three quarters of 2000, with higher growth in the second and third quarters (about 12%). Construction output, in turn, continued to contract by 4.3%. Retail sales nearly stagnated (0.3%).

1 See *Focus on Transition 1/2000*.

2 See *Focus on Transition 1/1999 and 1/2000*.

The unemployment rate was relatively constant at a high level (above 19%) during the first half of the year. In the third quarter, though, it declined by nearly 3 percentage points to 16.6% in September 2000 as a result of the extension of public-works programs (hiring of long-term unemployed persons by communities). Industrial gross wages were lifted by a relatively moderate 5.9% in nominal terms on average during the first nine months of 2000. This growth remained well below inflation, meaning that gross real wages in industry contracted by 3.1% in the first three quarters of 2000. Hence labor productivity improved substantially (13.8% in August 2000).

After the change in regulated prices mid-1999, inflation picked up in the first half of 2000 to peak in May 2000 (annual rate: 16.1%). In October 2000, the annual rate of inflation fell to 8.5%. As inflation had been high in the first half of 2000, the average rate of year-on-year inflation remained relatively elevated at 12.8% between January and October 2000.

At USD 0.15 billion, the current account deficit was minimal in January to August 2000. Thus, the shortfall represented around 1% of GDP in this period, while the current account deficit had reached 5.5% of GDP in 1999. This improvement can be traced mainly to the reduction of the foreign trade deficit, which has been nearly eliminated. Net inflows of foreign direct investment amounted to USD 94.7 million, while net inflows of portfolio investment came to USD 587.2 million. Other investment posted net outflows of USD 121.4 million in July 2000. Official foreign exchange reserves increased to USD 4.0 billion at the beginning of November 2000. At the end of July 2000, Slovakia's gross external debt was USD 11.5 billion, about USD 1.0 billion higher than in December 1999.

Slovakia also made headway slashing its budget deficit, although much less than with the external balance. At the end of October 2000, the central government deficit came to SKK 11.9 billion out of the year's target of SKK 18.0 billion (or 2% of GDP). However, the general government deficit is likely to be above target (3% of GDP) due to the boost in pensions adopted mid-2000.

The National Bank of Slovakia (NBS) follows a composite monetary strategy containing a strong monetary targeting element with M2 as an intermediary target. M2 growth was set at 9.3% for 2000. At the same time, the bank announces inflation targets, which pertained to core inflation in 2000. Moreover, monetary policy also takes into account, to a certain extent, the development of the exchange rate. For the end of 2000, the core inflation target was set at between 4.5% and 5.8%, which has been adjusted to 4.7% to 5.8% recently. In October 2000, core inflation stood close to the lower bound of this interval (4.8%). However, M2 growth was above target (17.4% in September 2000 against the same period of the previous year).

In February 2000, the central bank introduced overnight repos as a new monetary policy instrument. The two-week repo was launched at the beginning of May as a further step toward developing the NBS's set of monetary policy instruments. These interest rates were cut several times during the

year. Mid-November the overnight repos for liquidity-absorbing and liquidity-providing transactions stood at 6.5% and 9.5%, respectively, and the two-week repo was 8.25%.

At the beginning of November 2000, the rating agency Moody's raised the outlook of the Ba1-rated foreign currency bonds of the government of the Slovak Republic, the National Bank of Slovakia and bonds guaranteed by the Slovak Republic from "stable" to "positive." This was followed by a similar move by the rating agency Standard & Poor's.

The exchange rate of the Slovak koruna showed relatively large fluctuations caused by news regarding the country's OECD membership,¹⁾ domestic policy (including the illness of the President), and the development of the economy. In January and February 2000, the exchange rate was relatively stable at SKK 42.3/EUR. At the beginning of March, the NBS let the koruna appreciate somewhat further to between SKK 41.5 and SKK 41.7/EUR, where it remained until early May. In summer, the koruna depreciated to around SKK 43/EUR. The uncertainty caused by a referendum on early elections scheduled for November 11, 2000, caused the koruna to depreciate again to nearly 44 SKK/EUR mid-October, its lowest value this year. Subsequently, the Slovak koruna appreciated back to SKK 42.7/EUR (mid-November), as opinion polls indicated a rejection of early elections, the referendum was actually turned down, and the improved assessment of the rating agencies became known.

Structural reforms focused on the banking sector and financial market in 2000. At the end of June 2000, further packages of bad loans of the two state-owned major banks Všeobecná úverová banka (VUB) and Slovenská sporiteľňa (SLSP) were transferred to Slovenská konsolidačná. Thus, the share of bad loans in these banks was reduced to about 20%. This step should prepare these banks for privatization scheduled for next year. On November 1, Slovakia created a new authority, the Financial Market Office, which is responsible for supervision of the financial (nonbank) market, a task previously performed by the Finance Ministry. Banking supervision has remained with the NBS for the time being, but may be transferred to the new institution in the medium term.

The government has speeded up the privatization of the remaining state-owned companies as well as the restructuring of companies privatized under Mečiar's administration. The former mainly includes the sale of a 51% stake in Slovak Telecom to Deutsche Telekom for EUR 1 billion in July 2000. The latter group includes several large enterprises where privatization was not accompanied by improvement of management. The government succeeded in finding a foreign strategic investor for the steel company VSZ, which was facing significant financial problems. U.S. Steel agreed to take over VSZ for a payment of USD 60 million and committed itself to cover USD 325 million in debts and to invest a further USD 700 million. Furthermore, the Hungarian refinery MOL acquired a 36.2% stake in the Slovak oil-processing company Slovnaft for USD 262 million.

1 Slovakia will formally become the OECD's 30th member on deposition of the ratification document to the French government, which is expected to happen by the end of 2000.

2.5 Slovenia

After growing by 5.0% in 1999,¹⁾ Slovenian gross domestic product expanded by 4.9% in the first half of 2000 (according to preliminary data). Growth in the first quarter of 2000 was 6.3%, 3.6% in the second quarter. Whereas the driving force of growth in 1999 had been domestic demand, the economy in 2000 was more stimulated by external demand, triggering an expansion of exports. Exports augmented by 11.5% in the first eight months, while imports were up 3.9%.²⁾ Gross fixed investment gained 7.2% in the first quarter, while growth rates of private and public consumption in the same period amounted to 2.9% and 3.1%. Retail trade turnover climbed 4.7% in the first six months.

In contrast to previous years, industrial production grew dynamically in 2000, posting the highest growth since the country achieved independence. Industrial output expanded by 8.4% in January to July, and manufacturing was up 8.0% in January to September. Labor productivity in manufacturing surged by 10.7% in the first three quarters. Output growth in the first seven months was most pronounced in export-oriented branches, like electrical and optical equipment (19%), chemicals and chemical products (14%) and transport equipment (11%). The Slovenian Institute for Macroeconomic Analysis (IMAD) expects GDP growth of 4.75% for the entire year.

Total employment advanced by 1.8% in the first eight months of 2000, and the jobless rate (national definition, based on registered unemployed) eased from 13.3% in August 1999 to 11.7% in August 2000. However, survey-based unemployment (ILO definition) was much lower, standing at 7.2% in the second quarter. Gross real wages in August 2000 were 2.1% over the corresponding level of a year ago.

The CPI inflation rate had already tangibly quickened in the second half of 1999 (December 1999: 8.0% year on year), owing mostly to the introduction of VAT on July 1, 1999. Given largely exogenous factors, like the rise of raw material and energy prices, inflation remained high in 2000. In October it came to 9.0% (year on year). After remaining stable at about 4.0% in 1999, core inflation started rising early in 2000 and reached 6.5% in September.³⁾ As a result, the gap between actual and core inflation has narrowed over the summer months, with the gap coming to 2.5% in September. The official forecast for 2000 (annual average inflation) was revised upwards to 7.6% a short while ago. However, in the light of most recent data, it appears that this target will be very difficult to achieve.

After having run a substantial deficit on current account in 1999 (USD 784 million or 4% of GDP)⁴⁾ for the first time since independence, Slovenia registered a current account gap in the first eight months of 2000 (USD 416 million) that was slightly lower than the corresponding shortfall

1 As a result of corrections of foreign trade data in balance of payments statistics, the 1999 GDP growth figure was recently revised upwards to 5.0% from 4.9% published earlier.

2 Balance of payments statistics, measured in U.S. dollars.

3 Core inflation as calculated by IMAD, excludes prices that underwent the strongest or weakest changes in given months.

4 Corrected from figures published earlier (USD 581 million or 3% of GDP, see footnote 1 on page 12).

a year earlier (USD 497 million). The improvement resulted mainly from a reduction of the trade deficit (January to August 2000: USD 777 million, as against USD 860 million January to August 1999). Net FDI inflows remained negligible (USD 19 million in the first eight months of 2000). The current account deficit was largely financed by foreign borrowing and, to a smaller degree, by the reduction of foreign exchange reserves. Gross external debt consequently enlarged from USD 5.5 billion (about 27% of GDP) at end-1999 to USD 5.8 billion in August 2000. But only about USD 100 million of liabilities were short-term. The foreign reserves (including gold) of the Bank of Slovenia declined from USD 4.1 billion at end-1999 to USD 4.0 billion in September 2000 (equaling about 4.2 import months).

Slovenian monetary policy, which applies monetary targeting, but also places a strong *de facto* weight on exchange rate developments, was tightened in June 2000 to combat inflationary pressures. On June 1 the central bank boosted the discount rate from 8% to 9% and the lombard rate from 9% to 10%. The monetary target relates to M3; for 2000, this target is to grow by 12% to 18%. In September it was 15.5% over its level of September 1999. Base money was 7.0% higher in August 2000 than in August 1999. The exchange rate regime of the Bank of Slovenia is a managed float. From end-1999 to mid-November 2000 the tolar nominally depreciated by about 6.3% against the euro; in real terms, the Slovenian currency remained more or less stable vis-à-vis the common European currency. In September 2000, the real effective exchange rate of the tolar was 1.6% lower than a year ago (when deflated with the consumer price index).

For 2000 the authorities have aimed at a general government budget deficit of 1.0% of GDP and a central government budget shortfall of 1% of GDP. The budget is based on a 4% GDP growth target and annual average CPI inflation of 6.2%. In the period January to August, the public sector deficit already came close to 90% of the target for the entire year. However, this is not necessarily cause for serious concern, provided that the budget tends to be close to balance during the last months of the year, as it was in 1999. In mid-May, the finance ministry published fiscal guidelines for the period 2001–2004; these guidelines aim at eliminating the budget deficit through spending cuts and at producing a surplus upon EU accession.

Structural reforms have slowed down somewhat in 2000. This was partly connected to political turbulences during part of the year. The former governing coalition had broken up in April 2000, and a new government including former opposition parties was only formed in June. The subsequent focus of the political process turned to the parliamentary elections in October 2000. So far there has been no breakthrough in the drawn-out process of banking privatization. Major banks are still in majority state ownership. On July 27 the Slovenian government adopted a new central bank draft law which is geared to further harmonization with the body of EU law (stricter incompatibility clauses, independence of the central bank council from parliament, ban on financing public institutions). In August the draft law was submitted to parliament. Progress in harmonization with EU legal standards was also achieved in the area of insurance. The Slovenian payments system was finally reformed. As of September 11, 2000, firms have started

transferring their accounts from the Payments Agency,¹⁾ which is to be wound up, to commercial banks of their choice. Henceforth they will conduct their payment transactions through banks.

On November 14 the rating agency Moody's upgraded Slovenia's long-term sovereign debt rating from A3 to A2. Slovenia thus remains the front runner among central and eastern European countries in Moody's ratings. The agency justifies this step with the country's solid macroeconomic performance and the newly elected government's commitment to push forward with structural reforms.

1 The Payments Agency is the successor to the Bureau of Social Accounting (SDK) which, in former socialist Yugoslavia, administered enterprise payments.

S T U D I E S

More “Pre-Ins” Ante Portas?¹⁾ Euro Area Enlargement, Optimum Currency Area, and Nominal Convergence

Jarko Fidrmuc
and Franz Schardax²⁾

I Introduction

Since the beginning of the 1990s, the Central and Eastern European countries (CEECs) have aimed at future membership in the European Union (EU). After ten years of economic reform, these countries have largely succeeded in adjusting their economies to market principles. As a result, the EU started membership negotiations with five CEECs in 1998, which were extended to all ten associated countries about two years later. However, there is still much uncertainty regarding the timing and sequencing of the Eastern enlargement of the EU, as well as possible transition periods. As part of this enlargement agenda, several membership candidates have already expressed their aspiration to join the euro area as soon as possible after accession (see European Commission, 1999). Furthermore, several authors discussed the possibility of adopting the euro as legal tender in some CEECs already before full membership in the EU.³⁾ The European Union, including the Eurosystem, has outlined a three-step approach to the monetary integration of the candidate countries from Central and Eastern Europe, which is described in more detail by Backé and Radzyner (1998) and Backé (1999). The applicants will first join the EU, then enter the exchange rate mechanism (ERM II) of the European Union and finally, after the fulfillment of the Maastricht convergence criteria, accede to the euro area, i.e. participate fully in Economic and Monetary Union (EMU).

We ask whether the CEECs should introduce the euro as soon as possible after accession to the EU or if they should do so at a later stage. We are addressing this question by applying OCA criteria to five advanced transition economies (the Czech Republic, Hungary, Poland, Slovakia and Slovenia). The theory of optimum currency areas (OCA), which was developed by Mundell (1961) and McKinnon (1963), has become particularly popular for analyses of the costs and benefits of monetary integration, in particular with reference to EMU. The basic point of the OCA theory is that countries or regions exposed to symmetric shocks, or possessing mechanisms for the absorption of asymmetric shocks, may find it optimal to adopt a common currency. This literature therefore focuses on assessing the symmetry of output shocks in monetary unions, and/or evaluating the absorption mechanisms, such as labor mobility or fiscal transfers.

1 We would like to thank Andreas Nader for excellent statistical support. We also benefited from comments and suggestions from Kurt Pribil, Peter Backé, Doris Ritzberger-Grünwald, David Vavra, Cezary Wójcik, Julius Horvath, Jan Fidrmuc, as well as seminar participants at the AEI/HWWA seminar “The European Economic and Currency Union, An Interim Assessment” in Hamburg, June 29 to July 1, 2000, as well as comments by Lucjan Orlowski, Bas van Aarle, and Lucio Vinhas de Souza at the first ACE workshop “Monetary and Exchange Rate Strategies Related to the EU’s Enlargement” in Leuven, September 29 to 30, 2000, and remarks by Peter Mooslechner, Eduard Hochreiter and other participants of the HVW Seminar of the Oesterreichische Nationalbank, October 19, 2000. The views expressed in this paper are those of the authors and do not represent the position of the Oesterreichische Nationalbank.

2 Foreign Research Division, Oesterreichische Nationalbank.

3 Rostowski (2000) and Coricelli (2000) support an early introduction of the euro in some CEECs. Wójcik (2000) provides a critical survey of various arguments regarding the adoption of euro in the CEECs already before their accession to the EU.

In particular, the OCA theory identifies the following criteria (see Gandolfo, 1995):

1. *Similarity of shocks and business cycles*: Asymmetric shocks and business cycles raise the need for country-specific adjustment policies; however, in a single-currency area, country-specific monetary policy is not possible.
2. *Degree of openness*: A country where traded goods account for a high proportion of domestic output can profit from participating in a currency area.
3. *Product diversification*: A country exporting highly diversified products is less vulnerable to sector-specific shocks. Therefore, countries with a large product spectrum are less likely to use the exchange rate actively as an adjustment tool.
4. *International factor (especially labor) mobility*: High labor mobility facilitates adjustment to the adverse effects of asymmetric shocks and thus reduces the pressure for exchange rate adjustments.
5. *Fiscal transfers*: Alternatively to other adjustment mechanisms (exchange rate, labor mobility), fiscal transfers can be used to counteract asymmetric shocks in a currency area.
6. *Degree of policy integration and similarity between rates of inflation*: On the one hand, differences between rates of inflation may cause a loss of competitiveness in high-inflation countries, which calls for external adjustments. On the other hand, a high degree of policy integration already before creation (enlargement) of a currency area is likely to result in lower costs for participating countries.

The stronger any of the listed linkages between countries participating in a currency area are, the more net gains may be expected by participating countries. However, this contribution cannot discuss all these criteria. Insofar as labor movement and fiscal transfers depend on the current reform of EU institutions, as well as on membership negotiations with the CEECs, these areas are not discussed in more detail.

As a result of this preselection, the paper is structured as follows. First, we concentrate on trade integration and similarity of business cycles between the EU and the CEECs in the next section. An underlying problem is related to the availability of time series, and their comparability at the beginning and the later stages of the reform process. In order to overcome this problem to a certain degree, we apply Frankel and Rose's (1998) relation between the degree of trade integration and the convergence in business cycles to CEECs and EU countries to predict the degree of business cycle harmonization of CEECs with EU countries in the medium term.

Second, we turn to the issue of preserving competitiveness and price stability within an enlarged euro area (6th criterion) in section 3. As several relevant data for the Slovak Republic are not available, we had to confine the analysis in this part of the paper to the remaining four CEECs. In a first step, we attempt to gain insight into the degree to which the observed real appreciation in CEECs can be attributed to cost pressures or the working of the Balassa-Samuelson¹) effect, as the distinction is crucial for the preservation

1 See Balassa (1964), Samuelson (1964).

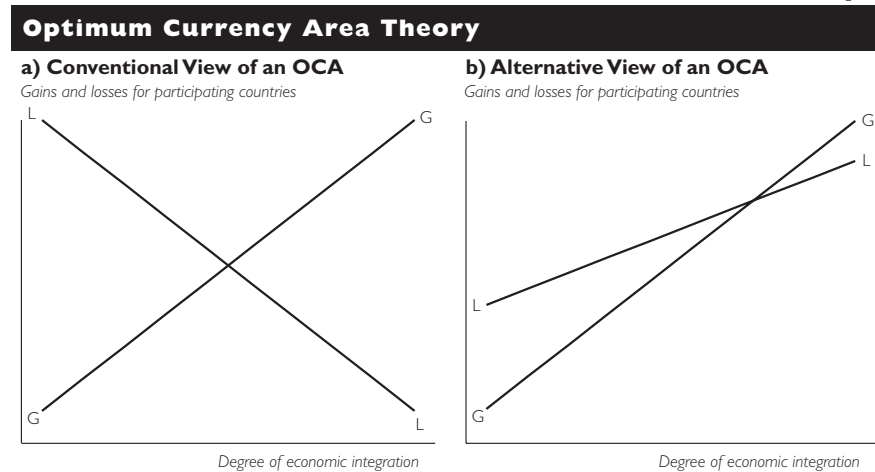
of competitiveness in a monetary union (where exchange rates are irrevocably fixed). Next, we ask what the existence of the Balassa-Samuelson effect means for inflation rates in a hypothetical enlarged euro area. Finally, we draw conclusions in section 4.

2 The Optimum Currency Area Theory

Frankel and Rose (1998) point out that the first two OCA criteria (see introduction) are endogenous. Closer trade relations are likely to result in a convergence of business cycles. Furthermore, similar business cycles create good preconditions for policy integration and the creation of a currency area. However, this view is not universally shared in the literature. For example, Krugman (1993) points out that, as trade becomes integrated to a higher degree, countries specialize more. Thus, these diverging expectations regarding the relation between business cycles and trade integration may be illustrated in figure 1.

The monetary efficiency gains, including for example the reduction of transaction costs, which are proportional to the volume of trade, are generally expected to be positively related to the degree of economic integration, as illustrated by the line GG in figures 1a and 1b. However, the classical and alternative view of the relation between the trade and losses resulting from the participation in a common currency area differ with respect to the shape of the LL curve. The classical optimum currency area theory expects a negative relation, while the alternative view predicts a positive relation between economic losses and the degree of economic integration. Still, there is a possibility that gains are higher than losses in the alternative view, when the GG line is significantly steeper than the LL line (see De Grauwe and Aksoy, 1999). Nevertheless, the potential gains from participation in a currency area are much lower in this case. Furthermore, the participating countries should be more integrated to achieve positive gains from monetary integration. Therefore, this paper also analyzes the structure of trade between the EU and the CEECs to establish whether the conventional view is appropriate for monetary integration of the CEECs, or whether the alternative view of OCA should be applied to these countries.

Figure 1



2.1 Foreign Trade Structure

2.1.1 Regional Structure of Exports and Imports

Since the opening-up of Eastern Europe, the importance of EU countries for the CEECs' trade has increased dramatically. As of 1997, the European Union was the most important trade partner of all CEECs. CEECs exported between 40% (Lithuania) and 70% (Hungary) of total exports to the single market of the Union. These export shares are comparable to or even higher than intra-EU shares for nearly all EU Member States. On the import side, the predominance of the EU is only slightly weaker.

Furthermore, we computed the share of exports and imports going to and coming from an "enlarged EU," which is the current EU plus the ten accession countries. According to the results, the countries for which the enlarged Europe is the most important export market are Slovakia and the Czech Republic, followed by Portugal, the Netherlands and Austria. Even at the lower end of the ranking we find EU member countries like Greece, the United Kingdom, Italy and Finland next to Lithuania, Romania, Latvia and Estonia. Also, regional import shares of accession countries do not deviate from those of the current EU members, although the Baltic republics and Southeastern European countries clearly rely more on non-European imports. However, it should be mentioned that Ireland reports even higher import shares from non-European countries.

As estimated by gravity models, Fidrmuc and Fidrmuc (2000) show that the trade between the CEECs and the EU, as well as the trade between individual CEECs, has already reached its natural level corresponding to the economic size, the distance between these countries, and the stage of integration. Nevertheless, the orientation of the CEECs on the EU is likely to increase after the EU's Eastern enlargement. On the one hand, trade with EU countries will increase in relation to reduced trade barriers. On the other hand, trade between the CEECs, which is also important in all CEECs, will add to the share of the new, enlarged Union.

The CEECs are relatively open economies. Exports account for about one third of GDP in Hungary, and above 40% in the Czech Republic, Slovakia and Slovenia. Thus, these countries are relatively more open than nearly all EU countries (Austria: 28%). There are only a few EU countries including Belgium, the Netherlands, and Ireland which are significantly more open than the smaller CEECs (export shares between 50% and 70% of GDP). Only Poland's exports are relatively lower at 17% of GDP, but this corresponds to the larger size of the Polish economy. Still, this figure is comparable e.g. to that of Spain (20% of GDP).

2.1.2 Intraindustry Trade

From the point of view of the OCA theory, if intraindustry trade accounts for a high share of trade, then, *ceteris paribus*, business cycles are expected to become more similar across countries as illustrated by figure 1a. By contrast, increased bilateral trade intensity may lead to the divergence of business cycles if the increase in trade is mainly due to the greater specialization as predicted by the alternative view of an OCA (figure 1b).

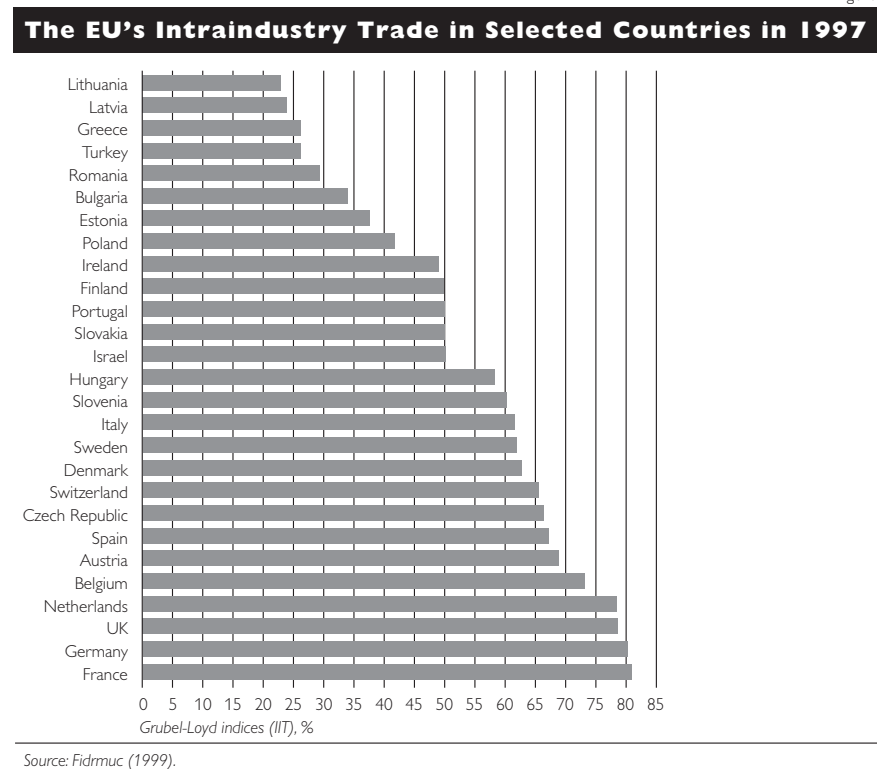
The growth of intraindustry trade observed in intra-EU trade also dominates the recent East-West trade development. This would increase net gains from the integration of CEECs into the euro area. The Grubel-Lloyd index of intraindustry trade sheds light on the kind of restructuring of foreign trade between the EU and the CEECs that has taken place. The index represents the share of absolute value of intraindustry trade in trade turnover, that is

$$IIT_t = 1 - \frac{\sum_i |X_{it} - M_{it}|}{\sum_i (X_{it} + M_{it})} \quad (1)$$

where X and M denote exports and imports by commodity groups i , respectively.

According to Fidrmuc (1999), the shares of intraindustry trade in trade turnover, as computed by Grubel-Lloyd indices for EU trade in manufacturing products with CEECs by three-digit SITC commodity groups, were between 25% (Romania and Bulgaria) and nearly 50% (former CSFR and Hungary) in 1990. These shares corresponded to the importance of intraindustry trade in EU trade with Greece and Portugal. However, intraindustry trade with the EU grew significantly in all CEECs (see figure 2). In 1997, the levels of intraindustry trade in EU trade with the Czech Republic, Slovenia and Hungary are now comparable to or even slightly larger than in EU trade with e.g. Spain and Sweden. Estonia, Poland and Slovakia report somewhat lower levels of intraindustry trade. These levels are comparable to those of Ireland and Portugal. However, the share of intraindustry trade in EU trade with Lithuania, Latvia, Romania, and Bulgaria still remained only slightly above the level of EU intraindustry trade with Greece and Turkey.

Figure 2



The convergence of trade structures between the EU and the CEECs implies that we can apply the conventional view of OCA (see figure 1a) also at least to the Central European membership candidates (the Czech Republic, Hungary, Slovenia, and to a lesser extent also Poland and Slovakia). Thus, the orientation of these countries towards the EU and, at the same time, fast restructuring of this trade to the structure in the core members of the EU allows us to conclude that the gains from participation in a common currency area could be high. Furthermore, this implies that a lower degree of trade association may already be associated with positive net gains for participating countries.

However, this conclusion is limited to a certain degree by the extent of so-called vertical intraindustry trade (that is, trade in products of different quality levels) in the EU's trade with the CEECs. Actually, Aturupane, Djankov and Hoekman (1999) show that about 80% to 90% of intraindustry trade of the EU with the CEECs can be attributed to vertical intraindustry trade. Fidrmuc, Grozea-Helmenstein and Wörgötter (1999) show that the intraindustry trade of selected EU countries with the CEECs is concentrated on other industries than intraindustry trade within the EU. However, the earlier literature provides us with few insights about whether the different composition of intraindustry trade is likely to have negative implications for the behavior of business cycles in partner countries.

2.2 Convergence of Business Cycles in the EU and the CEECs

Several studies report increasing similarities of business cycles between the EU (mainly Germany) and the CEECs since the economic reforms were begun. In particular, Boone and Maurel (1998 and 1999) find a significant convergence between business cycles (as measured by unemployment rates) in Germany and selected CEECs (the Czech Republic, Hungary, Poland and Slovakia). According to Boone and Maurel (1999), between 55% (Poland) and 86% (Hungary) of the CEECs' cycles (given by detrended unemployment) are explained by German shocks. This figure is lower than that estimated for French-German interdependence of business cycles (91%), but higher than that for the German influence on Spanish (43%) and Italian (18%) business cycles. Therefore, the authors conclude that the benefits of eventually joining the euro area could outweigh the costs in the CEECs. By contrast, Fidrmuc, Horvath, and Fidrmuc (1999) conclude that the Czech Republic and Slovakia do not constitute an OCA.

These findings are fully confirmed by the first two columns of table 1. Following Frankel and Rose (1998), we present correlations of detrended industrial production (in logs)¹ in Germany and the CEECs for two periods (whole available period and the later reform years, 1993 to 1999). At the beginning of the 1990s, Eastern European economies were characterized by the so-called transitional recession. The starting recovery in these countries was then strongly influenced by growing exports to the EU. As a result,

¹ Following Frankel and Rose (1996), we use the fourth difference of industrial production according to the International Financial Statistics of the IMF, line 66.

the business cycle of the EU (mainly that of Germany) has become an important determinant of the development of the CEECs’ economies.

Indeed, business cycles in several CEECs became strikingly similar to the business cycle of the EU between 1993 and 1999, although the correlation of business cycles (measured as the correlation of detrended industrial production) was insignificant during the 1990s. In particular, the correlation of growth of industrial production between Germany and Hungary (0.628), and Germany and Slovenia (0.766), was higher than the correlation of industrial production in Germany and Italy (0.601).¹⁾

However, the period of about six years might be too short to conclude that the business cycle has already become similar. In particular, this period corresponds to only about one full business cycle. Moreover, this period was characterized by only few supply and demand shocks. Actually, the correlation of industrial production in Germany and that in the Czech Republic and Slovakia remained relatively low. Contrary to our results, Boone and Maurel (1998) found a positive correlation of business cycles between Germany and the Czech Republic. More recently, Cincibuch and Vavra (2000) show that an alternative measure of similarity in business cycles – standard deviation of percentage changes in relative output in the Czech Republic and Germany – declined during the reform period, meaning that the symmetry of business cycles increased. Thus, this result may be sensitive to the selection of the output indicator and the definition of similarity of business cycles.

Insofar as the Czech Republic and Slovakia are quite similar to other CEECs (see previous section), this indicates that country-specific shocks may still have significant effects on these economies. It would be important to see whether the business cycles in Hungary and Slovenia remain strongly correlated with the German business cycle after the recent increase of oil prices.

Table 1

Similarity of Business Cycles of Selected Countries with Germany							
Industrial production	Observed correlation		Estimates applying (2)			Estimates applying (5)	
	1991–1999	1993–1999	Total trade	Imports	Exports	No EU effects	EU effects
Austria	0.790	0.806	0.455	0.449	0.441	..	0.467
Italy	0.577	0.601	0.470	0.455	0.463	..	0.520
Switzerland	0.665	0.717	0.442	0.440	0.425	0.324	..
Czech Republic	..	0.372	0.404	0.401	0.400	0.323	0.488
Hungary	0.302	0.628	0.380	0.379	0.379	0.226	0.391
Poland	0.159 ¹⁾	0.805 ²⁾	0.404	0.406	0.392	0.288	0.453
Slovakia	..	0.039	0.321	0.338	0.312	0.237	0.403
Slovenia	..	0.766	0.299	0.313	0.299	0.287	0.452

¹⁾ 1991, 1st quarter to 1995, 4th quarter.
²⁾ 1993, 1st quarter to 1995, 4th quarter.

The revealed trend toward the unification of business cycles in Europe is, despite data problems, not surprising. Frankel and Rose (1998) argue that, if a high share of trade is intraindustry trade, bilateral trade intensity increases the convergence of business cycles. They report a significant and positive

1 The IMF (2000a) reports a comparably higher correlation of GDP growth in, on the one hand, Germany and, on the other hand, Slovenia (0.80), Hungary (0.75), Slovakia (0.74), and lower figures for Poland (0.38) and the Czech Republic (0.01) in the same period (1993 to 1999).

relation between trade intensity and the correlation of business cycles as measured by various indicators of economic activity. In particular, they form a cross-section with correlations and average trade integration between 21 OECD countries computed for four equally sized periods (about ten years) between 1959 and 1993. Using this data set, they estimate the following relationships between the similarity (correlation) of business cycles and openness:

$$\begin{aligned}
 \text{Corr}(Q_i, Q_j) &= .6692707 + .0685103 T_{ij} & \text{where } T_{ij} &= \frac{X_{ij} + M_{ij}}{X_i + X_j + M_i + M_j} \\
 & (14.436) \quad (7.202) \\
 \text{Corr}(Q_i, Q_j) &= .6100328 + .0546553 T_{ij} & \text{where } T_{ij} &= \frac{M_{ij}}{M_i + M_j} \\
 & (14.548) \quad (6.615) \\
 \text{Corr}(Q_i, Q_j) &= .6681156 + .0686638 T_{ij} & \text{where } T_{ij} &= \frac{X_{ij}}{X_i + X_j} \\
 & (14.557) \quad (7.220)
 \end{aligned} \tag{2}$$

where Q stands for detrended (fourth difference of logs) industrial production, X_{ij} and M_{ij} for exports and imports between countries i and j , and $X_k, M_k, k = i, j$, for total exports and imports of trade partners i and j . Heteroscedasticity-robust T-statistics are in parentheses. We use these equations to estimate the potential correlation of business cycles in Germany (GE) and the CEECs given the current integration of these countries (given by $T_{ge,ce}$).

Table 1 shows that the correlation of business cycles in Germany and in selected Western European countries (Austria, Italy and Switzerland) was much higher in the 1990s than predicted by Frankel and Rose's estimates. This is not so surprising. First, these countries have oriented their economic policies much more on Germany than on other OECD countries. However, these factors are not fully considered (except the indirect effects through increased trade integration) in (2). Second, Frankel and Rose estimated (2) using correlations computed for four 11-year periods between 1959 and 1993. However, the similarity of business cycles in Germany, Austria and Italy is currently likely to be higher than in the previous decades as a result of the preparations for EMU.

Using (2), the correlation of industrial production in Germany and Austria or Italy is forecast at about 0.5. Actually, the corresponding correlations predicted for the CEECs are only slightly lower. The Czech Republic, Poland and Hungary could potentially reach correlations as high as 0.4 in the medium run, while Slovak and Slovene trade is less oriented towards Germany, resulting in a lower predicted correlation of about 0.3.

However, Frankel and Rose do not use intraindustry trade to explain the similarity of business cycles, although they stress the level of intraindustry trade as a major adjustment force inducing the convergence of business cycles between trading partners. Therefore, we estimate a similar relation between the correlation of business cycles, trade integration, and the level of intraindustry trade. Data on intraindustry trade is provided by Fidrmuc (1999), and was presented briefly in section 2.1. This data sample provides shares of the intraindustry trade of the EU with nearly all Western European countries, associated countries, Turkey and Israel, but not of the U.S.A.,

Canada, Australia and New Zealand. Correspondingly, our analysis is restricted to the effects of European monetary integration, which is under consideration in our current research.

Following the spirit of Frankel and Rose’s trade indicator, trade intensity is measured by the trade difference:

$$TDif_{ij} = \frac{|X_{i,EU} - X_{j,EU}|}{\min(X_{i,EU}, X_{j,EU})}, \quad (3)$$

that is, by the difference between the shares of the EU in exports of both trading partners, $X_{k,EU}, k = i, j$, divided by the lower export share of the EU. Similarly, we define $IITDif_{k,EU}$ as a difference in both countries’ levels of intraindustry trade with the EU, $IIT_{k,EU}$, that is

$$IITDif_{ij} = \frac{|IIT_{i,EU} - IIT_{j,EU}|}{\min(IIT_{i,EU}, IIT_{j,EU})}. \quad (4)$$

We restricted our analysis to the correlation of detrended industrial production in Western Europe (including Turkey and Israel) between 1990 and 1999. Although our restrictions were partially enforced by data availability, they might indeed be regarded as adjustments to the specific questions addressed in this paper. First, mainly European countries have tried to find a common exchange rate policy and to introduce a common currency. This is reflected by the restriction of the data sample to the European countries and to the recent period. Second, the use of bilateral trade flows between peripheral countries participating in EMU may lead to incorrect conclusions. For example, trade integration as well as the level of intraindustry trade is most likely low between Spain and Finland. Nevertheless, both countries show relatively similar business cycles, $\text{corr}(Q_{es}, Q_{fi}) = 0.59$, reflecting a high integration with the core members of the EU. The comparisons of trade flows of both countries with the EU correct this possible bias.

Applying the two trade variables $TDif_{k,EU}$ and $IITDif_{k,EU}$ computed for the most recent available year (that is, 1997), we estimate the following equation:

$$\text{Corr}(Q_i, Q_j) = .3641670 - .351289TDif_{ij} - .186641IITDif_{ij} + .165402EU15 \quad (5)$$

(6.688) (-5.330) (-4.591) (3.556)

where EU15 denotes a dummy for Member States of the EU, which reflects the coordination of economic policy in EU Member States in addition to increased trade integration. In general, this equation provides a relatively better fit with the adjusted R^2 of 0.45 than (2), for which relatively low levels of R^2 (between 0.0 and 0.2) were reported. Both trade variables, the difference in trade integration and in intraindustry trade, keep expected negative signs and are significant.

Finally, we use (5) to compute potential correlations of business cycles in Germany and in selected countries, which are presented in the last two columns of table 1. For CEECs, potential similarities of business cycles with Germany are presented both excluding and including the potential effects of membership in the EU. In general, the former estimates, which are close to 0.3, are smaller than the predictions according to (2). The intraindustry

trade level is still relatively small given the degree of trade integration between the EU and the CEECs. Not surprisingly, the inclusion of EU effects increases the predicted similarity of business cycles in Germany and in selected CEECs to between 0.4 and 0.5. Nevertheless, these levels are still lower than predicted and observed correlations of industrial production in Germany and Austria, or Germany and Italy.

The comparison of forecast, or potential, business cycle correlations for selected Western and Eastern European countries shows small differences between both regions. Further coordination of economic policy in CEECs with the EU is likely to result in a fast convergence of business cycles. Actually, the observed correlation of business cycles between Germany and Hungary or Slovenia between 1993 and 1999 was already higher than the potential correlation. Thus, some CEECs face extraordinarily favorable preconditions for a fast convergence to the business cycle in the EU (or EMU). This expectation is based on the high openness of the CEECs vis-à-vis the EU and the high and rapidly increasing shares of intraindustry trade in bilateral relations. Given first the high potential net gains from an OCA between the current EMU countries and the CEECs, as illustrated by the high importance of EU trade in the CEECs, and second the currently observed convergence of business cycles in both regions (which is partly caused by the first observation), we can expect a strong tendency of the CEECs to join the euro area in the future.

3 Competitiveness and Price Stability under Fixed Exchange Rates

After dealing with trade integration and the similarity of business cycles between the EU and the CEECs, we turn now to the issue of preserving competitiveness and price stability within an enlarged euro area (6th criterion in chapter 1) in this section.

By joining the euro area, the CEECs will give up independent interest rate and exchange rate policies in favor of the common monetary policy of the Eurosystem. This decision has important consequences for Central and Eastern European candidate countries as well as for current euro area members. In particular, the CEECs will face the challenge of maintaining competitiveness without having the possibility to resort to devaluations,

Table 2

Inflation Rates (Consumer Prices) in the CEECs

	Hungary	Poland	Czech Republic	Slovenia
1989	17.0	251.1	1.4	1,306.0
1990	28.9	585.8	9.7	549.7
1991	35.0	70.3	56.6	117.7
1992	23.0	43.0	11.1	201.3
1993	22.5	35.3	20.8	32.3
1994	18.8	32.2	10.0	19.8
1995	28.2	27.8	9.1	13.4
1996	23.6	19.9	8.8	9.9
1997	18.3	14.9	8.5	8.4
1998	14.3	11.8	10.7	7.9
1999	10.0	7.3	2.1	6.1
2000 1 st to 3 rd quarter	9.6	10.4	3.8	8.8

Source: WIW, Reuters Business Briefing.

while current euro area participants might be affected by the impact of enlargement on euro-area inflation and its consequences for the ECB’s policy stance.

In the course of the last decade advanced transition countries achieved great progress in the area of price stability (see table 2), but inflation rates remained above levels prevailing in the euro area (except in a recessionary environment in the Czech Republic). This leads us to the question of how inflation rates in the CEECs will develop when they are members of a monetary union.

Within a monetary union (where exchange rates are fixed), divergences in (“regional”) inflation rates may have an impact on competitiveness (by determining the real exchange rate) as well as on the overall euro-area inflation rate. As a starting point for dealing with these issues, we consider it important to look at the level of exchange rates in comparison with purchasing power parities in the CEECs in the early stages of transition and at present (see table 3).

Table 3

Exchange Rate Deviation Indices (ERDI)¹⁾			
	ERDI 1992	ERDI 1998	ERDI 1999
Poland	2.78	2.12	2.16
Slovenia	1.96	1.53	1.52
Czech Republic	4.33	2.45	2.48
Hungary	2.62	2.33	2.29
Greece	–	1.28	1.25
Ireland	–	1.06	1.05
Portugal	–	1.50	1.49
Spain	–	1.22	1.21

Source: OECD, WIIW, ECB.

¹⁾ The ERDI is the ratio of the (market) exchange rate to the purchasing power parity (PPP), both in terms of local currency per euro. For the euro area member states, the exchange rate to the euro was used for both years.

Three observations are notable: First, exchange rates in 1992 are strongly undervalued in relation to purchasing power parities. Second, the degree of undervaluation was reduced considerably during the 1990s, but, third, (with the exception of Slovenia) these undervaluations are still significantly larger than in catching-up economies in the euro area and in the EU member country Greece.

As we will explain in more detail below, there are several effects which are working towards a harmonization of price levels within a monetary union (see e.g. ECB, 1999). At the same time the well-known limits of price equalization (e.g. differences in taxation) across borders have to be borne in mind. If price levels tend to converge during a transitional period, inflation rates of members of a monetary union would diverge and the ERDIs of “low-price countries” would decline. Thus, the ERDIs reported in table 3 provide information about the total amount of price adjustments that would lead to a common price level within a hypothetical enlarged euro area.

We start the following subsection with a brief explanation of effects which are causing divergences in inflation rates in a monetary union and thus also affect the real exchange rate and ERDIs. Second, we attempt to quantify the importance of these effects in CEECs, and finally we deal with the impact of these effects on the inflation rate under the assumption of fixed exchange rates (or membership in a monetary union).

3.1 Reasons for Divergences of Inflation Rates within a Monetary Union

According to a recent ECB (1999) study, the presently existing inflation divergences within the euro area can be explained to a large degree by the convergence of prices to common levels within the euro area and the different cyclical positions of member countries. The convergence of prices towards common levels is driven by market integration effects which arise because of the completion of the single market and the Balassa-Samuelson effect. While market integration effects have an impact on the prices of tradables, the Balassa-Samuelson effect is relevant for the prices of nontradables. In the context of a transition economy (the Czech Republic), Cincibuch and Vavra (2000) mention an additional reason for divergences between inflation rates within a monetary union, namely cost pressures arising from wage increases in excess of productivity gains.¹⁾ In contrast to the Balassa-Samuelson case, these cost pressures are not restricted to the nontradables sector, but affect the tradables sector, too.

According to the Balassa-Samuelson effect, catching-up countries will experience quicker increases in productivity in the tradables sector than in the nontradables sector. Real wages in the tradables sector are determined by the marginal product of labor. Under the assumption of wage equalization across sectors, wages in the nontradables sector follow wages in the tradables sector. As productivity increases in the nontradables sector do not match wage increases, inflation in the nontradables sector will exceed inflation in the tradables sector. The sectoral divergences in productivity (and therefore also in inflation) are assumed to be higher in catching-up countries than in countries with an overall high level of productivity, which results in a real appreciation of catching-up countries. Stated in formal terms, the price ratio (P_r) between nontradables (P_n) and tradables (P_t) would develop as follows (all variables are in logs):²⁾

$$P_r = P_n - P_t = \frac{\delta}{\gamma} a_t - a_n \quad (6)$$

where γ and δ represent labor elasticities in the tradables and nontradables sectors, respectively, while a_t and a_n stand for the respective sectoral productivities.

As policy implications differ between inflation resulting from the Balassa-Samuelson effect and market integration effects on the one hand and economy-wide cost pressures on the other hand, it is important to distinguish between them. Differences in inflation rates arising from market integration effects and the Balassa-Samuelson effect are consequences of the increasing integration within the euro area and of real convergence and therefore do not warrant action from policymakers. In particular it should be noted that no loss of competitiveness is associated with real appreciation caused by the Balassa-Samuelson effect, as real appreciation takes place in the nontradables sector only.³⁾

1 Although other cost factors (e.g. energy price liberalization) have probably played a role, too, in this paper we concentrate on the most important cost factor under long-run considerations, namely wage costs.

2 For a derivation of this formula, see IMF (2000b).

3 If nontradables are inputs for tradables, this statement has to be qualified somewhat.

However, Björkstén (2000) mentions the possibility that the ECB’s “price stability objective may become more complicated to implement” (p. 11) if the enlargement of the euro area encompasses all candidate countries because of the ongoing process of real convergence associated with higher inflation rates.

Divergences of inflation rates which have their root in economy-wide (i.e. inclusive of the tradables sector) wage pressures are most problematic, as they not only cause inflation, but also have a negative impact on competitiveness within a monetary union. Therefore, obviously policymakers should respond in this case.

Finally, inflation rates within a monetary union may also differ because of different positions in the business cycle or because of different fiscal stances. Due to the temporary nature of business cycles, no policy response is required, while in the latter case the obvious response is a better harmonization of fiscal policy. As the focus of this paper is on forces which are driving inflation divergences and real appreciation in a monetary union in the long run, we will concentrate on real appreciation resulting from wage pressures and from the Balassa-Samuelson effect, and disregard cyclical factors in the empirical analysis.

3.2 Empirical Evidence

3.2.1 Cost Factors

A wage pressure-induced real appreciation will be reflected in a rise in unit labor costs (expressed in common currency terms) in the tradables sector.¹⁾ A comparison of the development of unit labor costs in common currency with the development of the real exchange rate (deflated by the prices of tradables) shows that cost factors may have contributed to real appreciation in the Czech Republic and to some extent in Poland and Slovenia, because these countries experienced a rise in unit labor costs in common currency between 1992 and 1998 (table 4). Unlike in Poland, not only did unit labor costs in common currency rise in the Czech Republic and Slovenia, but so did the real exchange rate. This seems to indicate that producers in the Czech Republic and in Slovenia were more successful in passing on rising wage costs to customers than their peers in Poland. The extent of real appreciation in the tradables sector in the Czech Republic can probably be explained in part by the very low level of the real exchange rate in 1992. Nevertheless, it should also be noted that profitability in the tradables sectors in Poland and the Czech Republic must have declined in the period under observation, as the rise in exchange rate-adjusted unit labor costs exceeded the increase in the real exchange rate. Indeed, for the Czech Republic, Cincibuch and Vavra (2000) provide evidence in support of this hypothesis. Although one should be aware of the importance of the choice of the base year, the development of wages in the Czech Republic and in Poland between 1992 and 1998 thus negatively affected competitiveness.

¹ In the empirical treatment we identified the tradables sector with the manufacturing sector. Nontradables encompass the remaining parts of GDP.

A persistence of this development would cause problems in the long run if these countries stuck to fixed exchange rates (or were members of a monetary union). Slovenia and Hungary nominally devalued their currencies between 1992 and 1998 to maintain the price competitiveness of exports. However, unlike in Poland¹) and the Czech Republic, the rise in unit labor cost in Deutsche mark terms did not exceed the real appreciation in terms of tradables prices. Thus, wages did not cause a decline in competitiveness. Obviously one cannot conclude that wage developments in the past (whether they were in line with productivity developments or not) would continue in a similar way if these countries were members of the euro area. Nevertheless, we consider this analysis important, because it provides some information about how far wage setting has to be adjusted to fulfill the economic rationale for participation in the euro area.

Table 4

Unit Labor Cost and Real Appreciation from 1992 to 1998, Total

	Poland	Slovenia	Czech Republic	Hungary
	%			
Unit labor cost in the tradables sector, expressed in Deutsche mark terms	8.4	6.4	84.1	-28.3
Real exchange rate against the Deutsche mark, based on the deflator for tradables	-21.6	15.8	65.7	- 9.5

Source: WIIW, own calculations.

3.3.2 Decomposition of Real Exchange Rate Changes

For some insight into the relative importance of cost factors and the real convergence-induced real appreciation in the CEECs, we decomposed the development of the (GDP deflator-based) real exchange rate in the same way as in Micossi and Milesi-Ferretti (1996). Changes in the real exchange rate (on a GDP deflator basis) are broken up into changes of the real exchange rate based on price indices for tradables and changes of the relative price between tradables and nontradables in the home country and "abroad." Let us define the GDP deflator as $P = \alpha P_N + (1 - \alpha)P_T$, where α represents the share of nontradables in GDP and P_N and P_T represent the deflators of nontradables and tradables, respectively.²) Thus, we are able to express the evolution of the (GDP deflator-based) real exchange rate, R , as follows:

$$\begin{aligned}
 R &= NX + P - P^* \\
 &= (NX + P_T - P_T^*) - \alpha(P_T - P_N) + \alpha^*(P_T^* - P_N^*), \quad (7)
 \end{aligned}$$

where NX means the nominal exchange rate and * stands for foreign (German) variables. The results are reported in table 5.

Column (5) – the "residual" – expresses the amount of change in the GDP deflator-based real exchange rate not accounted for by changes in the real exchange rate based on tradables prices. It is therefore interesting to compare columns (1) and (5): A large residual in comparison with the

¹ Poland undertook (nominal) devaluations, too.

² All variables in logarithms.

Table 5

Decomposition of Exchange Rate Changes 1992 to 1998¹⁾							
	R^2 ²⁾	NX^3	P_T/P^*T^4	$[1 + (2)/100]^* [1 + (3)/100]^5$	Residual	P_N/P_T^6	P^*_N/P^*T^7
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	%						
Czech Rep.	71.4	- 1.5	68.2	65.7	3.40	13	-7.5
Hungary	9.5	-58.5	118.0	- 9.5	21.07	36	-7.5
Poland	35.2	-53.5	73.5	-21.6	67.44	133	-7.5
Slovenia	24.7	-44.9	110.0	15.8	7.65	21	-7.5

Source: WIIW, own calculations.

¹⁾ Changes were calculated in a discrete way (the logarithmic expression in equation (7) assumes continuous growth rates).

²⁾ Real exchange rate based on the GDP deflator (“+” means real appreciation).

³⁾ Nominal exchange rate.

⁴⁾ Relative deflator of tradables.

⁵⁾ $100 [1 + (1)/100] / [(1 + (2)/100) * [1 + (3)/100]] - 100$.

⁶⁾ Relative deflator: nontradables / tradables, domestic.

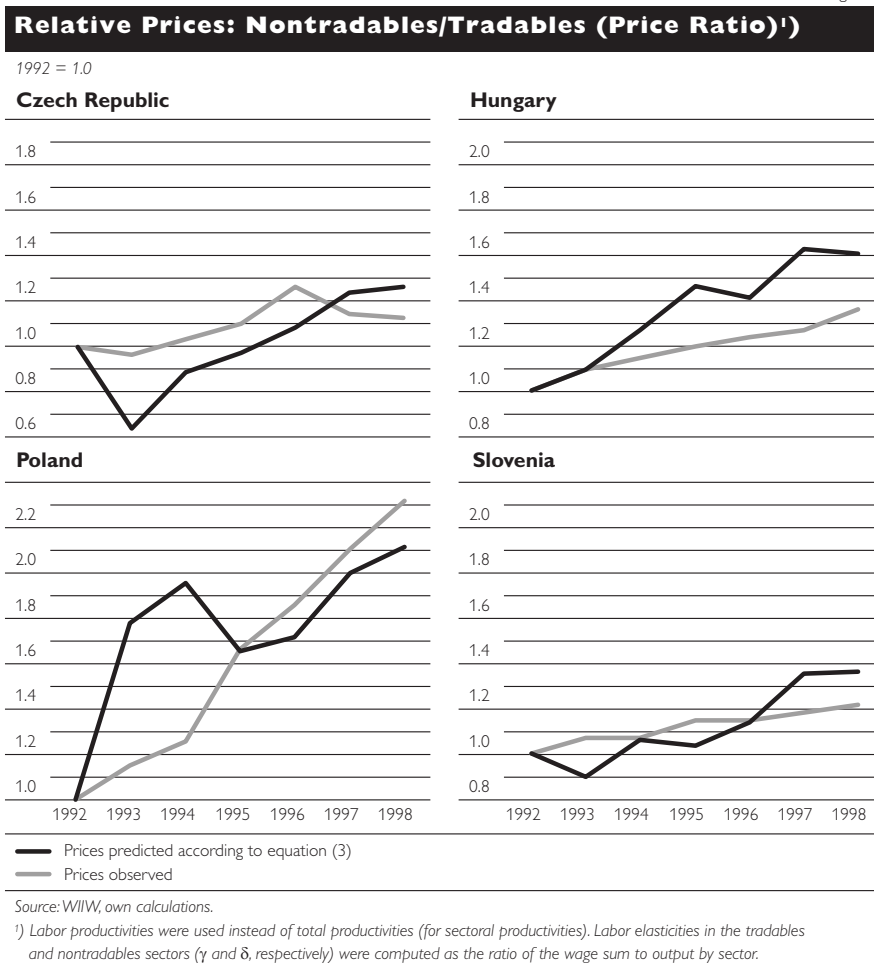
⁷⁾ Relative deflator: nontradables / tradables, foreign (Germany).

change in the GDP deflator-based real exchange rate means that real appreciation is mainly attributable to the nontradables sector. This would be consistent with the working of the Balassa-Samuelson effect, whereas wage pressure-driven real appreciation would affect the tradables and nontradables sectors similarly. However, it would be incorrect to take the proportion of the residual to the total amount of real appreciation as an exact relative measure of the Balassa-Samuelson effect as opposed to wage pressure-induced real appreciation. Among other reasons, divergences in sectoral profit margins (which indeed have taken place according to the analysis in section 3.2.1) would bias the results. Column (6) shows the cumulative relative price differential between tradables and nontradables between 1992 and 1998. In all countries the prices of nontradables grew more quickly than the ones for tradables, with Poland leading by far. Again, this outcome is in line with the Balassa-Samuelson effect.

Although the lack of appropriate data does not permit rigorous empirical tests of the Balassa-Samuelson hypothesis for CEECs, the magnitude of relative price changes seems to be broadly in line with predictions. Figure 3 (which is based on the approach of the IMF, 2000b) compares the predicted relative price ratio of tradables and nontradables, which is implied by sectoral productivity developments according to equation (6), with actual outcomes. In general, predicted and observed price ratios move closely together. This is also confirmed by high correlations between observed and predicted outcomes; they range between 0.67 (Poland) and 0.95 (Hungary). Except in the case of Poland, the outcomes are somewhat below predictions, which is in accordance with other studies with different country samples (see e.g. Canzoneri, Diba and Eudey, 1996).

After having shown that the Balassa-Samuelson effect explains the development of relative prices well, we will address what this means for inflation rates (measured by the GDP deflator). Table 6 illustrates the impact of the relative price change between tradables and nontradables on the GDP deflator. In line (1) of table 6 the average inflation differential (based on observed prices) between tradables and nontradables weighted by the share in the GDP deflator is reported. Stated differently, the figures in line (1) indicate how

Figure 3



many percentage points of additional inflation have been added to tradables inflation because of relative price changes between tradables and nontradables. In line (2) of table 6 the impact of sectoral productivity development-predicted relative price changes on the GDP deflator is given. Except for the fact that the numbers in line (2) are based on predictions according to sectoral productivity developments, the interpretation is identical with line (1). If tradables inflation in the CEECs and Germany had been identical and if the differences between tradables and nontradables inflation had remained at average 1992 to 1998 levels, GDP deflators in the CEECs would have deviated from the German deflator by the difference between the respective country-specific inflation differentials (columns 2 to 5) and the German inflation differential (column 6) of table 6.

Poland, followed by Hungary, shows the strongest productivity-predicted divergence between the prices of tradables and nontradables. This would imply inflation differentials which are significantly larger than presently observed differentials in the euro area. By contrast, Czech and Slovenian inflation differentials are comparable with differentials observed in the euro area.

Table 6

	Poland	Slovenia	Czech Republic	Hungary	Germany
	<i>per year, based on 1992–1998 averages</i>				
Inflation differential nontradables/tradables, weighted by their share of the GDP deflator	11.33	2.27	1.46	4.01	-0.99
Predicted (by productivity differentials) inflation differential between tradables/nontradables, weighted by the share of the GDP deflator	10.02	3.70	2.84	6.29	-

Source: WIIW, OECD, own calculations.

4 Conclusions

This paper addresses a controversial issue of the current enlargement agenda. The future enlargement of the euro area by Central and Eastern European candidate countries initiated an intense academic and political discussion at a time when membership negotiations between the EU and the associated countries started. This discussion was characterized by a multitude of very different policy proposals ranging from the immediate adoption of the euro in some countries (mostly in Poland and in Estonia) to arguments that the CEECs should not give up exchange rate flexibility in order to support growth and convergence to the EU.

Our contribution to the discussion focuses on five EU candidate countries (the Czech Republic, Hungary, Poland, Slovenia and Slovakia) and is based on the framework of the optimum currency area theory. On the one hand, we confirm earlier findings that the CEECs have rapidly converged to the EU countries in terms of business cycles and trade integration. In particular, business cycles in several CEECs (Hungary, Slovenia and to a lesser extent Poland) are strongly correlated with the business cycle in Germany in the period since 1993. In this respect, Hungary, Slovenia and possibly Poland, not, however, the Czech Republic and Slovakia, may be perceived to have made headway towards constituting an optimum currency area with the EU.

On the other hand, we argue that the observation period is still too short to conclude that the business cycles have already become similar. In particular, this period is characterized by only few supply and demand shocks. Furthermore, the business cycles in the Czech Republic and Slovakia are not much correlated with that in Germany. As these economies are quite similar to other CEEC economies, this indicates that country-specific shocks may still have significant effects on these economies.

To shed more light on this ambiguous result, we compute the potential correlation of the business cycle in Germany and in the CEECs using Frankel and Rose's (1998) relation between the degree of trade integration and the convergence of the business cycles of trade partners. We demonstrate that the high degree of trade between the EU and the CEECs represents a sound base for business cycle convergence, and thus for fulfillment of OCA criteria in the medium and long run. Furthermore, intraindustry trade provides additional information to explain convergence in business cycles.

Turning to the issue of nominal convergence, we found mixed evidence of wage-cost pressures in the CEECs between 1992 and 1998. While wage-cost pressures seem to have had a negative impact on international competitiveness and inflation in the Czech Republic and Poland, this does not seem to be the case in Hungary and Slovenia. Again, we have to caution against drawing too strong conclusions from this result. Because the time series analyzed is very short, this result is somewhat sensitive with regard to the starting point. Moreover, it cannot be taken for granted that wages and productivity in the analyzed CEECs will continue to develop in the same way in the future, in particular after entering the EU and later joining the euro area. However, it seems fair to conclude that some sort of intermediate "trial period" with limited exchange rate flexibility would be desirable to establish a track record before joining the euro area. This is an (other) argument why participation in ERM II, which is a condition for the adoption of the euro, makes sense from an economic viewpoint.

Although our sample was too short for us to conduct rigorous empirical tests, the data show that the Balassa-Samuelson effect is exerting a strong influence on inflation in the CEECs. As far as this reflects the ongoing process of real convergence, this observation has to be evaluated positively.

However, under conditions of future euro area participation, the existence of this effect means a prolonged upward pressure on inflation. When applying present GDP weightings of CEECs in a hypothetical enlarged euro area, even large deviations of inflation rates in the CEECs would have only a minor impact on the total euro area inflation rate. From this perspective, the risk of enlargement for current euro area members seems to be rather low. New euro area members could even face negative real interest rates for rather long time periods in the case of substantial deviations of inflation rates from those of core euro area members. As such situations do not tend to arise frequently or over prolonged periods, it would be a useful topic for future research to look into this issue in more detail. In the long run the impact of enlargement on total euro area inflation could increase when the share of GDP of new members converges towards their share in the population, which is 36% of the Euro-11 area at present. Even if this fact is taken into account, firm conclusions about the magnitude of the long-run impact of enlargement on inflation can still not be drawn, as additional factors come into play. In particular, the size and timing of enlargement rounds and the relative pace of real and nominal convergence are identified by Björkstén (2000) as relevant variables. In any event, the interlinkages between nominal and real convergence will remain a fruitful topic for both economic analysis and policy discussions.

To conclude, our results do not fully confirm that the CEECs already constitute an optimum currency area with the EU now, but they appear to be well placed to fulfill OCA criteria to the same degree as current EU members in the future.

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A Critical Review of Unilateral Euroization Proposals: The Case of Poland

Cezary Wójcik¹⁾

I Introduction

The severity of recent exchange rate crises, their unpredictability and their tendency to easily spread from one country to another have given a new impetus to the long-standing and always controversial debate on exchange rate policies and regimes. In the course of this debate, there has been growing support for the view that in the increasingly integrated world economy, intermediate exchange rate regimes are intrinsically prone to disruptive speculative attacks and exchange rate crises regardless of the development of economic fundamentals. This being so, the only feasible exchange rate regimes are thought to be the so-called corner solutions, i.e. either free floats or rigidly fixed regimes (currency boards, unilateral adoption of a foreign currency, monetary union).²⁾

Although this stance has remained rather controversial,³⁾ it has managed to prompt some countries to reconsider their exchange rate strategies. In Argentina, which operates under a currency board, the government publicly pondered, in early 1999, the idea to officially dollarize the economy. Later on, however, this option was dropped again, at least for the time being. In March 2000, Ecuador officially decided to adopt the U.S. dollar as the country's legal tender, after having faced capital flight, a banking crisis and severe recession.

However, the debate has reverberated beyond the confines of Latin America, also reaching a number of transition economies in Central and East Europe. This fact, along with the successful introduction of the common European currency, has also contributed to the emergence of several voices, in particular from academia, encouraging these countries to unilaterally adopt the euro.⁴⁾ At first glance, this idea may be tempting for one or the other accession country of Central and Eastern Europe, in particular if it is (mis)perceived as a feasible and available shortcut to monetary integration with the euro area.

The European Union, in turn, has made it very clear that unilateral euroization does not constitute a viable option for the monetary integration of candidate countries. The firm position of the European Union is that the way to the eventual adoption of the euro for the candidate countries is a sequential one. Integration will proceed in three steps, namely first accession to the European Union, subsequently participation in the exchange rate mechanism of the EU (ERM II) and finally entry into the euro area. Adoption

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2 *See e.g. Mundell (1999) or Dornbusch and Giavazzi (1999). Eichengreen (1994) as well as Obstfeld and Rogoff (1995) are two important precursors proclaiming the demise of intermediate exchange rate regimes.*

3 *For an opposite view see e.g. Frankel (1999), Mussa et al. (IMF, 2000).*

4 *In the Central and Eastern European EU accession countries, most of the discussion has taken place in Poland and Estonia. Moreover, the issue has been discussed for the Western Balkans, and the Deutsche mark was introduced in Kosovo as a de facto legal tender in the fall of 1999 and in Montenegro as a parallel legal tender in December 1999.*

of the euro will be possible after the fulfillment of the Maastricht convergence criteria and the convergence examination procedure laid down in the EC Treaty.

Moreover, on initiative of the European Commission, the ECOFIN Council of the European Union explicitly stated in November 2000 that “any unilateral adoption of the single currency by means of ‘euroization’ would run counter to the underlying economic reasoning of EMU in the (EC) Treaty, which calls for the eventual adoption of the euro as the end of a structured convergence process within a multilateral framework. Therefore, unilateral ‘euroization’ would not be a way to circumvent the stages the Treaty provides for for the adoption of the euro.” The Eurosystem (the ECB and the national central banks participating in the euro area) fully shares this position.

The proponents of unilateral euroization¹⁾ have argued that successful market-oriented reforms and the perspective of EU accession make candidate countries increasingly attractive to foreign investors. This induces substantial capital inflows, which exerts upward pressure on the nominal exchange rate. The resulting strong appreciation of the real exchange rate impairs the competitive position of domestic companies, and consequently leads to a high current account deficit. This makes the economies of the candidate countries extremely susceptible to potential reversals of capital flows and thus to currency crises. The advocates of euroization argue that neither monetary nor fiscal policies can keep these developments in check. By raising interest rates, monetary policy may cause a further appreciation of the nominal exchange rate and an even more pronounced deterioration of the current account, whereas a reduction of interest rates may fuel inflation. Fiscal policy may also prove to be ineffective, since a tightening of the budgetary position designed to eliminate or contain external instabilities may make a country even more attractive to foreign investors, thus further inducing capital flows. Fiscal expansion may, in turn, stimulate aggregate domestic demand, making the current account even worse, and increase the probability of capital outflows, with all their negative consequences. Finally, imposing capital controls to contain financial inflows may be impossible, since the free movement of capital is one of the main prerequisites to enter the EU.

The second main argument of the advocates of unilateral euroization is that the accession countries would experience high growth rates driven by very dynamic productivity advances. Under such circumstances, the accession countries would find it very hard to reduce inflation to low levels, as required by the EC Treaty for the (eventual) entry into the euro area. Reining in inflation would require sizeable nominal appreciation, which would, in the presence of some nominal rigidities, harm the competitive position of these countries. Unilateral euroization, maintain its proponents, would help to avoid this supposed trap.

While the issue of unilateral euroization has induced quite a bit of intellectual ferment in the past one-and-a-half years, its economic implications have not been fully explored yet. In particular, there is a need to draw a real-

¹ See e.g. Rostowski (1999).

istic picture about the economic implications a unilateral euroization move would have and to confront the widely contended advantages with the often underrated risks, drawbacks and dangers of such a policy move. The analysis will therefore complement those lines of argumentation which are mainly based on institutional and EC Treaty-related considerations.

In this paper, the primary focus is on Poland, and this is so for a number of reasons. First, Poland is the biggest accession country, and thus its policy moves may well have tangible repercussions in and for the whole of Central and Eastern Europe. Second, Poland has experienced a high current account deficit in recent years. Even if there appears to be no immediate risk of currency turmoil,¹⁾ this external imbalance constitutes a major challenge for policymakers. Third, the discussion about unilateral euroization has been more vigorous in this country than in most other accession countries.²⁾ At the same time, like elsewhere in Central and Eastern European accession countries, the proponents of unilateral euroization have not garnered substantial official or public support for their propositions. In fact, Poland moved from a wide-band crawling peg exchange rate regime to a float in April 2000, while continuing to rely on the direct inflation targeting strategy that it had followed since the beginning of 1999.

It should not go unnoted that the analysis of the economic effects of a hypothetical unilateral euroization move poses considerable conceptual problems. Costs and benefits cannot easily be offset against each other, as they are partly of a macroeconomic and partly of a microeconomic nature and as, moreover, both short-term and longer-term factors will be at work. Moreover, they are interrelated and can only partly be quantified with some degree of certainty or plausibility. The aim of this study is modest in the sense that it tries to gauge orders of magnitudes of particular effects, while neglecting, in most instances, the interplay between these individual effects. While the study is careful about “adding up” different types of effects, it nevertheless aims at arriving at an overall assessment of how suitable the unilateral euroization proposals are.

The paper consists of four sections and is structured as follows. Section 2 concentrates on the potential benefits unilateral euroization might have for Poland, while section 3 reviews the drawbacks of such a policy move. In doing so, outright costs and potential risks will be discussed. The final part contains a short summary and the main conclusions of the study.

Before exploring these issues further, the technical feasibility of a hypothetical unilateral euroization move has to be touched upon briefly. The main technical precondition for euroization is that official international reserves cover the monetary base (currency in circulation including vault cash and commercial bank reserves at the central bank), which would have to be

1 While current account deficits in the present order cannot be sustained in the longer run, the standard indicators typically employed to assess short-term vulnerability are quite solid (*M2/official reserve ratio 257% in March 2000, official reserve/short-term foreign debt ratio 345% at the end of 1999*). Poland's sovereign ratings have been stable, and Standard & Poor's even raised its sovereign rating for long-term foreign obligations of Poland from BBB to BBB+ in mid-May 2000.

2 See Rostowski and Bratkowski (1999 and 2000); Orłowski, Rybinski (1999); Rosati (1999); Wójcik (1999); Wójcik (2000); Lutkowski (2000); Kowalewski (2000); Gomułka (2000).

exchanged for euro.¹⁾ In the case of Poland, foreign exchange reserves are quite substantial and, from a purely technical point of view, unilateral euroization would thus seem possible. At the end of 1999 gross official reserves amounted to USD 25.5 billion, twice the size of the monetary base (M0).²⁾ Even after such a hypothetical unilateral euroization move, the Polish authorities would still retain half of their foreign exchange reserves.³⁾

2 The Potential Benefits

The main benefits that are claimed to be associated with unilateral euroization are lower interest rates, higher monetary stability in terms of low inflation and a reduction of transaction costs and of exchange rate volatility, which could positively influence foreign trade, and finally a potentially catalytic role of euroization on structural reforms. This section goes through these issues in turn.

2.1 Reduction of Interest Rates

According to the proponents of euroization, the most “tangible” advantage of unilateral euroization would be a rapid and substantial reduction of Polish interest rates. The argument goes as follows: The risk premium in domestic interest rates is usually assumed to consist of two components, the currency risk and the default risk. Euroization would effectively reduce currency risk almost to zero, and hence, *ceteris paribus*, the overall risk premium in domestic interest rates could substantially diminish. The risk premium would be reduced only to the extent that it is not related to nondevaluation default risk, which would clearly continue to exist. Based on this line of reasoning, one may quantify the potential fall in interest rates and its potential influence on both economic growth and the fiscal position.

During the last three years, the risk premium on Polish domestic interest rates has varied substantially and on average stood at 7.1%, as figure 1 shows.

A rough approximation of the default risk may be presented as the spread of Poland’s dollar-denominated eurobond over the comparable U.S. Treasury bond.⁴⁾ The development of the default risk is depicted in figure 2, which shows that on average it stood at about 1.4%.

At first glance, the average values for the overall interest rate premium and for the default risk in the period May 1997 to October 2000 seem to imply that, *ceteris paribus*, the fall in the domestic interest rates resulting from euroization could amount to approximately 5 to 6 percentage points. This would represent a considerable reduction in nominal and also in real terms.⁵⁾

- 1 Obviously, this could only be done after euro banknotes and coins are officially introduced in the euro area.
- 2 Compared to broader monetary aggregates, official foreign exchange reserves slightly exceeded narrow money (M1) and amounted to 40% of broad money (M2). All these ratios did not change tangibly during the first nine months of the year 2000.
- 3 It is worth noting that the presented ratios have been calculated at an actual exchange rate at the end of the year. Obviously, authorities could choose another conversion rate, which could change the final results. However, the room for maneuver would be limited by the need to preserve equilibrium in the economy.
- 4 This represents the default risk on Polish foreign currency-denominated securities, which is taken as a proxy here for the risk of default on local currency-denominated debt.
- 5 As of mid-2000 three-month interest rates in Poland stood at about 7% to 9% in real terms.

Figure 1



Source: National Bank of Poland, own calculations.

Note: The risk premia have been calculated on the basis of three-month money market interest rates less the expected depreciation of the currency less the three-month foreign interest rate. The preannounced depreciation rate under the crawling peg was taken as a proxy for expected depreciation, while for the floating-regime period which began in April 2000, the crawl rate in effect before flotation was retained unchanged. The foreign interest rate is a weighted average of anchor currency interest rates; for the period of floating, the weights of the foreign currencies were retained unchanged from the preceding period. Clearly, this measure is only a rough quantitative approximation, in particular with regard to capturing expectations, both under the wide-band crawling peg and even more so under the float thereafter (for an in-depth discussion of this issue see Darvas and Szapáry, 1999).

Figure 2



Source: Bloomberg.

However, several qualifications have to be added to these very simple and mechanistic calculations based on *ceteris paribus* assumptions.

First, the calculated impact refers to short-term interest rates. The impact on long-term interest rates does not have to be the same. A characteristic feature of transition economies, or more broadly, countries undergoing a credible disinflation process, is the inversed slope of the yield curves, which is opposite to the circumstances normally prevailing in euro area countries. Thus, inasmuch as euroization would produce a reduction of inflation (see below), the yield curve would not only shift downward, but it would also change its slope. This implies that, in a scenario of falling inflation, the reduction of medium- and long-term interest rates would be lower than that of short-term interest rates.

Second, default risk and exchange rate risk are interrelated in several ways. For instance, if the external debt of a given country and/or banking system liabilities are to a large extent denominated in a foreign currency (which is not the case in Poland)¹⁾, a substantial devaluation could impose a heavy financial burden on the fiscal deficit. In such a case relinquishing the possibility of devaluation could help to reduce sovereign risk. On the other hand, a devaluation may also prove beneficial for the domestic economy, spurring growth and improving the fiscal position, which could also lead to the reduction of sovereign risk.²⁾

Effects on GDP

By how much would the calculated fall in the interest rates spur Polish GDP? One way to approach this issue in a preliminary manner is to look at calculations of interest rate elasticities of investments and the possible effect of interest rate changes on GDP. Such calculations³⁾ suggest that a reduction of interest rates by 5 to 6 percentage points could increase Polish GDP by about 1.8% to 2.2%. It should be noted, however, that these results are based on a static model, so that the presented impact on GDP is of a one-time character. To estimate long-run effects, a dynamic approach would yield more suitable results. Moreover, euroization would presumably change the overall operational framework in the economy, and to a large extent affect economic agents' behavior, which could considerably influence the ultimate outcome.

Fiscal position

Lower interest rates would also have a positive impact on Poland's fiscal position, as the costs of servicing the domestic public debt would decrease. At the end of June 2000, the domestic debt of the state budget amounted to about PLN 143.7 billion, which represented about 20% of Polish GDP in 1999. If the average interest rate on the domestic public debt fell by 5 to 6 percentage points, fiscal expenditures would decrease by around 1.0% to 1.2% of GDP. These potential expenditure reductions would, however, not be achieved immediately. A large part of Polish domestic debt consists of fixed rate bonds, of which many are long and medium term. Besides, a portion of the domestic public debt is not fully market determined.⁴⁾

Would interest rates be poised to fall?

The question remains whether unilateral euroization would really represent a quasi "automatic" mechanism leading to a significant lowering of interest rates.

1 *As of the end of 1999, the total external debt of the Polish banking system amounted to only 7.9% of total banking liabilities, and the share of foreign currency deposits of the nonfinancial sector in total banking deposits to about 7.2% of total banking liabilities. At the same time Poland's total external debt amounted to about 41% of GDP, within which short-term external debt stood at 7% of GDP.*

2 *See Berg and Borensztein (2000).*

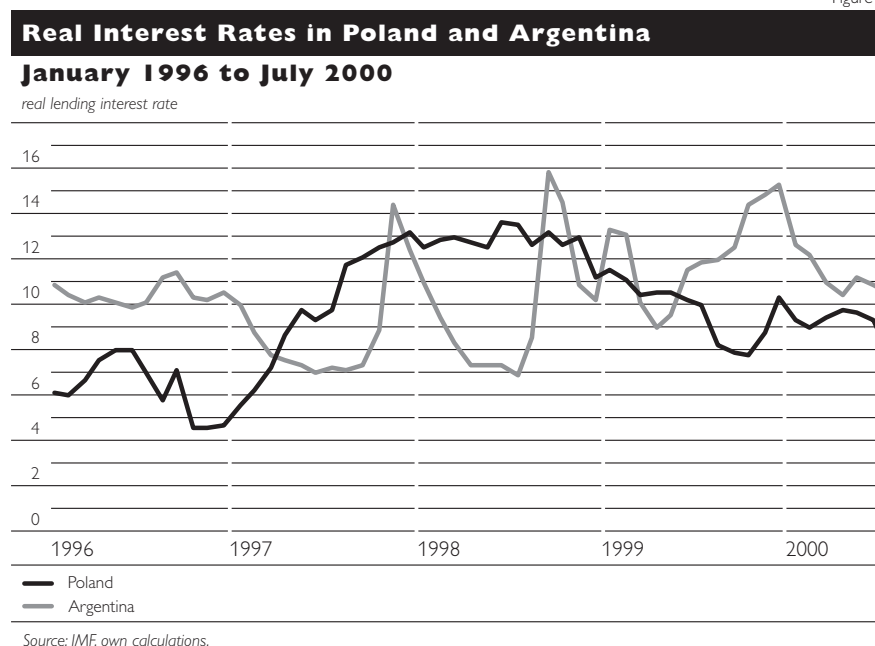
3 *See Fidrmuc and Fidrmuc (1999), and Backé and Fidrmuc (2000).*

4 *At the end of 1999, the share of "nonmarketable" debt was 11% of overall domestic public debt.*

One way to approach this question is to consider again that the calculated fall in interest rates was done under a strict *ceteris paribus* assumption. However, unilateral euroization may well invalidate this strong assumption, as it would bring about a complete regime change in the functioning of the economy. Unilateral euroization would “fix” short-term interest rates, which would be determined by the monetary policymaking process in the euro area. Second, it would fix the price of foreign exchange, i.e. the exchange rate. This would mean that if a disequilibrium between aggregate demand and aggregate supply built up in the economy, the entire adjustment would have to proceed through wages and prices, which often display downward nominal rigidities. At the same time, it should be underlined that unilateral adoption of the euro would not fix long-term interest rates, which would still be determined mainly by real factors, such as the propensity to save and the marginal productivity of investments as well as various risks, default risk probably being the most prominent of them. The crucial point here is that unilateral euroization, by raising questions about the smooth functioning of the adjustment mechanism when the effects of exchange rate misalignments and/or asymmetric real shocks persist, may add to the default risk, and thus to nominal and real interest rates. If external imbalances build up over time and if the adjustment mechanism indeed does not work properly, the risk premium will increase over time, since no country can accumulate foreign liabilities indefinitely without consequences in the form of higher borrowing costs. In other words, the fall in the exchange rate risk which clearly results from unilateral euroization may be partly or even fully offset (in an extreme case even overcompensated) by a rise in the default risk at subsequent stages.

A case in point is Argentina, which operates a currency board, while the U.S. dollar is widely used as a parallel currency. Still, real interest rates in

Figure 3



Argentina are at almost the same level as in Poland; at mid-2000, they stood at about 9% to 10% (see figure 3). Unlike in Poland, this is mainly due to high default risk, as currency risk, although rising recently, has been fairly low. The overall result in terms of interest rates is, however, very similar in both countries.

The issue of the interlinkages between default risk, exchange rate misalignment and external imbalances will be taken up again in section 3.2.2 and later in the study. Now, it is important to add that beyond the concrete developments in the real economy that may contribute to the increase in default risks, there are several factors which would cause a “structural” upward bias in the interest rates on credits advanced in a unilaterally euroized Polish economy. The most important reasons why this would be the case are the following:

First, a denomination of prices and wages in euro would still mean that international investors may perceive an economy as a separate and therefore probably less credible area. This is likely to make investors much more sensitive to the financial position of the country, especially if the fiscal position is not fully consolidated and transparent, as is the case in Poland. This would also add to the premium on interest rates.

Second, the lack of an effective lender of last resort (see below) may also add to financial fragility and, relatedly, to higher interest rates.

Third, it is not possible to completely rule out the devaluation risk, as a euroized country could, at least theoretically, always reintroduce its currency. A non-zero probability of such an exit option would probably be discounted by investors and reflected in domestic interest rates.

Moreover, the assessment of country risk would also be affected by the degree of political and general public support the unilateral euroization move would be able to garner. Poland has achieved a considerable level of macroeconomic stability and has been the most successful transition economy in Central and Eastern Europe in terms of GDP growth performance. Therefore, it is unlikely that society would be willing to accept any kind of extraordinary policy experiments involving the risk of derailing the dynamic catching-up process. The lack of a broad consensus both within society and the political elite could undermine the credibility of a hypothetical regime change towards a unilaterally euroized economy. This would add considerable uncertainty, which would have to manifest itself in a higher risk premium.

2.2 Reduction of Transaction Cost and Elimination of Exchange Rate Risk Volatility

A second supposed advantage of unilateral euroization relates to the claim that the elimination of exchange rate fluctuations as well as the reduction of transaction costs could provide a more favorable environment for international trade and thus for growth.

Reducing foreign exchange transaction costs

Foreign exchange transaction costs generally consist of two components: financial costs (bid-ask spread, commission fees, and other administrative

costs) and “in-house” costs – resources tied up in accounting and treasury departments to deal with foreign exchange management, payment delays and the like. The potential effects of unilateral euroization on financial foreign exchange transaction costs may be approximately measured as:¹⁾

$$T = p \frac{Y}{GDP} \quad (1)$$

where T denotes transaction costs (as percentages of GDP), p denotes the average charges for EUR/PLN conversion (expressed in percentages), and Y denotes the volume of EUR/PLN transactions.

The volume of EUR/PLN transactions may be estimated as a sum of Poland's gross flows of the current, capital and financial accounts of the balance of payments. As data on the currency structure of capital and financial transactions are lacking, the volume of EUR/PLN transactions is estimated here as the sum of Polish foreign trade of goods and services (exports and imports) with the euro area countries. If the average charges for EUR/PLN conversion are assumed to be 0.35% (which is the upper level of the European Commission's estimates of average conversion costs of current account transactions within the EU)²⁾, the foreign exchange conversion costs (their financial component) could amount to about 0.1 percentage point of Polish GDP annually.³⁾

Eliminating exchange rate volatility

It is much more difficult to calculate the impact of a reduction of exchange rate volatility on international trade than to calculate the reduction of foreign exchange transaction costs. Most of the literature states that the potential effect, if any, is not large, and that the reduction of currency fluctuations may have only small trade gains. However, in a recent paper, Rose (2000) finds that trade between common-currency countries is almost three times higher than between countries with different currencies. Furthermore, he finds that a common currency is not equivalent, as regards trade, to reducing exchange rate volatility to zero, which has a considerably smaller effect on trade creation than a common currency does. Lowering the standard deviation of the exchange rate around its mean by 1 would increase trade by close to 1.8%.

One may take Rose's (2000) findings as the upper limit of the potential trade gains. In doing so, unilateral euroization should be treated as a reduction of exchange rate volatility to zero, not, however, as corresponding to Rose's common currency variant, for the simple reason that unilateral euroization does not constitute a currency union and, moreover, that there is not even a common market between the euro area and Poland in the preaccession period.

1 See Anthony and Hallet, 2000.

2 Taking the upper bound of average costs appears justified, since the Polish banking system and financial institutions are relatively less efficient than their counterparts in the EU, and may therefore charge higher conversion costs.

3 The figure estimated by the EU Commission (1990) for the average European country is 0.4%.

In the period January 1997 to October 2000, the standard deviation of the PLN/EUR exchange rate around its mean amounted to 5.9. Based on Rose's findings, a reduction of exchange rate volatility to zero would imply an increase in Poland's trade with the euro area countries by about 10.5%. At the end of 1999, the GDP share of Polish trade (exports and imports) with euro area countries stood at about 27%. Thus, a calculated 10.5% increase in trade would raise the Polish openness ratio by about 2.7 percentage points.

How would this increase in openness add to the growth of Polish GDP? There is no consensus in the literature about the relationship between openness and growth. Some authors emphasize that this relationship is strongly nonlinear (e.g. Baldwin and Sbergami, 1999), which makes potential estimates very difficult and uncertain. On the other hand, Frankel and Romer (1999) find that growth is positively related to openness (as measured by the share of imports and exports in GDP), and that this relationship is relatively strong: They estimate that increasing the ratio of foreign trade to GDP by 1 percentage point raises income per capita by between 0.5% and 2%. Frankel and Romer's results, which again can be taken as an upper level, would indicate that – all else being equal – the calculated 2.7 percentage point increase in the openness ratio resulting from the elimination of exchange rate volatility could lead to a one-time rise of Polish GDP by between 1.4% and 5.4%.

Once more, it has to be added that the size of this effect is highly uncertain, as both the link between exchange rate stability and openness and the relationship between openness and growth are doubtful and contested in the literature. Therefore, this very uncertain effect should not enter any serious cost-benefit balance of unilateral euroization.

2.3 Low Inflation

In a certain sense, unilateral euroization can conceptually be treated as an anti-inflationary strategy akin to a fixed exchange rate. By adopting the euro, the domestic component of money supply would be eliminated by definition. At the same time, money supply growth would decelerate substantially, even though the rate of monetary expansion may typically remain above the euro area average due to capital inflows associated with the catching-up process. This slowdown in the growth rate of money supply would result in lower inflation. If inflation is inertial (as will be argued below), real money supply will be dampened further, with (temporary) negative effects on domestic demand and thus on growth and employment. On the other hand, greater monetary stability could improve business conditions in the domestic economy, making a country more attractive to foreign investors and leading to higher foreign investment.

2.4 Euroization as a Catalyst for Macroeconomic Discipline and Reform?

Finally, unilateral euroization, by imposing a straitjacket on the economy, could also play a catalytic role for fiscal prudence and structural reforms in transition countries.

However, these are only *potential* effects, and cannot be taken for granted. As Lebaron and McCulloch (2000) recapitulate Panama's experi-

ence, "... (the) dollar can indeed provide a stable monetary base for a country, giving it a low inflation anchor, but it cannot assure model policies to promote growth and development."

Furthermore, it seems that in the case of Poland (but also of other advanced applicant countries), the prospective integration into the EU already represents a very important stimulus for institutional and structural reforms as well as for macroeconomic prudence. It is highly indeterminate whether changes in the exchange rate regime and, in particular, euroization would add to the already existing powerful incentives for reform and sound macroeconomic policies.

3 The Drawbacks

3.1 The Costs

This section reviews the outright costs of euroization. These include forgoing seigniorage revenues and relinquishing the lender-of-last-resort function. Moreover, stabilization costs arise if unilateral euroization occurs in an inflationary environment.

3.1.1 The Loss of Seigniorage

One of the most apparent quantifiable costs that goes along with the demise of a currency is the loss of seigniorage revenues accruing from the issue of legal tender. While euro area countries which have introduced the euro according to the procedures foreseen in the EC Treaty participate in sharing seigniorage revenues that derive from issuing the euro, this clearly does not apply in the hypothetical case of unilateral euroization.

There are many definitions of seigniorage. In this study, seigniorage revenues are calculated as the annual change in the monetary base, which simply represents the actual wealth transfer the private sector has to make in order to receive base money from the central bank.¹⁾

Analytically, one can distinguish between stock and flow seigniorage revenues. The stock cost of seigniorage relates to the cost that is associated with the withdrawal of domestic currency from circulation and its exchange for the newly adopted foreign currency, utilizing official foreign exchange reserves. Thereby, the authorities would return to the public the seigniorage that had accrued over time.

The loss of stock seigniorage resulting from a hypothetical euroization of the Polish economy may be represented as a share of the monetary base in GDP. Between 1995 and 1999 the monetary base (M0) amounted to about 8.5% of GDP in Poland; at the end of 1999 it stood at 8.8% of GDP. This figure may be assumed as an approximation of the cost of the loss of stock seigniorage.

The flow cost, in turn, would be associated with the forfeiture of future seigniorage revenues. The loss of flow seigniorage can be calculated as the annual change in the monetary base as a share of GDP. In the period between

1 Berg and Borensztein (2000) show that the increase in the volume of the monetary base is equivalent to the resulting central bank profits in present-discounted-value terms.

1995 and 1999 the average change of M0 as a proportion of GDP in Poland amounted to 1.5%.

For the sake of precision, some observations should be added on the calculation of the figures presented. First, the formula used to calculate flow seigniorage revenues presupposes that there are no remunerated legal reserve requirements. If commercial banks, however, do earn interest on their obligatory reserves held at the central bank, the magnitude of seigniorage revenues is reduced by the amount of the remuneration. Up to now obligatory reserves in Poland have not been remunerated. However, this may change in the future, resulting in a change in seigniorage revenues.¹⁾

Second, the figures for seigniorage revenues presented above do not take into account the costs of money production. However, the costs of money production in Poland are very low, so they make no perceptible difference.²⁾

Third, the calculations do not take into account the operational costs of the central bank, as supposed unilateral euroization would not reduce them substantially. Moreover, as Poland will become a member of the ESCB when acceding to the European Union and, later on, after meeting the Maastricht convergence criteria and passing the convergence examination laid out in the EC Treaty, a member of the euro area and the Eurosystem, the country could not simply liquidate its central bank, as some dollarized countries have in which the central bank is virtually nonexistent.

To estimate this value for future periods, one has to make various assumptions about the time path of the monetary base, nominal GDP and the ratio of the monetary base to GDP.³⁾ This, however, would go beyond the scope of this study. An alternative approach is to take past magnitudes as an indication of future flow seigniorage revenues, at least for a time horizon of the next few years.

First, past revenues have been fairly stable in relation to GDP. Second, these figures are broadly in line with what empirical work on other countries would suggest. Several studies estimate seigniorage revenues in advanced economies to range between 0.5% and 1.5% of GDP. Cukrowski and Janecki (1998) find that, for the period 1993 to 1997, total gains from money creation in Poland amounted to around 2% of GDP annually.

Furthermore, it should be mentioned that the NBP has been steadily conducting open market operations since the mid-1990s, with the aim to limit the excess liquidity of the domestic banking system, stemming from the strong capital inflows and the simultaneous central bank interventions on the foreign exchange market to avoid an appreciation of the domestic currency. The costs of these operations have considerably reduced the amount of seigniorage revenues in the past years. The costs of open market

1 Up until September 1999, the following reserve ratios were in force: zloty demand deposits 20%, zloty time deposits 11%, all foreign currency deposits 5%. However, in September 1999 reserve ratios were lowered to 5% for all eligible deposits. The funds released due to the lowering of reserve requirements were used by 67 banks to purchase 6-, 7-, 8-, 9- and 10-year bonds issued by the NBP.

2 In 1997 (most recent data available), these costs constituted less than 2% of total expenditure of the National Bank of Poland, and about 0.001% of the flow seigniorage accrued in that year.

3 See Anthony and Hallet (2000).

Table 1

Open Market Operations in Poland as a Proportion of GDP¹⁾

	%
1997	0.79
1998	0.96
1999	0.46

Source: NBP, Central Statistical Office, own calculations.

¹⁾ In recent years, about 90% to 95% of all open market operations have been conducted by issuing NBP money market bills to contain the liquidity on the Polish money market.

operations have varied over time; in the period 1997 to 1999, they ranged roughly between 0.5% and almost 1% of GDP (see table 1).

The NBP has largely succeeded by now in eliminating the excess liquidity and, under the current floating exchange rate regime, there is much less scope for endogenous money creation through the foreign exchange market.¹⁾ Thus there will be less need to conduct sterilization operations in the future. This is important for gauging future seigniorage revenues. While falling inflation will presumably have a dampening effect on flow seigniorage revenues in the medium run, the phasing out of sterilization operations will, *ceteris paribus*, exert an upward effect on these revenues. In an overall perspective, this may produce fairly steady flow seigniorage revenues over the upcoming years.

3.1.2 The Lender of Last Resort

In a unilaterally euroized country, the monetary authorities cannot act as a lender of last resort, i.e. banks cannot ask the central bank for any rescue loans to avoid a crisis in the banking system. Such an arrangement can severely limit the room for maneuver for dealing with banking sector crises. This tends to be particularly problematic if the banking system, or some of its segments, are not yet fully strong and sound.

Poland is one of the few transition countries which has not experienced a banking system crisis during the transformation process. The country has made substantial headway in reforming its banking system, and a number of weaknesses in the sector have been removed or mitigated over the past ten years. However, although a lot has been achieved, the Polish banking system is still not fully developed and exhibits several inefficiencies. More concretely, the level of financial intermediation in Poland is still relatively low. Regulation of the sector is advanced, but enforcement is not yet fully ensured despite considerable progress. Bank privatization has proceeded far, but the sale of the last two remaining fully state-owned banks, Poland's largest retail banks, PKO BP and BGZ Bank, which are burdened by large amounts of nonperforming loans, is still at an early stage. Table 2 gives a short overview of some key indicators of the Polish banking system.

Some propositions are usually made on how to deal with not having a lender of last resort.

¹ The zloty was floated in April 2000, and there have been no central bank interventions on the foreign exchange market since. Indeed, the NBP had not intervened on the foreign exchange market in the two years before the flotation either while operating a wide-band crawling peg regime.

Table 2

The Banking Sector in Poland: Some Key Indicators

	1999
Combined balance sheet of credit institutions as a share of GDP	59.5
Total equity capital held by foreign investors, %	56.0
Ratio of nonstandard assets to gross claims of the nonfinancial sector, %	13.2
Average risk-weighted capital adequacy in the banking sector	12.4
ROA (net earnings to average total assets), %	1.0
ROE (net earnings to average core capital), %	14.2
Net profitability (net earnings/total expense), %	4.8
Cost/income ratio (total expense/total income), %	93

Source: National Bank of Poland, General Inspectorate of Banking Supervision.

First, this problem could be resolved by having the domestic banking system owned by foreign institutions. Foreign subsidiaries would generally be indifferent to whether euro transactions are made abroad or in the domestic economy, since their budget constraints would not be related to foreign exchange considerations, but to their overall balances.¹⁾ Hence, the foreign headquarters of international banks could provide funds to finance local operations if there is any shortage of resources.

Although the share of foreign ownership is significant in the Polish banking system (see table 6), the integration of the Polish banking sector with its Western counterparts is not yet complete, in particular because in a number of important cases foreign investors still do not possess majority shares in the banks and thus do not exert full control. It is therefore far from obvious that, at present, a foreign institution could effectively replace the central bank in exercising the lender-of-last-resort function.

Moreover, eliminating the central bank as a lender of last resort could give foreign banks operating in the respective economy a competitive advantage. While domestic banks would be cut off from emergency liquidity, foreign ones would not. This could build a certain asymmetry into the banking system, allowing domestic banks to be perceived as potentially more fragile and less attractive than their foreign counterparts. This, in turn, could lead to shifts of savings from domestically owned to foreign-owned banks, which could further aggravate the unevenness in the sector.

A second possibility, as put forward by Rostowski and Bratkowski (2000), could be the use of the remaining international reserves to create a special fund to be tapped if individual banks experience serious liquidity problems or during a systemic crisis.

As presented above, the foreign exchange reserves of the NBP are quite high in terms of balance of payments considerations, but at the same time, they are limited when one compares the amount of foreign exchange reserves that would remain at the disposal of the monetary authorities in the case of a hypothetical unilateral euroization to deposits in the Polish banking system. These remaining foreign exchange reserves would cover 56% of sight deposits (M1) and only about 20% of all deposits (M2) in the Polish banking system. Whether this would be sufficient to cope

1 This is essentially the case in Panama, one of the few long-standing instances of dollarized economies (see Moreno-Villalaz, 1999).

with a crisis depends on the nature and the scope of such turbulences. Of course, the reserve fund could be supplemented by opening euro-denominated credit lines at foreign private commercial banks. While this may of course enhance the system's efficiency and credibility, it would be at a cost, a cost which should be also taken into account when drawing an overall cost-benefit balance of a hypothetical unilateral euroization.

A third option would be to introduce high liquidity requirements with a view to reducing the banks' vulnerability to adverse changes in liquidity and profitability, thereby reducing the need for lender-of-last-resort mechanisms. This option, too, comes at a cost. The costs of financial intermediation would rise and thus have negative effects on investment and growth. While it is next to impossible to quantify these costs, they must not be neglected in an inclusive analysis.

In general terms, enhancing the effectiveness of the banking sector, improving its supervision and bringing regulation in line with international standards is of crucial importance. However, measures to this end should constitute a fundamental part of any policy package irrespective of the choice of exchange rate regime.

3.1.3 The Cost of Initial Monetary Stabilization

As argued above, unilateral euroization may have a dampening effect on inflation. While this would, in principle, be a welcome development, the associated (temporary) costs in terms of output and employment should not be overlooked.

In an economy which has experienced persistent inflation, inflation expectations are higher and more deeply entrenched than in countries with a low-inflation record. The presence of formal or informal indexation mechanisms, which are pervasive in the Polish economy, provides solid evidence of the existence of strong and presumably cemented inflation expectations. In fact, inflation in Poland is hovering around 10% and has exhibited a great deal of inertia over the past years. Under such circumstances, a move to an extremely tight pegged exchange rate regime may have highly contractionary effects.

The magnitude of this cost would primarily hinge upon how fast economic agents' expectations adjust, while other factors, e.g. structural characteristics, would also play a role. The speed of expectation adjustment, in turn, would depend on the credibility of the regime change. While it is difficult to assess the credibility of a hypothetical adoption of the euro, two points seem to be obvious. First, the unilateral nature of such a move can make it difficult to build up the necessary credibility very quickly. Second, the degree of credibility would depend closely on the accompanying measures that would be taken, in particular in the areas of fiscal policy as well as structural and institutional reform.

Against this backdrop, it is not very likely that expectations would change immediately, that inflationary inertia would disappear overnight and that low inflation would come at no cost. Moreover, there is ample general evidence that reducing moderate inflation takes time, and even

if fiscal policies are sound, inflation developments respond only gradually to a tight nominal anchor like a fully fixed nominal exchange rate.¹⁾

All this suggests that unilateral euroization does not constitute a miracle (costless) cure for an inflationary bias. The adjustment costs could still be substantial.

3.2 Risks

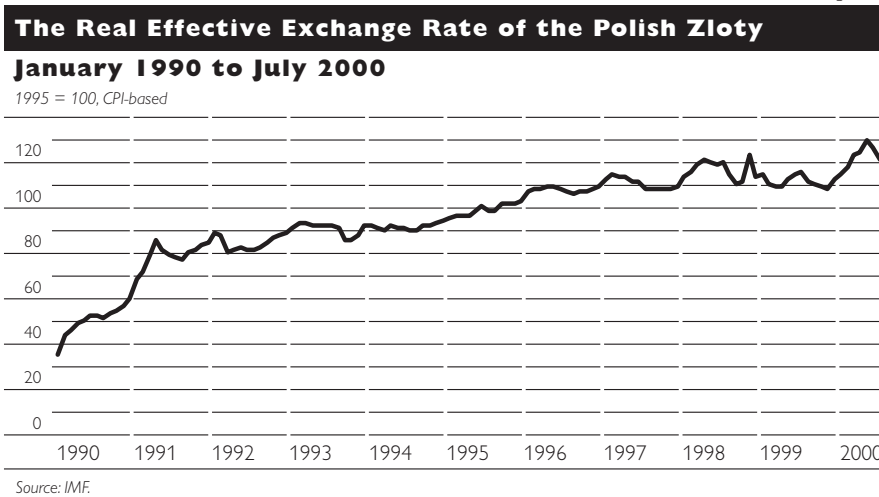
3.2.1 Real Exchange Rate Developments

in the Process towards Eventual Nominal Convergence

One of the arguments Rostowski and Bratkowski (2000) put forward in favor of euroization in Poland and other accession countries states that in the framework of a flexible exchange rate it will be very difficult for these countries to reduce inflation to low levels, as required by the EC Treaty for the eventual entry into the euro area. Rostowski and Bratkowski suppose that Poland will experience high growth rates driven by very dynamic productivity advances before and beyond EU accession. Consequently, meeting the Maastricht inflation criterion would require a rapid appreciation of the nominal exchange rate, which is said to be detrimental to an economy's competitiveness, as nominal rigidities would slow or limit the needed fall in the price of tradables and/or in the unitfactor costs of these goods. Under the Treaty provisions, a major adjustment recession would be needed to fulfill the inflation criterion and thus qualify for participation in the euro area. Along this line of argument, unilateral euroization would allow a country to avoid such a negative development.

However, this reasoning is not convincing. There no persuasive evidence that real appreciation will continue at the high speed witnessed during the past stages of the transformation process. If this basic presumption is relaxed, the situation turns out to be much less dramatic than suggested. Moreover, it should not be overlooked that the fulfillment of the Maastricht convergence criteria is an issue that will have to be tackled at a very advanced stage of the overall integration process, years after EU accession. From today's view-

Figure 4



1 See Sahay and Végh (1995), Krzak (1996).

point, there are no cogent arguments why Central and Eastern European countries should not eventually be able to qualify as successfully and smoothly for participation in the euro area as the incumbent catching-up economies of the European Union.

Undoubtedly, almost all Central and Eastern European transition economies have witnessed a substantial appreciation of their real exchange rates in the course of the last ten or eleven years. The Polish zloty does not constitute an exception. Between 1990 and the beginning of 2000, it appreciated by about 237% in real terms on a CPI basis (see figure 4).

The phenomenon of real exchange rate appreciation has usually been explained by the Balassa-Samuelson effect.¹⁾ Undoubtedly, productivity developments can explain a good deal of the observed pervasive appreciation of real exchange rates in Central and Eastern Europe. However, this is not the whole story. Moreover, it is far from obvious that real appreciation will continue at the same high speed in the next few years. Two considerations in this respect are important.

First, productivity developments at the beginning of the transition process have been influenced, to some extent, by specific factors that have made for one-off productivity growth. The main such factor is a better allocation of existing resources under the new economic system.²⁾

Second, not all of the real appreciation has been due to the Balassa-Samuelson effect. At the same time, real appreciation has, to a significant extent, also been attributable to sizeable devaluation and thus undervaluation at the onset of stabilization programs, which created room for a corrective appreciation later on.³⁾ Moreover, a fair share of the relative price changes resulted from the adjustment of the administrative prices of many utility services, such as energy, heating, rent and public transportation, which have been raised more progressively than nonregulated prices.⁴⁾

As these effects are likely to gradually fade, real exchange rate appreciation will probably slow down substantially in the years to come. This assertion is confirmed by the historical development of the Polish real exchange rate. As figure 4 shows, after initially shooting up, the pace of real

1 This effect results from differential productivity developments between tradables and nontradables, while wages develop uniformly across sectors and wage increases are driven by the productivity increases in the tradables sector. Consequently, nontradables inflation is higher than tradables inflation, leading to a trend appreciation of the (equilibrium) real exchange rate. However, the applicability of this concept to Central and Eastern Europe has been contested by some authors. Grafe and Wyplosz (1997) formulated the hypothesis of the Balassa-Samuelson effect in reverse, where an increase in labor productivity is a consequence of real appreciation, and not the driving force behind it.

2 See Gotz-Kozierkiewicz (1999). This phenomenon is known as the so-called "simple reserves." Productivity growth is achieved through better allocation of resources under the new economic system and not necessarily through upgrading of obsolete technologies. A closely related concept is the X-efficiency improvement concept, which refers to the difference between the actual production level and the maximum level of production, with a given stock of resources. For the application of this theory to the analysis of the transformation process, see e.g. Rosati (1998).

3 Grafe and Wyplosz (1997).

4 See Gotz-Kozierkiewicz (1999). This argument is closely related to the so-called cost-recovery hypothesis (see e.g. Koen and De Masi, 1997).

appreciation of the Polish zloty has been steadily decreasing over time, with the trend stabilizing in the last two years.

As a result, Poland may well be able to achieve inflation convergence without experiencing detrimental nominal appreciation, just like the catching-up economies of the European Union that have successfully managed to qualify for participation in the euro area without major turbulences.

3.2.2 The Monetary and Exchange Rate Policy Instrument

Another risk associated with euroization is the complete removal of monetary and exchange rate policy as tools of macroeconomic policy-making. At the same time, the monetary policy of the euro area will not take into account, not even at the margin, the economic situation in Poland.

Whether monetary policy can be used as an instrument to smooth cyclical fluctuations or not is controversial. A devaluation of the nominal exchange rate usually has only temporary effects on the real exchange rate and on international competitiveness. Moreover, a frequent use of the exchange rate instrument will influence inflationary expectations and therefore be even less effective in achieving even temporary changes in the real exchange rate and in economic activity. Furthermore, long and mostly uncertain lags of monetary transmission and their impact on the exchange rate, output and employment make the usefulness of this instrument even more questionable. The notion of the autonomy of monetary policy is also arguable. In the era of globalization, capital mobility increases substantially, and money becomes more and more endogenous. As a result, domestic interest rates are increasingly determined by external factors, and the room for maneuver of national monetary authorities is becoming ever narrower.¹⁾

However, even in the contemporary globalized world, monetary and exchange rate policy, provided they are generally credible, may still act as shock absorbers. Large, idiosyncratic real shocks require adjustments in the real exchange rate. If the nominal exchange rate is fixed, a large negative shock will require wages and prices to fall during the adjustment process. If wages and prices do not adjust instantaneously, the economy will experience a recession or at least a slowdown in growth. Unilateral euroization (and rigidly fixed exchange rates in general) may produce swings in countries' growth performance. In a comprehensive analysis, euroization should thus be presented in the context of the potential tradeoff between monetary stability and real variability.

The standard approach that is applied to analyze the feasibility of unilaterally adopting a foreign currency (and, more generally, a fixed peg) is the theory of Optimal Currency Areas (OCA theory). The OCA theory considers the adoption of a foreign currency beneficial and sustainable for countries exposed to the same shocks as the foreign country or currency area which has mechanisms for the adjustment to asymmetric shocks. According to the OCA theory, wage and price flexibility, factor mobility and/or fiscal

1 See e.g. *Buiter (2000)*.

transfers are some such mechanisms.¹⁾ The smaller the exposure to asymmetric shocks, the less need there is to resort to such adjustment mechanisms. In order to lower the probability of asymmetric shocks, it is crucial that a country's foreign trade be highly integrated with the foreign country or currency area and that its exports be well diversified in terms of the structure of exported goods and services, which in turn will help foster business cycle synchronization.

At first glance, Poland does not seem to fulfill the OCA criteria sufficiently yet, although it has clearly made substantial progress over the past decade. The structure of the Polish economy still differs, in several ways, from that of the euro area and its members. Industry still accounts for a comparatively large share of GDP, whereas services are underrepresented; in terms of employment, agriculture takes a very high share. Unlike the other Central and Eastern European EU candidate countries, Poland is not a very open economy. In 1999, its exports amounted to only 17.6% of GDP, while overall trade stood at 47.5% of GDP; 56.8% of total trade is directed to euro area countries. The goods structure of exports has changed, as Poland has moved upwards in the international division of labor, but it is still fairly distinct from that of the euro area countries: Exports are still dominated by unprocessed goods, and the degree of diversification is still rather low.

Several studies have applied the OCA theory to Poland and other EU applicant countries from Central and Eastern Europe within a more formal analytical framework.²⁾ While these studies do not come to fully the same conclusions, Poland's economy does tend to be less in line, in overall terms, with the OCA criteria than some other advanced transition economies.

The inconclusiveness of these empirical studies calls for some caution and is indicative of the risks a premature unilateral adoption of the euro would involve for Poland. Against the backdrop of structural differences, the existence and smooth functioning of adjustment mechanisms to asymmetric shocks is very important. However, the Polish labor market is fairly inflexible,³⁾ which means that the major domestic adjustment mechanism is not fully functional. Cross-border movement of labor between Poland and the euro area does not exist either as an adjustment mechanism. Preaccession transfers from the EU budget will help foster structural convergence, which, in turn, will make asymmetric shocks less likely over time, but only gradually. Under these conditions, it could turn out to be very costly to relinquish the monetary and exchange rate instrument altogether ahead of time and without any genuine fallback or exit option.

1 *It is an open issue whether a high degree of cross-border labor mobility is also an important condition for the smooth functioning of a common currency area. It can be argued that the cross-border mobility of labor is less important if regional and intersectoral mobility of labor is coupled with sufficient wage flexibility.*

2 *See e.g. Boone and Maurel (1999), Frankel and Schmidt (1999), Cincibuch and Vavra (2000), Fidrmuc and Schardax (2000).*

3 *See e.g. Pujol and Griffiths (1996) and, more recently, ING Barings (2000).*

3.2.3 Exchange Rate Misalignment

Unilateral euroization, like any rigidly fixed exchange rate regime, involves the risk of exchange rate misalignment. In the case of unilateral euroization, this risk is aggravated by the lack of a standard exit strategy. Any lasting deviation of the real exchange rate from its equilibrium level will therefore very likely be costly in terms of interest rates, output and employment. This section examines three aspects which could lead to an appreciation of the exchange rate beyond its equilibrium level, namely an inertial appreciation of the exchange rate, demand-side factors and cost factors.

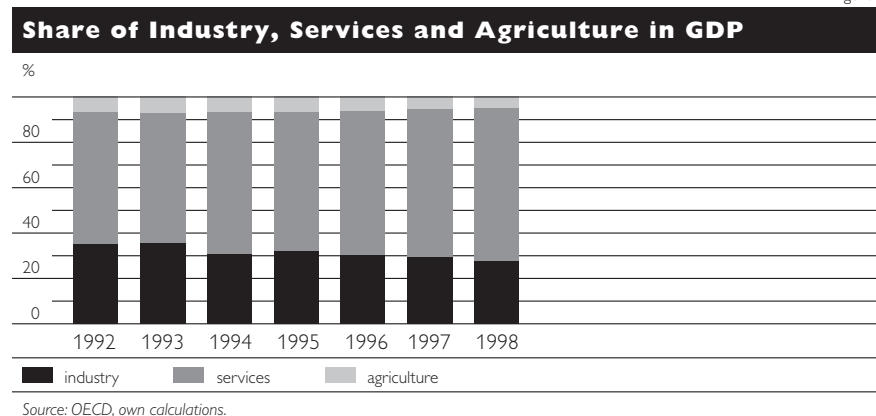
Inertial appreciation of the exchange rate

As mentioned above, euroization may cause inflation to fall. However, the disinflation process would, in all likelihood, not be accomplished immediately, as has been argued above. In the intermediate time period, an inertial upward shift in the price level and thus a real appreciation of the exchange rate would occur. Rostowski and Bratkowski (2000) argue that this problem could be resolved by an upfront devaluation of the domestic currency at the moment of conversion. However, fixing the exchange rate at a devalued level is not a convincing solution, as wage and price inflation would probably be more stubborn and difficult to contain.

Demand-side factors

Looking at past developments, one can observe that in Poland industrial output (industry can be taken as a proxy for the tradables sector) has declined as a share of GDP while the GDP share of services (a proxy for the nontradables sector) has increased continuously (see figure 5). This phenomenon has also been observed in other advanced transition countries (with the notable exception of Hungary), which suggests that supply-side factors and, in particular, the Balassa-Samuelson effect, have not been at work alone. Had this been the case, the share of the tradables sector in total output would have steadily risen, as higher productivity growth in the tradables sector would have had induced labor and capital to move out of the nontradables sector, reducing the supply of nontradables and increasing the supply of tradables (IMF, 2000).

Figure 5



In light of this evidence, it seems that the analysis should also take into account possible demand-side effects which can be important for exchange rate developments and the competitiveness of the economy.

In Poland and in many other transition countries, services, which account for the greater part of the nontradables sector, were underdeveloped and also underconsumed during the pretransformation period, even taking into account the lower income level in these countries. As transition began, consumption started to converge towards western patterns of higher shares of services in consumption. This fact is reflected in relatively high income elasticities of demand for services in Poland as well as the majority of other transition countries, as compared to western countries (see table 3).

Table 3

**Income Elasticities of Selected Services
in Poland, Germany and Austria in 1993**

	Poland	Germany	Austria
Gross rent	1.59	1.35	1.43
Fuel and power	0.87	0.77	0.77
Medical care	1.28	1.17	1.21
Purchased transport services	0.94	0.85	0.86
Communications	1.63	1.25	1.26
Recreation and education	1.14	1.14	1.15
Miscellaneous goods and services	1.34	1.27	1.21

Source: Podkaminer (1998).

Thus, increasing income levels in transition countries induce a shift in expenditure towards the nontradables sector and services in particular. These changing demand patterns then translate into a changing structure of the economy, and the share of services in overall output starts to increase.

This process is also very important for real exchange rate movements and the competitiveness of the tradables sector over time.

As demand for services surges, the price of services rises (in absolute and relative terms). This attracts new investment, which augments capacities in the sector. As capacities become larger, the relative price of services falls again. Besides, if supply is very flexible, firms may anticipate increases in demand and may make necessary investments in line with their expectations in advance. Thus, when demand materializes, the necessary capacity may already be there to meet consumers' needs. In this case, the impact of the shift in demand on actual prices is less visible in the behavior of relative prices (i.e. it does not have long-term implications on nontradables prices).¹⁾

Nevertheless, the internal terms of trade in the economy change in favor of the nontradables sector. In a two-sector economy, capital flows to the nontradables sector. If capital is scarce (a widespread problem in transition countries, where savings are usually too small to generate enough domestic capital), capital flows to nontradables are partly at the expense of the tradables sector, so that productivity developments in this sector are constrained. Under *ceteris paribus* conditions, this may then be reflected in a relatively weaker current account.

¹ A number of econometrics studies (e.g. IMF, 2000) confirm this.

A great part of investment in transition economies has been financed by foreign direct investment. Thus, the effect described above should manifest itself in a relatively large share of the nontradables sector in the sectoral distribution of FDI flows. In fact, in Poland, slightly more than half of the foreign direct investment made since the beginning of the transformation process up to the end of 1999 has been directed to the nontradables sector, which suggests the relative importance of this effect in this country.

FDI flows into the nontradables sector cause the exchange rate to appreciate in real terms, but they do not generate future inflows of foreign exchange, which will be needed to pay future dividends to the foreign owners. This means that the exchange rate appreciates beyond its equilibrium level; this is the exchange rate which ensures that the current account will be balanced in the long run.¹⁾

Table 4

**Distribution of Foreign Direct Investment in Poland,
as of December 31, 1999**

	Capital invested	Distribution
	USD million	%
Tradables (manufacturing and agriculture)	17.416	49.5
Nontradables	17.753	50.5
thereof: financial intermediation	7.861	
Trade and repairs	3.398	
Construction	1.930	
Transport, storage and communications	1.891	
Community, social and personal services	1.585	
Total	35.170	100

Source: PAIZ (Polish Agency for Foreign Investments).

The demand-side effect may simultaneously go through the labor market as well. Rising demand and prices in the nontradables sector boost this sector's business perspectives. As turnover and profits rise, wages in nontradables may increase to attract new labor. Assuming that the law of one price holds on the labor market, it may cause additional wage pressures in the tradables sector and as such influence its unit labor costs and/or profit margins, and thus its competitive position. As a further consequence, the lower return on capital in the tradables sector may stimulate a shift of investment out of this sector and towards the nontradables sector, which typically tends to be exposed to less intense competition and, in addition, sees swiftly rising demand.

Unilateral euroization may strengthen these demand-side effects further, as it would effectively eliminate exchange rate fluctuations (risk) and presumably facilitate access to foreign capital. Obviously, easier access to capital should be seen as an advantage, but there is a substantial risk that it could also lead to loose lending practices and a credit boom financing excess consumption activity.

¹ Panagiotis (1999) also stresses the importance of the sectoral distribution of FDI inflows for the real exchange rate and current account balance.

Cost factors

Other factors that may cause exchange rate overvaluation relate to cost-push inflation arguments.

First, there is still a need to free the administered prices of many goods and services or adjust them to cost-recovery levels. In many transition economies, these goods and services still constitute a large part of the consumer baskets that are used to calculate CPI indexes. The resulting inflation may lead to a real appreciation of the currency beyond the equilibrium exchange rate (Gotz-Kozierkiewicz, 2000).

Second, some goods from the nontradables sector may constitute inputs for the production costs of tradables. Thus, the rising price of such intermediate goods will, *ceteris paribus*, adversely affect the tradables sector by reducing profit margins, and hence the competitiveness of the economy.

Third, it cannot be excluded that wage developments in the tradables sector exceed productivity developments. Again, such rises in production costs will, *ceteris paribus*, adversely affect the tradables sector by reducing profit margins and hence will affect the competitiveness of the economy.¹⁾ In Poland, wage inflation led to a loss of competitiveness in the period 1992 to 1998, as Fidrmuc and Schardax (2000) show. The system of wage bargaining appears to be an important explanatory determinant for wage developments. Poland has an unorthodox mix of centralized and enterprise-level wage bargaining, which may facilitate wage inflation. On the other hand, wage dynamics have become much more moderate in 1999 and 2000. It remains to be seen whether this is evidence of a structural change in wage determination or only a temporary phenomenon.

The demand-side and cost factors depicted above call for retaining some flexibility in the exchange rate policy, at least for some time to come. This flexibility may allow Poland to mitigate output and employment losses resulting from a potential deviation of the real exchange rate from its equilibrium level.

3.2.3 Balance of Payments Concerns and Interest Rates

The Polish current account deteriorated sharply over the past few years. Recently, the deficit has come to about 7.5% to 8% of GDP. In the medium term, such current account gaps are not sustainable and corrective action will have to be taken, preferably fiscal measures and measures to foster corporate restructuring. While the currently high and mainly privatization-induced FDI flows provide for a certain breathing space and appear to ensure smooth financing, there is no room for complacency.

It is important to understand that unilateral euroization would not constitute a miracle cure for the external imbalances of the Polish economy. Unilateral euroization does not eliminate concern about current account deficits. A permanently unbalanced trade position does not lose its economic significance and may cause a structural deficit of aggregate demand, turning an economy into a constantly depressed region. In an extreme situation, a kind of hysteresis effect may even arise. Persistent deviation of actual output

¹ See Cincibuch and Vavra (2000), and Fidrmuc and Schardax (2000).

from capacity output may also reduce the latter, thus further weakening a country's position on international markets and its attractiveness for foreign investment. Argentina, operating under a currency board, constitutes a good example: an overvalued real exchange rate makes the country's production uncompetitive, while nominal rigidities forebode a lengthy and painful adjustment process. All this has a negative impact on Argentina's attractiveness as an investment target and forces whole industrial branches to leave the country.

The case of Argentina is, to some extent, a combination of exceptional factors.¹⁾ Such an extreme situation does not have to occur in a euroized Poland. However, in the case of Poland, a slowdown in economic activity may deliver some other threats: it could incite problems in the banking system and in the fiscal realm, which is already under strain. Such a combination of a current account deficit and the resulting fiscal problems would imply the necessity to accumulate foreign liabilities. This, in turn, may make the country more vulnerable to potential shifts in market sentiment.

Admittedly, unilateral euroization could stimulate deeper integration with international financial markets and promote easier access to foreign financial resources, which would probably facilitate the financing of potential external imbalances, making the problem less imminent. Authorities would be granted more room for maneuver and more time for corrective action. However, no country can accumulate foreign liabilities indefinitely without running into a debt trap. At some point, international investors will demand a higher premium, as the default risk rises. At this stage, the potential benefit of euroization from lower interest rates would be reduced or completely eliminated.

3.2.4 The Risk of Crisis

This issue is directly related to the problem of external crisis. The proponents of unilateral euroization argue that the unilateral adoption of the single currency would effectively insulate Poland from any speculative attack, as there would be nothing to speculate against. This is too good to be true. It is plausible that unilateral euroization would to a large extent protect an economy against currency crises which are driven by contagion unrelated to a change in underlying fundamentals. But it would not guard an economy against other crises, like recessions or banking crises, nor would it make an economy immune to swings in market sentiment and external crises in the form of sharp capital outflows. An unsustainable fiscal deficit or a weakening position of the private sector in general and the financial system in particular may still provoke investors to escape the country by selling off government securities or other domestic assets.²⁾

Capital outflows need not be induced only by foreign investors. Even stronger pressure may come from domestic residents, who may choose to

1 *In the case of Argentina, one of the most important factors is the substantial appreciation of the U.S. dollar, to which the peso is nominally pegged, and the simultaneous drastic devaluation of the currency of the country's main trading partner, Brazil.*

2 *See Berg and Borensztein (2000).*

invest their savings in international capital markets and in foreign banks abroad instead of at home. As recent cases of external crisis in many emerging economies have shown, such capital flight may be an important source of total capital outflows. This has also been evidenced by the cases of currency turmoil the Czech Republic and Slovakia experienced in 1997 and 1998, respectively. In a crisis situation, nothing can prevent the public from transferring all its liquid assets from domestic banks to foreign banks abroad (or to hoard cash in cookie jars).¹⁾

Another argument often advanced by the proponents of unilateral euroization is the ineffectiveness of macroeconomic policies, which would inevitably lead to a crisis situation in a non-euroized accession country. While the role of monetary and exchange rate policy issues has been dealt with at length in earlier sections of the paper, it is worthwhile mentioning that this line of argument is not persuasive with respect to fiscal policies either. This is especially true of fiscal tightening. Fiscal restraint will not necessarily, by making a country more attractive to foreign investors, induce capital inflows, by contrast to what Rostowski (1999) states. In fact, such a move is likely to lead to lower interest rates and thus to less attractive yields for foreign capital, which should reduce the upward pressure on the exchange rate. The question is which of these two effects will then dominate.

4 Conclusions

Unilateral euroization has been proposed by some academics as a solution to the alleged ineffectiveness of macroeconomic policies in the run-up to European Union accession and, furthermore, as a device to bypass the fulfillment of the Maastricht inflation criterion. The European Union, in turn, has made it very clear that unilateral euroization does not constitute a viable option for the monetary integration of candidate countries and that it would run counter to the underlying economic reasoning of EMU in the (EC) Treaty.

This study has attempted to shed some light on the economic issues involved and thus to contribute to the discussion, focusing on the case of Poland. The following main conclusions emerge from this study.

The often cited benefits of unilateral euroization are much less clear-cut than they would appear to be at first glance, while the costs and risks are considerable indeed. The most tangible effect of unilateral euroization would be a perceptible reduction of interest rates, perhaps on the order of 5 to 6 percentage points. While this effect may have a positive impact on growth and also on the fiscal balance, its magnitude would remain uncertain, both in the short run but even more so in the longer term. While unilateral euroization would reduce exchange rate risk substantially, an increase in other types of risk, in particular default risk, would probably mitigate these gains from the outset and, if imbalances built up over time and the adjustment mechanism did not function properly because nominal

1 In the case of euroization, economic agents would be able to transfer their money holdings to foreign banks abroad without any conversion costs. Unlike in any other regime, there would be virtually no opportunity costs of keeping money abroad. This may, in turn, add to the variability of capital flows.

rigidities persisted, risk premia would increase and could wipe out the initial benefits. Likewise, gains from lower interest rates in terms of GDP growth and the budget balance could well prove to be temporary.

Unilateral euroization would reduce conversion costs, but the gains are relatively minor. Whether the reduction of exchange rate volatility accompanying unilateral euroization would have positive effects on trade and whether trade gains, if they materialized, would feed into added growth remains a largely open question.

Whether inflation would be sustainably reduced is another unresolved issue. On the one hand, the slowing growth of money supply in the initial phase would dampen inflation. Moreover, if inflation is inertial, this would also inflict temporary costs on growth and employment. On the other hand, after the initial stabilization period is completed, inflation may accelerate above the average in the euro area, and may prove to be difficult to contain unless very tight fiscal policy is pursued.

Some analysts mention that unilateral euroization could act as a catalyst for macroeconomic discipline and reform. However, the perspective of EU accession already represents a very important stimulus for macroeconomic prudence as well as for structural and institutional change.

The clearcut costs of unilateral euroization are the loss of seigniorage (one-off stock cost: about 8.5%; flow cost: up to 2% of GDP annually) and the elimination of the monetary authorities' lender-of-last-resort function, which could have adverse consequences, as the Polish banking system, despite having made remarkable progress in the past decade, is not yet fully transformed and developed.

Exchange rate misalignment is another potentially grave risk that would be associated with unilateral euroization. Poland does not fulfill the OCA criteria sufficiently yet to do without a certain degree of nominal exchange rate flexibility. Inertial appreciation of the exchange rate, demand-side factors and cost factors may cause the exchange rate to deviate from its equilibrium level, a circumstance which might not be easy to correct under a hypothetical unilateral euroization. Moreover, unilateral euroization would effectively eliminate exchange rate risk and presumably facilitate access to foreign capital, which may be an advantage, but which also harbors the substantial danger of loose lending practices and a credit boom that would, in turn, finance excess consumption.

The risk of exchange rate misalignment appears to be particularly momentous against the backdrop of the already large current account deficit. Unilateral euroization would not constitute a miracle cure for the external imbalances of the Polish economy. In fact, it may facilitate the evolution of a structural deficit of aggregate demand, which would turn the country into a depressed region for a long time, just because of the minimal flexibility it leaves for corrective policy action.

A unilateral adoption of the euro is clearly premature for Poland both on institutional and economic grounds. At present, too early a unilateral adoption of the euro may prove to be a fairly crisis-prone arrangement, even if it does provide a certain protection against currency crises that are not related to changes in underlying fundamentals.

Finally, the main arguments advanced by the proponents of unilateral euroization are not convincing. Macroeconomic policies can be effective tools to cope with the policy challenges of preaccession. This is particularly true of fiscal policy. Furthermore, there are good reasons to believe that real appreciation will tend to lose speed as the catching-up process advances, so that the eventual meeting of the inflation criterion for participation in the euro area may turn out to be much less problematic than is sometimes argued.

In the final analysis, hypothetical unilateral euroization would be a risky venture for Poland, with no viable exit option in a crisis situation. This may delay the real convergence of the Polish economy, which in turn would rather slow than accelerate accession to the European Union and eventually preparation for full participation in Economic and Monetary Union.

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Measuring Central Bank Independence in Selected Transition Countries

Sandra Dvorsky¹⁾

I Introduction

The main purpose of this paper is to measure the degree of central bank independence (CBI) in five Central and Eastern European transition economies striving for EU accession, namely the Czech Republic, Hungary, Poland, Slovakia and Slovenia (referred to as the CEEC-5 below).

The idea of measuring the degree of CBI in these countries was mainly motivated by an earlier paper, which reviewed central bank legislation in the CEEC-5 by applying the requirements of the Maastricht Treaty as a yardstick.²⁾ While no measurement exercise of legal CBI was undertaken in 1997, for this paper it seemed interesting to apply CBI measurement models to the legislation currently in force in the CEEC-5, thus contributing to the ongoing discussion on CBI in these countries. I applied the two most widely used indices of CBI measurement to draw a comparative picture of the current state of central bank legislation in the CEEC-5 and to assess the progress achieved by individual countries during the transition period. Subsequently, I compared my results with those of other authors and earlier studies. Moreover, the paper will critically review the indices themselves as well as the process used to score their subitems, in particular against the background of the Maastricht Treaty requirements, which in practice constitute the driving force for any amendment of central bank laws in the CEEC-5. In order to complete the picture, I will measure the degree of actual CBI, thus updating my own calculations on the turnover rate of governors in the CEEC-5 (see Radzyner and Riesinger, 1997). While a quantification of CBI is often used as a starting point for assessing a possible relationship between the degree of CBI and inflation, this paper will not correlate computed measures of legal or actual CBI to inflation data of past years.

The remainder of this paper is structured as follows: Section 2 will deal with the measurement of CBI, starting with a survey of recent theoretical and, in particular, empirical literature. Subsequently, the degree of legal CBI will be measured by applying the two most widely used indices, the Cukierman and the Grilli-Masciandaro-Tabellini (GMT) indices. Moreover, the turnover rate of central bank governors will be used as a proxy to measure actual CBI. The section will close with an interpretation of computed results as well as a critical review of the indices on legal and actual CBI. Section 3 will summarize and conclude.

1 *Foreign Research Division, Oesterreichische Nationalbank. The paper was largely written during a research visit at the Bank of Finland Institute for Economics in Transition (BOFIT). Views expressed in this paper are the author's views and do not necessarily reflect the Oesterreichische Nationalbank's views. An earlier version of this paper with a somewhat broader focus appeared in the BOFIT Discussion Paper series. The author is grateful for the valuable comments received by Nils Björkstén, Economics Department, Bank of Finland, Jukka Pirttila, BOFIT, and Peter Backé, Foreign Research Division, Oesterreichische Nationalbank, as well as for legal advice by Thomas Wagner, Legal Division, Oesterreichische Nationalbank.*

2 *This earlier study was published under the author's previous name in 1997, jointly with Olga Radzyner. See Radzyner and Riesinger (now: Dvorsky).*

2 Measuring the Degree of Central Bank Independence

While only selected aspects of CBI in transition economies had been analyzed for a limited number of countries until 1997,¹⁾ an increasing number of authors seems to have published both theoretical and empirical work on this topic in the recent past. As a case in point, Wagner (1998) contributed to the theoretical discussion of CBI by broadly analyzing the preconditions of successful disinflation policy in transition economies. In particular, he covers institutional requirements – such as CBI – and the choice of nominal anchors. In a more recent publication, he argues that a high degree of legal CBI without the necessary degree of actual CBI may not only be ineffective, but even counterproductive. According to Wagner, a merely formally independent central bank, which de facto is still in a weak position, risks being blamed for unsuccessful disinflation policies by the government. In the long run, this “institutional cheating” may undermine the credibility of the monetary authority (see Wagner, 1999).

Furthermore, a considerable amount of empirical literature on CBI in transition countries has been published in the recent past. Loungani and Sheets, for instance, construct an index of legal CBI by combining elements of the GMT index and the DeBelle and Fischer methodology. They measure the degree of CBI in twelve transition countries (including the Czech Republic, Poland and Hungary) and correlate it with the inflation data of 1993. The results seem to confirm the negative correlation between CBI and inflation for this set of countries (see Loungani and Sheets, 1997). Maliszewski (1997) examines the degree of legal CBI in 16 transition economies, including the CEEC-5. He applies and somewhat modifies the GMT index to measure legal CBI and finds a negative correlation between CBI and inflation. A very recent paper by Maliszewski examines a set of 20 transition economies and measures legal CBI by applying the above-mentioned modified GMT index (see Maliszewski, 2000). Moreover, a negative correlation between inflation and CBI is found also for this set of countries.²⁾ Huterski et al. (1997) review the history of CBI in Poland and i.a. present calculations on the degree of legal CBI as of 1996 (i.e. before the adoption of the new central bank law) by the Cukierman index. Pospisil (1997) briefly analyzes the role of CBI in the disinflation process of the Czech Republic. Äimä (1998) measures the degree of legal CBI in the Baltic countries using the Cukierman and the GMT indices and finds no truly significant variations of legal CBI between these three countries. Moreover, the turnover rates of governors are calculated. A major effort of measuring legal CBI in 26 transition economies (including the CEEC-5) was undertaken by Cukierman et al. (1998). Their set of 26 transition countries comprises the CEEC-5, though recent amendments of Hungarian³⁾ and Polish legislation are not yet taken into account (see Cukierman et al., 1998). Lybek (1999) constructs an index

1 For an overview of literature on CBI in transition economies until 1997, see Radzyner and Riesinger (1997).

2 The present paper was written entirely before the publication of Maliszewski's study.

3 The most recent amendment of the Act on the National Bank of Hungary of 1991 went into force on January 1, 1997, and contains a number of changes i.a. on the appointment procedures of the members of the Bank's highest decision-making body as well as on incompatibility regulations.

to measure legal CBI in the 15 successor states of the former Soviet Union and calculates turnover rates of governors to measure actual CBI. Interestingly, a significant correlation between legal CBI and inflation can be found, whereas the degree of actual CBI (expressed as the turnover rate of governors) proves to be irrelevant (see Lybek, 1999).

2.1 Measuring Legal Independence

As mentioned earlier, the Cukierman and the GMT indices will be applied to measure legal CBI. Despite admitted weaknesses which have been debated in recent literature,¹⁾ these indices will be used to allow for comparison of results with findings of other authors dealing with different countries and/or earlier central bank legislation. In particular, calculations on the Baltic central bank legislation (see Äimä, 1998) as well as earlier results on some of the CEEC-5 seem to be interesting cases of reference in this respect (see Siklos,²⁾ 1994, and Cukierman et al., 1998).

To measure legal independence, I have analyzed national legislation, i.e. the legislation presently in force in the CEEC-5, although new laws or amendments are currently being prepared by Slovakia and Slovenia and an amendment is currently being debated in the Czech Republic to meet the Maastricht requirements.³⁾

2.1.1 The Cukierman Index

Although the Cukierman index has already been applied to some of the central bank laws in force in the CEEC-5, own calculations seem to be justified for two reasons. First, the assignment of scores for different subitems of the index will be explained in detail for each country and compared with respective requirements of the Maastricht Treaty, which in practice constitute the driving force for changes in legislation in the CEEC-5. In particular, wherever national legislation does not clearly fit into any of Cukierman's categories, I have applied the rationale of the Maastricht Treaty. Second, as a consequence of this approach, I had to recalculate scores for the countries whose legislation was measured by previous studies to ensure equal treatment of the CEEC-5 in this exercise. This pertains to the central bank legislation of the Czech Republic, Slovakia and Slovenia. The recently changed central bank laws of Hungary and Poland have not yet been measured.

1 As a case in point, Mangano compares calculations based on the GMT and the Cukierman indices and reveals that authors diverge considerably in their assessment of CBI, mainly due to subjectivity in their interpretation of laws. See Mangano (1998).

2 Siklos (1994) did some pioneering work and constructed an index of legal CBI (similar to the Cukierman index) for the Czech Republic, Hungary, Poland and Slovakia.

3 The amendment on the National Bank of Slovakia Act is currently being prepared and will possibly be presented at the beginning of next year. The new law on the Bank of Slovenia was approved by the government in July 2000 and is scheduled for parliamentary debate in fall 2000. The draft amendment contains a prohibition of any fiscal financing by the central bank, new regulations on the potential dismissal of members of the highest decision-making body as well as incompatibility clauses. Moreover, it will strengthen the central bank's financial independence and contain provisions on the bank's reporting requirements towards parliament. The amendment of the Act on the Czech National Bank, initially meant to improve compliance with Maastricht Treaty requirements, has provoked a heated parliamentary debate. See section 2.2 of this paper.

The Cukierman index comprises 16 subitems for assessing the degree of legal CBI which are grouped into the following four sets of items:¹⁾ 1. variables on the status of the chief executive officer (code: CEO), namely his term of office, appointment and dismissal procedures and incompatibility clauses; 2. the policy formulation variables (code: PF), comprising regulations on the competence to formulate monetary policy, the central bank's potential participation in the budget process as well as regulations on potential conflicts between the central bank and the government; 3. the legislated central bank objectives (code: OBJ); and 4. regulations concerning limitations of lending (code: LL). Each of the 16 subitems is assigned a score between 0 (smallest level of independence) and 1 (highest level of independence), where the "fine tuning" for each subscore depends on the number of legal alternatives proposed by Cukierman. The overall index for each country is obtained in two different ways, either by calculating an unweighted mean ("LVAU") or by computing a weighted index ("LVAW").

Table 1

Legal CBI in the CEEC-5 Measured by the Cukierman Index					
	Czech Republic	Hungary	Poland	Slovakia	Slovenia
1. Chief executive officer (CEO)					
too	0.75	0.75	0.75	0.75	0.75
app	0.50	0.25	0.50	0.25	0.50
diss	0.83	0.83	0.83	0.83	1.0
off	1.0	0.50	1.0	1.0	0
2. Policy formulation (PF)					
monpol	1.0	1.0	1.0	1.0	1.0
conf	1.0	1.0	1.0	1.0	1.0
adv	0.0	1.0	1.0	0.0	0.0
3. Central bank objectives (OBJ)					
obj	0.6	0.6	0.8	0.6	0.6
4. Limitations on lending (LL)					
lla	n. a.	0.66	1.0	n. a.	0.66
lls	0.66	1.0	1.0	0.66	n. a.
ldec	1.0	0.66	n. a.	1.0	0.66
lwidth	0.66	1.0	n. a.	0.66	0.66
ltype	0.33	0.33	n. a.	0.33	0.33
lmat	1.0	1.0	n. a.	1.0	0.66
lint	0.25	0.75	n. a.	0.25	0.25
lprm	0	1.0	n. a.	0	0
Index 1 (LVAU, unweighted)	0.6907	0.7841	0.9140	0.6818	0.6004
Index 2 (LVAW, weighted)	0.7000	0.7485	0.8987	0.6853	0.6044
Siklos 1994	0.56	0.39	0.46	0.33	n. a.
Cukierman et al. 1998 (LVAW)	0.69	0.67	0.46	0.62	0.6

For definitions and codes, see Cukierman (1992), table 19.1, pp. 373–376.

I will comment in detail on the rationale of assigning scores on individual subitems to the CEEC-5 below (see table 1). The first component of the Cukierman index, assessing the terms of office of the chief executive officer (code: *too*) yields the second best score for all CEEC-5. All CEEC-5 have stipulated six-year terms for their central bank governors, the ideal case being perceived as a minimum term of eight years by Cukierman. Similarly, the Statute of the ECB requires that the term of office for the top officials of the ECB (members of the Executive Board) is set at eight years, with no

1 For the detailed codes and definitions, see Cukierman (1992), table 19.1, pp. 373–376 or Cukierman et al. (1992), table 1, pp. 358–359.

reappointment possible (see Article 11.2, Statute of the European System of Central Banks and of the European Central Bank, 1992). However, a major difference is that the Statute's requirement applies to *all* members of the ECB Executive Board (not only to the chief executive officer). Moreover, the minimum term of office for governors of national central banks (NCBs) is established as five years, but of course their term may be longer (see Article 14.2 of the Statute, 1992).

The assignment of scores to the CEEC-5 on the appointment procedures of the central bank governor (code: *app*) inevitably involves a considerable degree of subjectivity resulting from the interpretation of laws, because the relevant provisions in the CEEC-5 laws do not clearly fit into the categorization offered by Cukierman. According to Cukierman, appointment solely by the central bank board or by a council composed of members from executive and legislative branches as well as from the central bank board would yield the highest scores (1.0 and 0.75, respectively). Appointment solely by the legislative branch (Congress, king) comes third, scoring 0.5, followed by appointment through the council of ministers (0.25) or by individual government members (0.0). None of these options can be found in the CEEC-5 central bank legislation. Consulting the Maastricht Treaty on this issue, analogies can hardly be drawn for assessing national legislation either.¹) Therefore, the following approach was taken: If the central bank governor is appointed by the president of state (Czech Republic), a score of 0.5 was assigned, if this has to be preceded by a proposal or recommendation from a member of the government (Hungary and Slovakia), the score was reduced to 0.25. For Poland and Slovenia, where the central bank governor is appointed by parliament on proposal of the president of state, the score was set at 0.5. The reasoning behind this approach is that the presidents of state typically are not directly involved in economic policy and are generally elected for a longer term than governments. Furthermore, appointment by parliament seems to be preferable to government appointment because the opposition parties have to be included in the discussion. Once governments come into play, even if they only have the right to propose or recommend a candidate, there are – as recent experience in Hungary has shown – numerous possibilities to delay or complicate the appointment of central bank officials. I will come back to this in more detail in section 2.2 of the paper.

It is interesting to note that only the Slovene legislation gains a maximum score on the possible dismissal of the central bank governor (code: *diss*) according to Cukierman's methodology, because the law does not contain any provision for his potential dismissal. Consequently, the other four countries, whose legislation is considerably closer to the Maastricht requirements in this respect by limiting dismissal to nonpolicy reasons, are rated only at the second best score. However, the national legislation of these four countries still contains a variety of provisions on potential reasons for dismissal (see Radzyner and Riesinger, 1997, table 3), whereas the Maastricht Treaty

¹ According to the Statute, ECB top officials are appointed "by common accord of the governments of Member States...on recommendation from the Council after it has consulted the European Parliament and the Governing Council." See Article 11.2 of the Statute.

restricts these reasons to two predefined cases: first, the conditions for the performance of their duties are no longer fulfilled or, second, officials are guilty of serious misconduct (Article 11.4. and Article 14.2. of the Statute, respectively).

Assessing the incompatibility clauses according to Cukierman's methodology (code: *off*) proves to be problematic for the Hungarian legislation. As such regulations are in place but do not explicitly prohibit the CEO to hold any other office in government, a score of 0.5 was assigned. While the Maastricht Treaty itself does not explicitly stipulate any incompatibility clauses for members of decision-making bodies, the Statute contains a provision requiring that the members of the ECB Executive Board be full-time central bankers; any other occupation is prohibited "unless exemption is exceptionally granted by the Governing Council" (see Article 11.1 of the Statute). Moreover, the EMI derived the general principle that "... membership of a decision-making body involved in the performance of ESCB-related tasks is incompatible with the exercise of other functions which might create a conflict of interest." (see EMI, 1996).

Following Cukierman's indexing system, the judgment of the central bank's authority to formulate monetary policy (code: *monpol*) does not take into account the legal provisions on the design of exchange rate policy in the CEEC-5. This could, however, somewhat change the picture, as the central bank laws of Hungary and Poland assign a rather important role to the governments in this area (for Hungary, see Radzyner and Riesinger, 1997). The new Polish legislation stipulates that "the NBP shall carry out the foreign exchange policy established by the Council of Ministers in consultation with the Council" (see Article 24 of The Act on the National Bank of Poland, 1997).

It is worth noting that the issue of policy coordination with the government (code: *adv*) only allows for one of two scores, depending on whether the central bank is actively involved in the preparation of the government's budget or not. As the CEEC-5 legislation contains a variety of provisions regulating policy coordination mechanisms between the central bank and the government (see Radzyner and Riesinger, 1997, table 1), a more detailed scale of scores would possibly produce a more balanced picture of the policy coordination status of the central banks. In general, it has to be emphasized that the participation of government members in meetings of the central bank's highest decision-making body even if only in an advisory capacity (with no right to vote) – as stipulated in a number of the CEEC-5 laws – may be debatable in the context of Maastricht Treaty requirements.

According to Cukierman, the maximum score on the statutory objectives of central banks (code: *obj*) may only be assigned if price stability is mentioned as the only goal and, in addition to that, the final say of the central bank in case of conflict with the government is explicitly mentioned in the law. Consequently, Poland, whose legislation clearly stipulates price stability as the only goal and therefore can be seen as being in line with Maastricht requirements, merely records the second best score. As to the other four countries, the wording of their laws does not unambiguously reflect the objective of price stability; therefore, they were all assigned scores of 0.6.

The issue of potential conflict resolution, however, seems to be included twice in the Cukierman index, as it also figures under the code *conf*.

Turning to the limitations on central bank lending to the government, the Polish legislation is the only one in the CEEC-5 that prohibits any fiscal financing. The Polish Constitution, which was endorsed by referendum in 1997, stipulates this.¹⁾ The remaining four countries still permit direct central bank credit, albeit under strictly limited circumstances, be it in the form of advances (code: *lla*, Hungary and Slovenia) or purchases of government securities (code: *lls*, Czech Republic and Slovakia). Consequently, Poland is the only country that is assigned the maximum score of 1.0 for the subitems *lla* and *lls*; scores on the other subitems asking for detailed regulations on possible central bank lending to the government are by definition not available (n.a.) in the case of Poland. The Maastricht Treaty requires an absolute prohibition of any direct central bank lending to the public sector (see Article 101.1 of the EC Treaty, ex-Article 104.1), so this corresponds to the Cukierman index requirement for a maximum score.

As to the circle of potential borrowers (code: *lwidth*), only the Hungarian legislation clearly limits this circle to the central government alone, thus qualifying Hungary for the maximum score (see Section 19.1 of Act LX of 1991 on the National Bank of Hungary). The Czech, Slovak and Slovene laws are less clear, as they mention the Czech, Slovak and Slovene Republics as the potential beneficiaries of central bank lending;²⁾ therefore, scores of 0.66 were assigned to these countries.

It is worth noting that the Cukierman scores on the type of limits on direct central bank credit to the government (code: *ltype*) produce identical results for the Czech Republic, Hungary and Slovakia, because the central bank laws of these countries all define these limits as a percentage of government revenues. The score, however, does not fully reflect existing differences in legislation. While the Czech and Slovak laws refer to previous year's budget revenues – a figure which typically may no longer be changed when central bank credit is negotiated – the Hungarian and the Slovene legislation refer to the current year's (planned) budget figures.³⁾ For Slovenia, the score was also set at 0.33, although the definition of the maximum amount of direct central bank credit to the government did not clearly fit any of Cukierman's categories.⁴⁾

Reviewing CEEC-5 central bank legislation on the maximum maturity of central bank credit to the government (code: *lmat*), regulations in most cases seem to be even stricter than Cukierman's maximum score would require,

1 The Act on Public Finances adopted in November 1998 implemented the constitutional prohibition. No separate regulation of this issue can be found in the central bank law. See *The Act on the National Bank of Poland* (1997).

2 See Article 30.2 of the Act on the Czech National Bank, Section 25.2 of *The National Bank of Slovakia Act*, and Article 61 of *The Law on the Bank of Slovenia*, respectively.

3 See Article 30.2 of the Act on the Czech National Bank, Article 19 of Act LX of 1991 on the National Bank of Hungary, Section 25.2 of *The National Bank of Slovakia Act* and Article 61 of *The Law on the Bank of Slovenia*, respectively.

4 According to the Slovene legislation, these limits are defined as 5% of the annual budget and as 20% of the anticipated budget deficit (see Article 61 of *The Law on the Bank of Slovenia*).

with three months in the Czech Republic and Slovakia and 15 days in Hungary, as opposed to Cukierman's maximum requirement of six months.

Whereas the Czech, Slovak and Slovene central bank laws lack any stipulation on the level of interest rates to be applied and are therefore scored at 0.25 (code: *lint*), Hungary is assigned a score of 0.75, with central bank law prescribing the prime rate to be applied as a basis for central bank lending to the government (see Section 19.5 of Act LX of 1991 on the National Bank of Hungary).

Only the Hungarian central bank law contains an explicit prohibition of lending in the primary market¹⁾ (code: *lprm*), whereas Slovene legislation lacks a provision in this area. As mentioned above, the Czech and Slovak laws allow for purchases of securities directly from the government (see code *lls*). Consequently, identical scores assigned to the Czech Republic, Slovakia and Slovenia again do not fully reflect differences between national legislations.

2.1.2 The Grilli-Masciandaro-Tabellini (GMT) Index

In order to compare computed results obtained by applying the Cukierman methodology, measurements of legal CBI according to the GMT index are presented in table 2. For this exercise, I partly draw on results computed by Maliszewski. Scores on Hungary and Poland are updated in correspondence with the recently changed central bank legislation. Moreover, a few changes to Maliszewski's scores on the Czech Republic and Slovakia due to differences in interpreting the central bank law are marked in the table (see Maliszewski, 1997).

The GMT index is composed of two subindices, defined as political and economic independence of the central bank (see Grilli et al., 1991). The concept of political independence comprises nine subitems covering appointment procedures for the members of the central bank's highest decision-making body, the relationship between this body and the government, and the formal responsibilities assigned to the central bank. The economic independence of the central bank is composed of seven subitems, which include the issue of central bank financing of the budget as well as the nature of monetary instruments. Every subitem is scored using a binary system under which an asterisk is either assigned or not assigned. The overall index of legal CBI is obtained by a simple addition of unweighted scores on political and economic independence.

A few remarks on measuring the GMT index following Maliszewski's methodology appear to be in order: The assignment of asterisks for the appointment procedure of the central bank governor crucially depends on the interpretation of Maliszewski's item G1. According to Maliszewski, one asterisk is assigned if the governor is not appointed by the government (which is the case in all CEEC-5) and an additional asterisk is assigned if the governor is not appointed by parliament only. Consequently, Poland and Slovenia, where the governor is appointed by parliament on proposal of the president of state are assigned two asterisks. In my interpretation, the appointment of the governor of Slovakia's central bank also qualifies for

1 See Section 19.3 of Act LX of 1991 on the National Bank of Hungary.

Table 2

	Czech Republic	Hungary	Poland	Slovakia	Slovenia
Legal CBI in the CEEC-5 Measured by the GMT Index					
for Transition Economies					
Political independence					
Governor					
G1	**	*	**	* ¹⁾	**
G2	*	*	*	*	*
Board					
B3	*	*	*	*	*
B4	*	*	*	* ²⁾	*
B5	*	*	*	*	*
Relationship with government					
R6	*	*	*	*	*
R7	*	*	*	*	*
Constitution					
C8	*	*	*	*	*
C9	*	*	*	*	*
Index P. I.	9	7	9	6	8
Economic independence					
Direct credit to the government					
D1	*	*	*	*	*
D2	* ³⁾	*	*	* ³⁾	*
D3	*	*	*	*	*
D4	*	*	*	*	*
D5	*	*	*	*	*
Monetary instruments					
M6	*	*	*	*	*
M7	*	**	*	*	*
Index E. I.	4	8	7	5	4
Overall Index O. I.	13	15	16	11	12
O. I. Maliszewski (1997)	14	9	12	12	12

Source: Maliszewski (1997), tables 1 and 2, pp. 22–23. Results on Hungary and Poland have been updated based on the new central bank legislation.

¹⁾ Maliszewski assigns no asterisks to Slovakia on item G1.

²⁾ In contrast to Maliszewski, no asterisk is assigned to Slovakia on item B4.

³⁾ In contrast to Maliszewski, no asterisk is assigned to the Czech Republic and Slovakia on item D2.

two asterisks, because under the central bank law, the governor “is appointed by the president of state on recommendation of the government with the consent of parliament” (see section 7.2 of The National Bank of Slovakia Act). Furthermore, under item B4, Maliszewski demands that all members of the central bank’s highest decision-making body be appointed for more than five years. In my understanding, this requirement is not fulfilled by the Slovak central bank law, which stipulates a four-year term for three members of the Bank Board (see section 7.4 of The National Bank of Slovakia Act). Interestingly, Slovenia scores least under item B5, the reasons for dismissal of the central bank governor, because it is the only central bank law which does not contain any relevant provisions. The same fact yielded the maximum score among the CEEC-5 when the Cukierman methodology was applied (see above).

Turning to the index assessing the economic independence of the central bank, it is worth noting that items D1 to D5 all carry asterisks for Poland,

where central bank lending to the government is completely prohibited. A logical interpretation of the codes would require an entry such as “not available,” but this change of procedure would entail a different methodology for aggregating the seven subitems (to solve this problem, calculating a weighted average could be considered). Moreover, my interpretation of the Czech and the Slovak central bank laws on item D2 deviates from that of Maliszewski, who finds that central bank lending is stipulated to be done at market interest rates (or at the central bank base rate). To my understanding, neither of the two laws contains a regulation on the level of interest rates to be applied to central bank credits to the government. Therefore, no asterisks are assigned to the Czech Republic and Slovakia on item D2.

Comparing the results with the findings of Maliszewski, differences can be explained as follows: For Hungary and Poland, the overall index of legal CBI shows a substantial increase, which is connected with the recent changes in central bank legislation. Differences of indices for the Czech Republic and Slovakia are considerably smaller and are due to differences in the interpretation of laws by the authors. For Slovenia, the assessment applying the GMT index is identical to that performed by Maliszewski.

2.2 Measuring Actual Independence – The Turnover Rate of Governors

As pointed out in Radzyner and Riesinger (1997), the implementation of central bank law in practice plays an equally important role when assessing the degree of CBI. The concept of actual CBI comprises a number of different aspects, such as the turnover rate of governors, the personalities of central bank governors, the practice of overriding the central bank by budget laws or the design of policy coordination mechanisms in practice. As the present paper focuses primarily on measuring the degree of CBI, I will restrict the analysis of actual CBI to the turnover rate of governors, which was introduced by Cukierman in 1992 and proved to be a reasonably good proxy to measure actual CBI in particular for less developed countries (for more details on further aspects of actual CBI, see Radzyner and Riesinger, 1997). The turnover rate of governors is defined as the average term of office of central bank governors in different countries and is calculated by dividing the number of governors within a given period of time by the length of this reference period (expressed in years or fractions of years).

In this paper, the turnover rate of governors in the CEEC-5 will be calculated, thus updating the calculations undertaken in 1997 (see Radzyner and Riesinger, 1997, table 4, p. 77). At the outset, let me make a few methodological remarks. As the reference period, the date of promulgation of the respective central bank law was chosen as a starting point in 1997. In order to ensure continuity and a minimum length of the observation period, I retained this approach, although Poland has adopted a new central bank law in the meantime. Therefore, the criterion for the starting point chosen will be reformulated as being the date of promulgation of the *first Western-type* central bank law. “Acting” central bank governors – typically vice governors who serve as governors for an interim period without being formally appointed to this position – will not be counted in the total number of governors. This approach is relevant for the scores of the Czech Republic and

Poland. Moreover, governors who have been reappointed to their offices to serve a second term will only be counted once. This is relevant for the results on the Czech Republic, Poland and Slovenia.

Table 3

Turnover Rate of Governors in the CEEC-5¹⁾

	Governors	Period of reference	Turnover rate of governors	Results of 1997 ²⁾
Czech Republic	Josef Tošovský , Feb. 17, 1993, to Dec. 17, 1997, ³⁾ reappointed on July 20, 1998, for another six years	Dec. 1992 to Aug. 2000	0.13	0.23
Hungary	Péter Ákos Bod , Dec. 9, 1991, to Dec. 14, 1994 György Surányi , since March 1, 1995	Dec. 1991 to Aug. 2000	0.23	0.38
Poland	Zdzisław Pakuła , July 13, 1988, to Sep. 11, 1989 Władysław Baka , Sep. 21, 1989, to Jan. 24, 1991 Grzegorz Wójtowicz , Jan. 25, 1991, to Aug. 9, 1991 Hanna Gronkiewicz-Waltz , ⁴⁾ since March 5, 1992, reappointed on Feb. 19, 1998, for another six years	Feb. 1989 to Aug. 2000	0.35	0.49
Slovakia	Vladimír Masár , Aug. 1, 1993, ⁵⁾ to July 30, 1999 Marián Jusko , since July 30, 1999	Nov. 1992 to Aug. 2000	0.26	0.23
Slovenia	France Arhar , since June 25, 1991, reappointed on April 1, 1995, for another six years	June 1991 to Aug. 2000	0.11	0.17

¹⁾ The turnover rate is calculated as the number of governors divided by the length (in years or fractions of years) of the reference period.

²⁾ See Radzyner and Riesinger (1997).

³⁾ In the interim period: Vice Governor **Pavel Kysilka**, December 18, 1997, to July 19, 1998.

⁴⁾ In the interim period: Deputy Governor **Andrzej Topinski**, October 8, 1991, to April 3, 1992.

⁵⁾ Before: Vice Governor **Marián Tkáč**, January 1, 1993, to July 29, 1993.

Looking at the results shown in table 3, all CEEC-5, with the exception of Slovakia, have improved their turnover rate as compared to the calculations performed in 1997. The explanation for this is that the observation period is three years longer, combined with the fact that almost no changes took place in the top positions of the central banks from 1997 to the cutoff date of calculations (i.e. August 31, 2000). However, as the reference periods are still very short, the calculated results have to be interpreted with caution. To draw a comparative picture of the degree of actual CBI in the CEEC-5, it is worth taking a closer look at the actual political developments motivating changes in the central banks' decision-making bodies as well as recent debates on the independent status of the central bank in some of the CEEC-5.

An annex to this paper contains a detailed review of recent political discussions revolving around the personalities of top central bank officials in the CEEC-5. This review clearly shows that calculated turnover rates do not truly reflect the state of actual CBI in these countries. Moreover, evidence from Hungary and Slovakia, where the government has a say in the appointment procedures of the central bank governor according to the laws,¹⁾ seems to suggest that governments actively use this possibility to exert political pressure on the central bank or at least to politically influence the choice of candidates.

¹⁾ In Hungary, the central bank governor is appointed by the state president on proposal of the prime minister. According to the Slovak legislation, the state president appoints the central bank governor on recommendation of the government, with the consent of parliament. See above.

Another interesting indicator of the degree of actual CBI which seems to have gained relevance in some of the CEEC-5 recently is the way in which political debates preceding possible or necessary changes in the central bank law unfold and their intensity. One case in point is Slovakia, where the parliament started to discuss a controversial draft amendment to the central bank law which had been put forward by the Mečiar government in early 1998. The government proposal would have included an increase in the number of central bank governing board members from eight to ten, with five members to be named by the government. Moreover, the draft proposed would have given parliament the right to approve the central bank's budget, and, even more importantly, it would have increased central bank participation in the short-term covering of the state budget deficit (see Reuters, May 18, 1998). The draft, however, was withdrawn from the parliament's agenda a few months before the elections and was not taken up again after the political change in Slovakia in September 1998.

A more recent example of a political debate on central bank law is the Czech Republic, where a draft amendment to the central bank law has been debated by parliament since the beginning of 2000. While the initial draft had aimed at adapting the present legislation to the Maastricht Treaty requirements, a number of modifications potentially threatening the independent status of the central bank were put forward by the opposition parties during the parliamentary debate. In July 2000, the amendment was passed by the lower house of the Czech parliament.¹⁾ At the time of the editorial close (September 30, 2000) it was pending approval by the upper house. Although the final outcome of this conflict remains to be seen, it can be said that this debate on the legal status of the central bank definitely did not help to strengthen the public's awareness of the relevance of CBI in practice.

2.3 Interpretation of the Computed Results and Critical Remarks on the Indices Applied

In the first part of this section, I would like to comment on the results obtained for the CEEC-5 by applying the two indices for legal CBI. Moreover, the results will be compared with those of other authors. Furthermore, some strengths and weaknesses of these indices with regard to the particular set of five countries and their goal to become EU members will be briefly discussed. In the second part of this section, I will interpret the measured turnover rate of governors and assess the usefulness of this index.

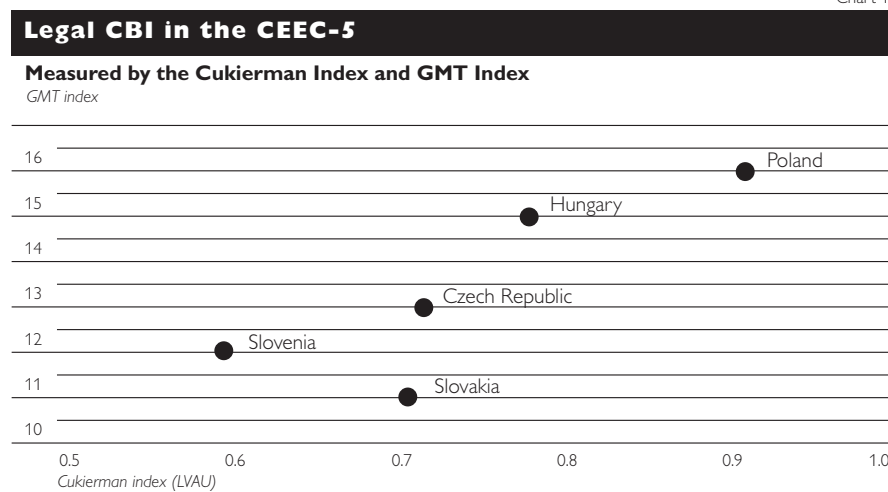
2.3.1 The Indices for Legal CBI

Comparing the results on legal CBI in the CEEC-5 calculated by applying the Cukierman index, the following picture emerges: Poland records by far the highest score, followed by Hungary. Results on the Czech and Slovak legis-

1 Criticism was voiced i.a. by the ECB in an unofficial statement made available to the CTK (the Czech news agency) on July 28, 2000, as well as by the European Commission's delegation in the Czech Republic (see CTK, July 27, 2000). The problematic issues include, in particular, the CNB's obligation to consult the exchange rate regime and the inflation target with the government. Moreover, it was criticized that the "operational" budget of the CNB will be subject to parliamentary approval.

lation seem to be rather close to each other, while Slovenia appears last in this ranking (see table 1). The rankings are identical for both indices, the unweighted (LVAU) and the weighted (LVAW) index, though scores seem to converge slightly when the weighted index is applied. Calculations according to the GMT index largely seem to confirm obtained results, the main difference being the assessment of Slovakia, which falls behind Slovenia when the GMT methodology is used. To review the degree of compliance with Maastricht Treaty requirements, it is interesting to look at the European Commission's assessment published in the 1999 progress reports. According to the Commission, Poland is the only country whose central bank legislation needs only "some technical amendments" in order to fully comply with the body of EU law. Not surprisingly, the Commission's main criticism concerns the issue of central bank financing to the government, which is still permitted, though to a limited degree, in the remaining four countries. Moreover, the Commission identifies weaknesses in the area of personal independence for Slovakia's and Slovenia's central bank laws (see European Commission, 1999 a–e, chapters 3.3, respectively). To sum it up, the European Commission's assessment largely corresponds to the findings derived from the measurement exercise of legal CBI.

Chart 1



At first glance, a comparison of the computed results of legal CBI in the CEEC-5 with that in the Baltic states using the Cukierman index suggests that the degree of CBI in the CEEC-5 is substantially higher than that observed in the Baltics (see Äimä, 1998). Differences in results, however, mainly seem to originate from the particular aggregation methodology introduced by Äimä in order to account for the nonrelevance of several subitems for currency board arrangements.¹) Results computed following the GMT index render a picture similar to the one described above, putting the three Baltic countries clearly behind the CEEC-5, with only Latvia reaching the

¹ Only one index calculated by Äimä can be drawn upon for comparison (referred to as "index 1" in the paper); the results are as follows: 0.64 (Latvia), 0.61 (Lithuania) and 0.55 (Estonia). The second index ("index 2") obviously leaves out a subset of four variables. See Äimä (1998).

same level as Slovakia. Upon closer inspection, the Baltics' scores for the sub-index on political independence are similarly high as those for the CEEC-5. Again, differences in the calculated results stem from the fact that those items of the index on economic independence dealing with limits to central bank lending to the government are considered not to be relevant for the countries that have adopted currency boards, and are consequently not taken into account in the aggregated score.¹⁾

Looking back at measurements of legal CBI undertaken for earlier central bank legislation in some of the CEEC-5, the findings of Siklos (1994) provide an interesting reference. As mentioned before, Siklos applied the Cukierman methodology to measure CBI in the Czech Republic, Hungary, Poland and Slovakia. A comparison of his results with the calculations in this paper clearly reveals that all four countries have substantially increased their degree of legal CBI according to the Cukierman index. The results, however, may not be fully comparable, as Siklos left out a number of components of Cukierman's subitem "limitations of lending" (code: LL). A comparison with the results presented by Cukierman et al. in 1998 confirms that the adoption of new central bank laws in Hungary and Poland definitely increased their degree of CBI, so that both countries are assigned higher scores in this paper as compared to the results of Cukierman et al. (who measured legislation as of 1991 for these two countries, see Cukierman et al., 1998). The difference in the score on Slovakia is obviously due to subjectivity in the interpretation of the law. This can be explained mainly by the particular approach taken in this paper, as the rationale of Maastricht requirements was taken into account whenever more than one interpretation for individual subitems of the Cukierman index was possible (for details, see section 2.2 of this paper). Moreover, differences between the computed results stemming from the subjectivity of interpretation once more seem to justify own calculations designed to ensure equal treatment in a cross-country comparison.

Comparing requirements imposed by the Cukierman index to the Maastricht Treaty requirements, it is interesting to note that in some areas the Cukierman index seems to be stricter than the Treaty. A case in point is the subitem on legislated central bank objectives, where the maximum score may only be assigned if price stability is mentioned as the only goal and, in addition to that, if the final say of the central bank in conflicts with the government is explicitly mentioned in the law (see section 2.1.1 of this paper). On the other hand, in some areas, the Cukierman index is less strict than the Maastricht Treaty requirements, such as the issue of personal independence. Whereas the Treaty requires that regulations on appointment procedures, terms of office, reasons for potential dismissal and incompatibility clauses apply to *all* members of the highest decision-making body of the ECB (i.e. the Executive Board; see Article 11 of the Statute), the Cukierman index only examines the legal status of the chief executive officer. In this context it is interesting to note that for national legislation of Member States the Statute only contains explicit requirements concerning the legal status of the

¹ A similar problem was identified for Poland when calculating the GMT index, but it was dealt with in a different manner. See section 2.1 of this paper.

national central bank's (NCB's) governor, while this was interpreted to pertain to all members also of NCBs in the 1998 Convergence Report (see EMI, 1998, p. 12). What does this mean for the scores of the CEEC-5 legislation? As these countries primarily aim at adjusting their laws to Maastricht standards, it can be seen as unlikely that they will record a maximum score according to the Cukierman methodology in the foreseeable future on the subitems where the Cukierman index is stricter than Maastricht standards. By analogy, for the subitems where the Cukierman index is somewhat less strict than Maastricht standards, the present CEEC-5 legislation may already qualify for a maximum score according to the Cukierman methodology, although the EU still sees a need for adaptation to Maastricht requirements. Another general remark relates to the fact that scores on individual items in some cases do not fully reflect the variety of different regulations in CEEC-5 legislation. This became particularly evident when the subitem on the type of limits on direct central bank credit (code: *ltype*) was analyzed (see section 2.1.1 of this paper). Moreover, some issues in the field of financial independence, such as procedures to approve the central bank's budget, are not covered by the Cukierman index at all. One subitem, namely that dealing with the potential dismissal of the central bank governor, even seems to reveal contradictory views. While the nonexistence of such a provision rendered the maximum score for Slovenia, this will have to be changed in order to fulfill Maastricht Treaty requirements.

The GMT index is less deeply structured than the Cukierman index, offering a choice of only two answers for each of the subitems. Consequently, the assignment of scores is a comparatively simple procedure involving the assignment of an asterisk or a blank. Similarly, the aggregation is done by simply adding up the number of asterisks assigned. Moreover, as pointed out earlier, the assignment of scores on the five subitems on direct credit to the government (code: D1 to D5) seems to include a slightly illogical element for countries where direct credit to the government is absolutely prohibited. A logical interpretation of the definitions would require the assignment of blanks for items D1 to D5, although this approach would at the same time reduce the outcome for the overall index (see section 2.1.2 on Poland).

To sum it up, apart from the above-mentioned methodological precautions, both indices rendered the expected results within the overall framework.

2.3.2 The Turnover Rate of Governors as a Proxy for Actual CBI

In general, it has to be emphasized that turnover rates calculated for the CEEC-5 have to be interpreted with great caution. Due to the relatively short observation period of a maximum of eleven years, the results are extremely sensitive to changes of both the numerator (the number of governors) and the denominator (the length of the observation period). The results are critically dependent on whether to include "acting governors" in the total number of governors of the country examined, and the length of the observation period varies with the definition of its starting date (see section 2.2 of this paper).

In this context it is interesting to note that Cukierman et al. defined an upper threshold for the turnover rate of 0.2 to 0.25 (corresponding to one governor every four to five years, which is equal to the electoral cycle in most countries), where any measure exceeding this threshold is considered large (see Cukierman et al., 1993). Looking at the results calculated for the CEEC-5, three of the five countries examined, namely Hungary, Poland and Slovakia, still show results close to the defined upper threshold turnover rate (see table 3). Cukierman argued elsewhere that an extremely low turnover rate may not reflect a high degree of CBI, but may in fact indicate that a governor is willing to do whatever the government asks him to do (see Cukierman et al., 1992). While this lower threshold has not yet been quantified in the literature, the Maastricht Treaty may implicitly contain an answer to this question, as it limits the maximum duration of office of members of the ECB Executive Board to eight years, with no reappointment possible (see Article 112 of the EC Treaty, ex-Article 109 a).¹) This would correspond to a minimum turnover rate of 0.125 (one governor every eight years). In this sense, the calculated score for Slovenia would be below this lower threshold, with the Czech Republic being just slightly above.

To sum it up, as pointed out in the detailed country discussion, a closer look at the recent political debates on CBI as well as political influences on appointments of governors clearly shows that the results on the turnover rate of governors do not truly reflect the degree of actual CBI in the CEEC-5.

3 Summary and Conclusions

Reviewing the computed measures on the degree of legal CBI in the CEEC-5, it can be concluded that both methodologies applied largely yield the expected results, also when compared to the Maastricht Treaty requirements. While the overall degree of legal CBI is found to be comparatively high in all countries examined, the still existing possibility of central bank credit to the government can be identified as the main weakness in all countries but Poland; it substantially reduces the score of the other four countries, with Poland showing the best results for both measures of legal CBI. This largely confirms the findings of the previous study (see Radzzyner and Riesinger, 1997).

Moreover, updated measures of the turnover rates of governors do not seem to fully reflect the degree of actual CBI in the CEEC-5. Recent political debates on changes of central bank legislation as well as discussions preceding the appointment of central bank top officials draw a picture that clearly differs from the calculated results on turnover rates.

A comparison of requirements imposed by the Cukierman index to the Maastricht Treaty requirements reveals that the Cukierman index seems to be stricter than the Treaty in some areas, and less strict in other areas. This has potential implications for the future measurement of legal CBI not only in the CEEC-5, but also in other EU accession countries, if the

¹ The minimum term of office for governors of NCBs is five years (see Article 14.2 of the Statute), which would correspond to a lower threshold of the turnover rate of 0.2. But of course their legislated term may be longer.

Cukierman methodology is applied. As amendments to EU candidates' legislation will primarily aim at fulfilling the Maastricht Treaty requirements in the foreseeable future, this implies that they are unlikely to record maximum scores on those subitems where the Cukierman index is stricter and, by analogy, that present national legislation may already qualify for a maximum score according to the Cukierman methodology on other subitems, although the EU still sees a need for adaptation to Maastricht requirements.

Annex

Slovenia exhibits the lowest turnover rate of governors; Governor France Arhar was reappointed to a second term of office in 1995. However, in the wake of the government crisis early this year, rumors spread that France Arhar was offered a political position in the newly founded united conservative party. Meanwhile, Governor Arhar repeatedly reaffirmed his intention to remain central bank governor until the end of his second term of office (see Reuters, April 13 and August 3, 2000, respectively).

The turnover rate of governors for the Czech Republic is also comparatively low, ranking second among the CEEC-5. But taking a closer look at the recent history of the Czech National Bank's top management, a somewhat different picture emerges. In December 1997, Governor Josef Tošovský left the central bank to become prime minister for an interim period until early elections. Interestingly, he did not formally resign as a central bank governor, but was dismissed from his post by President Václav Havel because of incompatibility of a government position with his office according to the central bank law. As Tošovský declared his intention to return to his function when he took over his post as a prime minister, Vice Governor Pavel Kysilka was appointed acting governor only for this interim period. In fact, Tošovský was formally reappointed by President Havel in July 1998 for six years, a few weeks after the parliamentary elections had been held. Moreover, the turnover rate of governors calculated for the Czech Republic may change in the near future, as Mr. Tošovský officially submitted his candidacy for a position in the EBRD in June 2000.¹⁾

The calculated turnover rate for Hungary comes third among those of the CEEC-5, substantially lower than in 1997. This is due to the fact that no personnel changes have taken place since 1997, as Governor Surányi was still serving his six-year term. However, the relationship between the Hungarian government and the central bank (NBH) seemed to be marked by growing tension between Governor Surányi and the government. Following a dispute over losses made by an NBH subsidiary in Vienna in the first half of the 1990s, since September 1999 the government had refused to appoint any new vice governors to the central bank until a parliamentary committee closed the investigation of the causes. Meanwhile, the terms of two vice governors (Szapáry and Kovács, September and December 1999,

1 However, a final decision had not been taken at the editorial close. See Reuters, various reports, June to September, 2000.

respectively) have expired and successors have not yet been appointed, so that currently only one vice governor remains in office.¹⁾

It is interesting to note that Slovakia's calculated turnover rate is the only rate among the CEEC-5 that increased from 1997. This is merely due to the fact that central bank governor Vladimír Masár was not reappointed when his six-year term of office expired, but was replaced by his deputy, Marián Jusko.

As in 1997, Poland still records the highest rate of turnover of governors among the CEEC-5. This score, however, is solely due to the frequent changes of central bank governors in the period from 1989 to 1992, and does not reflect Poland's successful track record in terms of CBI since the appointment of Hanna Gronkiewicz-Waltz in March 1992. During her first term of office, a number of important regulations on CBI were included in the new Polish Constitution, thus providing the legal basis for the new central bank law which was adopted a few months after Governor Gronkiewicz-Waltz was reappointed.

Cutoff date: September 30, 2000.

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¹ Although the NBH's supervisory board meanwhile reported to parliament that no irregularities by the current management could be found on examination of this issue, a decision on appointing new vice presidents had not yet been taken at the editorial close.

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The Development of the Croatian Banking Sector since Independence

Stephan Barisitz¹⁾

I Introduction

Like other elements of structural reform, banking reform in independent Croatia has proceeded relatively slowly, compared to the most advanced central European countries. The delicate geopolitical situation of the country, its involvement in wars on its own territory and in Bosnia in the first half of the 1990s, authoritarian political tendencies and Croatia's long-standing political isolation from the EU are not likely to have created an atmosphere conducive to structural reform. But the Croatian government did opt for a radical macroeconomic stabilization program in 1993 that met with impressive success for a number of years and remains an important element of the economic strategy of the authorities even today (status: November 2000). The fact that Croatia did not keep up the momentum of reforms by failing to sufficiently spread them to the structural and institutional spheres even after the most preoccupying security problems had been overcome caused the country to fall back in the ranks of reforming transition economies. The pivotal relationship of macrostructural links and their effect on a country's economic performance is vividly illustrated by the eventful history of Croatia's banking sector during the last decade, featuring repeated banking crises and rehabilitation efforts.

This study attempts to trace and analyze the development of banking in Croatia since the demise of the former socialist Yugoslavia and Croatian independence (1991). Following a chronological structure, chapters 2–9 offer an overview of historic evolutions and interrelationships. Specifically, the development of legal foundations, banking supervision, banks' major sources of assets, liabilities, earnings and related changes, bank restructuring, rehabilitation programs and the role of foreign banks and FDI are analyzed. Chapter 10 gives a brief summary and focuses on some conclusions and recommendations.

2 Socialist Yugoslav Origins

In the former Socialist Federative Republic of Yugoslavia (SFRY) a two-tier banking system had already existed since the early 1960s. Its creation was connected with a number of decentralizing measures which put an end to the central planning system in Yugoslavia, as it had been copied from the USSR after World War II. At the time, two-tier banking consolidated the economic system of workers' self-management or "market socialism" of Yugoslav flavor. Workers' self-management was based on decentralized planning and "social ownership" of the means of production, a term not clearly defined and denoting neither state nor private ownership. Pervasive price controls existed. Workers' collectives and elected directors were the most important decision-making bodies in firms. However, the communist party authorities often intervened in decision making, particularly at a local level,

1 Foreign Research Division, Economic Analysis and Research Section, OeNB. The standard disclaimer applies. The author is thankful for valuable comments made by Hermine Vidovic (WIIW), Thomas Nowotny (OeNB), Kurt Pribil (OeNB) and Doris Ritzberger-Grünwald (OeNB). The author also wishes to thank Hermine Vidovic and Thomas Nowotny for materials provided and is grateful to Andreas Nader (OeNB) for statistical support.

where political and economic elites typically tended to intermingle. The National Bank of Yugoslavia (NBY, central bank) in Belgrade had branches in all constituent republics, including Croatia, and most commercial banks specialized in certain regions.

The Law on Principles of the Credit and Banking System, adopted in 1977, provided the detailed legal framework for banking in socialist Yugoslavia. Although commercial banks were also socially owned, they were managed by a “bank assembly,” consisting of the “founders” of the bank as well as of representatives of the staff. The bank assembly elected a director. Commercial banks could be founded by state institutions, enterprises or social organizations. Founders were represented in the assembly according to the amount of their capital participation, whereas the staff representation could not take more than 10% of votes. Therefore, in contrast to firms, credit institutions were strongly influenced by their outside founders.¹⁾ Typically, most banks were founded by a number of enterprises and organizations, at times including some public participation; their most important assignment was to supply credits on the most favorable (cheapest) terms to founder enterprises (connected lending). Some of them have also been strongly connected to regional or national political hierarchies.

Given regional specialization and some cartel agreements on the level of interest rates on household deposits, competition was limited and banks would mainly procure funds from the local population. A major part of these funds consisted of foreign exchange deposits (mostly denominated in Deutsche mark) stemming from earnings from tourism and remittances of “guest workers” living abroad.²⁾ The foreign currency was then surrendered to the NBY, which in return supplied the commercial banks with the equivalent amount in Yugoslav dinars (YUD) and the right to purchase foreign exchange from federal authorities. Owing to the dominating incentives for bank behavior and to possibilities of political interference, commercial banks’ credit decisions often did not correspond to market criteria. In case the banks ran into financial difficulties, the central bank would normally act as a lender of last resort. Apart from very small private firms, enterprises usually also faced soft budget constraints; if necessary, they would be bailed out by banks or republican or federal state authorities.

This system was prone to recurring bouts of repressed and open inflation. During most of the 1980s, roughly 20 banks were active on Croatian territory, two of which served the whole constituent republic while the rest served in largely non-overlapping regional areas. In the second half of the decade, when some timid reform measures were begun and prices were partly freed, open inflation gathered momentum. In February 1989 a new federal banking law was passed; it liberalized the establishment and activity of credit institutions and required existing banks to “corporatize” themselves, i.e. turn themselves into limited liability companies or joint stock companies with the founders and staff becoming owners/shareholders. Because there

1 *Leipold (1980), p. 181.*

2 *Former Yugoslavia was more open to the West than other former socialist countries, so people could more or less freely travel to the West, and tourism in Yugoslavia (especially on the Adriatic coast) was more developed.*

Table 1

Overview: Economic Indicators Croatia

	Real GDP ¹⁾)	Unemploy- ment rate	Industrial production ²⁾	CPI ³⁾	Current account ⁴⁾	Trade balance	Total official reserves minus gold	Budget surplus/ deficit ⁴⁾	Gross debt in convertible currencies	Exchange rate ⁵⁾	Interest rate ⁶⁾
	percentage change over previous year	period average	percentage change over previous year		USD million	USD million	USD million, end of period	in % of GDP	USD million	period average	%
1990	- 7.1	x	-11.3	+ 127.4	x	x	x	x	x	x	x
1991	-21.1	x	-28.5	+ 244.2	x	x	x	x	2,823	x	x
1992	-11.7	15.5	-14.6	+11,703.7	x	x	166.8	x	2,713	x	1,889.4
1993	- 8.0	14.6	- 5.9	+ 1,133.1	623.0	295.3	617.3	x	2,638	325.16	34.5
1994	+ 5.9	14.8	- 2.7	+ 2.4	853.4	327.1	1,409.5	+1.6	3,020	190.49	8.5
1995	+ 6.8	15.1	+ 0.3	+ 4.6	-1,441.5	-2,243.8	1,895.7	-0.9	3,809	192.76	8.5
1996	+ 6.0	15.9	+ 3.1	+ 3.7	-1,091.3	-2,113.7	2,314.0	-0.5	5,308	194.83	6.5
1997	+ 6.5	17.6	+ 6.8	+ 5.0	-2,325.1	-3,194.4	2,539.1	-1.3	7,452	200.05	5.9
1998	+ 2.5	18.1	+ 3.7	+ 5.3	-1,530.4	-2,236.4	2,815.7	+0.7	9,588	194.57	5.9
1999	- 0.3	19.1	- 1.4	+ 3.8	-1,522.6	-2,022.9	3,025.0	-1.9	9,925	13.20	7.9
1999											
January	x	18.6	- 4.1	+ 3.4	x	- 226.1	2,611.6	x	x	13.64	5.9
February	x	18.6	- 5.2	+ 3.3	x	- 264.2	2,397.0	x	x	13.37	5.9
March	- 1.5	18.8	- 3.6	+ 3.3	- 562.0	- 213.9	2,451.0	x	x	13.17	7.9
April	x	18.8	- 3.0	+ 3.2	x	- 311.4	2,413.3	x	x	13.18	7.9
May	x	18.7	- 2.6	+ 3.2	x	- 297.5	2,583.0	x	x	13.18	7.9
June	- 1.1	18.6	- 1.8	+ 2.9	- 578.9	- 405.7	2,609.8	x	x	13.18	7.9
July	x	18.8	- 2.0	+ 4.6	x	- 333.6	2,755.0	x	x	13.14	7.9
August	x	18.8	- 2.8	+ 4.5	x	- 175.7	2,847.6	x	x	13.20	7.9
September	- 1.0	19.3	- 2.8	+ 4.2	421.3	- 254.0	2,816.0	x	x	13.13	7.9
October	x	19.7	- 2.3	+ 4.2	x	- 327.3	2,994.6	x	x	13.10	7.9
November	x	20.0	- 2.1	+ 3.5	x	- 398.0	2,825.6	x	x	13.08	7.9
December	- 0.3	20.4	- 1.4	+ 3.8	- 802.9	- 298.8	3,025.0	x	x	13.06	7.9
2000											
January	x	20.9	- 0.7	+ 3.9	x	- 107.4	2,852.8	x	x	13.00	7.9
February	x	21.1	+ 3.5	+ 3.9	x	- 200.7	2,807.8	x	x	12.97	7.9
March	+ 4.0	21.3	+ 3.7	+ 3.9	- 428.3	- 302.3	2,925.1	x	x	12.95	7.9
April	x	21.3	+ 1.5	+ 4.3	x	- 227.9	2,942.7	x	x	12.95	5.9
May	x	21.0	+ 1.4	+ 4.2	x	- 301.4	3,100.8	x	x	12.97	5.9
June	+ 3.8	20.5	+ 2.9	+ 5.7	- 282.3	- 379.0	3,236.8	x	x	13.05	5.9
July	x	20.6	+ 2.6	+ 5.4	x	- 344.7	3,511.3	x	x	13.17	5.9
August	x	20.8	+ 3.2	+ 5.8	x	..	3,424.9	x	x	13.24	5.9

Source: national data, IMF, WIIV, EBRD.

¹⁾ Subannual: quarterly data.

²⁾ 1999, 2000: cumulated periods.

³⁾ Annual data: Dec. to Dec.; 1999, 2000: inflation over corresponding month of previous year.

⁴⁾ General government.

⁵⁾ ATS for 100 HRK; as of 1999: EUR for 100 HRK.

⁶⁾ Official CNB discount rate; end of period.

was frequently a large number of founders, the shares were often widely scattered, which meant weak power and control of owners. New private banks also entered the market.

Basic market-oriented banking supervision regulations were issued, such as limits on lending to individual borrowers, capital adequacy, credit risk assessment and provisioning for bad loans. But the NBY lacked the means to effectively enforce many of these provisions, especially the above-mentioned limits. The futile macroeconomic stabilization effort of 1990¹⁾ was not accompanied by any meaningful attempt at restructuring banks or enterprises. In August 1990 the Yugoslav parliament passed an amendment to the constitution of the SFRY which abolished workers' self-management and provided for transition to a capitalist market economy. Given the mounting

1 The so-called Marković program, named after its initiator, the last federal prime minister Ante Marković.

centrifugal political tendencies and the unraveling of the socialist Yugoslav state structures during these years, it is unclear what immediate practical effect the latter measure had.

3 The Early Years of Independence: “Linear Rehabilitation” of Banks

After Croatia gained independence in the fall of 1991,¹⁾ the country immediately lost control of parts of its territory as a consequence of military action. Croatia then remained subject to military tensions and warfare on its own territory and in adjacent parts of former Yugoslavia until 1995. During this time, the new government in Zagreb only controlled about two thirds of the territory of the republic.²⁾ In areas directly touched by hostilities, rival ethnic groups were often expelled, fixed assets of banks or banks' customers were destroyed or became inaccessible, and operations of credit institutions were frequently forced to shut down when the towns in which they were located were occupied. Apart from the negative economic effects of the wars and disintegration of former Yugoslavia, the above-mentioned persistent security problem put big strains on the overall economic development of the country and also constituted a drag on banking reforms.

Soon after independence, the former branch of the National Bank of Yugoslavia in Zagreb became the National Bank of Croatia, called Croatian National Bank (CNB, Hrvatska Narodna banka) since 1997.³⁾ The establishment of the CNB was regulated in a government ordinance issued in December 1991 and in the Law on the Croatian National Bank, enacted in November 1992. Following the model of the German Bundesbank, the law provides for an independent central bank, which is, however, accountable to parliament. The CNB is in charge of bank licensing, banking regulation and banking supervision, including in certain cases the revocation of licenses. The currency reform of December 1991 replaced the Yugoslav dinar with the Croatian dinar (HRD), to be replaced, in its turn, by a permanent currency after an improvement of the economic situation. At the time of Croatian independence (fall of 1991) there were 26 commercial banks in the country. They consisted of 20 “old” credit institutions, the two largest of which (Privredna banka, Zagrebačka banka) operated nationwide and 18 of which were medium-sized regional banks, and six new private ones active in Zagreb.

In order to take stock of the banking system inherited from former Yugoslavia, the Croatian authorities in cooperation with the auditing firm Coopers & Lybrand prepared an analysis of the quality of bank assets according to 1989 data. The results indicated that at the time, the bad assets were twice the size of bank capital. Drawing from these results and its own inquiries, the CNB noted in its 1991 Annual Report that at the end of 1990 five banks were solvent, ten banks were solvent with problems in

1 Croatia was internationally recognized during the first months of 1992.

2 The former so-called “Republic of Serb Krajina” remained outside the control of the state.

3 In order to avoid confusion, the central bank of the republic will henceforth be called by its current name, “Croatian National Bank” even if it is dealt with in reference to times before 1997.

connection with the settlement of claims, eleven banks were technically insolvent and two banks seriously technically insolvent. Yet even in this relatively somber analysis, claims on the NBY relating to transfers of foreign exchange from citizens' bank deposits to Belgrade were entered as "high quality" bank assets. These claims reportedly amounted to about USD 3.2 billion in the second half of 1991 and comprised the bulk of households' savings, or around 50% of total bank assets. With the dissolution of former Yugoslavia, the NBY stopped honoring these claims and simply seized the foreign exchange. So commercial banks were in fact stripped of most of their hard currency assets, and were left with partly dubious loans extended to enterprises in domestic currency and sizeable liabilities in foreign exchange. The problem of insolvency grew drastically and spread. Still before the NBY's refusal, a part of foreign savings had been withdrawn and transferred to bank accounts abroad or hoarded.¹⁾

Pent-up demand and price liberalization, the strong contraction of economic activity,²⁾ major macroeconomic and structural imbalances inherited from socialism as well as the absence of any strong stabilization measures during the first years of independence triggered very high inflation, keeping in mind that price rises had been high in former Yugoslavia as well. Annual retail price inflation (December to December) rose from 240% in 1991 to over 11,000% in 1992 (table 1). During the first ten months of 1993, the monthly inflation rate was 28% on the average. This loss of internal value was accompanied by negative real interest rates and precipitated an even stronger depreciation of the Croatian dinar, thereby increasing the burden of liabilities to depositors. Currency substitution – foreign currencies, especially the Deutsche mark, replaced the Croatian dinar in everyday transactions – gathered momentum. Given the relatively liberal framework of bank licensing and supervision stemming from the former Yugoslav banking law of 1989, and given the emergence of new sources of earning money partly linked to the unstable macroeconomic situation (e.g. currency arbitrage transactions, speculation and foreign trade financing), the total number of banks increased substantially to 43 at end-1993 (table 2).

Despite this proliferation of credit institutions, the widespread insolvency and fragility of the banking sector, particularly of "old" banks, demanded urgent attention. The authorities decided to attack two major structural problems inherited from the socialist past. One problem was linked to enterprise debtors who were victims of the economic calamities brought about by the collapse of former Yugoslavia and of the ineffective use of credit resources stemming from lending decisions taken in the socialist era. Many of these debtors had become delinquent. Therefore the government in 1991 and 1992 issued so-called "big bonds" to large socially-owned companies in an amount equivalent to about USD 1 billion. In exchange, the government took (additional) equity in the enterprises. With these securities the enterprises repaid banks the nominal value of their overdue obligations. The bonds were issued for a term of 20 years and were indexed to the

1 Jankov (2000), p. 3.

2 On the whole, Croatian GDP is estimated to have contracted by about one third from 1989 to 1993.

producer price index. However, since they paid no interest and were not tradable, they did not provide banks with new liquidity.

The other problem related to the unserviceable foreign currency deposits. In 1992 the government of Croatia assumed responsibility for the respective claims (amounting to about USD 3 billion) against the NBY. Since the newly independent Croatian state had few foreign exchange reserves, it issued to the banks domestic currency-denominated "counterpart bonds" indexed to the Deutsche mark. In order to prevent the withdrawal of the deposits from the banking system, which would have precipitated the failure of banks, these deposits were blocked for a period of three years (until July 1995) and thereafter unfrozen at the minimum rate of 20 semiannual installments. The bonds bear 5% interest and are payable semiannually. Individuals have, however, been allowed to buy back their blocked deposits at a 30% discount or to swap them for government bonds, which could be used to purchase socially-owned apartments or firms. While this has met with some interest, the bulk of foreign currency deposits remained frozen (until the beginning of the unblocking process).¹⁾

These two measures were called "linear rehabilitation" measures, since they were not geared to specific banks but aimed at doing away with particular economy-wide problems by giving every bank securities in an amount proportional to its nonperforming claims. This was done in a static manner, in some respects resembling a bookkeeping operation to clean up balance sheets. Thus, linear rehabilitation at once and formally solved the problem of insolvency and decapitalization of many banks, which were relieved of a financial burden and given new room to maneuver. Claims on government came to represent almost half of total banking assets at end-1993. Yet the bonds placed in banks' portfolios did not provide them with sufficient liquidity and only earned below-market yields; customary rehabilitation measures or substantial restructuring, like changes in management or bank ownership, curbs on granting credits to dubious debtors, and in the last instance, bank bankruptcy, were not implemented or envisaged. In fact, two interest groups continued to hold sway over many banks: large debtors and politicians. Since basic incentives remained unaltered, linear rehabilitation lacked a dynamic impact on credit institutions' behavior. Overall, soft budget constraints continued to operate in the real as well as the financial sector, and imprudent lending practices (particularly to owner-enterprises) persisted.

Bank privatization got off to a slow start at the beginning of the 1990s. Apart from the issuing of new shares (capital increases), banks were usually privatized indirectly, i.e. through privatization of their shareholders, mostly socially-owned enterprises.²⁾ In order to make enterprise privatization legally possible, in a first step enterprises were *de jure* nationalized, then shares were sold by the Croatian Privatization Fund. This was often a gradual process, dominated by MEBOs (management and employee buyouts), given the power staff traditionally held in firms formerly subject to workers' self-

1 Van Elkan (1998), p. 6 to 7.

2 Another way of privatizing banks was through "case-by-case rehabilitation," involving the cancellation of (part of) shareholders' capital and its takeover by the state (see below).

management. While politically understandable, MEBOs did not provide privatized enterprises with new capital or know-how. Moreover, company managers often remained the same persons. As a result, the ownership composition of almost all the “old” banks has constantly changed, being determined by privatization of their enterprise owners. But this in itself did not give a strong impetus to restructuring. Before 1993, no “old” bank was more than 50% privately owned.

4 The Stabilization Program (1993) and New Legislation

In 1993 inflation, having become a chronic phenomenon, persisted even in the absence of significant fiscal deficits. In the context of an accommodative monetary policy, widespread indexation prevailed and, notwithstanding the loss of hard currency deposits to Belgrade and capital flight, currency substitution expanded throughout the economy.

In October 1993 the authorities embarked on an ambitious stabilization program which consisted of two major elements: first, restrictive monetary, fiscal and incomes policies and (after an initial devaluation) a strong orientation of the exchange rate of the Croatian currency to the Deutsche mark as a nominal anchor in the formal framework of a managed float in order to achieve rapid disinflation; also, curtailment of CNB-refinancing of credit institutions; and second, implementation of major structural adjustments in the economy, including stepping up the privatization process, demonopolizing parts of the economy, restructuring loss-making industries (such as shipbuilding) and rehabilitating the banking sector. Whereas the first plank of the program was carried out with impressive results, the second plank has been much more difficult, and its realization has turned out to be a protracted matter. In fact, in a number of areas structural reforms have still not been concluded or have remained at an early stage. Indexation was discontinued and the authorities succeeded in quickly cutting galloping inflation to almost zero. In a few months, inflationary expectations were broken. In May 1994 the Croatian dinar (HRD) was replaced by the Croatian kuna (HRK) as a permanent currency at a ratio of HRD 1,000 for HRK 1. In 1994, annual inflation slowed to about 2% (Dec. to Dec.), and in the following years remained stable at a moderate level (4 to 5%). Economic growth reappeared in 1994 and remained robust until 1997 (table 1).

The success of the stabilization program substantially improved the macroeconomic environment for banking activity. Real interest rates turned positive and, as economic confidence slowly returned, capital flight diminished and hard currency that had been kept abroad or stashed away started to flow back into the banking system. As a result of this capital inflow, the stock of new foreign currency deposits (i.e. deposits that were established after 1991 and whose withdrawal was not blocked) expanded from USD 820 million at end-1993 to USD 4.0 billion (68% of all deposits) at end-1996. This fueled a strong expansion in lending. At the same time, given the stabilization of prices and of the exchange rate and the return of confidence in the Croatian currency, reverse currency substitution was observed.

The legal framework for banking was also improved. The new Banks and Savings Banks Act (October 1993) rendered legislation more compatible

Table 2

Number and Size of Commercial Banks¹⁾ and Savings Banks in Croatia						
Period	Total number of commercial banks	Commercial banks graded according to their assets		Total number of savings banks	Savings banks graded according to their assets	
		Less than HRK 1 billion	HRK 1 billion and over		Less than HRK 100 million	HRK 100 million and over
Dec. 1993	43	35	8	0	0	0
Dec. 1994	50	40	10	33	31	2
Dec. 1995	53	42	11	21	20	1
Dec. 1996	57	42	15	22	21	1
Dec. 1997	60	41	19	33	30	3
Dec. 1998	60	37	23	33	29	4
Dec. 1999	53	34	19	30	26	4
Aug. 2000	50	32	18	30	26	4

Source: CNB.

¹⁾ Reporting deposit money banks as defined by the CNB.

with that of a capitalist market economy. The law, modeled on the German *Kreditwesengesetz* (Banking Act), set a number of prudential standards which did not exist before 1993. To give an example, the minimum capital adequacy ratio was set at 8% of risk-weighted assets in accordance with international standards.¹⁾ Lending to shareholders and single borrowers was restricted to certain shares of liable capital. Lending to members of management or supervisory boards required the approval of both bodies, but there were no quantitative limits on loan size. The law allowed for three types of credit institutions: banks with a “full license” (requiring minimum capital equivalent to DEM 15 million), banks with a “limited license” (minimum capital of DEM 5 million) and savings banks (minimum capital of DEM 1 million). Branches of foreign banks had to satisfy a minimum capital requirement of DEM 2.5 million. The scope of business was defined for universal banks, but banks with a limited license were not permitted to engage in international banking business and savings banks in addition were not allowed to accept enterprise deposits. Remaining limitations on private and foreign ownership of credit institutions were removed.

All banks operating at the time the law was enacted were asked to bring their operations into line with the law by the end of 1995. Licensing remained a relatively easy hurdle to pass, since one of the goals of the law was to foster competition and break some still existing regional monopolies. In December 1994, the total number of banks in Croatia increased to 50, 24 of which were “new” private banks. While most of them kept the focus of their activities in the nation’s capital, some started to penetrate the regions. Some limited further competition was induced by the (formal) entry of savings banks into the market. While in 1993, according to official data, there had been none, in December 1994 the country disposed of 33 savings banks. Most of them had apparently operated in the informal sector until 1994. But

¹ However, reported capital adequacy ratios depend on accounting standards and on classification rules used to assign assets to risk categories. In this respect, Croatian implementation guidelines did not uniformly conform to international standards and/or have not always been consistently applied.

these entities were quite small, their activities locally focused, and their assets together did not exceed 2% of the assets of all credit institutions. Notwithstanding the proliferation of banks, concentration remained high. The share of total assets of the two “old” banks operating nationwide continued to amount to around 55% of total assets through 1995.

5 Banking Problems in the Mid-1990s

Although the macroeconomic situation and the general legislative framework improved, a significant part of the banking sector still faced considerable financial difficulties resulting from continuing regional military hostilities, the accumulation of nonperforming loans, the reduction of central bank refinancing, and restrained liquidity reflecting a sizeable fraction of assets in the form of nontradable government debt.¹⁾ The financial needs of banks in difficulty drove up interest rates on the interbank money market, enabling other credit institutions to earn high interest rate margins on liquidity supplied by the repatriation of foreign savings. Rising interbank rates had repercussions on interest rates economy-wide. Average quarterly interbank rates and credit rates rose above 25% (on an annual basis) at end-1995 and stayed at a high level in the first half of 1996 (chart 1).

In order to tackle some of these problems, strengthen legal sanctions against loss-making banks and protect depositors, the Law on Bank Rehabilitation and Restructuring (June 1994) was adopted and the State Agency for Bank Rehabilitation and Deposit Insurance (BRA, the Agency) established. According to the law, banks with losses in excess of 50% of capital are obliged to submit to the rehabilitation and restructuring process. A bank can voluntarily choose to undergo this process if its losses are less than the 50% threshold. The CNB then has to conduct a feasibility study of the bank and recommend to the government whether rehabilitation is desirable. If the government approves, existing shareholders' equity is written off against losses (or suspended), the bank's management may be dismissed, new capital provided and governance authority and ownership partially or fully transferred to the BRA (the state).

A new deposit insurance scheme covers savings deposits of individuals and is administered by the BRA. It is financed through premiums levied on credit institutions.²⁾ In the event that a bank entered bankruptcy, the BRA was at first authorized to pay to insured depositors 100% of the first HRK 30,000 (or foreign exchange equivalent) and 75% of deposits between HRK 30,000 and HRK 50,000. From July 1, 1998, the maximum coverage was increased to HRK 100,000 (approximately USD 16,000), and the graduated system was abolished. Premiums are levied at a rate of 0.2% of insured deposits per quarter. All premiums are paid – and the Agency's investments are held – in local currency, while about three quarters of insured deposits are denominated in foreign currencies. Insurance applies to all eligible

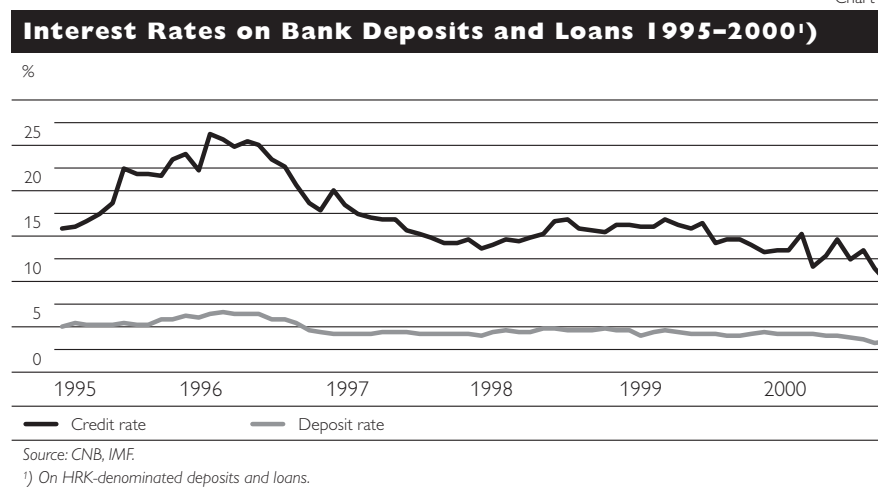
1 From 1993 to 1996 the government did not pay interest and only partially paid principal on “counterpart bonds” in cash. Instead, it serviced this debt by issuing new securities.

2 Although the law was enacted in 1994, the scheme did not become operational at that time, because the Ministry of Finance did not specify the insured amount per deposit until 1997.

accounts regardless of the financial soundness of the bank holding the deposits.

The rehabilitation process according to the law involves three stages: The first is financial restructuring, which comprises the write-down of bad loans against loss provisions and capital and, if these are insufficient, against bonds issued by the BRA. Further BRA bonds may be issued to provide initial capital for the bank. The loans are transferred to the BRA for workout. The second stage consists of operational restructuring, which involves the draft and implementation of a recovery plan for the bank, usually including measures to improve operating efficiency and risk assessment capabilities. The third stage is privatization of the state's share to investors that are not also major debtors of the bank.¹⁾ Since, in contrast to linear rehabilitation, this process focuses on the economic situation of individual credit institutions, it can be termed "case-by-case rehabilitation."

Chart 1



6 "Case-by-Case Rehabilitation" Measures

Although the above-mentioned reform laws had been enacted in 1993 and 1994, substantial bank rehabilitation measures according to the procedures outlined did not start until the fall of 1995. Certainly, in the preceding years the attention of the authorities with respect to economic policy had been focused on assuring the success of the Stabilization Program. Moreover, the long-lasting military standoff and conflict that had affected the country throughout the first half of the 1990s came to an end with the war in the summer of 1995,²⁾ after which the Croatian authorities resumed control of almost the entire territory of the republic.³⁾

Four "old" banks (one with nationwide operations, and three big regional banks), which together accounted for 46% of total banking sector assets at end-1995, were selected for the rehabilitation process as stipulated by the

1 Van Elkan (1998), p. 8.

2 The reconquest of the "Krajina."

3 The last part of the "Krajina," Eastern Slavonia, was reclaimed through negotiations in 1997.

1994 bank rehabilitation law. The four banks were: Privredna banka (in terms of assets the largest commercial bank in Croatia until its restructuring, headquartered in Zagreb), Riječka banka and Splitska banka (the two largest regional commercial banks, from Rijeka and Split/Dalmatia respectively), Slavenska banka (the fifth largest regional commercial bank, from Osijek/Slavonia). Thus, the restructuring exercise applied to four out of the seven largest credit institutions.

The least troubled of the four banks and the first to enter the rehabilitation process was Slavenska banka, and it did so voluntarily in October 1995. The BRA injected liquidity into the bank by purchasing a part of its “big bonds” (with a discount) and granted a short-term credit. The Agency acquired a minority share (35%) of the bank’s equity, giving it veto power on the bank’s supervisory board. The existing management team was retained, and Slavenska banka took the obligation to reduce its loans to large borrowers and owners as well as enterprise stakes it had acquired through debt-equity swaps to the limits stipulated by law. The second phase of rehabilitation, which was drafted by the bank and approved by the BRA, was largely completed in 1997, and the state’s share was successfully sold to the EBRD and Kärntner Landes- und Hypothekenbank (of Austria) in 1998.

Riječka and Splitska banka entered into obligatory rehabilitation in April 1996. Riječka banka reportedly was saddled with 1.4 times more bad credits than capital; in Splitska banka, this relationship was 2.3. The sum of bad loans of both credit institutions accounted for about 6% of the total volume of loans of the banking sector in mid-1996.¹⁾ The two banks’ entire capital was wiped out in the process of writing off the credits; the BRA became the sole owner of both banks, government bonds were placed in their portfolios and new management teams were installed. Operational restructuring of the banks has made considerable progress. The state partially divested its equity holdings in 1997. During the first half of the year, former private sector shareholders who were not debtors of the banks and had a good record of creditworthiness were allowed to acquire a quarter of the banks’ shares at concessional prices. As a result, the state’s share in Riječka banka declined to 75%, while its share in Splitska banka only fell to 88%, since not enough former shareholders met the conditions for the transaction. In the spring of 2000, majority shares in both banks were sold to strategic foreign investors: Bayrische Landesbank (Germany) bought a 59% stake in Riječka banka for USD 76 million, and UnoCredito Italiano secured a 63% holding in Splitska banka for USD 57 million.

The obligatory rehabilitation procedure for Privredna banka started in December 1996. This institution held a very large amount of bad credits that exceeded its capital by a factor of about 2.7; in November 1996, Privredna banka’s bad loans made up about a quarter of all loans of the banking sector.²⁾ Almost all capital was written off in the first phase. After recapitalization through bonds and an injection of liquidity, the BRA had an ownership stake of 90%. Furthermore, there was a turnover of the bank’s management.

1 Jankov (2000), p. 4.

2 *Ibid.*

Operational restructuring was complicated and took about three years. The authorities then privatized Privredna banka through sale to a foreign strategic investor. In December 1999 Banca Commerciale Italiana paid EUR 301 million (about the same amount in U.S. dollars at the time) for a 66% stake in the bank.

Rehabilitation of the four credit institutions had a strong effect on outstanding bank credit and government debt. In 1996 loans to enterprises with a face value of about HRK 2 billion were written off from Riječka banka and Splitska banka, and a further HRK 4 billion in credits were written off the books of Privredna banka; this was the equivalent of around one fifth of the stock of credit to enterprises at end-1995. Government bonds were issued and cash payments made to recapitalize the four banks; they totaled HRK 3.2 billion (about 4% of GDP). The bonds have a maturity of 10 years and carry an interest rate of 6%; both amortization and interest are due semi-annually. Since these bonds (like the "counterpart bonds") were indexed to the Deutsche mark, they increased the exposure of the state to exchange rate movements. But foreign exchange revenues from the above-mentioned privatizations (mostly in euro) eased this constraint.

The most obvious initial consequence of the rehabilitation of the four banks was a decline in the level of interest rates. The restructuring of these banks' assets, their receipt of bonds yielding greater liquidity than had been the case in the framework of linear rehabilitation and the injection of cash caused the liquidity situation of the four banks to improve dramatically. As a result, pressures on interbank interest rates eased markedly already in mid-1996, contributing to a general decline in interest rate levels. Moreover, the expansion of banks' deposit-taking and lending activities resumed. However, some deterioration of loan portfolios reportedly occurred in 1997 and 1998, notably in Slavenska banka. More generally, in connection with continuing shortcomings in accounting practices, the CNB estimated that the banking sector failed to make provisions for dubious assets amounting to HRK 2.9 billion (or about 30% of liable capital) in 1996.

Zagrebačka banka (the largest credit institution of the country since the rehabilitation of Privredna banka) has been relatively well managed. Its major clients have been private export companies in good financial condition. Zagrebačka banka has therefore been able to restructure on its own. It was the first Croatian bank to get an international credit rating, and in mid-1996 it floated about 25% of its capital on the London Stock Exchange. As of the beginning of 1998, about a third of the bank's capital was owned by foreigners. At end-1996, 48 banks (out of a total of 57) were majority privately owned (i.e. more than half of their shares were held by privately owned firms). These private and privatized credit institutions accounted for 60% of the assets of the banking sector. 20 banks, all licensed after 1991, were entirely in private ownership.

7 Persisting Structural Shortcomings of Banking Activities

In 1998 the total number of banks in Croatia amounted to 60, the highest number so far (table 2). This quite large number for an economy of 4.8 million inhabitants indicated considerable potential for consolidation and was bound to weaken the capacity of the CNB to adequately monitor all credit institutions. On the other hand, the relatively liberal approach to licensing probably enhanced competition, as outlined below. But the sector remained highly concentrated, with the two largest banks of the socialist period (the privatized Zagrebačka banka, and the largely state-owned Privredna banka) still dominating the market and accounting for about 42% of total assets, 35% of deposits and 30% of the capital of the banking sector. The three medium-sized banks rehabilitated in 1995–96¹⁾ (Slavonska, Riječka, Split-ska) made up 17% of total assets. Five rapidly expanding small to medium-sized banks, consisting of some former regional and some “new” private banks, accounted for 12%, while the remaining 50 banks accounted for 29% of total assets.

Foreign-owned banks slowly consolidated their foothold in Croatia and started to trigger more competition. The share of majority foreign-owned banks in total assets of the sector increased to 4% at end-1997 and 7% at end-1998. In 1998 there were still 33 savings banks with comparatively modest resources.²⁾ The first foreign banks to enter Croatia were Austrians (RZB/Raiffeisen-Zentralbank Austria at the beginning of 1995, then Bank Austria in 1996). Other early entrants were Germany's Hypo-Vereinsbank, Société Générale, BNP-Dresdner Bank and Cassa di Risparmio di Trieste.

The years following the adoption of the Stabilization Program and the end of military hostilities witnessed a strong economic expansion in Croatia accompanied by a stable exchange rate and one of the lowest inflation rates of all transition countries. One of the major factors stimulating this expansion was strong capital inflows, which mainly consisted of the repatriation of foreign currency resources and deposits. This certainly reflected enhanced confidence in the domestic banking sector. Foreign currency deposits with Croatian banks rose to around USD 4.9 billion at end-1997 and peaked at USD 6.1 billion at end-1998 before declining somewhat in 1999. Foreign currency deposits came to around 80% of total bank deposits, which is among the highest comparable shares in the entire region.

This inflow as well as credits taken up abroad and strong increases in real wages fueled rapid growth of lending and a “catching-up process” in domestic consumption, which triggered a substantial deterioration of the current account. Croatia's current account balance turned negative in 1995, and the deficit quickly grew to 11.6% of GDP in 1997 (see also table 1). Since most of the credits extended on the basis of the foreign exchange inflow were in domestic currency, the entire banking sector's open foreign exchange position (i.e. the ratio of foreign currency liabilities to foreign currency assets)

1 Besides Privredna banka.

2 Their total assets in comparison to commercial banks' assets did not exceed 1%.

grew from 135% at end-1995 to 231% in December 1998 (table 3).¹⁾ However, it must be added that the bulk of the Croatian kuna credits granted were indexed to the Deutsche mark (currency clause). By doing this, banks substituted credit risk for foreign exchange risk. Despite the anti-inflationary success of the authorities, the Deutsche mark continued to constitute a *de facto* dual currency in Croatia.

A number of “aggressive risk-taking banks”²⁾ (which, apart from some privatized former regional banks, mostly consisted of “new” private banks predominantly located in Zagreb) outperformed other banks in attracting foreign currency deposits by offering high interest rates. Many of them then lent the money on to other banks or enterprises, likewise demanding high lending rates. Loans to households (e.g. real estate and automobile purchase credits) expanded strongly, albeit from a low base. They grew from a share of 9% of total bank credits at end-1993 to 26% at end-1997. The above-mentioned credit institutions, unencumbered by a legacy of nonperforming loans or low-liquidity assets, quickly gained market share,³⁾ but their behavior raised concerns about the riskiness of their lending. Notwithstanding the improved framework of banking supervision according to the law of 1993, elements of related party lending, single client exposure, inadequate provisioning, and political interference in banking decisions reportedly resurfaced. Some banks showed irresponsible management of their depositors’ money, sometimes even accompanied by irregularities and criminal activities, like money laundering.⁴⁾

A number of factors brought problems to a head. After the bulk of foreign savings had apparently been repatriated, the inflow of foreign exchange leveled off in 1998. Some problems started to emerge in the repayment of credits based on these inflows. The Asian financial crisis of the fall of 1997 and the Russian crisis a year later narrowed foreign borrowing opportunities for emerging economies, including Croatia and its banking sector, and increased foreign investors’ nervousness. Given the strong deterioration of the external balances, the authorities decided to tighten fiscal and monetary policies. The latter measures were also aimed at protecting the stability of the exchange rate.

This further exacerbated the situation of high risk-taking banks. After remaining stable at a level of about 10% for almost two years, interbank rates were driven up to about 15% in the spring of 1998. Continuing institutional weaknesses related to the persistent degree of nontransparency stemming from the failure to consistently apply international accounting standards, to the lack of a clear market exit mechanism for banks provided for by legislation, and to the still modest experience and insufficient human capital in

1 Own calculations based on CNB data. Calculations exclude households’ blocked foreign exchange deposits and counterpart bonds (domestic currency-denominated, but linked to the Deutsche mark) issued for blocked deposits.

2 See description in Babič, Jurković and Šonje (1999), p. 23, p. 28.

3 An indication of developments can be taken from the fact that the number of credit institutions with assets between HRK 1 million and HRK 10 million, which the CNB defines as medium-sized banks, increased from 6 in 1993 to 21 in 1998.

4 As stated in the lecture of Marko Škreb, former Governor of the CNB, at the OeNB on May 21, 1999. Report on the Lecture by Marko Škreb, p. 103.

the area of banking supervision in the CNB. These shortcomings have probably prevented the CNB from intervening earlier in the evolving new crisis. Up to a point, the fact that all banks that had so far encountered difficulties had been rescued by the state contributed to a moral hazard problem affecting banks' behavior. The bankruptcy system for enterprises had also proved to be relatively ineffective. Since some drawbacks of the existing banking and bankruptcy laws had become evident, the authorities made preparations to overhaul the legislation. The expansion of lending activity of high risk-taking banks contributed to the growth of the share of private banks in total assets and capital of the banking sector (to 67% and 74% respectively by end-1997).

Table 3

Commercial Banks' Open Foreign Exchange Position¹⁾								
	Dec. 1993	Dec. 1994	Dec. 1995	Dec. 1996	Dec. 1997	Dec. 1998	Dec. 1999	Aug. 2000
	HRK million							
Commercial banks' foreign currency assets								
Reserves	–	–	–	–	–	1,668	4,635	5,651
Foreign assets	6,192	7,047	9,279	12,526	16,168	12,743	12,353	18,674
Claims on central government and funds	967	1,252	1,866	1,843	1,971	1,893	959	1,650
Claims on other domestic sectors (enterprises, households, local government)	10,139	10,094	11,050	8,087	8,443	9,087	7,063	6,757
Total foreign currency assets	17,298	18,393	22,195	22,456	26,582	25,391	25,010	32,732
Commercial banks' foreign currency liabilities								
Foreign currency deposits	5,412	8,783	14,099	21,818	31,278	37,791	36,966	43,370
Foreign liabilities	11,971	13,101	15,108	12,381	13,540	15,878	17,027	17,283
Central government and funds' deposits	316	158	265	136	4,488	4,265	2,559	2,857
Restricted deposits	325	433	416	641	939	498	610	606
Total foreign currency liabilities	18,024	22,475	29,888	34,976	50,245	58,612	57,162	64,116
	%							
Open foreign exchange position (foreign currency liabilities as %age of foreign currency assets) ¹⁾	104.2	122.2	134.7	155.7	189.0	230.8	228.6	195.7

Source: CNB Bulletins September 2000 (no. 52), October 2000 (no. 53) and own calculations based on data provided in these Bulletins.

¹⁾ Excluding households' blocked foreign exchange deposits and "counterpart bonds" (domestic currency-denominated, but linked to the DEM/EUR) issued for blocked deposits.

8 The New Banking Crisis of 1998 to 1999, First Bankruptcies and Measures of the Monetary Authorities

The underlying insolvency of several banks became apparent in the course of 1998, when the gains in market shares of the "aggressive banks" abruptly came to an end. In February, a struggle among owners of the fifth largest bank, Dubrovačka banka, led to rumors about the bank's financial difficulties and triggered a run on deposits. Dubrovačka banka (based in Dubrovnik) belonged to the former network of regional banks. It was privatized in 1994 with the sale of a large stake to a businessman with strong political connections attempting to consolidate an important position in the hotel industry of the Dalmatian region. The bank had inherited some problems of the past (comparable to those of the rehabilitated banks of the mid-1990s) as well as engaged in aggressive risk taking. After suffering severe liquidity bottlenecks, Dubrovačka banka received emergency liquidity support from the CNB and was subjected to rehabilitation procedures (corresponding to the

rehabilitation law of 1994), including a write-off of shareholders' equity and a turnover of management.¹⁾

The failure of Dubrovačka banka undermined confidence and resulted in a withdrawal of deposits from other credit institutions. Reverse currency substitution stopped and gave way to opposite tendencies. By mid-1998, the liquidity position of the sixth largest bank, Glumina banka, had also seriously deteriorated. Although the bank requested CNB support, the monetary authorities, in a break with the past, did not recommend deeply insolvent Glumina banka for rehabilitation. In contrast to Dubrovačka banka, which served a specific region, Glumina banka had its headquarters and main operations in the capital of Zagreb, where the banking sector was already relatively highly developed and where there was more competition. While an improved legal framework was in preparation, several other banks experienced serious liquidity problems and some stopped meeting their obligations. The CNB stepped up its provision of exceptional liquidity assistance.²⁾

To prepare for interventions after the expected adoption of the new banking law, the CNB commissioned two audit firms to examine the 1997 financial accounts of 12 banks and bring them into line with international accounting standards. The new Banking Law was enacted in December 1998.³⁾ It strengthened the central bank's regulatory and enforcement powers and clarified and facilitated bankruptcy procedures. In particular, it established the institution of a temporary administrator in the event of the insolvency of a bank. The temporary administrator is empowered to take control of the respective bank's assets and is assigned the task of developing and recommending to the CNB a strategy for solving the bank's problems. The new law also raised minimum initial capital requirements, increased the capital adequacy ratio to 10% and reduced maximum exposure limits to single clients, and shareholders and related parties. The category of savings banks was abolished, and all such institutions are obliged to meet the criteria for commercial banks by end-2001.⁴⁾ Enterprise bankruptcy legislation was amended in March 1999 to strengthen creditors' rights and accelerate procedures.

Equipped with its new powers, the CNB began to implement a number of measures to address individual weaknesses of the identified problem banks. The latter accounted for approximately 15% to 20% of total assets of the banking sector in 1998. The first type of problem banks solely consisted of Croatia banka. This was the country's twelfth largest credit institution, the closure of which, however, was viewed by the CNB to pose a systemic risk. In February 1999 the monetary authorities appointed a temporary administrator and supplied continuous liquidity support. Following CNB recommendations, the government in September 1999 decided to rehabilitate the bank and issued government bonds for its recapitalization.

1 It became the fourth bank out of the top five (measured by assets at the beginning of 1998) to undergo rehabilitation.

2 Lönnberg and Maggi (1999), p. 37.

3 This law replaced the Banks and Savings Banks Act (of 1993).

4 Lönnberg and Maggi (1999), p. 37.

The second type of problem bank comprised 14 commercial and savings banks deemed to be insolvent. These institutions together made up around 8% of total banking assets. The CNB appointed temporary administrators for all of these banks and filed requests to the commercial courts for bankruptcy proceedings against ten banks. In 1998 and 1999 the courts decided to initiate such proceedings against eight institutions, among them (the above-mentioned) Glumina, Gradska, Ilirija, Komercijalna, Neretvansko-gospodarska and Županjska banka. Temporary administrators in the six remaining banks were instructed to take action aimed at improving the collection of their claims, cutting operating costs and preparing opportunities for possible mergers with sound credit institutions.

In the third instance, the CNB took preventive measures with respect to small banks that were weak, but still solvent. Individual supervisory agreements between the banks and the monetary authorities were concluded. By end-1999, all credit institutions concerned were implementing remedial actions mandated by the CNB, regardless of the difficult macroeconomic environment. The banking crisis itself had compounded the dampening effects of the fiscal and monetary tightening on growth. Real GDP growth fell to 2.5% in 1998. While the current account deficit fell to 7.1% of GDP in 1998, this was by no means yet reassuring.

In 1999 the Kosovo war (March to June) further aggravated the economic situation by substantially reducing Croatia's tourism receipts. The country suffered a mild recession that year (GDP: -0.3%) and ended up with a current account gap about the same size as in 1998. Inflation was slightly higher in 1998 (5.3%) than before. During the half year that followed the Russian financial crisis (of August 1998), the real exchange rate of the Croatian kuna to the Deutsche mark depreciated by about 8%, but recovered somewhat afterwards. This depreciation may have added to some credit losses suffered with respect to Deutsche mark-indexed loans. In 1998 and 1999, total CNB cash injections into problem banks amounted to HRK 1.8 billion (1.3% of 1999 GDP), issues of government securities for bank recapitalization came to HRK 2.7 billion (1.9% of GDP).¹⁾ Since the resources of the BRA for reimbursing depositors of banks undergoing bankruptcy proceedings were not (yet) sufficient, the government introduced a major revision to the budget in mid-1999 to include means for paying out a third of insured deposits in 1999. Total spending to reimburse insured deposits is estimated at about 2% of GDP.²⁾ Due to the takeover of assets of rehabilitated banks by the BRA (the state) and the exit of a number of bankrupt private institutions, the share of private banks in total assets and capital of the banking sector temporarily declined to 59% and 64%, respectively, in mid-1999. The share of majority foreign-owned banks increased to 9% of assets and to 15% of capital.

By the end of 1999, the most immediate problems of the crisis appeared to have been overcome and public confidence at least partly restored. Although the Croatian public had been unaccustomed to the fact that banks

1 Lönnerberg and Maggi (1999), p. 38.

2 Report on the Lecture by Marko Škreb (1999), p. 102.

can go bankrupt, by and large it calmly accepted the restructuring measures. Money that had been withdrawn from Croatian kuna as well as foreign exchange deposits in banks that were not subject to bankruptcy procedures started to flow back in mid-1999. Reverse currency substitution returned.¹⁾ In 2000, foreign exchange deposits in the banking system reached new record levels. The closure of some problem banks favorably influenced supply and demand on the interbank market, thus reducing interest rates. The bankruptcies may also have sent a signal to the banking sector in general, breaking or weakening expectations of future bailouts and thereby reining in moral hazard problems. But the multiplicity of claims on strained budgetary resources has given rise to concern.

Ljubinko Jankov estimated total fiscal expenditure, or, more precisely debt issuing, for the rehabilitation of banks in Croatia during the period from 1991 to mid-1998 at around 31% of annual GDP.²⁾ This debt build-up consists of: First, government-issued bonds (“big bonds” and “counterpart bonds”) in 1991–92 for the “linear rehabilitation” of banks: 22.6% of GDP; second, bonds issued in lieu of cash in 1993–96 to service liabilities related to counterpart bonds: 1.2% of GDP; third, securities issued in 1996 for the rehabilitation of Riječka banka, Splitska banka and Privredna banka: 6.1% of GDP; and fourth, bonds issued for the restructuring of Dubrovačka banka in the amount of 0.8% of GDP. If one disregarded just mentioned expenditures in connection with Dubrovačka banka and instead took earlier data on issues of government liabilities with respect to all bank rehabilitation measures in 1998 and 1999 (Lönnberg and Maggi: 1.9% of GDP), one would arrive at an estimate of total cumulative indebtedness for bank rehabilitation in 1991–99 of 32% (or roughly a third) of gross domestic product.

This is regarded as high in comparison with central European countries as well as in an international comparison.³⁾ But it covers neither expenditures for the settlement of insured deposits in bankrupt banks, nor the sizeable cash injections repeatedly carried out by the CNB, nor does it take into account the costs of the banking crises borne by other actors and sectors of the economy (e.g. depositors, enterprises, regions). Liabilities acquired by the government of Croatia in connection with bank rehabilitation came to the equivalent of USD 4.3 billion and made up about 95% of total (domestic and foreign) government debt in 1992. The latter amounted to around a quarter of GDP. Until 1998 debt due to bank rehabilitation grew to USD 5.6 billion, but in relative terms declined to half of total government debt, which had grown slightly to 26% of GDP. The servicing of debts for bank rehabilitation has been a considerable burden for the national budget, especially since 1996.

1 *After the local currency share of broad money had declined to 31% in March 1999, it climbed back to 35% in October 1999.*

2 *Jankov (2000), p. 7.*

3 *Jankov (2000) p. 7–8; see also international comparisons in Šonje and Vujčić (1999), p. 11 to 12.*

9 Current Structural Adjustment Efforts and FDI

The year 2000 (as of November) has seen a confluence of largely positive macroeconomic changes and strong, very favorable structural changes, improving the overall situation of the banking sector. But it is not yet clear whether the adjustments have produced the critical mass needed to bring about a “breakthrough” on the path of the Croatian banking sector to a developed market-oriented institution.

After confidence had returned in the wake of the latest banking crisis, internal demand recovered, spurring the growth of consumption as well as investment. Exports were stimulated by economic expansion in all major external markets (the EU as well as central and eastern Europe). In contrast to the preceding year, which had been marked by the Kosovo war, the summer of 2000 featured a strong rebound of tourism revenues. In the first semester of 2000, GDP grew by about 4% (over the corresponding period of 1999); independent experts expect growth for the whole year to be in the range of 2% to 4%. The current account deficit is expected to decline to about 4% to 5% of GDP, mainly financed by FDI linked to privatization. But due to structural problems with extrabudgetary funds (health system, pensions) and the tax system, the fiscal situation is likely to deteriorate. Rising international oil prices have been the primary source of increasing inflation, which came to 7.1% (year on year) in September 2000, one of the highest levels since adoption of the Stabilization Program in 1993.

The elections that resulted in the change of presidency and government at the beginning of 2000 brought about an improvement of the domestic political situation as well as of political relations between Croatia and the EU and made it possible for the country to start overcoming its international isolation. Negotiations on a Stabilization and Association Agreement with the European Union are to start in the fall of 2000. In mid-2000 Croatia became a member of the WTO. But the political change (so far) has not entailed a major adjustment of the economic policy strategy of the authorities, nor has the change at the helm of the CNB (July 2000). After a few months of discussions, the authorities decided they would continue to adhere to the basic principles laid out in the previous administration’s Stabilization Program (of 1993). The Croatian kuna has remained oriented toward the euro/Deutsche mark as a *de facto* nominal anchor. Under its new governor, the CNB continued to conduct a tight monetary policy and to oppose any substantial devaluation (or appreciation) of the Croatian kuna.¹⁾

However, some experts and politicians (including the main economic advisor of the president) have contended that the Croatian kuna is overvalued by about 30% to 40% and have spoken out in favor of a strong devaluation to boost export competitiveness and stimulate industrial production. They also feel that monetary policy should be relaxed. As pointed out above, given the considerable indirect foreign currency exposure of banks, a substantial devaluation could create serious problems for a large part of the banking sector and trigger renewed capital flight.

¹ In the summer months of 2000 the CNB repeatedly intervened to prevent the Croatian kuna from appreciating too strongly against the euro.

After the banking crisis of 1998–99 had been overcome, there was a spate of transactions featuring foreign strategic investors purchasing stakes in leading Croatian banks, most of which had been rehabilitated in preceding years. These purchases substantially altered the ownership structure of the Croatian banking sector and turned Croatia from one of the laggards to one of the front runners with respect to foreign participation in transition economies' banking sectors. As mentioned earlier, Banca Commerciale Italiana in December 1999 paid about USD 300 million for a 66% stake in Privredna banka, the second largest bank in the country. Under its new owner, Privredna banka has already launched extensive marketing campaigns in the corporate as well as the retail sector to recoup terrain lost in recent years.

In April 2000, Unocredito Italiano bought 51% of Splitska banka (the third largest bank) for USD 46 million. The new majority owner undertook to issue additional shares, increasing the bank's capital by about USD 10 million and raising Unocredito's stake to 63%. In May, Germany's Bayerische Landesbank secured a 59.9% holding in Riječka banka (the fourth bank) for USD 76 million. The foreign investor acquired a 33.7% stake in the bank from the BRA for USD 41 million and agreed to increase the capital of the bank through a share issue. The German insurer Allianz raised its share in Zagrebačka banka to 10%. According to statements from its management board, Zagrebačka banka was then looking for a "top international bank" to join Allianz as a core strategic shareholder. In 1999 Bankers Trust Company acquired a large stake in Zagrebačka. In mid-2000 foreigners, owned 63% of Zagrebačka banka. The Ministry of Finance, perhaps somewhat euphorically, claimed that the entry of some major West European banks "has put an end to the weakness of the financial services sector in Croatia."¹) Competition has certainly been enhanced. The still existing lack of competition in some regions will probably soon be a thing of the past, because new foreign-owned players can be expected to move into hitherto relatively "protected" regional territories. The two banks remaining in state hands, Dubrovačka banka and Croatia banka, are slated for privatization in the coming months (table 4).

The takeover of larger banks appears to be complemented by some long-awaited tendencies toward consolidation of medium and small-sized banks. FDI is partly involved in these processes, too. Thus, Erste Bank and Steiermärkische Bank und Sparkasse (both of Austria) announced their intention to merge three small regional credit institutions of their own (Bjelovarska banka, Čakovečka banka and Trgovačka banka) into one unit. On September 1, 2000, Bjelovarska banka took over the other two banks and has since operated under the name Erste & Steiermärkische Bank. Zagrebačka banka recently acquired Varaždinska banka (the seventh largest bank), further strengthening the former's position as the largest credit institution in the country. In the first quarter of 2000 the CNB appointed temporary administrators to two small insolvent regional banks, Istarska banka (of Istria) and Cibale banka, and initiated bankruptcy proceedings. Bankruptcy proceed-

1 Norton (2000), p. 66. See also Tibbitts (2000), p. 12.

ings were also launched against three other small credit institutions that had been identified as problem banks during the crisis of 1998–99 (Agroobrtnička banka, Hrvatska gospodarska banka, Promdei banka). But the decision on Istarska banka triggered strong political resistance from some members of the government. Subsequently the CNB revised its decision, and the government partially recapitalized Istarska banka by issuing bonds.

Evidently, despite the strengthening of its authority through the new Banking Law, the central bank has not become immune to political interference. On the other hand, currently a new draft central bank law aimed at increasing and safeguarding the independence of the monetary authorities is being debated.¹⁾ As a result of stricter licensing procedures, of bankruptcies in 1999 and 2000 and of some mergers, the total number of banks in Croatia fell to 53 at end-1999 and to 50 in August 2000. The number of savings banks declined to 30. Concentration, while diminishing slightly since the mid-1990s, has remained high and has probably grown again lately owing to recent transactions and consolidations. In mid-1999, the two largest banks accounted for over 45% of total assets and for almost 40% of total capital of the banking sector. The five largest credit institutions accounted for over 60% of all assets and half of all capital. After the privatizations and takeovers of some of the largest banks by foreign strategic investors in 1999–2000, the share of the private sector in the total assets of the banking system is reported to have increased to about 90%, the bulk of which is owned by foreigners (table 4). The improved overall health of the banking system and increased competition caused interest rates to drop to the lowest levels for years in mid-2000 (chart 1).

The banking sector's open foreign currency position (foreign exchange liabilities as a percentage of foreign exchange assets), as measured above, declined to 196% in August 2000 (table 3). As most loans are still indexed, banks' indirect exposure to Croatian kuna depreciation remains substantial. Given the tightening of banking supervision by the CNB²⁾ supported by an improved legal framework embodied in the new Banking Law and given the recent exit of bankrupt institutions, banks that remained solvent adopted a more prudent lending policy. They also probably adjusted their portfolios in a prudential response to previous excess lending. However, the introduction of a dose of hard budget constraints in the banking sector seems to have prompted many banks to go further and start shying away from granting credits to firms, because enterprise bankruptcy regulations and, in particular, creditors' rights apparently remain insufficiently enforced in Croatia. Besides, many large enterprises are highly indebted.

1 This would replace the above-mentioned Law on the Croatian National Bank (of November 1992). The draft law is reported to provide for observance of central banking standards of the EU, from institutional and personal independence to defining the primary goal – the achievement and preservation of price stability. See: *South East Europe* (2000). See also Vidovic (2000b), p. 6.

2 Among other measures, reserve requirements have been strongly increased.

Table 4

Croatia's Top Ten Banks

Largest Croatian Commercial Banks as Measured by Net Assets as of End-1999

Rank	Credit institution	Net assets	Index of net assets 1999/97	Major foreign investor (year of purchase) ¹⁾	Share of all foreign investors in capital ¹⁾
		HRK million			in %
1	Zagrebačka banka	25,101	1.18	Bankers Trust Company (1999)	64
2	Privredna banka	15,744	1.03	Banca Commerciale Italiana (1999)	66
3	Splitska banka	7,436	1.05	Unocredito Italiano (2000)	63
4	Riječka banka	6,139	1.22	Bayrische Landesbank (2000)	60
5	Dubrovačka banka	3,667	0.81	–	–
6	Raiffeisenbank	2,947	2.03	RZB (Raiffeisen-Zentralbank) (1995)	100
7	Varaždinska banka	2,628	1.13	Bankers Trust Company (2000)	62
8	Slavonska banka	2,481	0.95	Kärntner Landes- und Hypothekenbank (1998)	72
9	Hypo Alpe-Adria-Bank	2,242	2.04 ²⁾	Kärntner Landes- und Hypothekenbank (1996)	100
10	Dalmatinska banka	2,227	0.92	Regent Pacific Fund (2000)	44

Source: Norton (2000 a), p. 65; information provided by the CNB as well as by Velimir Šonje and Raiffeisenbank Zagreb.

¹⁾ Information on ownership structure as of September 2000.

²⁾ Index 1999–98.

10 Summary and Conclusions

10.1 Summary

The eventful history of the Croatian banking sector since the onset of transition can be divided into four periods, each of which – except the last – ended with a banking crisis and/or rehabilitation measures. But each period witnessed some qualitative improvements in the situation and partly also in the behavior of banks over the previous period.

The *first period* comprised the early years of independence and brought about major upheavals for the banking business. The collapse of the traditional system of workers' self-management and of former socialist Yugoslavia, economic disintegration and dislocation, the ongoing wars of Yugoslav succession, the new government's loss of control of parts of the country's territory and the confiscation of the bulk of Croatian households' savings in foreign exchange by the National Bank of Yugoslavia (Belgrade) inflicted great losses and hampered the transition of the country's banking system to a market-oriented one.

Among the only profitable activities for credit institutions in the hyperinflationary environment of the early 1990s were currency arbitrage transactions and other speculative activities. In order to reactivate the banking and enterprise sectors, the authorities decided to carry out "linear rehabilitation" measures to bail out insolvent firms that had become victims of ineffective lending decisions taken in the socialist era and to reimburse depositors and banks for foreign exchange deposits seized by the NBY. Government securities called "big bonds" were transferred to enterprises in order to repay bank loans and "counterpart bonds" were placed in banks' portfolios. But "linear rehabilitation" was only a one-off measure that was not accompanied by any major changes in incentives, and soft budget constraints continued to operate.

The *second period* was ushered in by the authorities' adoption of the Stabilization Program in the fall of 1993. Monetary and fiscal policies were tightened and the Croatian currency was in fact linked to the Deutsche mark within the formal framework of a managed float. A new banking law was adopted that rendered legislation more compatible with that of a capitalist market economy. Inflation was brought down quickly and for a number of years featured among the lowest of all transition economies. A robust economic recovery set in. Capital and foreign currency that had been transferred abroad during the years of upheaval and instability started to flow back.

On the other hand, a significant portion of the banking sector still faced considerable financial difficulties resulting from continuing regional military hostilities and the accumulation of nonperforming loans. A bank rehabilitation law was enacted in 1994, and an agency for bank rehabilitation and deposit insurance was created. After the military conflict had come to an end and the macroeconomic situation had been stabilized, the authorities decided to rehabilitate four relatively big troubled banks, which together accounted for almost half of total banking sector assets ("case-by-case rehabilitations"). The managements of three of the four institutions were dismissed and the shareholders lost their capital. The recapitalization measures were onerous and featured the massive issuing of government bonds.

The *third period* was at first characterized by continued economic expansion that was largely driven by a catching-up process in domestic consumption fueled by the return of foreign currency savings, by credits taken up abroad and by strong wage increases. This triggered a substantial deterioration of the current account, led to a considerable widening of the banking sector's open foreign exchange position and thus increased the sector's vulnerability to a depreciation of the kuna. In this context, a number of rapidly expanding small to medium-sized private banks outperformed other banks in attracting foreign currency deposits by offering high interest rates. Since they did not engage in prudent lending and thus took high risks, they soon encountered problems regarding the repayment of such loans. These were exacerbated by the effects of the international financial crises of 1997–98, which cut access to foreign credits, and by the authorities' decision to tighten macroeconomic policies in reaction to the deterioration of external balances.

The underlying insolvency of several banks became apparent in the course of 1998. Whereas two medium-sized banks were rehabilitated the traditional way, a number of other problem banks only received limited liquidity assistance from the CNB, which waited for the enactment of a new banking law at end-1998. This new law strengthened the supervision authority of the CNB and, in particular, facilitated bank bankruptcy procedures. On request of the central bank, the commercial courts initiated bankruptcy proceedings in 1998–2000 in at least 11 cases. These restructuring measures were carried out under difficult economic conditions that were further aggravated by the impact of the Kosovo war on Croatia (loss of foreign exchange revenues from tourism in 1999). A major revision to the

budget of 1999 had to be introduced to supplement the means of the deposit insurance agency for paying out insured deposits of bankrupt banks. Total cumulative government debt issuing for bank rehabilitation in Croatia in 1991–99 has been estimated to amount to about a third of annual GDP, which is high in an international comparison.

The *fourth period* started in 2000 and was introduced by a confluence of positive macroeconomic and structural changes, improving the overall situation of the banking sector. The change of presidency and government at the beginning of 2000 brought about an improvement of the political environment and has made it possible for the country to overcome its isolation from the EU. Despite the change at the helm of the CNB in mid-2000, (so far) the authorities have not planned any major adjustment of the economic policy strategy inherited from the previous administration (as laid down in the Stabilization Program of 1993).

After the banking crisis of 1998–99 had been overcome, there was a spate of transactions in which foreign strategic investors purchased stakes in leading Croatian credit institutions, most of which had been rehabilitated in preceding years. These transactions are believed to have increased the share of the private sector in total assets of the banking system to about 90%; the bulk of these assets is owned by foreigners. Croatia has thus turned from one of the laggards to one of the front runners with respect to foreign participation in transition economies' banking sectors. On the other hand, the introduction of a dose of hard budget constraints in the banking sector seems to have prompted many credit institutions to become very cautious in lending to firms, given that creditors' rights remain insufficiently enforced in Croatia.

10.2 Some Remaining Challenges

After various reform “waves” and structural adjustments over more than a decade of transition, with changes accelerating during the last two years, the Croatian banking sector has seen its efficiency and competitiveness substantially improve. Still, there are some important remaining challenges with respect to banking sector development in Croatia:

- A strong effort to relaunch or accelerate reforms in the real sector is needed, since banking sector reforms cannot be successful if they are not accompanied by enterprise reforms. Hard budget constraints need to spread from banking to the enterprise sector, and creditors' rights need to be enforced. This would appear to be the only way to create a sustainable basis for reactivating commercial bank lending. It would ensure a more efficient allocation of credit than in the past and create incentives for efficiency-enhancing investment. A new initiative in this direction may already have started: The government recently pledged to accelerate the sale or liquidation of 1,850 firms in which the state continues to hold stakes. About half of these enterprises are assumed to be insolvent. Bankruptcy proceedings have reportedly begun.¹⁾ On the other hand, accelerated restructuring in industry is bound to tempo-

¹ Vidovic (2000a), p. 40.

rarily drive up the already high unemployment rate and create additional social hardship.

- As mentioned earlier, banks' indirect foreign currency exposure remains high. As long as the population stays strongly attached to hard currency deposits and the euro/Deutsche mark remains a *de facto* dual currency in Croatia – notwithstanding the commendable Croatian kuna inflation record over a number of years – there is little the authorities can do to reduce the exposure, short of partially or fully abandoning the Croatian kuna and opting for a currency board or outright euroization. Since the CNB and the government do not seem to favor these alternatives (currently), the best overall strategy would appear to be sound macroeconomic and structural policies.
- Notwithstanding recent bankruptcies and mergers and acquisitions, some of the remaining smaller banks will need to find a market niche or merge to achieve a viable size. Given the FDI-induced increase in competition, further exits of smaller banks from the market can be expected. If properly managed, though, such institutions' failure need not undermine depositors' confidence. Croatia is still "overbanked"; the average Croatian assets-per-employee ratio is reported to be USD 650,000, well below the USD 5 million seen in developed markets.¹⁾
- The current deposit insurance scheme has two shortcomings. It is vulnerable to exchange rate movements, because the BRA's (the deposit insurance agency's) right to invest its revenues in foreign currency assets is restricted. Further, contributions paid to the BRA are independent of the financial soundness of the respective credit institutions. A reform of the deposit insurance scheme, which is reportedly under preparation, should address these two problems.²⁾

If the new government capitalizes on existing political goodwill and on the current favorable macroeconomic situation, it could reinvigorate structural reform of the real economy. Together with FDI and in-depth bank restructuring efforts by new strategic foreign investors, this could put Croatia's banking sector on track to catching up with its advanced central European neighbors. Such structural catching up would help the country meet further preconditions for catching up in European integration.

Editorial close: November 10, 2000.

1 *Economist Intelligence Unit (2000).*

2 *See discussion in Lönnberg and Maggi (1999), p. 43 to 44.*

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O E N B A C T I V I T I E S

Completing Transition: The Main Challenges

The OeNB's East-West Conference 2000

This year's East-West Conference took place from November 5 to 7 at the Vienna Marriott Hotel and was entitled "Completing Transition: The Main Challenges." The Oesterreichische Nationalbank hosted this event together with the Joint Vienna Institute (JVI), which is the major training center for officials from Central and Eastern Europe as well as from the CIS countries and which has become a strategic partner for the OeNB in many of its transition-related activities.

A sizeable number of key experts in the field of transition, top policy-makers, high-level civil servants and well-known academics addressed the conference. The speakers engaged in a very productive and stimulating discussion, and many participants from the general audience joined into this debate when the floor was opened at the end of each session. The conference thus provided a forum for communication and for an exchange of views. In particular, it allowed for dissemination of the experience of individual countries on their way to establishing competitive market economies.

Setting the Stage and Taking Stock

The conference was opened by OeNB Vice Governor Gertrude Tumpel-Gugerell and the Director of the JVI, Lindsay Wolfe. *Gertrude Tumpel-Gugerell* outlined the conference program, and then sketched the progress in the transition economies by referring to the promising recent growth performance and the overall disinflation record. She stressed that transition was not yet over even in the most advanced countries, although the political agenda in these economies was becoming ever more focused on convergence and integration issues. In a number of other transition countries, *Gertrude Tumpel-Gugerell* said, the agenda was still very much dominated by transition-specific issues; in these cases, the prime task often was to achieve a critical mass of reform and stabilization measures that move an economy out of a bad equilibrium in which transition has become mired, having been captured by vested interests. The OeNB's Vice Governor concluded by sketching the manifold transition-related activities of the Oesterreichische Nationalbank and the contribution the Bank can make to the transformation process. In his remarks, Director *Lindsay Wolfe* concentrated on presenting to the audience the Joint Vienna Institute and its numerous activities over the past eight years.

Mike Moore, Director General of the World Trade Organization, introduced the conference theme in his opening keynote address. Creating a thriving market economy, he stated, was a daunting challenge. But a number of success stories demonstrate that it can be done. The WTO is keen to nurture such accomplishments and to help others to emulate them. It was a good sign, *Moore* said, that transition countries were increasingly taking advantage of the opportunities the WTO offers and played a constructive role in ongoing negotiations on agriculture and services.

The first session examined where the transition process currently stands. This stocktaking exercise, which was based on the three country cases of Poland, Slovakia and Armenia, explored the successes and failures to date, with a view to identifying the underlying reasons and factors that have driven and shaped past developments. This session was chaired by *John Odling-Smee*,

Director of the IMF's European II Department, while the country cases were presented by Karol Lutkowski, Professor at the Warsaw School of Economics, Elena Kohutikova, Vice Governor of the National Bank of Slovakia, and Gagik Arzumanyan, Deputy Minister of Finance and the Economy, Armenia. In his opening statement, John Odling-Smee stated that, despite tremendous efforts, progress had not been as good as it had been hoped for at the outset of transformation, except in the leading transition countries. Substantial headway had been made in lowering inflation and reducing macroeconomic imbalances. But structural and institutional reforms had advanced less in most countries and, in some cases, structures persist which are close to those of centrally planned economies. The situation is complicated further by rising reform fatigue and deeply entrenched vested interests which constitute major obstacles to further progress. Rent-seeking and corruption had flourished in half-reformed systems. Fighting and eventually overcoming these vested interests will take time; there are no easy and quick fixes.

Karol Lutkowski highlighted the main determinants of successful transformation in Poland. He pointed out that there was sufficient social support for reforms, even though this backing had somewhat eroded over the years, and that the high growth that Poland has recorded over the past seven years had solid microeconomic foundations, in particular in the SME sector. The bleak spots of the Polish performance are the state of the agricultural sector and high unemployment. In order to raise employment, investment would have to pick up which, in turn, raises the question of what can be done in order to facilitate its financing. He underlined that Poland had succeeded in avoiding a financial crisis and that currency convertibility had been greatly expanded. However, monetary policy had reacted too late to the capital inflows that surged after 1994. This delay, in turn, led to inflationary pressures later on.

Elena Kohutikova depicted Slovakia as an example of both good and bad reforms. After gaining independence, Slovakia was successful in achieving stabilization in 1994–95. However, the need to create appropriate microeconomic underpinnings was not fully understood. A period of compromise that started in the area of restructuring and privatization followed, with increasing macroeconomic imbalances. Inflation was kept low, not least because the government stopped price deregulation. Since early 1999, Slovakia has again embarked on a stabilization and reform path which embraces both macro- and microeconomic measures. Imbalances have been reduced, while further reforms are needed to sustain the stabilization gains achieved, in particular in the areas of enterprise restructuring, bank privatization, and institutional reforms (pension, social security and health sector reforms). Monetary policy has to provide adequate conditions for reforms and convergence; inflation should be reduced further but not to very low levels; a range of 4% to 6% seems to be appropriate for the next few years to come.

Gagik Arzumanyan presented the Armenian experience. He drew attention to some successes, e.g. with disinflation, but also to the major structural imbalances that persist to plague the Armenian economy. He criticized that reforms had been driven externally, with very little flexibility of IMF and World Bank staff. Moreover, governance in the broadest sense had been poor.

Finally, cooperation with the outside world had remained low, not least due to physical restrictions on trade. In order to be successful, Armenia has to live up to three challenges: to improve governance, to step up cooperation and to achieve program ownership. All these three areas are interrelated, but program ownership is the most important key to success.

The ensuing discussion focused on the ownership and governance issues Arzumanyan had raised, on the impact of armed conflicts on economic performance, and on how to cope with vested interests once they have become deep-rooted. A further issue was how to raise savings in transition economies and, related to this, the question of the appropriate level of real interest rates in the course of transition.

Microeconomic Issues

The next two sessions focused on microeconomic issues, starting with enterprise restructuring and subsequently turning to financial sector reform. The introductory lecture for the enterprise restructuring session was given by Erik Berglöf, Professor at the Stockholm School of Economics and Director at SITE, who also chaired this session. The two speakers at the session were Ricardo Lago, Deputy Chief Economist at the EBRD, and Stilpon Nestor, Head of the Corporate Affairs Division at the OECD.

Erik Berglöf gave a lecture on “The Economics of Enterprise Restructuring and Privatization in Central and Eastern Europe.” What matters for corporate restructuring is competition, corporate governance, hard budget constraints and privatization. Developments in Central and Eastern Europe have differed from the performance in the CIS countries due to differences in law enforcement, in the quality of social safety nets and financial sector support for corporate restructuring. In fact, the next big challenge of restructuring was to (further) activate the financial sector, remarked Berglöf. In terms of policy implications, Berglöf stated that policy advice should focus on the implementability of proposed measures and institutions. For Central and Eastern Europe, the “top-down” approach – through EU accession – was critical, but would have to be complemented by a “bottom-up” approach to ensure sustainability: End users would have to be activated, and coordination problems would have to be solved. For the CIS countries, there is less scope for outside anchors, while the “bottom-up” approach is also more difficult to implement; coopting special interests may be necessary to enable the countries to move ahead.

Like many other speakers, *Ricardo Lago* stressed the wide variation in reforms across countries and regions. He cited the huge untapped potential of the transition countries and argued that property rights and enforceability had to be strengthened in order to improve the access of firms to equity and credit finance, which would then propel development. Another crucial factor for success was the entry of new firms. Much still had to be done on this score, he emphasized: New companies tend to be at a disadvantage compared to the old sectors, as they receive fewer subsidies, have to pay higher bribes and experience stricter treatment by tax authorities on arrears.

Stilpon Nestor presented a paper on “Corporate Sector Reform in Russia and other CIS Countries.” He argued that relatively little restructuring and

corporate governance had been witnessed in the countries he focused on. In Russia, privatization has led to insider ownership and subsequently contributed to the capture of the state by the new elites and a subsequent blocking of further reform. There are two main differences between privatization in Russia and in Central and Eastern Europe. In Russia, there was no asset privatization through liquidation, and competition objectives did not play a role. Current reforms in Russia display some promising signs, e.g. to improve shareholder rights. Other measures, like the recent changes in insolvency laws, have to be assessed more critically because they create new perverse incentives to “tunnel” firms. More generally, there is still much work to be done to build up a system of appropriate discipline and incentives which would then foster corporate restructuring in Russia and the other CIS countries.

In the discussion, the issue of privatization was explored further. Nestor stressed that it would be disastrous to delink restructuring and privatization (e.g. by management contracts or preprivatization programs) and that countries should be more inventive in their privatization methods. Assistance should come with privatization being a condition. Another issue was entrepreneurship, which, according to Berglöf, is endogenous to the reform process. On the issue of an outside anchor for those transition countries which are not candidate countries for EU accession, Berglöf emphasized that EU standards and rules could play an important role for those countries as well. In fact, he stressed, the current Russian reform program had been very much inspired by the economic criteria set out for EU accession for the group of candidate countries.

Age Bakker, Deputy Executive Director of De Nederlandsche Bank, presided over the financial sector session. He was joined by three speakers: Elizabeth Roberts, Director at the Financial Stability Institute of the Bank for International Settlements, Lajos Bokros, Director “Europe and Central Asia Region” at the World Bank, and Willi Hemetsberger, Chief Executive Officer of CAIB.

In his introductory statement, Age Bakker stated that, despite the progress achieved, financial sector reform was still a hard nut to crack, for three main reasons: It is a very complex sector, vested interests play a large role, and global change in the sector is rapid. The room for maneuver central banks have in financial sector reform is fairly limited. Their role relates to the following areas: monetary stability, the functioning of the payments system, fostering capital market development by demanding sound collateral, the lender-of-last-resort function, and supervision (even in cases where central banks do not have a formal function in this area).

Elizabeth Roberts spoke about “Bank Restructuring and Bank Supervision in Transition Economies.” In her view, the main challenges in this area related to accounting (valuation techniques, loan-loss provisioning), legal issues (property rights, collateral, transfer of ownership, liquidation procedures) and auditing. The main tasks are bank privatization, allowing for the entry of foreign banks, the development of a sound credit culture, the transformation of banks into true financial intermediaries and the privatization of corporates. The three pillars of a functioning banking system are: corporate

governance of banks, market discipline, and banking supervision. In the transition economies, banking supervision should typically be located with the central banks, at least for the time being, as central banks dispose of the necessary funds to perform this task, they have established reputations and they are, in any case, concerned with systemic risk issues.

Lajos Bokros reviewed financial sector developments in the transition economies. He stated that, after ten years of transition, the financial sector in Central and Eastern Europe was characterized by low levels of financial intermediation, relatively poor asset quality and serious undercapitalization and a still quite narrow range of services, especially in nonbanking, largely immature governance structures, and an increasingly sophisticated legal and regulatory framework coupled with shallow implementation and enforcement capacity. Despite these broad commonalities, the transition economies of Central and Eastern Europe (not including the Baltic states) and of selected CIS countries can be classified into five groups. There are the advanced reformers (Poland, Hungary), reluctant modernizers (Czech Republic, Slovenia), countries struggling with the double legacy of central planning and years of insufficient microeconomic reforms thereafter (Slovakia, Croatia), desperate reformers (Romania, Bulgaria) and prolonged crisis cases (Russia, Ukraine). In a similar vein as Elizabeth Roberts, Lajos Bokros named three pillars of financial sector development: internal and external governance structures, domestic and international competition, and prudential regulation and supervision.

Willi Hemetsberger spoke on "Banking in Central and Eastern Europe: The Experience of an Emerging Europe Investment Bank." After the Russian crisis, he stated, financial markets drew a clear distinction between Central Europe and the CIS countries. The former have increasingly been perceived as having made the transition and are now grouped by the markets, in terms of risks, together with Turkey, Israel and South Africa. Today, the markets widely expect an early EU accession of the Central European countries, and this has been factored into valuations. Market capitalization will most likely at least double in these countries over the next five years. M&A activities have increased strongly since 1999.

The discussion which followed focused on the entry of foreign banks. Roberts emphasized that it was important for the best foreign banks to enter the domestic markets of the transition countries. Bokros stated that there was no other promising road for establishing a sound banking sector in the transition economies than welcoming first-class foreign investors. Transition economies did not have the time for an organic development of a prudent banking culture based on domestic sources. On supervision, which was again touched on in the discussion, Bokros said that a case could be made for moving towards consolidated supervision, as markets in transition economies were small, information sharing among agencies was not ensured and global financial markets were becoming increasingly complex. Hemetsberger defended his market capitalization projections by stating that Central European stocks were still 30% to 50% undervalued and falling interest rates would further boost stock prices.

Fiscal Policy Challenges

The session on fiscal policy challenges was chaired by Andreas Wörgötter, Head of Country Studies V Division at the OECD, who also gave an introductory lecture on the topic. There were four speakers in this session: Pavel Mertlík, Deputy Prime Minister for Economic Policy and Minister of Finance of the Czech Republic, Thomas Wieser, Director General at the Austrian Federal Ministry of Finance, Peter Heller, Deputy Director of the IMF's Fiscal Affairs Department, and Alain Morisset, Adviser in the DG ECFIN of the European Commission.

In his introductory lecture, *Andreas Wörgötter* analyzed the fiscal situation in advanced transition economies. He identified the crowding out and the deterioration of the external balance that is associated with budget deficits, the high tax wedge, the low tax base because of high evasion, the tradeoff between fiscal consolidation and enterprise restructuring as the main problems. He underlined that the OECD experience showed that fiscal expansion slows structural change, globalization reduces the effective tax base, and fiscal tightening tends to be noncontractionary if it focuses on reducing transfers and public consumption and is supported by wage moderation or exchange rate devaluation. Low income levels, high investment needs in infrastructure and incomplete enterprise restructuring complicate fiscal policies in the transition economies. The expenditure- and revenue-to-GDP levels are relatively high in these countries, and there is a need to consolidate fiscal accounts (central, regional and local budgets, extrabudgetary funds, other off-budget items). The challenge now was to withstand social concerns, improve infrastructure, reduce the number of public sector employees and prepare for future needs (EU accession, aging, health care), stressed Wörgötter.

Pavel Mertlík spoke about the fiscal performance of the Czech Republic. The budget surpluses reported in the early transition years drew a false picture about actual developments; the Czech Republic now has to pay for the mistakes of this earlier period. The main task of the current stage is to resolve the problems and liquidate the institutions of transformation. Among the latter, the most prominent is the Consolidation Bank (CB), to which most of the commercial banks' bad loans have been transferred and which has played a crucial role in bank restructuring and privatization during the past three years. The CB is about to be transformed into a nonbank institution, and its portfolio will gradually be sold off over the next years. Those parts of Czech public finances which are not tied to transformation-specific tasks do not differ much from those of other OECD countries. The next tasks are to review all expenditures in terms of their effectiveness and social usefulness, to modify the level and structure of taxation (entailing a modest rise in taxation levels and a reduction of the share of indirect taxes) and to define a public finance framework that allows for transparency and expenditure control, also at the regional and local levels.

Thomas Wieser spoke about the "Quality of Public Expenditures: Temporal Dimensions of Budget Policy." In his speech, he reviewed the fiscal consolidation patterns of OECD countries since 1970 and asked what lessons this experience held for the transition economies. He showed that consolidation

in OECD countries had consisted mainly in slashing forward-looking expenditures. While public consumption had remained more or less steady in relative terms and interest payments had been falling, pension expenditures have increased considerably, spending on human capital has been flat or falling, and fixed capital expenditures have shown an overall decline in most cases. Deficits were thus cut where it was easiest to do so, at the expense of the long-term dynamics of economic systems. In Austria, for example, investment outlays will have to rise significantly in order to correct past mistakes, which implies that more fiscal consolidation is still to come. Wieser concluded by expressing his hope that Central and Eastern Europe would avoid the fiscal consolidation mistakes OECD countries made over the past three decades.

Peter Heller gave a presentation on "Social Sector Reform in Transition Countries." In his view, social sector problems are a time bomb which has only started to explode. Heller made four main points: The transition process has seen an adverse transformation of social insurance systems. The reform of these systems is vital for growth, welfare and fiscal viability. Progress in social sector policies has been very mixed in transition economies. Some needed reforms are obvious in technocratic terms, while others are much harder to achieve, both administratively and politically.

Alain Morisset spoke about fiscal policy and EU accession. He highlighted three main challenges. The budgetary process must be brought in line with EU requirements, in terms of efficiency, tax code enforceability, internal control procedures and external audit. Countries have to be in a position to track budget developments quickly. And they have to accept and adopt the EMU provisions of the EU *acquis* that relate to fiscal policy. In order to foster the preparations for accession in this area, the Commission has proposed to establish a fiscal surveillance procedure for the candidate countries which will be implemented and applied from 2001 onward.

The subsequent discussion focused upon the discrepancies between reform rhetoric and actual action to revamp social safety nets. Another issue was the adjustment of tax systems to EU standards, in particular with a view to various exemptions and tax holidays in the EU countries. Furthermore, the issue of productivity of public expenditures and related systemic inefficiencies was touched upon.

Keynote Address by Horst Köhler

The day was brought to a close with a dinner at which *Horst Köhler*, Managing Director of the International Monetary Fund, addressed the conference participants. He stressed the differentiated development in the transition economies and the substantial hardships that transition has brought for millions of people. He underlined the importance of institution-building, and maintained that it was the role of the state to act as a strong and credible regulator. Köhler then browsed through the main challenges of transition, the need to tackle its social implications, to face the difficulties of restructuring and to fight corruption. He stressed that there were no single one-size-fits-all textbook solutions for most transition problems. He encouraged the transition economies to be more self-confident and emphasized the responsibilities

of the developed industrialized countries in preserving growth at a global level. In this context, he pleaded for further European integration and a clearer picture for enlargement, which should be undertaken on a case-by-case basis, according to the merits of the individual candidates. Technical assistance should be better coordinated and it should not be misused to wage a competition of systems. Köhler then touched upon his vision for the IMF, which should become more focused on growth and macroeconomic stability, and which should review its conditionality concept. The Fund should become more patient and flexible in its dealings with individual countries, and it should further accentuate the principle of program ownership.

Monetary Policy Challenges

The next morning began with a session on monetary policy challenges, another policy area which is crucial for managing transition successfully. This session was chaired by *Gertrude Tumpel-Gugerell*. She was joined by three further central bankers, Pierre van der Haegen, Director General at the ECB, György Surányi, Governor of the National Bank of Hungary, and Ryszard Kokoszczyński, Vice Governor of the National Bank of Poland, as well as by one academic, namely Fabrizio Coricelli, Professor at the University of Siena.

Pierre van der Haegen presented a joint paper with *Christian Thimann*, Head of Division at the ECB, on “Monetary Policy Challenges in Transition and towards Accession.” He reviewed the evolving monetary policy strategies of candidate countries, which were mostly exchange rate-based in the early phase of transition, while exhibiting an increasingly wider diversity as transition advanced and preparations for EU accession gained momentum. Despite this variety, inflation performance has been broadly similar in most accession countries, while real exchange rate appreciation has tended to be more pronounced in pegging countries. Currently, monetary policymakers in accession countries face both technical challenges (resulting e.g. from the uncertainties of monetary transmission) and challenges that arise from increasing capital mobility and further advances on disinflation. Candidate countries should pursue real and nominal convergence in parallel, but nominal targets should not be excessively restrictive. Monetary policy has supported and will have to support the real convergence process by providing an appropriate environment. After EU accession, the new Member States will at some point join the ERM II and eventually the euro area. Unilateral euroization is not in line with the spirit of the EC Treaty.

György Surányi presented the case for an exchange rate-based monetary policy strategy. He pointed out the successes of the narrow-band crawling peg regime that Hungary had introduced in 1995, both in terms of disinflation and growth. Surányi argued that any exchange rate regime choice was case-dependent, while the real exchange rate appreciation associated with real convergence had to be faced independently of the exchange rate regime. During the catching-up process, there is no optimal exchange rate regime. A fixed system is accompanied by “market sentiment” risk, while a flexible regime entails the risk of depressing the tradables sector. For Hungary, it is too early to weaken the anchoring role of the exchange rate, but if and when

monetary transmission becomes more transparent and stable, an inflation target may become increasingly advantageous. But even then, the anchoring role of the exchange rate can never be fully disregarded in a small open economy like Hungary.

Ryszard Kokoszczyński presented the case for a direct inflation targeting (DIT) strategy in advanced transition economies. He started with a short look back to the early years of transition, when capital mobility was still low. At that stage, the exchange rate was indeed the major anchor, but not the only one. In a number of cases, the exchange rate target was, at that time, complemented by a monetary target. With increasing capital mobility in the mid-1990s, these originally successful strategies became ever more inconsistent and inappropriate and eventually had to be dropped. *Kokoszczyński* then elaborated on the flexible DIT strategy Poland has followed since the beginning of 1999. In a sense, this was not a new strategy when it was adopted, but rather a new way of communicating the monetary strategy. In Poland, DIT was, in a way, chosen by default, as neither monetary nor exchange rate targeting constituted feasible options. DIT also fit the Polish situation because it is less dependent on fiscal policy prudence (one of the somewhat weaker features of the Polish success story) than other strategies. Overall, the performance of monetary policy has been fine, if one considers the country's growth and disinflation record.

Fabrizio Coricelli's talk was entitled "Exchange Rate Arrangements in the Transition to EMU: Why Not an Early Adoption of the Euro?" *Coricelli* started out by stressing that his statement focused solely on the monetary policy angle, abstracting from the EC Treaty requirements and political economy issues. He stressed that capital flows and their short-run changes posed serious problems for interest and exchange rate policies in accession countries. Sudden reversals of capital flows potentially inflict enormous social costs on the candidate countries. All these countries are highly open and exhibit a solid trade integration with the EU, which suggests that they should adopt a link to the euro. Exchange rate flexibility is not a way to test whether the exchange rate is at its equilibrium level, as markets do not lead the exchange rate to its equilibrium under high capital mobility. This also weakens the rationale for the ERM II. As the accession countries are catching up, they display large current account deficits, which are, however, equilibrium phenomena. In the light of volatile capital flows, these countries need a credible system, and, according to *Coricelli*, the early adoption of the euro is the only credible system, at least for some candidate countries.

The ensuing debate mainly circulated around *Coricelli's* propositions. *Surányi* stated that euroization was a fashionable topic, but not a viable option for Hungary at this stage. However, if accession were excessively delayed, there might be no other choice than the adoption of the euro. But such a move would require a considerable (further) tightening of the country's fiscal policy stance. *Kokoszczyński* took this point up and pointed out one of the dilemmas of euroization: Such a move would require strict fiscal discipline; however, at this stage of transition and preaccession there was a need for more active fiscal policies, which restrains the room for maneuver of budgetary policies. *Van der Haegen* said that there were good arguments against too

much exchange rate flexibility in the small and open economies of Central and Eastern Europe. However, there were a number of good reasons for not moving to the extreme of euroization: Seigniorage is lost, and the interest rate – a useful indicator of fiscal slippages – is forgone. Moreover, the EC Treaty is a tested framework for the enlargement of the euro area. However, van der Haegen conceded, if enlargement were derailed, arguments for unilateral euroization would become much stronger. On a further question dealing with indicators for real convergence, van der Haegen stressed that the current criteria for euro area participation should not be changed or augmented for newly acceding EU member countries. However, the fulfillment of the Maastricht criteria should and will also be checked with a view to the sustainability of nominal convergence achievements.

At the end of this session, Gertrude Tumpel-Gugerell presented this year's *Olga Radzyner Award* (see Box).

Presentation of the Olga Radzyner Award 2000

This award was established in order to commemorate Olga Radzyner, who headed the Bank's Foreign Research Division until her tragic death in August 1999 and who was the driving force behind building up and expanding the OeNB's array of transition- and accession-related activities. The Award is bestowed on young economists for excellent research focused on monetary and finance issues in economics. This year's winners were:

*Florian Ovidiu **Bilbiie** (Romania) from the University of Warwick*

*Martins **Bitans** (Latvia) from the University of Latvia and*

*David **Vavra** and Martin **Cincibuch** (Czech Republic) from CERGE Prague and the Czech National Bank, respectively.*

Florian Ovidiu Bilbiie received the award for his master's thesis at the University of Warwick; its title is: "Inflation Contracts, Targets and Strategic Incentives for Delegation in International Monetary Policy Games." Martins Bitans was awarded the prize for his master's thesis at the EuroFaculty of the University of Latvia; it is entitled: "Assessing the Implications of the Economic and Monetary Union for the Countries in Central and Eastern Europe: The Case of Latvia." David Vavra and Martin Cincibuch received the prize for their working paper "Towards the EMU: A Need for Exchange Rate Flexibility?"

Trade and Financial Integration

The conference focus then moved on to the international integration of transition economies, concentrating on trade as well as financial flows. This session was chaired and briefly introduced by Miguel-Rodriguez Mendoza, Deputy Director General of the WTO. The two speakers in this session were Michael Landesmann, Professor at the University of Linz and Director of the WIIW, and Marcelo Selowsky, Chief Economist "Europe and Central Asia Region" at the World Bank. *Miguel-Rodriguez Mendoza* touched upon the export performance of the transition economies, emphasizing the increase in real exports in 2000 (after they had fallen in 1999), and welcomed the increasing inclusion and active participation of transition economies in the WTO.

Michael Landesmann focused on the shifting trade structures of Central and Eastern European countries and on the reasons that underlie these changes. He stressed that Hungary, the Czech Republic, Slovenia, Poland, and Slovakia had been moving swiftly upstream in the international division of labor during the 1990s, while there has been little change in this respect in Southeastern Europe and in the CIS countries. In the five most successful countries, labor-intensive exports had fallen considerably in relative terms, while skill- and R&D-intensive exports have risen tangibly. The rapid dynamics of these changes in comparative advantages are associated with very fast productivity advances in selected branches, while wage rate developments are much more uniform. Another remarkable development is the very swift movement of these five countries into higher export price areas.

Marcelo Selowsky presented the driving forces for the successful transformation and integration of transition economies. He stressed the importance of the entry and growth of new firms, the hardening of budget constraints on traditional sectors, and the importance of social programs to facilitate labor mobility and thus restructuring. If the investment climate is poor, sustained growth is impossible and capital leaves the country. In Russia, for example, capital flight is particularly pronounced, amounting to 7% of GDP because there are few investment opportunities that yield appealing risk-corrected rates of return.

The ensuing discussion mainly centered on the perspectives for trade developments following EU accession. According to Landesmann, the largest impact will be on the agricultural and food sectors as well as on services. Manufacturing exports will experience less of a regime shift, as trade is essentially liberalized already today. Nevertheless, increased confidence may give a further boost to trade in this sector as well.

Luncheon Speech by Klaus Liebscher

During lunch, OeNB Governor *Klaus Liebscher* addressed the audience. He reviewed recent developments in the euro area and raised the question of how this experience related and translated to the countries in transition. In this vein, he stressed the constant need for economic reform in all societies and the crucial importance of a balanced and consistent policy mix for both the euro area and the transition countries. Subsequently, Governor Liebscher outlined the European Union's strategy for monetary integration of candidate countries and underlined, in particular, the importance and the benefits of central bank independence.

Looking Ahead towards Completing Transition

During the last afternoon, the conference took an explicitly forward-looking approach, investigating where the transition process is headed and what remains to be done in order to eventually complete it. These were the topics covered in a keynote speech delivered by Simon Commander, Professor at London Business School; they were additionally highlighted by the presentation of three country cases: Hungary, Romania and the Russian Federation. The panelists that joined this session were András Inotai, Director General of the Institute for the World Economy at the Hungarian

Academy of Sciences, Cristian Popa, Vice Governor of the National Bank of Romania, and Oleg Vyugin, Vice Executive President of Troika Dialog Brokerage Moscow.

Like several other speakers, *Simon Commander* underlined the differential development of transition economies and the stark regional differences within individual countries. He stressed that transition had entailed hardship for many people, especially in the CIS countries. Poverty had risen substantially, and the apparently high human capital had largely dissipated, as skills were often very firm-specific and therefore not easily adaptable to new circumstances, labor mobility was low due to missing fallbacks, education spending had collapsed, and the advances of information and communication technology, which led to an extraordinary change of the skill mix in OECD countries in recent years, had no impact on the CIS countries.

András Inotai argued that Hungary had reached an advanced stage of transition characterized by high growth and sustained macroeconomic stability. Nevertheless, the challenges Hungary was facing are numerous: proceeding with disinflation, modernizing its agriculture, improving the quality of its public administration, moving further ahead with structural reforms. In order to contain risks, growth must continue to be export- and investment-driven, greenfield investments must be expanded, the brain drain must be coped with, and competitiveness strengthened further. Membership in the EU is a key issue; the EU is the main external anchor of development of the country, and the Union must also face and live up to its own challenges to retain this anchoring role successfully.

Cristian Popa reviewed Romania's recent economic developments. He stressed the advances towards macroeconomic stabilization, progress in institution-building and the clean-up of the banking sector. But, as he said, stop-and-go policies have affected credibility, which has made the adjustment process more costly. The challenges ahead for Romania are manifold and comprise, inter alia, further disinflation, lowering fiscal dominance, reducing arrears in the economy and embarking upon a real convergence path with the European Union.

Oleg Vyugin challenged the conventional wisdom that the resurgence of economic growth in Russia was due to high oil prices while structural change was lacking. He stressed the prudent stance of fiscal policy and argued that the recent softening of monetary policy had been the flipside of a major and mostly unsterilized buildup in foreign exchange reserves. Incentives for business activities had improved tangibly, as the very fast mergers and acquisitions process since 1999 demonstrates. The Putin administration aims at tapping new sources of growth by focusing on five major reform blocks, namely cleaning up budgetary structures and procedures, restructuring and better controlling natural monopolies, improving law enforcement and reforming the public administration, consolidating the banking sector, and finally improving the social safety network. While reforms are well underway in several of these main areas, banking sector reform has not yet taken off and bureaucracy reform is still at an early stage. Progress in these two latter areas will constitute the litmus test for the reform capability of the new administration.

The ensuing discussion touched upon a broad range of issues, from agricultural reform in the advanced transition economies to the role of the oligarchs in Russia.

The concluding keynote address was held by President *Jean Lemierre* of the European Bank for Reconstruction and Development, who presented the EBRD's view of the transformation process. Lemierre acknowledged the substantial progress that had been made, but stressed that transition was far from being complete. The task of building a market economy consists not in blindly copying the West, but in developing a distinctive blend of market forces and state regulation in each transition country. The three major lessons to be learned from transition are that institution-building needs to receive the highest priority, that early reforms pay off and that the accountability of governments is a key element of success.

The conference was rounded off by *Gertrude Tumpel-Gugerell*, who stressed the following points in her concluding remarks. First, transition takes longer and is more complex than originally expected. Second, economic progress has been very diversified in transition economies which, third, has increased the heterogeneity among these countries. Fourth, macroeconomic stabilization has not always been adequately underpinned by microeconomic changes and a proper rule of law. Fifth, financial sector development was the key to success. Banking supervision must be independent and adequately financed; the central bank has to be involved in financial stability issues. Sixth, fiscal consolidation is still incomplete in most transition economies. Seventh, there are several viable ways to define monetary policy. Finally, program ownership is very important, i.e. the countries themselves have to play an adequate role in designing their stabilization and reform strategies.

Lectures Organized by the Oesterreichische Nationalbank

The OeNB hosted four lectures by renowned economists and experts within its series dedicated to topics crucial to transition economies in the second half of 2000. Readers may benefit from the main insights drawn from the lectures, which are presented below. The invited speakers in the second half of 2000 were *Thomas C. Dawson*, Director of the External Relations Department of the IMF, who presented “The IMF’s Assessment of Current Economic Developments in Transition Economies – Some Comparisons”; *Albrecht Rothacher*, Principal Administrator in the DG Enlargement of the European Commission, who provided an overview about “EU-Enlargement: Current Questions”; *Nils Björkstén*, senior economist at the Bank of Finland’s Economic Policy Division, who presented his paper about “Catching Up in the Enlarged Euro Area: A Common Challenge for Monetary Policy”; and finally, *Günter Verheugen*, the EU Commissioner for Enlargement, who provided insights into the current status of enlargement in a speech entitled “EU Enlargement.”

The presentations are routinely rounded off by discussions during which representatives of the academic community, government bodies and reporters, all of whom have a professional interest in the topics presented – have ample opportunity for an exchange with the speakers. The constraints on the length of the Focus on Transition do not allow a detailed account of the discussions in the brief overviews of each lecture the reader will find below.

Lecture by Thomas C. Dawson

The IMF’s Assessment of Current Economic Developments in Transition Economies – Some Comparisons

On July 10, 2000, Thomas C. Dawson, Director of the External Relations Department of the IMF, delivered a lecture on “The IMF’s Assessment of Current Economic Developments in Transition Economies – Some Comparisons.”

In his lecture and in the following discussion he provided not only a reflection on lessons learned from ten years of economic transition from central planning to markets. He also gave a frank, crisp and personal assessment of the IMF’s role in this transition and on the likely future role of the Fund.

The IMF has sometimes been criticized for pushing too strongly for rapid reform in the post-communist era and for limiting its agenda to macroeconomic adjustments while neglecting the task of institution-building. Such criticism is misplaced. Also with hindsight, the push for early macroeconomic reform is well justified. Clearly, the countries which reformed fastest have also remained the most successful countries. But contrary to allegations, the IMF has always insisted on institution-building as a crucial prerequisite for economic progress. The Fund has been consistent in its claim that macroeconomic reform and general economic reform will only succeed if accompanied by institution-building. This point was made as early as in 1991, inter alia in a paper written by Stanley Fisher. Today it is being emphasized again by the IMF’s new Executive Director, Horst Köhler. What was underestimated at the outset, though, were the geographical and historical obstacles to the reform process. They are the reason that the more advanced countries will

continue to make rapid progress while the others will continue to encounter difficulties in catching up.

Some people have questioned the IMF's role in handling and smoothing the Russian crisis in 1998, with the main reproach being that the IMF was too indulgent towards Russia in the years and months preceding the crisis. That may well have been the case, but in the end, the IMF is the instrument of its members. It was these members who determined the policy towards Russia; it was they who insisted upon generosity without too many questions being asked.

But this should not imply that the Fund itself made no mistakes. In retrospect, it becomes evident that the IMF relied – all too heavily – on a rather small group of Russian reformers who impressed the Fund by their air of purpose and determination. The Fund thus overrated their capacity to actually implement what they preached. The IMF's future activities in Russia will depend on the economic program of the new government (which looks quite promising at first sight). One could ask, of course, whether Russia actually needs to use IMF facilities at present given its current account surplus, which is mainly due to the high price of crude oil.

The case of Russia also prompts the question as to whether IMF support is contingent on political factors or whether this support even comes with political strings attached. While there are no formal rules to that effect, in practice member countries can and do impose conditionalities because they are able to block, in the Board, the consensus required for IMF decisions.

Turning to Ukraine, it has become clear by now that some of the reports given by the Ukrainian National Bank to the IMF were false. The issue will have to be settled before macroeconomic assistance is resumed. In the meantime, the IMF will provide large-scale technical help for establishing a sound banking system in Russia and in Ukraine. One has to wonder whether, at present, a banking system in the proper sense of the term even exists in Russia. The situation is worse still in Ukraine.

In presenting issues in the more advanced of the Central and Eastern European countries, the IMF shuns the usage of the term “graduation from transition.” Indeed, such a term would be misleading, as some problems of transition persist even in the most successful of the formerly communist countries. In particular, this holds true for the financial sector. It is for this reason that the IMF will continue to provide some limited technical help. But the lion's share of the task will have to be borne, and is being borne, by the European Union. The EU can promote adjustment to European and international standards by aid on a scale and with a specificity that cannot be matched by the IMF. Nor would the IMF be able to gain the same leverage on policy decision that this massive aid provides.

The U.S.A. has always supported European integration. The eastward expansion of the EU adds a motive for continuing this course in the future.

As after each major crisis, calls for a wholesale reform of the IMF and of the entire international monetary and financial system have become more frequent and insistent in the aftermath of the Asian and the Russian crises. The clamor has abated in the meantime. If the recent meeting of the G-7

ministers of finance in Fukuoka is any guide, such reforms will be limited to a streamlining of the existing facilities.

One of the proposals to thus have faded from discussion had aimed at establishing in advance firm rules for some sort of “Chapter Eleven” proceedings for countries in the grip of a monetary and/or a financial crisis. The Fund will, of course, continue to stay engaged in the resolution of such crises. But the rules of burden sharing, especially of the burden sharing between private and public lenders, will also continue to be determined on an ad-hoc basis. In this context, efforts will persist to “bail in” private lenders. The financial sector in troubled countries will be subject to special scrutiny and attention.

Critics of the Bretton Woods institutions come from opposite sides of the political spectrum. On the one side are the critics who scuttled the WTO Seattle meeting, but on the other side some in the U.S.A. advocate a retreat into unilateralism or even neoisolationism. The latter attitude even partly colored the so-called Meltzer Report to the U.S. Congress, which proposes to severely limit the role of the Fund, and to do away, for all practical purposes, with the IBRD. While most other studies arrived at different conclusions, the Meltzer report could signal a shifting mood in the U.S.A. If the U.S.A. would in fact withdraw from multilateralism and world leadership, no other power would be in a position to assume this role. This also applies to the European Union, as – at least in the Bretton Woods institutions – it still has not managed to speak with a single and coherent voice.

Lecture by Albrecht Rothacher

EU Enlargement: Current Questions

On September 15, 2000, Mr. Albrecht Rothacher, Principal Administrator in the DG Enlargement of the European Commission, delivered a lecture on “EU-Enlargement: Current Questions” at the Oesterreichische Nationalbank.

Mr. Rothacher began by stating that the current negotiations with the group of candidates for EU membership which started negotiations first, the so-called Luxembourg Group (Cyprus, the Czech Republic, Estonia, Hungary, Poland, Slovenia), have already been going on for two and a half years. However, negotiations with the Luxembourg Group will probably not last as long as those held with Spain and Portugal, which took seven to eight years. In an interview, the EU’s commissioner for enlargement, Mr. Verheugen, recently said that he would like to see most candidate countries entering the EU by 2005. Negotiations would have to be finalized by mid-2003 for any country which wishes to meet that entrance date, because the subsequent process of ratifying the signed treaties by the EU and by the candidate country will probably take at least one-and-a-half years.

The countries preparing for EU accession have two main types of problems:

First, the candidate countries have few financial resources: Therefore, it is very difficult for these countries to make the large investments required to comply with EU standards, in particular with environmental standards (air

pollution, drinking water, sewage and waste), but also with social standards, where transition arrangements will presumably be granted only in limited areas and for short periods. It will be costly for the candidate countries to switch from the previously prevailing standard of compensation to the EU's principle of prevention in the field of safety at work. Moreover, the EU's standards on food safety apply both to the primary level of the food industry (dairies, slaughterhouses) and to the structure of the agricultural sector. For instance, the integrated cooling procedure for milk prescribed by the EU means a farm needs at least 40 cows to turn a profit.

Second, the administrative structures in the candidate countries need to be overhauled: This relates to the infrastructure of administration and to human resources. The inherited infrastructure is often very centralistic. Hence, there is the need to build decentralized administrative bodies in order to facilitate the application of the body of EU law (*acquis communautaire*) throughout the whole country. Earnings are much lower in the public than in the private sector. Often the difference is huge. Only in Slovenia is the problem less acute. Quite frequently younger civil servants leave for the private sector just after having received training in EU-related matters. In addition, the "old guard" was appointed to jobs not on the grounds of skills, but of political loyalty under the communist era. That problem is smaller in countries with a short history of statehood, like Slovenia, the Baltic countries and the Slovak Republic.

The body of EU law has been divided into 31 chapters for the negotiations. The candidate countries of the Luxembourg group have provisionally closed as many as 11 to 16 chapters (with Cyprus leading), while the countries of the Helsinki group (Bulgaria, Latvia, Lithuania, Malta, Romania, the Slovak Republic) have already closed 4 to 7 chapters. The European Union still lacks a fully developed common position in two very sensitive areas. In the first area, the free movement of labor, the divergent positions of the EU Member States are the main hurdle: Germany and Austria appear to be in favor of a ten-year transition period coupled with quotas for specific professional groups, while Denmark and the Netherlands favor immediate full liberalization, as they lack professionally skilled workers. In the second area, agricultural policy, the EU Commission has to choose between two options: the first is a dual system, implying double price levels and border controls, and the second is a unified agricultural policy for incumbents and new entrants, though with differentiated direct payments depending on certain criteria. Within the chapter covering the free movement of capital, giving foreigners access to buy real estate constitutes a major problem for Poland, but also for other countries (Hungary, the Czech Republic). Here, Austria was granted a five-year transition period for secondary residences when it joined, while Denmark was granted an exemption for an unlimited period for its cottages on the coast during the Maastricht Treaty negotiations. Other difficult chapters include transport policy (implementation of domestic controls according to EU standards e.g. for lorries as a prerequisite for abolishing border controls), and the environment. The commitment of Estonia, Hungary and Slovenia in the negotiations of those chapters appears to be greater than that of other candidates. Finally, the chapter on competition

policy comprises sensitive issues like nondiscrimination in public tenders and state aid.

There are two main scenarios for the entrance of candidate countries into the EU. The first scenario sees a relatively small group of the best-prepared countries entering the EU before the others. While initially the Czech Republic was handled at the top of the list because its macroeconomic data were excellent (hiding problems at the micro level), Estonia, Hungary and Slovenia are the present frontrunners, apart from Cyprus and Malta. The second scenario (preferred by Mr. Verheugen in some public declarations) consists in a “big bang” accession of up to 10 countries (i.e. all candidate countries except Bulgaria, Romania and Turkey) entering at once, but probably somewhat later than a smaller group. The advantages of the latter scenario would be that the administrative reforms within the countries would already be more advanced at the entrance date and fewer or shorter transition arrangements would be necessary.

In the ensuing debate, several topics were raised: aspects of international security and enlargement, acceptance of EU enlargement by the citizens of the EU and the candidate countries, the EU’s institutional reform, the EU’s budget and transfers to candidate countries, transition periods and border controls, the examination of the implementation of the body of EU law, the entrance scenario, the negotiations with Bulgaria and Romania as well as the relations with Croatia. The European Commission’s position on border controls has changed from a strong opposition initially to the preference for selective controls, in order to facilitate accession. Four main channels for examining the implementation of the *acquis communautaire* were mentioned: 1. reports of the EU’s attachés in the respective countries, 2. reports of bilateral trade chambers, 3. exchange programs for the staff groups of the public sector (“twinning arrangements”), and 4. reports of investors from the EU. A participant mentioned two problems attached to the entrance scenario: 1. the possible resistance of Germany and France to a first enlargement round without Poland, 2. the need to break up the customs union of the Czech Republic and Slovakia (including the establishment of custom controls at the border) if the Czech Republic enters earlier. The Commission’s current proposal on the EU’s transfers to candidate countries provides for a cap at 4% of each candidate’s GDP for the overall sum of transfers from the EU. The resulting maximum amount of transfers would absorb at most up to 18% of the EU’s budget. If that cap were applied to the present EU Member States, only Greece, which currently receives transfers on the order of 6% of GDP, would be affected.

Nils Björkstén

Catching Up in the Enlarged Euro Area: A Common Challenge for Monetary Policy

On September 22, 2000, Nils Björkstén, senior economist at the Bank of Finland's Economic Policy Division, presented a paper he had written on the topic "Catching Up in the Enlarged Euro Area: A Common Challenge for Monetary Policy" within the framework of the OeNB's series of lectures on transition issues. Mr. Björkstén started out by explaining that the common monetary policy of the Economic and Monetary Union (EMU) was formulated to address the needs of the euro area as a whole. For individual member countries, however, monetary policy will frequently be either too loose or too tight, since countries will from time to time experience different rates of growth and inflation.

Some of these "divergences" across euro area countries are structural, stated Mr. Björkstén, resulting from underlying differences in the economies. Real convergence (catching up) relates to a gradual elimination of differences in economic development across euro area countries. This is desirable and probably inevitable in the long run. Nevertheless, the process is also destabilizing for EMU macroeconomic policy, because the larger the developmental differences are to begin with, the greater the structural divergences in trend inflation rates will be.

When economies integrate closely enough, developmental differences diminish by means of a real convergence process, whereby poorer countries "catch up" to richer countries in terms of per capita incomes. Price levels converge as well. This is a long-term process which affects trend inflation differentials. As price levels converge in the euro area, structural inflation in the poorer countries will be higher, since the two levels simply cannot equalize without one growing faster than the other. This causes a protracted divergence of inflation rates across member countries that cannot be addressed via monetary policy tools as long as the monetary policy is shared. Gradual convergence in living standards therefore results in a sustained divergence between inflation rates within EMU.

The inflationary effect of real convergence has already been well documented in Spain and Portugal, which have the lowest per capita GDP levels in the euro area. When EMU enlarges to include more countries, many of which are far poorer than the poorest of the current euro area countries, the divergence of structural inflation rates will increase.

At the same time, the objective of the euro area common monetary policy is to maintain price stability. This is defined as an annual increase in the harmonized index of consumer prices (HICP) of less than 2% on average, over the medium term, across the entire euro area. Since the average nominal inflation rate is limited to 2%, any higher levels of inflation in euro area catching-up economies must be offset by lower levels elsewhere.

This phenomenon can potentially be serious, but there are three reasons why it will not take policymakers by surprise. First, EMU enlargement will not take place until at least two years after the EU has enlarged, and this is a process which may be protracted and incremental. Second, nominal conver-

gence of inflation rates is a formal prerequisite for an economy seeking to join EMU. Thus, whether by tight national monetary policy or otherwise, inflation will be brought down and held down in accession countries before they join the euro area.

Finally, the accession economies are still too small to carry much weight in the calculated euro aggregates. Considerable catching up in living standards will have to take place before the weight becomes substantial. At present, the combined size of the accession countries' economies is close to that of Spain; nevertheless, with a combined population of over 170 million people, if full convergence takes place, the accession countries will eventually converge to a weight of about one third of the euro area.

All the same, it is likely that EMU will include more countries in the decades to come, and like Spain and Portugal today, real convergence will lead accession countries to have both above-average inflation and a steadily increasing weight in euro area inflation aggregates. The paper assesses the size, speed and importance of this phenomenon.

Mr. Björkstén related that available evidence on the speed of real convergence had been gathered from Europe, the United States and Canada, respectively, in order to provide some indication of what might be expected in the euro area over the next two to three decades. In all three areas, real convergence has taken place at a fairly rapid pace. In the United States and in Canada, however, migration appears to have had an important effect in the convergence process, something which has been much less of a factor in Europe, Mr. Björkstén concluded.

Lecture by Günter Verheugen

EU Enlargement

On September 28, 2000, Günter Verheugen, the EU Commissioner for Enlargement, gave a lecture on the topic "EU Enlargement." The event took place on invitation of the Oesterreichische Nationalbank and was cosponsored by the Diplomatic Academy and the Austrian Society for Foreign Policy and International Relations. With about 500 participants, the event was well attended.

OeNB Governor Klaus Liebscher introduced Commissioner Verheugen, who made it quite clear at the outset that it was no longer a question *whether* EU enlargement would take place. The question still open was *when* and *how* this enlargement would occur. Speed and expediency are important goals, but the quality of the whole process is at least as important. It would be unwise, therefore, to seek a tradeoff between these two aims.

The Commission assesses the situation of the candidate countries in annual progress reports. This year's report is scheduled to be published in November. According to Mr. Verheugen, it will conclude that most applicants have indeed moved closer to the EU. The Commissioner could imagine that – in the most optimistic case – ten of the twelve candidate countries will have become EU members by the year 2005.

While all candidates except Turkey meet the political criteria for membership, they still have some way to go to fully meet the other criteria.

In many instances weaknesses in the administrative and judicial system persist, making it difficult to translate the EU standards into practice. Massive corruption is a problem in some countries and has to be fought resolutely.

Enlargement is in the interest of all existing EU members and of Europe as a whole. In some Member States, enlargement has nonetheless caused apprehension. The Commission is aware that real problems may indeed linger behind some of these fears about possible infrastructure bottlenecks, competitiveness problems for border regions and inflows of migrant labor that could temporarily destabilize regional labor markets. In reality, however, such problems will prove to be minor. Border regions might very well find that enlargement provides added economic impetus. Nonetheless, the European Commission takes seriously these concerns voiced by parts of the EU population: It will submit proposals on how to address them.

One other concern common to many member countries is that enlargement may become too expensive. But the Commission is determined to respect the financial guidelines of Agenda 2000. And certainly, its budget will not rise beyond the limits prescribed in the EU Treaty.

To a certain extent, enlargement has already become a reality. The CEE candidate countries already conduct between 50% and 80% of their external trade with the Community. On the other hand, the EU has a large surplus in trade with these countries. The economies of candidate countries are growing faster than the economies of the 15 EU members. Most of the benefits of enlargement will accrue to the EU members with traditionally strong links to central and eastern Europe. Austria is among those countries. However, Europe as a whole will profit as well, last but not least through greater political stability. For the first time in its history, Europe will have the chance to become an undivided continent.

Technical Cooperation of the Oesterreichische Nationalbank with Countries in Transition

In the second half of 2000, the OeNB continued and intensified its cooperation activities with reforming countries in Central and Eastern Europe, the West Balkans and the CIS republics both at a bilateral and at a multilateral level.

At the bilateral level, the OeNB held four one-week seminars for central bankers covering the following topics: "Austria's First Five Years in the EU – Lessons and Experiences after One Year in EMU" (March 20 to 24, 2000), "Accounting in the OeNB as a Member of the ESCB" (August 28 to September 1, 2000), "The Changeover to the Euro: Monetary Policy and Foreign Exchange Management – The OeNB's Experience with Monetary Policy Operations and Financial Reporting in the Eurosystem" (September 11 to 15, 2000) and "Payment Systems – Adapting to the ESCB Environment" (October 9 to 13, 2000). The positive reaction of the participants and the ongoing strong demand for these seminars has induced the OeNB to continue this series in 2001 with four seminars for central bankers on the following topics: "Preparing for EMU" (February 19 to 23, 2001), "Banking Supervision Today and Tomorrow – Recent Experience and Future Capital Regulation" (March 5 to 9, 2001), "From Financial Accounting to Central Bank Planning and Budgeting – Current Accounting Issues; Operational and Strategic Planning; Cost Accounting" (September 3 to 7, 2001), and "Monetary and Banking Statistics" (October 1 to 5, 2001).

In the course of the year 2000, the OeNB has observed an increasing demand for short-term bilateral workshops which typically covered very specific topics and which take place directly at the respective central bank requesting them. Within this framework, the OeNB held a two-day workshop on "The Changeover to Euro Banknotes and Coins" at the Bank of Slovenia in April 2000 and a one-day workshop on "Practical Problems in Payment Systems" at the Czech National Bank (CNB) in October 2000. In July 2000, the OeNB held a high-level workshop on "Economic, Fiscal and Monetary Policy Coordination" at the National Bank of Hungary (NBH). Furthermore, one two-day workshop with the NBH on "IT – Statistical Background for Central Bank Statistical Systems" was organized in October 2000 and another one on "Supervising Derivative Transactions" is currently under preparation. For the first half of 2001, the OeNB plans a one to two day workshop on "EU/EMU Accession Issues" at the National Bank of Slovakia. Moreover, the OeNB hosted a number of study visits, e.g. in May 2000 from the Bank of Slovenia on "SAP 3 – Implementation in Accounting" and in September 2000 from the National Bank of Poland, covering – in parallel – the following topics: "Legal Aspects of Financial Instruments"; "Model of the Functioning of the Central Register for Treasury Securities at Central Banks in Connection with the ESCB" and "Accounting Standards." Moreover, staff members of the CNB paid two study visits to the OeNB in October 2000, the first visit to cover – in parallel – the topics "experiences in the field of banking statistical reporting for balance of payments" and "monitoring transportation services and travel for balance of payments purposes," the second visit to cover "IT development in the OeNB." Furthermore, a study visit for experts of the NBH in the OeNB's IT department is being prepared.

Apart from these short-term cooperation activities, the OeNB hosted a two-month traineeship for an employee of the CNB on “Coordinating International Relations of a Central Bank” in October/November 2000. Furthermore, there seems to be an increasing interest in organizing research stays for staff members at foreign central banks. This approach enables both the sending and the receiving central bank to jointly study and discuss transition issues. Within this framework, the OeNB plans to accommodate a researcher from the CNB for three months in 2001 to prepare an in-depth study on cost-push inflation.

At the multilateral level, the OeNB for the first time took part in the EU-financed twinning program and is currently preparing the project covenant on “Strengthening the Capacity of the Romanian Institutions for the Prevention and Control of Money Laundering” in cooperation with Italy.

The Austrian authorities, i.e. the Austrian Ministry of Finance and the OeNB, remain committed to supporting the Joint Vienna Institute (JVI), both financially and by contributing to the JVI’s academic program. Therefore, in addition to the four one-week seminars held by the OeNB every year, the Austrian authorities jointly organize two one-week seminars at the JVI. The topics planned for these two seminars in 2001 are as follows: “Foreign Direct Investment Policy” (May 14 to 18, 2001) and “The Challenge for Structural Reforms: Design, Implementation, Experience” (November 26 to 30, 2001). Moreover, the JVI’s course in Applied Economic Policy (AEP), the successor to the former Comprehensive Course, includes an “Austrian segment” financed jointly by the Austrian Ministry of Finance and the OeNB. In the first part of this segment, experts from a variety of academic and organizational backgrounds present lectures devoted to specific features of Austria’s market economy, such as the political and economic structure, social partnership, issues of fiscal federalism, incomes policies, Austria’s experience with EU accession and the introduction of the euro in a two-and-a-half day period. In the second part, the so-called study tour, participants spend three days visiting companies, state and local government authorities, banks, media centers and the like to gain an insight into the structures of Austria’s economy and administration. The OeNB organizes the programs for the study tours.

S T A T I S T I C A L A N N E X

Gross Domestic Product

	Bulgaria	Czech Republic	Estonia	Hungary	Latvia	Lithuania	Poland	Romania	Russia	Slovak Republic	Slovenia
Annual change in %											
1990	-9.1	-1.2	x	-3.5	x	x	-11.6	-5.6	-3.0	-2.5	-4.7
1991	-11.7	-11.6	x	-11.9	x	x	-7.0	-12.9	-5.0	-14.6	-8.9
1992	-7.3	-0.5	-13.7	-3.1	x	x	+2.6	-8.8	-14.5	-6.5	-5.5
1993	-1.5	+0.1	-8.5	-0.6	-14.9	+6.5	+3.8	+1.5	-8.7	-3.7	+2.8
1994	+1.8	+2.2	-2.0	+2.9	+0.6	+7.6	+5.2	+3.9	-12.7	+4.9	+5.3
1995	+2.9	+5.9	+4.3	+1.5	-0.8	+14.5	+7.0	+7.1	-4.1	+6.7	+4.1
1996	-10.1	+4.8	+3.9	+1.3	+3.3	+4.7	+6.0	+3.9	-3.4	+6.2	+3.5
1997	-7.0	-1.0	+10.6	+4.6	+8.6	+7.3	+6.8	-6.1	+0.9	+6.2	+4.6
1998	+3.5	-2.2	+4.7	+4.9	+3.9	+5.1	+4.8	-5.4	-4.9	+4.1	+3.8
1999	+2.4	-0.2	-1.1	+4.5	+0.1	-4.1	+4.1	-3.2	+3.2	+1.9	+5.0
1997											
3 rd quarter	+3.1	-2.1	+11.6	+5.1	+10.0	-2.1	+6.7	x	+1.9	+6.6	+4.5
4 th quarter	+2.1	-1.4	+13.1	+5.3	+10.7	+3.9	+6.4	x	+2.6	+6.9	+3.4
1998											
1 st quarter	+16.8	-1.1	+11.2	+4.5	+9.5	-1.5	+6.5	-9.4	-1.3	+6.2	+6.0
2 nd quarter	+2.6	-1.8	+7.4	+5.1	+6.0	+1.4	+5.3	-1.0	-1.0	+6.1	+2.5
3 rd quarter	-1.8	-2.5	+3.0	+5.6	+2.4	-5.4	+4.9	..	-8.1	+5.1	+3.3
4 th quarter	+1.2	-3.3	-1.4	+5.2	-1.7	-4.8	+3.0	..	-8.2	+0.5	+3.4
1999											
1 st quarter	+0.8	-3.3	-3.3	+3.5	-1.5	-1.9	+1.6	-4.6	-2.7	+1.9	+2.9
2 nd quarter	+2.7	+0.1	-2.5	+3.9	-1.1	+1.4	+3.1	-3.2	+1.2	+2.9	+7.4
3 rd quarter	+4.8	+1.0	-0.5	+4.5	+0.2	-5.4	+5.0	-3.6	+6.7	+0.5	+4.3
4 th quarter	+1.0	+1.0	+1.8	+5.9	+2.8	+1.8	+6.2	-1.4	+7.3	+2.3	+5.0
2000											
1 st quarter	+4.8	+4.4	+5.2	+6.6	+5.3	+9.6	+6.0	+0.9	+8.4	+1.5	+6.3
2 nd quarter	+5.5	+1.9	+7.5	+5.9	+4.0	-3.7	+5.2	+3.3	+6.7	+1.9	+3.6

Source: WIW (The Vienna Institute for International Economic Studies); Estonia, Latvia, Lithuania: IMF; Estonia: national source from 1997. Quarterly data: national sources.

Industrial Production

	Bulgaria	Czech Republic	Estonia ¹⁾	Hungary	Latvia	Lithuania ¹⁾	Poland	Romania	Russia	Slovak Republic ²⁾	Slovenia
Annual change in %											
1990	-16.7	-3.3	x	-10.2	x	x	-24.2	-19.0	-0.1	-4.0	-10.5
1991	-20.2	-21.2	x	-16.6	x	-4.9	-8.0	-22.8	-8.0	-19.4	-12.4
1992	-18.4	-7.9	x	-9.7	-34.6	-51.6	+2.8	-21.9	-18.0	-9.3	-13.2
1993	-9.8	-5.3	x	+4.0	-38.1	-34.7	+6.4	+1.3	-14.1	-3.8	-2.8
1994	+10.6	+2.1	-2.1	+9.6	-9.5	-29.8	+12.1	+3.3	-20.9	+4.8	+6.4
1995	+4.5	+8.7	+2.0	+4.6	-6.3	+0.9	+9.7	+9.4	-3.3	+8.3	+2.0
1996	+5.1	+2.0	+3.5	+3.4	+1.4	+3.5	+8.3	+6.3	-4.0	+2.5	+1.0
1997	-5.4	+4.5	+13.0	+11.1	+6.1	+8.0	+11.5	-7.2	+1.9	+2.7	+1.0
1998	-7.9	+3.1	+0.8	+12.5	+2.0	+7.0	+3.5	-13.8	-5.2	+5.0	+3.7
1999	-12.3	-3.1	..	+10.4	-8.8	..	+4.3	-8.0	+8.1	-3.4	-0.5
1999											
July	-16.1	-6.1	-5.5	+5.4	-9.8	-11.2	+1.4	-9.2	+12.8	+1.7	-3.4
August	-4.2	+1.5	+0.7	+13.0	-5.8	-12.5	+7.1	-9.2	+16.0	-4.2	+1.1
September	-5.5	-2.2	+4.3	+13.3	-1.1	+1.5	+8.7	-9.2	+20.2	-1.6	+0.8
October	-5.1	-1.3	+6.4	+15.1	-2.1	-13.3	+8.9	-9.2	+10.3	+2.4	+1.7
November	-2.7	+3.6	+4.3	+19.3	+2.5	-16.4	+15.7	-9.2	+12.9	+2.2	-0.1
December	-7.8	+7.5	+7.5	+9.9	-0.9	-11.5	+19.0	-9.2	+11.1	-1.6	+8.2
2000											
January	+4.4	+3.9	+13.1	+17.9	+4.3	+6.9	+7.9	-2.1	+10.7	-3.1	+2.5
February	+2.8	+5.1	+14.4	+24.1	+3.6	+14.3	+16.5	+0.8	+13.7	+8.0	+11.8
March	+5.2	+5.2	+9.6	+20.3	+2.0	+6.0	+6.7	+2.6	+9.6	+8.6	+7.5
April	-2.9	+2.8	+4.8	+13.6	-2.7	-14.0	+5.2	+4.2	+5.5	+18.9	+7.6
May	+7.9	+6.5	+17.2	+29.4	+10.8	+0.7	+12.1	+11.3	+10.6	+10.2	+10.8
June	+0.9	+6.1	+15.4	+21.1	+8.4	-3.9	+13.4	+12.7	+9.8	+7.7	+10.3
July	+8.1	+5.6	+9.7	+19.6	-2.6	-2.8	+7.8	+12.7	+8.5	+13.5	+8.1
August	+6.5	+11.0	+12.8	+23.1	+5.7	+17.2	+9.2	+12.7	+10.2	+9.9	+7.0
September	+7.8	+3.7	+8.5	+16.8	+1.8	+7.5	+5.0	+12.7	+7.2	+15.4	+3.7

Source: Annual data: WIW; Estonia, Latvia, Lithuania: national sources. Monthly data: national sources.

¹⁾ Industrial sales.

²⁾ Beginning in 1999 change in % against 1998 monthly average.

Unemployment Rate

	Bulgaria	Czech Republic	Estonia	Hungary	Latvia	Lithuania	Poland	Romania	Russia	Slovak Republic	Slovenia
<i>End of period (in %)</i>											
1990	1.7	0.8	x		x	x	6.3	x	x	1.6	5.8
1991	11.1	4.1	x		x	x	11.8	3.0	x	11.8	10.1
1992	15.2	2.6	x	9.8	2.3	x	13.6	8.2	5.2	10.4	13.4
1993	16.4	3.5	4.1	11.9	5.8	3.4	16.4	10.4	6.0	14.4	15.4
1994	12.8	3.2	4.1	10.7	6.5	3.8	16.0	10.9	7.7	14.6	14.2
1995	11.1	2.9	4.0	10.2	6.6	6.1	14.9	9.5	9.0	13.1	14.5
1996	12.5	3.5	4.3	9.9	7.2	7.1	13.2	6.6	9.9	12.8	14.4
1997	13.7	5.2	3.6	8.7	7.0	6.7	10.3	8.9	11.2	12.5	14.8
1998	12.2	7.5	4.0	7.8	7.6	6.9	10.4	10.4	13.3	15.6	14.6
1999	16.0	9.4	5.2	7.0	9.7	8.4	13.0	11.5	12.1	19.2	13.0
1999											
July	13.0	8.8	5.0	7.5	9.9	7.8	11.8	11.3	11.9	18.3	13.4
August	13.6	9.0	5.0	6.8	9.8	8.1	11.9	10.9	11.8	18.2	13.3
September	14.2	9.1	5.2	6.6	9.5	8.4	12.1	10.9	11.9	17.8	13.1
October	14.7	8.9	5.2	6.7	9.3	8.9	12.2	10.8	12.1	17.7	13.0
November	15.6	9.0	5.2	6.6	9.1	9.5	12.5	11.1	12.3	18.3	13.0
December	16.0	9.4	5.2	6.3	9.1	10.0	13.0	11.5	12.2	19.2	13.0
2000											
January	17.2	9.8	5.4	7.0	9.1	10.8	13.6	11.9	12.0	19.5	13.3
February	18.1	9.7	5.6	7.2	9.1	11.2	13.9	12.2	11.9	19.5	13.0
March	18.8	9.5	5.7	6.0	9.0	11.4	13.9	11.9	11.3	19.3	12.6
April	19.0	9.0	5.3	6.9	9.0	11.2	13.7	11.6	10.8	18.8	12.4
May	18.9	8.7	5.2	6.7	8.6	11.1	13.5	11.2	10.2	18.6	12.0
June	18.2	8.7	5.0	6.0	8.4	11.1	13.5	10.8	10.1	19.1	11.8
July	18.3	9.0	4.8	6.6	8.2	11.6	13.7	10.5	10.0	19.4	11.9
August	18.0	9.0	4.9	6.5	8.1	11.8	13.8	10.1	9.8	17.4	11.7
September	17.8	8.8	4.9	5.7	7.9	11.8	14.0	9.9	..	16.6	..

Source: WIW; Estonia, Latvia, Lithuania: national sources.

Consumer Price Index

	Bulgaria	Czech Republic	Estonia	Hungary	Latvia	Lithuania	Poland	Romania	Russia	Slovak Republic	Slovenia
<i>Period average (annual change in %)</i>											
1990	+ 23.8	+ 9.7	x	+28.9	x	x	+585.8	+ 5.1	+ 5.3	+10.4	x
1991	+ 338.5	+56.6	x	+35.0	x	x	+ 70.3	+170.2	+ 92.6	+61.2	x
1992	+ 91.2	+11.1	x	+23.0	+243.3	x	+ 43.0	+210.4	+1,526.5	+10.0	+201.3
1993	+ 72.8	+20.8	+89.8	+22.5	+108.8	+410.2	+ 35.3	+256.1	+ 873.5	+23.2	+ 32.3
1994	+ 96.0	+10.0	+47.7	+18.8	+ 35.9	+ 72.2	+ 32.2	+136.8	+ 307.0	+13.4	+ 19.8
1995	+ 62.1	+ 9.1	+28.8	+28.2	+ 25.0	+ 39.7	+ 27.8	+ 32.3	+ 197.5	+ 9.9	+ 13.5
1996	+ 123.0	+ 8.8	+23.1	+23.6	+ 17.6	+ 24.6	+ 19.9	+ 38.8	+ 47.8	+ 5.8	+ 9.9
1997	+1,082.3	+ 8.5	+10.6	+18.3	+ 8.4	+ 8.9	+ 14.9	+154.8	+ 14.8	+ 6.1	+ 8.4
1998	+ 22.3	+10.7	+ 8.2	+14.3	+ 4.6	+ 5.1	+ 11.8	+ 59.1	+ 27.6	+ 6.7	+ 8.0
1999	+ 0.3	+ 2.1	+ 3.3	+10.0	+ 2.4	+ 0.8	+ 7.3	+ 45.8	+ 85.7	+10.6	+ 6.1
1999											
September	+ 1.7	+ 1.2	+ 2.8	+10.9	+ 2.3	+ 1.4	+ 8.0	+ 50.2	+ 62.0	+14.7	+ 7.5
October	+ 3.0	+ 1.4	+ 2.8	+10.5	+ 2.8	+ 0.2	+ 8.8	+ 50.7	+ 57.2	+14.0	+ 7.7
November	+ 4.6	+ 1.9	+ 3.2	+10.6	+ 3.2	+ 0.1	+ 9.2	+ 53.7	+ 50.5	+13.9	+ 7.8
December	+ 6.1	+ 2.5	+ 3.8	+11.2	+ 3.2	+ 0.3	+ 9.8	+ 54.8	+ 36.6	+14.2	+ 8.0
2000											
January	+ 7.8	+ 3.4	+ 3.3	+10.0	+ 3.1	+ 0.8	+ 10.1	+ 56.8	+ 28.9	+13.6	+ 7.8
February	+ 9.1	+ 3.7	+ 3.1	+ 9.8	+ 3.4	+ 0.8	+ 10.4	+ 55.7	+ 25.1	+16.4	+ 8.3
March	+ 9.6	+ 3.8	+ 3.1	+ 9.6	+ 3.2	+ 0.8	+ 10.3	+ 49.0	+ 22.4	+16.6	+ 9.0
April	+ 9.3	+ 3.4	+ 3.1	+ 9.2	+ 3.8	+ 0.8	+ 9.8	+ 48.9	+ 19.9	+15.9	+ 9.2
May	+ 10.3	+ 3.7	+ 2.9	+ 9.1	+ 3.1	+ 0.4	+ 10.0	+ 44.0	+ 19.4	+16.0	+ 9.1
June	+ 10.9	+ 4.1	+ 3.2	+ 9.1	+ 2.4	+ 1.2	+ 10.2	+ 40.9	+ 20.2	+15.4	+ 9.7
July	+ 8.0	+ 3.9	+ 4.1	+ 9.6	+ 2.9	+ 1.4	+ 11.6	+ 44.5	+ 19.1	+ 9.2	+ 8.8
August	+ 10.1	+ 4.1	+ 4.4	+ 9.6	+ 2.5	+ 0.9	+ 10.7	+ 45.4	+ 18.8	+ 8.7	+ 8.2
September	..	+ 4.1	+ 4.7	+10.3	+ 2.2	+ 0.3	+ 10.3	+ 44.9	..	+ 8.7	+ 8.9
October	..	+ 4.4	..	+10.4	..	..	+ 10.4	..	..	+ 8.5	+ 9.0

Source: WIW; Estonia, Latvia, Lithuania: IMF.

Trade Balance

	Bulgaria	Czech Republic	Estonia	Hungary	Latvia	Lithuania	Poland	Romania	Russia	Slovak Republic	Slovenia
USD million											
1990	x	x	x	348.0	x	x	x	-3,427.0	x	x	x
1991	x	x	x	189.0	x	x	x		x	x	x
1992	x	x	x	48.0	- 40.3	x	x		x	x	791.1
1993	x	- 525.0	- 144.8	-3,247.0	18.6	- 153.1	- 2,293.0		x	71,129.0	- 154.2
1994	x	-1,381.0	- 356.9	-3,635.0	- 301.1	- 201.6	- 836.0	- 172.0	17,675.0	80,154.0	- 337.5
1995	x	-3,678.0	- 666.1	-2,442.0	- 580.7	- 943.5	- 1,827.0	- 284.4	20,726.0	69,389.7	- 954.3
1996	187.6	-5,877.0	-1,019.4	-2,645.0	- 799.1	-1,203.8	- 8,154.0	- 379.8	22,933.0	60,713.4	- 881.7
1997	380.3	-4,540.0	- 349.1	-1,734.0	-1,051.3	-1,784.0	-11,320.0	- 257.6	17,362.0	55,691.7	- 771.6
1998	- 457.3	-2,554.0	-1,115.3	-2,121.0	-1,377.4	-2,083.0	-13,667.0	- 328.1	17,097.0	40,188.5	- 774.9
1999	-1,081.0	-2,060.0	- 877.1	-2,178.0	-1,223.2	-1,830.8	-14,500.0	- 411.7	35,302.0	- 1,103.1	-1,156.7
1999											
July	- 96.1	- 198.3	- 80.8	- 167.0	- 100.3	x	- 1,337.0	- 678.5	3,086.0	- 42.0	47.5
August	- 48.7	- 79.9	- 78.8	- 117.0	- 111.9	x	- 1,230.0	- 628.6	3,088.0	- 26.9	- 33.5
September	- 85.8	49.2	- 66.1	- 210.0	- 102.7	- 320.3	- 1,319.0	- 681.3	3,198.0	- 62.6	- 50.4
October	- 50.7	- 139.7	- 82.9	- 217.0	- 111.6	x	- 1,136.0	- 669.8	3,413.0	- 35.5	- 68.5
November	- 97.8	- 386.0	- 115.9	- 199.0	- 141.0	x	- 1,406.0	- 708.2	3,794.0	- 98.0	- 112.2
December	- 175.9	- 507.7	- 139.1	- 222.0	- 148.2	- 439.0	- 1,771.0	- 686.3	5,263.0	- 169.6	- 154.0
2000											
January	- 207.0	- 125.6	- 40.8	- 134.8	- 70.0	x	- 1,458.0	- 593.3	3,892.0	- 52.8	- 90.4
February	- 149.7	- 199.8	- 77.7	- 185.9	- 69.4	x	- 1,148.0	- 745.7	4,233.0	- 77.6	- 83.4
March	- 69.4	- 171.4	- 80.8	- 182.3	- 99.0	- 143.0	- 1,242.0	- 771.3	5,325.0	- 36.0	- 137.5
April	- 82.5	- 139.8	- 80.6	- 45.4	- 101.2	x	- 1,076.0	- 690.5	4,539.0	23.1	- 120.8
May	- 147.5	- 258.3	- 101.0	- 131.3	- 118.9	x	- 903.0	- 694.8	4,767.0	- 64.0	- 118.5
June	- 130.5	- 247.0	- 74.7	- 222.1	- 101.7	- 271.9	- 1,042.0	- 824.0	4,688.0	- 22.5	- 19.7
July	- 149.4	- 384.6	- 64.7	- 184.1	- 119.7	x	- 1,040.0	- 820.5	5,223.0	- 25.0	- 89.8
August	- 112.3	- 401.0	- 66.2	- 41.6	- 119.1	x	..	..	5,305.0	0.0	- 117.4

Source: national central banks.

Current Account

	Bulgaria	Czech Republic	Estonia	Hungary	Latvia	Lithuania	Poland	Romania	Russia	Slovak Republic ¹⁾	Slovenia
USD million											
1990	x	x	x	127.0	x	x	x	-3,337.0	x	x	x
1991	x	x	x	267.0	x	x	- 1,359.0	537.9	x	x	x
1992	x	x	x	324.0	191.4	x	- 269.0	1,626.9	x	x	926.2
1993	x	455.8	21.1	-3,455.0	428.0	- 83.5	- 2,329.0	4,128.8	12,792.0	- 601.2	191.9
1994	x	- 786.8	-165.2	-3,911.0	200.8	- 90.4	- 944.0	10,930.4	8,850.0	664.9	573.0
1995	x	-1,369.1	-157.9	-2,480.0	- 17.9	- 56.6	5,455.0	15,858.0	8,025.0	391.4	- 99.4
1996	x	-4,292.2	-399.4	-1,678.0	-280.0	- 722.6	- 1,352.0	23,732.0	12,448.0	- 601.2	31.4
1997	426.5	-3,211.0	-562.8	- 981.0	-346.2	- 981.3	- 4,312.0	52,896.6	3,900.0	-1,952.3	11.4
1998	-375.4	-1,336.0	-479.7	-2,298.0	-707.8	-1,298.0	- 6,810.0	77,616.6	2,100.0	-2,063.1	-147.2
1999	-660.2	-1,058.2	-315.9	-2,076.0	-635.9	-1,053.4	-11,660.0	106,886.6	24,990.0	-1,083.1	-782.6
1999											
August	66.7	x	x	154.0	x	x	- 783.0	147.0	x	- 3.8	13.0
September	- 3.4	- 16.8	18.6	- 88.0	-104.0	- 248.2	- 1,156.0	74.0	5,801.0	- 27.1	- 29.2
October	- 11.5	x	x	- 54.0	x	x	- 846.0	- 74.0	x	- 10.0	- 10.5
November	- 95.9	x	x	- 161.0	x	x	- 1,024.0	- 206.0	x	- 57.1	- 35.2
December	-150.6	- 669.0	-155.9	- 573.0	-100.8	- 380.5	- 1,689.0	- 374.0	10,838.0	- 224.9	-210.5
2000											
January	-243.6	x	x	- 78.1	x	x	- 1,207.0	- 12.0	x	- 13.5	- 24.6
February	- 96.0	x	x	- 153.4	x	x	- 962.0	43.0	x	- 11.9	- 26.4
March	- 2.1	- 335.7	- 76.4	- 139.8	- 33.4	- 69.5	- 1,346.0	- 66.5	12,159.0	- 39.0	-119.1
April	- 37.3	x	x	26.5	x	x	- 851.0	- 85.0	x	59.4	- 41.9
May	- 64.6	x	x	- 73.4	x	x	- 410.0	- 294.0	x	- 94.5	- 82.4
June	16.0	- 386.2	- 58.7	- 407.2	- 78.4	- 155.8	- 862.0	- 15.0	10,804.0	- 45.2	34.9
July	- 31.8	x	x	7.5	x	x	- 693.0	- 91.0	x	5.6	- 67.0
August	98.2	x	x	159.1	x	x	- 961.0	..	x	- 4.4	- 89.1
September	..	..	..	- 270.3	..	..	- 594.0	..	..	..	..

Source: national central banks.

¹⁾ Beginning with 1997: BOP Manual, 5th edition.

Total Reserves Minus Gold

	Bulgaria	Czech Republic	Estonia	Hungary	Latvia	Lithuania	Poland	Romania	Russia	Slovak Republic	Slovenia
<i>End of period (USD million)</i>											
1990	x	x	x	1,069.0	x	x	4,492.1	524.0	x	x	x
1991	310.6	x	x	3,934.0	x	x	3,632.6	694.9	x	x	112.1
1992	902.2	755.0	170.2	4,425.0	x	45.3	4,099.1	825.9	x	x	715.5
1993	655.2	3,789.4	386.1	6,700.0	431.6	350.3	4,091.9	995.5	5,835.0	415.7	787.8
1994	1,001.8	6,144.5	443.4	6,735.0	545.2	525.5	5,841.8	2,086.2	3,980.4	1,691.2	1,499.0
1995	1,236.5	13,843.0	579.9	11,974.0	505.7	757.1	14,774.1	1,579.0	14,382.8	3,363.9	1,820.8
1996	483.6	12,352.0	636.8	9,720.0	654.1	772.3	17,844.0	2,102.8	11,276.4	3,418.9	2,297.4
1997	2,248.5	9,733.7	757.7	8,407.9	704.0	1,010.0	20,407.2	3,803.3	12,894.7	3,230.3	3,314.7
1998	2,830.8	12,542.1	810.6	9,318.7	728.2	1,409.1	26,432.3	2,867.4	7,801.4	2,868.8	3,638.5
1999	3,083.4	12,825.0	853.1	10,954.0	840.2	1,195.0	24,534.6	2,687.0	8,457.2	3,370.7	3,168.0
1999											
September	2,689.3	11,937.7	779.8	10,275.2	767.6	1,239.0	25,042.3	2,601.3	6,633.5	2,880.0	3,195.3
October	2,689.5	13,106.3	786.1	10,199.0	856.4	1,245.8	24,804.7	2,664.7	7,080.9	2,897.7	3,170.4
November	2,708.7	12,678.1	706.4	10,860.5	854.0	1,432.8	24,465.9	2,590.0	7,598.5	2,814.1	3,184.2
December	3,083.4	12,806.1	853.5	10,954.0	840.2	1,195.0	24,534.6	2,687.0	8,457.2	3,370.7	3,168.0
2000											
January	2,826.6	12,779.0	731.0	11,244.5	816.3	1,206.0	24,636.2	2,670.9	8,912.4	3,338.8	3,074.3
February	2,772.3	12,644.2	739.5	11,549.9	782.2	1,401.0	24,531.0	2,573.0	9,606.2	3,433.1	3,014.1
March	2,715.3	12,556.9	727.6	10,681.3	847.2	1,334.9	24,678.1	2,716.3	11,456.4	3,672.1	3,290.0
April	2,799.5	12,602.7	743.6	10,313.3	847.7	1,232.6	24,592.1	2,711.4	13,409.9	4,122.4	3,190.9
May	2,784.8	12,819.9	702.1	10,714.2	805.7	1,236.3	24,869.7	2,797.2	15,877.7	4,030.0	3,106.7
June	3,014.5	12,989.9	810.2	10,503.3	832.0	1,377.2	25,031.6	3,152.8	17,684.6	4,015.0	3,142.4
July	2,747.8	12,948.2	774.1	10,231.0	888.4	1,371.0	24,705.5	3,523.6	19,955.2	3,899.3	3,097.1
August	2,695.9	12,234.7	763.4	10,352.3	852.6	1,341.0	24,615.0	3,538.1	20,288.9	4,331.0	2,981.0
September	..	12,432.0	770.1	..	816.6	1,301.6	24,510.9	..	..	4,166.2	2,972.3
October	..	11,965.0	..	..	..	..	25,204.8	..	..	3,939.0	..

Source: IMF; Czech Republic: national sources from September 2000; Slovak Republic: national sources from October 2000.

Central Government Surplus / Deficit

	Bulgaria	Czech Republic	Estonia ¹⁾	Hungary	Latvia	Lithuania	Poland ²⁾	Romania	Russia ³⁾	Slovak Republic	Slovenia ⁴⁾
<i>% of GDP</i>											
1990	x	-0.2	x	-0.1	x	x	+0.4	-0.4	x	-0.2	x
1991	x	-2.0	x	-4.6	x	x	-3.8	-1.9	x	-3.4	+2.6
1992	-5.8	-0.2	x	-6.7	-3.0	x	-6.0	-4.4	-10.4	-2.8	+1.2
1993	-11.0	+0.1	-0.4	-5.6	-0.2	x	-2.8	-1.7	-6.5	-6.2	+0.9
1994	-6.5	+0.9	-0.6	-8.1	-1.9	-1.9	-2.7	-4.2	-11.4	-5.2	+0.0
1995	-6.6	+0.5	+0.3	-5.5	-3.8	-1.8	-2.4	-4.1	-5.4	-1.6	+0.0
1996	-10.9	-0.1	-1.6	-1.9	-0.8	-2.5	-2.4	-4.9	-7.9	-4.4	+0.3
1997	-3.9	-0.9	+1.6	-4.0	+1.2	-1.0	-1.3	-3.6	-7.0	-2.6	-1.2
1998	+1.5	-1.6	-1.9	-3.7	+0.2	-1.3	-2.4	-2.8	-5.0	-2.7	-0.8
1999	+1.8	-1.6	-4.8	-2.9	-3.0	-0.3	-2.0	-2.6	-1.7	-1.9	-0.6
1998											
1 st quarter	+7.2	+2.0	-0.7	-7.6	+3.1	-0.7	-3.0	-3.4	-4.9	+0.7	x
2 nd quarter	-5.7	-1.3	-0.1	-0.7	+1.0	-0.7	-4.4	-4.9	-5.3	-2.7	x
3 rd quarter	+6.6	+1.0	-1.5	-3.0	+0.8	+0.3	-0.8	-0.2	-4.4	-2.4	x
4 th quarter	-2.7	-7.2	-5.1	-10.1	-3.8	-3.9	-1.8	-3.0	-5.0	-5.9	x
1999											
1 st quarter	+1.8	+0.5	-8.6	-9.0	+0.3	-1.3	-6.5	-2.0	-4.8	+0.6	x
2 nd quarter	+3.7	-1.7	-5.0	-2.5	-5.2	-3.8	-1.8	-5.6	-3.5	-4.1	x
3 rd quarter	-5.5	-0.5	-1.3	-1.5	-2.8	+1.6	+0.0	-2.5	-2.2	-2.6	x
4 th quarter	-2.2	-4.5	-4.6	+0.2	-4.1	+1.2	-0.7	-1.5	-1.7	-1.1	x
2000											
1 st quarter	-0.1	+1.9	-1.0	-4.3	-1.0	-2.6	-4.5	-6.7	+4.4	-0.4	x
2 nd quarter	+7.8	-2.8	-2.3	-1.1	-4.9	-2.0	-2.2	-5.9	+7.0	+0.1	x

Source: WIW; Russia: IMF; Latvia, Lithuania: national sources; Estonia: national sources from 1996. Quarterly data: national sources.

¹⁾ Including social budget in 1993 and 1994.

²⁾ Since 1998: privatization receipts treated as financing items.

³⁾ Quarterly data are cumulative.

⁴⁾ General government deficit; revised methodology since 1999.

Gross External Debt

	Bulgaria ¹⁾	Czech Republic	Estonia	Hungary	Latvia	Lithuania	Poland	Romania ²⁾	Russia	Slovak Republic ³⁾	Slovenia
	USD million										
1990	10,007.0	x	x	21,505.0	x	x	48,475.0	1,140.0	56,200.0	x	1,954.0
1991	12,247.1	x	x	22,812.0	x	x	48,412.0	2,131.0	70,100.0	x	1,866.0
1992	13,805.7	7,762.3	x	21,644.0	x	x	47,044.0	3,240.0	80,200.0	2,981.0	1,741.0
1993	13,836.4	9,604.9	298.0	24,566.0	x	x	47,246.0	4,249.0	112,784.0	3,626.0	1,873.0
1994	11,338.4	12,209.7	534.0	28,526.0	x	529.0	42,174.0	5,563.0	121,600.0	4,310.0	2,258.0
1995	10,148.0	17,190.3	785.0	31,660.0	1,415.0	1,374.0	43,957.0	6,482.1	120,500.0	5,827.0	2,970.0
1996	9,601.6	21,180.5	1,387.0	28,043.0	2,025.0	2,081.0	47,541.0	8,344.9	125,000.0	7,810.0	4,010.0
1997	9,760.2	21,616.5	2,562.0	24,395.0	2,731.0	3,146.0	49,648.0	9,502.7	130,800.0	10,700.0	4,176.0
1998	10,251.5	24,348.4	2,900.0	27,280.0	3,060.0	3,577.0	59,163.0	9,884.1	145,000.0	11,900.0	4,959.0
1999	10,104.7	22,863.4	2,871.0	29,279.0	3,803.0	4,335.0	64,219.0	8,839.5	158,800.0	10,518.0	5,491.0

Source: WIW; Estonia, Latvia, Lithuania: EBRD (European Bank for Reconstruction and Development).

¹⁾ Gross external debt in convertible currencies.

²⁾ Medium- and long-term gross debt.

³⁾ The official level of foreign debt in 1997 was USD 9.9 billion; however, this figure was distorted by an accounting operation.

Exchange Rate

	Bulgaria	Czech Republic	Estonia	Hungary	Latvia	Lithuania	Poland	Romania	Russia	Slovak Republic	Slovenia
	Period average (ATS per 100 units of national currency) ¹⁾										
1990	519.17	x	x	17.99	x	x	1,196.82	50.69	x	x	x
1991	65.64	x	x	15.62	x	x	1,104.00	15.29	x	x	42.35
1992	47.08	x	x	13.91	1,492.10	619.88	806.49	3.57	x	x	13.52
1993	42.16	39.90	87.97	12.65	1,722.52	267.77	642.13	1.53	1,162.41	37.80	10.27
1994	21.10	39.68	87.92	10.86	2,040.34	287.14	502.65	0.69	516.66	35.64	8.87
1995	15.01	37.99	87.94	8.02	1,910.82	252.04	415.73	0.50	219.13	33.93	8.51
1996	5.95	39.00	87.97	6.94	1,922.04	264.67	392.66	0.34	204.87	34.54	7.82
1997	0.73	38.50	87.92	6.53	2,100.91	305.11	372.16	0.17	209.07	36.30	7.64
1998	0.70	38.33	87.95	5.77	2,098.86	309.48	356.19	0.14	127.55	35.13	7.45
1999	0.05	2.72	6.39	0.40	160.39	23.47	23.66	0.0061	3.81	2.27	0.52
1999											
September	0.05	2.75	6.39	0.39	163.64	23.81	23.34	0.0058	3.74	2.29	0.51
October	0.05	2.74	6.39	0.39	162.15	23.35	22.73	0.0056	3.63	2.30	0.51
November	0.05	2.75	6.39	0.39	166.40	24.17	22.73	0.0055	3.68	2.32	0.51
December	0.05	2.78	6.39	0.39	169.66	24.73	23.72	0.0055	3.69	2.35	0.51
2000											
January	0.05	2.78	6.40	0.39	169.25	24.67	24.04	0.0054	3.50	2.37	0.51
February	0.05	2.81	6.40	0.39	171.21	25.43	24.54	0.0054	3.54	2.37	0.50
March	0.05	2.81	6.40	0.39	173.99	25.93	25.35	0.0054	3.64	2.41	0.50
April	0.05	2.76	6.40	0.39	176.95	26.41	24.95	0.0053	3.69	2.42	0.50
May	0.05	2.74	6.40	0.39	180.98	27.60	24.54	0.0054	3.90	2.34	0.49
June	0.05	2.77	6.40	0.39	175.32	26.34	23.95	0.0050	3.73	2.36	0.49
July	0.05	2.81	6.40	0.38	176.23	26.61	24.62	0.0049	3.82	2.36	0.49
August	0.05	2.83	6.40	0.38	181.05	27.66	25.38	0.0049	3.99	2.36	0.48
September	0.05	2.82	6.39	0.38	185.58	28.67	25.54	0.0049	4.13	2.32	0.48
October	0.05	2.88	6.39	0.38	188.89	29.69	25.46	0.0048	4.27	2.30	0.48

Source: IMF; OeNB, end of period from October 2000.

¹⁾ Up to December 31, 1998, in ATS; as of January 1, 1999, in EUR.

Official Lending Rate¹⁾

	Bulgaria	Czech Republic	Estonia	Hungary ²⁾	Latvia	Lithuania	Poland	Romania	Russia ³⁾	Slovak Republic	Slovenia
<i>End of period</i>											
1990	4.5	x	x	22.0	x	x	48.0	x	x	x	x
1991	54.0	9.5	x	22.0	x	x	36.0	18.0	5.0	9.5	x
1992	41.0	9.5	x	21.0	120.0	x	32.0	70.0	80.0	9.5	25.0
1993	52.0	8.0	x	22.0	27.0	x	29.0	70.0	210.0	12.0	18.0
1994	72.0	8.5	x	25.0	25.0	x	28.0	58.0	180.0	12.0	16.0
1995	34.0	9.5	x	28.0	24.0	x	25.0	35.0	160.0	9.8	10.0
1996	180.0	10.5	x	23.0	9.5	x	22.0	35.0	48.0	8.8	10.0
1997	6.7	13.0	x	20.5	4.0	13.0	24.5	40.0	28.0	8.8	10.0
1998	5.1	7.5	x	17.0	4.0	13.0	18.3	35.0	60.0	8.8	10.0
1999	4.5	5.0	x	14.5	4.0	13.0	19.0	35.0	55.0	8.8	8.0
1999											
August	4.8	6.0	x	15.5	4.0	13.0	15.5	35.0	55.0	8.8	8.0
September	4.5	5.5	x	15.5	4.0	13.0	15.5	35.0	55.0	8.8	8.0
October	4.4	5.0	x	15.5	4.0	13.0	15.5	35.0	55.0	8.8	8.0
November	4.5	5.0	x	15.0	4.0	13.1	19.0	35.0	55.0	8.8	8.0
December	4.5	5.0	x	14.5	4.0	9.1	19.0	35.0	55.0	8.8	8.0
2000											
January	3.9	5.0	x	13.0	4.0	8.9	19.0	35.0	45.0	8.8	8.0
February	3.1	5.0	x	13.0	4.0	8.8	20.0	35.0	45.0	8.8	8.0
March	3.6	5.0	x	12.0	3.5	7.9	20.0	35.0	33.0	8.8	8.0
April	3.6	5.0	x	11.0	3.5	7.5	20.0	35.0	33.0	8.8	8.0
May	3.4	5.0	x	11.0	3.5	9.8	20.0	35.0	33.0	8.8	8.0
June	4.1	5.0	x	11.0	3.5	9.3	20.0	35.0	33.0	8.8	9.0
July	3.4	5.0	x	11.0	3.5	10.1	20.0	35.0	28.0	8.8	9.0
August	4.0	5.0	x	11.0	3.5	8.5	21.5	35.0	28.0	8.8	9.0
September	4.0	5.0	x	11.0	3.5	8.2	21.5	35.0	28.0	8.8	9.0

Source: IMF; Poland, Russia: national sources; Lithuania, Romania: OECD.

¹⁾ Due to currency board arrangements, the Bank of Estonia and the Bank of Lithuania do not lend to the government or enterprises. Therefore these two countries do not define or publish discount rates.

On October 9, 1997, the Bank of Lithuania introduced an "official lending rate": weighted average rate on domestic currency lending to residents.

²⁾ Base rate.

³⁾ Refinancing rate.

