



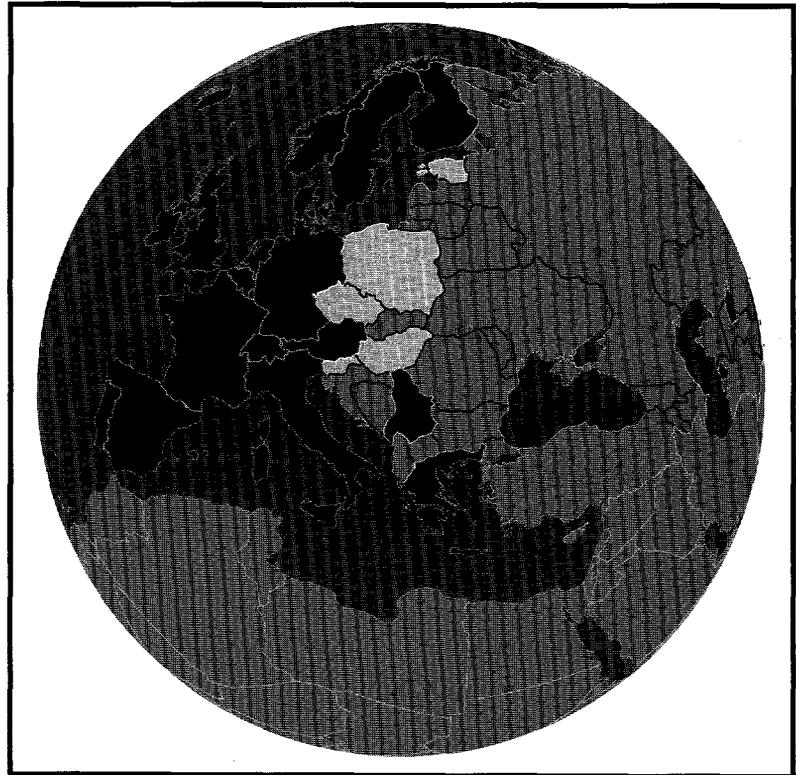
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*Europe and Central Asia Poverty Reduction and Economic
Management Series*

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Financial Integration, Vulnerabilities to Crisis, and EU Accession in Five Central European Countries



Mustapha Nabli

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Mustapha Nabli

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Washington, D.C.*

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Contents

| | |
|--|-----|
| Foreword | v |
| Acknowledgments | vii |
| Executive Summary | 1 |
| Introduction | 2 |
| | |
| 1. Context and Comparative Approach | 6 |
| Context | 6 |
| Comparative Perspective | 8 |
| Capital Flows | 9 |
| 2. The Manifestations of Vulnerability | 10 |
| Large or Increasing Current Account Deficits | 11 |
| Real Exchange Rate Misalignment and Competitiveness | 14 |
| Size and Composition of External Liabilities | 15 |
| Lending Booms, Asset Bubbles, and Excessive Risk Taking | 18 |
| Overall Assessment of Vulnerability | 20 |
| 3. Interpretation, Implications, and Near-to-Medium Term Prospects | 24 |
| Initial Conditions | 24 |
| The “Causal” Factors or Sources of Vulnerability | 29 |
| Macro-policies and Distorted Incentives for Excessive External Borrowing | 29 |
| Fragility of the Financial Systems | 32 |
| Corporate Governance Factors | 34 |
| External Environment and Near-to-Medium Term Prospects | 34 |
| East Asian Crisis | 35 |
| Implications of European Monetary Union | 38 |
| 4. EU Accession and Experience of the Southern Mediterranean Countries | 40 |
| Policy Lessons from Portugal, Greece, and Spain | 41 |
| Implications and Prospects for the CE5 | 43 |
| 5. Concluding Remarks and Recommendations | 45 |
| Annex 1 Capital Flows—Tables | 48 |
| Annex 2 Capital Flows to the CE5 | 50 |
| Annex 3 Trade Integration and Longer-term Growth Prospects | 56 |
| | |
| Notes | 62 |
| References | 64 |

List of Tables

| | |
|--|----|
| Table 1 Traditional Indicators of Vulnerability | 12 |
| Table 2 Private to Private Capital Inflows, Current Account, Savings, and Investment | 13 |
| Table 3 Real Exchange Rates and Export Growth | 14 |
| Table 4 Size and Composition of Foreign Liabilities | 16 |
| Table 5 Foreign Currency Exposure of Banks | 17 |

| | | |
|------------|--|----|
| Table 6 | M2/Reserves | 18 |
| Table 7 | Lending and Money Growth | 19 |
| Table 8 | Quality of Bank Portfolios..... | 20 |
| Table 9 | Overall Assessment of Vulnerability | 22 |
| Table 10 | Comparison of Initial Conditions upon Rapid Growth Acceleration | 25 |
| Table 11 | Integration with the Global Economy..... | 26 |
| Table 12 | Initial Conditions: Foreign Liabilities | 27 |
| Table 13 | Initial Conditions: Growth, Openness, Savings, and Investment | 28 |
| Table 14 | Incentives to Borrow Abroad | 30 |
| Table 15 | Comparative Export Structures of Selected CE5 and EA5 Countries..... | 36 |
| Table 16 | Comparative Export Structures at 2-digit Level for CEEs and DAEs | 37 |
| Table 17 | Exchange Rate Regimes of the CE5 | 39 |
| Table 18 | The Possible Macro Effects of Integration into the EU | 41 |
| Table A1.1 | Net Total Capital Inflows to Three Groups of Countries | 48 |
| Table A1.2 | Net Private Capital Inflows to Three Groups of Countries | 49 |
| Table A3.1 | Trade Openness | 57 |

List of Figures

| | | |
|-------------|---|----|
| Figure 1 | Real GDP Growth Rates | 8 |
| Figure 2 | CE5 Trade with EU | 36 |
| Figure 3 | CE5 Trade with Central Europe | 36 |
| Figure 4 | Foreign Direct Investment to Czech Republic, Hungary, and Poland by Source | 44 |
| Figure A2.1 | Total Private Capital Flows to Regions | 51 |
| Figure A2.2 | Institutional Investor Credit Rating | 52 |
| Figure A2.3 | International Bond Spreads | 53 |
| Figure A2.4 | Foreign Direct Investment to Czech Republic, Hungary, and Poland by Source | 54 |
| Figure A3.1 | Trade Openness | 57 |
| Figure A3.2 | Mean Tariffs (Unweighted) | 58 |
| Figure A3.3 | Primary Exports..... | 58 |
| Figure A3.4 | Composition of Current Account Revenues—1992..... | 58 |
| Figure A3.5 | Composition of Current Account Revenues—1996..... | 58 |
| Figure A3.6 | CE5 Trade with EU..... | 59 |
| Figure A3.7 | CE5 Trade with Central Europe | 59 |

Note: The analysis and data are largely based on information available as of May 1998, when the report was written. Data for 1997 is partial and limited. The report does refer to some recent developments, but does not fully account for them

Foreword

The Poverty Reduction and Economic Management Unit in the World Bank's Europe and Central Asia Region has been undertaking a series of analytical work on issues pertinent to the economies in the region. These issues include: transition issues; issues of economic integration pertinent for the Central and Eastern Europe countries which are candidates for accession to the European Union; poverty issues; and other economic management issues. The analytical work has been conducted by staff of the unit, other Bank staff as well as specialists outside of the Bank.

This technical paper series was launched to promote wider dissemination of this analytical work, with the objective of generating further discussions of the issues. The studies published in the series should therefore be viewed as work in progress.

The findings, interpretations and conclusions are the authors' own and should not be attributed to the World Bank, its Executive Board of Directors, or any of its member countries.

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Executive Summary

The objective of this study is to help assess the possible vulnerabilities in five Central European countries as they integrate into the world economy and proceed towards European Union (EU) accession, in light of the recent financial crisis which started in East Asia. The discussion focuses on five countries slated to be the first in the region to join the EU—the Czech Republic, Estonia, Hungary, Poland, and Slovenia (CE5). While analysis is presented for the five countries, the report does not aim at providing specific policy recommendations for each one, as the objective of the study is to point out vulnerabilities and risks.

A comparative analysis approach with two regional groups of countries is pursued, making use of the recent East Asian experience as well as the experience of the Southern Mediterranean Countries during the period of their accession to the European Community. The first group is comprised of the five East Asian countries (Indonesia, Korea, Malaysia, the Philippines, and Thailand, or the EA5), which are all considered “fast integrators”, and which have been most affected by the recent financial crisis. The second group is made up of the three Southern Mediterranean countries of Portugal, Greece, and Spain (SM3), which acceded to the EU in the 1980s and whose experiences are very important to these successor applicants. Portugal experienced significant vulnerabilities in the period 1989-92 and Spain had a currency crisis in 1992.

The main finding of the report is that in some of the CE5 there are indications that vulnerabilities to financial crisis might exist, and these vulnerabilities are in some aspects similar to those witnessed in East Asia. Vulnerabilities might increase in the medium term due to many factors. First, dissipation of the initial benefits from low initial levels of indebtedness and from an initial surge in FDI linked to privatization. Second, larger expected volumes of inflows in the run-up to EU accession imply increased difficulty of managing the macroeconomic consequences of these inflows, while macro-stability becomes even more important with EMU. Third, the composition of these inflows which is likely to contain an increasing share of more volatile flows. A number of findings and messages related to this are to be stressed:

- As they prepare for EU membership, the five ECA countries have already experienced greater opening of their economies and substantial capital inflows, both by historical standards and compared with other countries. This is due to a mixture of special circumstances: transition, special agreements with the EU, and an international environment where private capital flows surged in the 1990s until late-1997.
- Barring a total collapse of capital flows and a world recession and given their strong reform programs, overall links to the EU, and greater trade integration than that of the SM3 at accession in the 1980s, the CE5 are likely to avoid significant contagion effects and to continue to attract large capital inflows during their run-up to accession to the EU.
- The CE5 will have to make sure ongoing capital flows continue to be effectively used and that their benefits in terms of increased capital accumulation and productivity growth are not outweighed by the risks and vulnerabilities they create. The quality of intermediation of these capital flows should be a major concern.

- A major source of vulnerability in the CE5 is their nascent financial systems and their ability to handle large and increasing volumes of capital. As the experience of East Asia demonstrates, high priority should be given to improving the quality and performance of the banking system. These risks may be compounded by problems of corporate governance, a problem we have not been able to explore in this report.
- For macroeconomic management, there are significant tradeoffs and problems of effectiveness of macropolicy instruments. Fixed or quasi-fixed exchange rates help anchor expectations and reduce uncertainty, but, associated with large capital flows and the desire to have an autonomous monetary policy, they present many risks. Systems of fixed or quasi-fixed rates appear to be associated with larger real exchange rate appreciation, which, when coupled with underestimation of exchange risk, increases incentives for foreign borrowing. High domestic interest rates are still the rule due to slowly receding inflation, risks associated with domestic financial systems, and monetary policy to deal with capital inflows. Countries with more flexible exchange arrangements have been able to respond better to the increases in capital inflows. However, they lose the nominal anchor provided by fixed exchange rates, and face higher risks of volatility and misalignment of real exchange rates. These problems are likely to be exacerbated in the medium term as the CE5 will have to walk a tightrope between the need to achieve more exchange rate stability in the context of EMU and the requirements of exchange rate flexibility to manage capital inflows.
- The volatile international environment makes it a priority for the CE5 to undertake needed reforms. While the real effects (more competitive exports of EA5) on the CE5 may be expected to be small or compensated by the benefits of their close association with the EU, the risks from financial instability are much larger. They may result from a reversal of trends on international interest rates and/or contagion effects from crisis in other transition or developing economies.

In the presence of these risks and vulnerabilities, the crucial challenge for the CE5 is to be able—given the tight timetable (by historical standards) as they access the EU—to adjust and increase the speed of implementation of institutional reforms in step with the increased volumes of capital flows and the required capacity to fully benefit from these inflows. As the experience of the SM3 demonstrates, success in reaping the benefits of capital inflows depends critically on the capacity and the speed at which a country implements the required reforms compared to the speed of increase in capital inflows. Some of the most relevant candidates for reform include the financial sector, public administration, the system of enforcement of property rights, and corporate governance. It is important to work today on the conditions for successful integration.

Introduction

The recent turmoil in East Asia and its spread has highlighted the risks associated with surges and reversals in capital flows which developing and transition economies face. These risks are particularly significant in the presence of weak financial systems. Given this context, we consider the specific situation of the Central European countries (CECs).¹

The CECs are in the process of transforming their economies into market economies. In addition they have entered a period of transition towards membership of the European Union (EU), which will take place over the next 6-15 years. With widely varying experiences, this economic transformation has, generally, brought about a surge in capital flows to the region. Currently, these inflows have been moderated by the impact of East Asian crisis and its spread to other emerging markets. Nevertheless, in the longer term, the CECs will remain heavy users of foreign capital as they prepare for EU accession and take steps to harmonize their macroeconomic, monetary and fiscal policies and regulatory frameworks with the *Acquis Communautaire*. In particular, more advanced countries among the CECs will benefit from investors' improving risk perceptions. At the same time, greater openness of capital accounts will constrain the flexibility of CECs in using the instruments of macroeconomic and monetary policy.

The objective of this study is to help assess—particularly in light of the recent East Asian experience as well as the experience of the Southern Mediterranean Countries during the period of their accession to the European Community—the possible vulnerabilities in a number of CECs as they proceed with global financial integration and with EU accession. A subgroup of the Central European countries, those slated to be the first in the region to join the EU—the Czech Republic, Estonia, Hungary, Poland, Slovenia (CE5)—are focused upon. While analysis is presented for the five countries, country-specific policy recommendations are not presented, as the focus of the study is to point out vulnerabilities and risks. Based on general lessons learned about financial crises, and the recent East Asia experience in particular, the various factors of vulnerability are discussed and their relevance assessed. However, two main points must be stressed at the outset.

First, from the experience of the recent East Asia financial crises as well other crises, *predicting such crises is very difficult*, if not illusory, endeavor. The causes and unfolding of crises tend to vary and evolve, with new features appearing all the time. *This report is not, therefore, about predicting any possible crises in the CE5.*

What the recent experience and literature have shown is that more attention should be given to the appearance of vulnerabilities or to warning indicators of the risk of unsustainability. There is still a debate about whether crises occur in response to, and are caused only by, fundamentals, or whether they may also occur as a result of “self-fulfilling” attacks. However, it is well recognized that the occurrence of successful “self-fulfilling” attacks can only take place if some vulnerabilities exist. A country that does not have such vulnerabilities cannot be subject to attacks, even though it may be subject to some contagion.

While the presence of vulnerabilities may increase the risks of a crisis, they clearly do not imply its occurrence or enable its prediction. However, addressing vulnerabilities in a timely manner can contribute significantly to preventing the occurrence of crises. Just as important, if not more so, are the possibilities of minimizing the costs and disruptions of crisis should they occur. Bearing in mind regional and country particularities, and that every crisis is different, with distinctive dynamics and ingredients, various sources of vulnerability can and should be identified. This must be part of any strategy for preventing crises.

One must be very careful in drawing lessons from a crisis in one country or region for another. More specifically, we need to be cautious in drawing direct inferences from the presence of factors or vulnerabilities contributing to or “causing” crises in economic regions

such as East Asia. Such inferences may not be relevant to the Central European countries as they financially integrate. The particular stage of the transition process in these countries, as a group as well as individually, should also be taken into consideration.

For these reasons, the analysis of the factors of vulnerabilities related to capital inflows is usefully approached by distinguishing between the *manifestations* of vulnerability and *causal factors* or sources of vulnerability. The analysis of the causes of vulnerability should help assess the significance of the risks associated with the presence of manifestations of vulnerability and help determine preventive actions.²

A comparative analysis approach with two regional groups of countries is used in this report. The first group is made up of the five East Asian countries (Indonesia, Korea, Malaysia, the Philippines and Thailand, or EA5), which are all considered 'fast integrators' (that is, having exhibited relatively rapid integration from the early 1980s to early 1990s—see World Bank, 1996, *Global Economic Prospects*), and which have been most affected by the recent financial crisis. The second group is comprised of the three Southern Mediterranean countries of Portugal, Greece and Spain (SM3), which acceded to the EU in the 1980s and whose experiences are very important to these successor applicants.

Major Findings and Messages of This Report

The main finding of this report is that in some of the CE5 there are indications that vulnerabilities to financial crisis exist, and that these vulnerabilities are in some aspects similar to those witnessed in East Asia. While the existence of such vulnerabilities should not be taken to mean that a risk of crisis is imminent, it points to the need to undertake or accelerate the reforms required to prevent such occurrences. Vulnerabilities might increase in the medium term due to many factors. First the dissipation of the initial benefits from low initial levels of indebtedness and from an initial surge in FDI linked to privatization. Second, larger expected volumes of inflows in the run-up to EU accession imply increased difficulty of managing the macroeconomic consequences of these inflows, while macro-stability becomes even more important with EMU. Third, the composition of these inflows which is likely to contain an increasing share of more volatile flows.

A number of findings and messages are to be stressed:

1. Thus far, as they prepare for EU membership, the five ECA countries have already experienced greater opening of their economies and substantial capital inflows by historical standards due to a mixture of special circumstances: transition, special agreements with the EU, and an international environment where private capital flows surged in the 1990s until late 1997. During the period 1993-96, Hungary, the Czech Republic, and Estonia received cumulative net private inflows equivalent to 43, 35, and 22 percent of GDP, respectively. The size of the inflows is similar to that experienced by major emerging markets over a period twice as long, 1989-96: Thailand 55 percent, Malaysia 50 percent, Chile 33 percent, and the Philippines 33 percent. Notably, cumulative flows to Chile during 1978-81 came to 39 percent of GDP and flows to Mexico during 1989-94 period came to 27 percent of GDP. Compared to the SM3 countries, flows to the CE5 are high. For example, net FDI flows as a

percentage share of GDP to the Czech Republic, Estonia, and Hungary (on average during the 1993-96 period) were 3 to 6 times the FDI to GDP ratios of Portugal and Spain in the 1981-86 pre-accession period and 1/3 to 3 times higher in the 1987-91 post-accession period.

2. Similar to other emerging markets, the CE5 face the risks of a global, persistent retrenchment and increased interest rates, following the Russian moratorium. However, barring a total collapse of capital flows and a world recession, and given their strong reform programs, their overall links to the EU, and greater trade integration than that of the SM3 at accession in the 1980s, the CE5 are likely to avoid significant contagion effects and continue to attract a large amount of capital inflow during their run-up to EU accession.
3. The large capital inflows from the early stages of transition were probably effectively used in most cases, and helped increase growth and standards of living. But as these inflows continue, and the initial stock adjustments are completed, countries need to make sure these resources continue to be well used and that the benefits of increased capital accumulation and productivity growth are not outweighed by the risks and vulnerabilities they create. The quality of intermediation of these capital flows should be a major concern.
4. A major source of vulnerability in the CE5 is their nascent financial systems and their ability to handle large and increasing volumes of capital. As the experience of East Asia demonstrates, a high priority should be given to improving the quality and performance of the banking system. These risks are apparently compounded by the problems of corporate governance (and the links of financial system with corporations, particularly SOEs and emerging private enterprise groups), which we have not been able to explore in this report.
5. For macroeconomic management, there are significant tradeoffs and problems of effectiveness of macropolicy instruments. Fixed or quasi-fixed exchange rates help anchor expectations and reduce uncertainty (with currency boards providing stronger credibility to the nominal anchor). However, associated with large capital flows and the desire to have an autonomous monetary policy they present many risks. Systems of fixed or quasi-fixed rates appear to be associated with larger real exchange rate appreciation, which, when coupled with underestimation of exchange risk, increases incentives for foreign borrowing. High domestic interest rates are still the rule due to slowly receding inflation, risks associated with domestic financial systems, and monetary policy to deal with capital inflows. Countries with more flexible exchange arrangements have been able to respond better to the increases in capital inflows. But they lose the nominal anchor provided by fixed exchange rates, and face higher risks of volatility and misalignment of real exchange rates. These problems are likely to be exacerbated in the medium term as the CE5 will have to walk a tightrope between the need to achieve more exchange rate stability in the context of EMU and the need for exchange rate flexibility to manage capital inflows. The tradeoffs are difficult to manage, and unless a country is credibly committed to a fixed exchange rate under a currency board arrangement, greater exchange rate flexibility is generally desirable.

6. The volatile international environment and the unsettling effects of the spreading East Asia crisis make it a priority for the CE5 to undertake needed reforms. While the real effects (more competitive exports of EA5) on the CE5 may be small or compensated for by the benefits of their close association with the EU, the risks from financial instability are much larger. They may result from a reversal of trends on international interest rates or contagion effects from crises in other transition or developing economies.

In the presence of these risks and vulnerabilities the crucial challenge for the CE5 is to be able—given the tight timetable (by historical standards) of EU accession—to adjust and increase the speed of institutional reforms in step with increased capital flows, and the required capacity to fully benefit from these inflows. As the experience of the SM3 demonstrates, the success in obtaining the benefits of capital inflows depends crucially on the capacity and the speed with which a country implements the required reforms, compared to the rate of increased capital inflows. Some of the most relevant candidates for reform include the financial sector, public administration, the system of enforcement of property rights, and corporate governance. It is important to work today on the conditions for successful integration.

Outline of this Report

Section 1 discusses the context and presents a short description of the CE5 countries' experience in attracting capital flows, comparing it with the experiences of the SM3 and EA5. Section 2 analyses the manifestations of vulnerability to financial crises and sustainability of foreign capital flows to the CE5. The analysis will draw on the experiences and the lessons from the recent crisis in East Asia, and from the Southern Mediterranean countries during the period of their accession. In section 3 the results of the previous section are interpreted and implications drawn in view of the initial conditions of the various countries; we also look into the causes of vulnerability in order to assess the risks of financial crisis. The near-to-medium term prospects for the international environment for the CE5 are also discussed, particularly the possible impact of the East Asia crisis and the introduction of the Euro. In section 4 EU accession of the CE5 and the lessons from the Southern Mediterranean countries' accession to the EC in the 1980s are discussed. Concluding remarks and recommendations are given in the section 5.

1. Context and Comparative Approach

This section presents a short discussion of the context and experience of the CE5 in attracting capital flows since the beginning of the capital surge (in 1992-93 for some countries and a few years later for others). The CE5's experiences are then compared to those of the two groups of comparator countries—the EA5 and SM3. (A more detailed discussion is given in annex 2.)

Context

Capital flows to Central and Eastern Europe are not new. Both the five accession countries that are the focus of this study and other transition economies (TEs) were receiving significant capital flows even before the start of radical market-based reforms in early 1990s. How-

ever, these early capital inflows were tightly controlled by central governments that exercised a monopoly over foreign exchange transactions and foreign trade. Even before the start of radical reforms, the CE5 were characterized by greater openness and inclination to apply at least some market-based solutions to their problems. Hungary had a very long history of gradualist market reforms starting in 1968. Slovenia was the most open among the republics of former Yugoslavia, and traded actively with and borrowed from the EC countries in the 1980s. Similarly, Czechoslovakia (in the 1960s) and Poland (from early 1980s) attempted to infuse a dose of “market” into their economies. Estonia was the least rigidly managed republican economy in the former USSR. Overall, among the transition economies, the CE5 were the best placed to tackle the radical reform agenda right from the beginning.

The macroeconomic impact of these earlier capital inflows was significant and was characterized by major misallocation of resources. This was particularly evident in Poland in the 1980s. Poland borrowed massively to finance its failed modernization drive. Similar, although less pronounced, problems emerged in Hungary. As a result, these two countries entered the period of radical market-based reforms heavily indebted, and Poland had to go through a major debt rescheduling exercise at the same time as it was establishing fundamental market mechanisms. For several years in the early reform period, the legacy of earlier capital inflows threatened to jeopardize economic revival and forced painful stabilization measures.

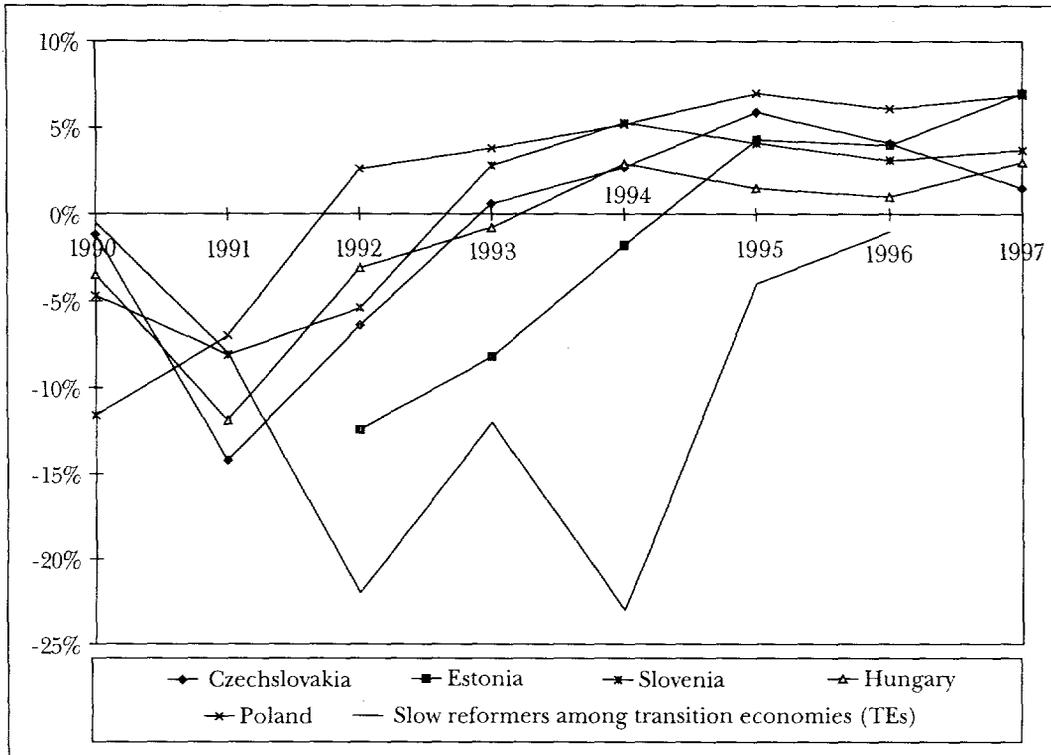
In the early 1990s, all TEs initiated fundamental market-based reform programs. The main components of these reforms included price and trade liberalization, privatization, creation of market-based financial systems, and fiscal adjustment. This massive reform agenda was supported by the international financial institutions (with the exception of Slovenia, which joined the international financial institutions only in early 1993). The speed of market-based reforms in individual countries varied dramatically. What distinguished the CE5 from the rest of TEs was the political commitment to undergo the most painful changes as rapidly as possible.

Poland was the original proponent of “shock therapy” and the other four countries in this group were among the first to introduce decisive liberalization measures. The World Bank economic liberalization index constructed for the 1996 World Development Report shows all five countries were firmly in the group of “rapid reformers”. Early in the reform period, all TEs experienced (and some continue to experience) large capital flight caused by the lack of confidence in the economic prospects. The CE5s were more fortunate also in this respect—decisive economic reforms have restored consumers’ and investors’ confidence and capital flight episodes were limited and short lived. Czechoslovakia in 1990 and 1992 was an exception, driven first by the expected large depreciation of the Koruna and then by the breakup of the Czech Republic and Slovakia. Already in 1992 improvements in the investment climate and creditworthiness stimulated investors’ interest in transition economies.

The CE5 were among the first to benefit from investor interest, and, as result, the economic decline they experienced was markedly shorter than in most other TEs. Already in 1993 their reform efforts were rewarded by an early resumption of economic growth. GDP growth in the CE5 recovered between 1992 and 1993. They generally performed much better than the slower reforming TEs (figure 1).

Capital flows played a major role in this process of adjustment and recovery, even though the five countries differ widely in terms of their recent performance as well as their experience with capital inflows.

Figure 1 Real GDP Growth Rates



Sources: World Bank (1996) and IMF (1998), April.

Comparative Perspective

The manifestations and causes of vulnerability are discussed in a *comparative perspective*, focusing on the recent history of the EA5 and the SM3 at the time of their accession to the EC. This comparison is especially useful because of the crises that EA5 and SM3 countries have experienced. The Asian countries are still experiencing the financial crisis that began in 1997. Among the SM3, Portugal experienced significant vulnerabilities between 1989 and 1992 with a near financial collapse and the reimposition of capital controls in 1992, and Spain had a currency crisis in 1992 following accession.

The comparative analysis is based on determining the period of each country's surge in capital inflows, emphasizing private-to-private flows. The relevant base year is defined as that just preceding the surge. While we have a clear indication about when the surge began in the CE5 (see discussion below), we have to make some assumptions about the EA countries. All of these countries have been receiving significant amounts of foreign capital for a long period of time, for more than a decade in the case of Thailand. However, since we want to concentrate on the most recent episode leading to the crisis of 1997, we selected 1993 or 1994 (depending on the given country) as the beginning of a new surge in capital inflows. Among the EA5, Korea and Indonesia are most relevant for comparison, both of which witnessed a surge after 1993. Thailand and Philippines have been receiving significant amounts

of capital for a longer period and the more recent period used here, 1993-96, is to be interpreted with care since the comparison with the base period is not associated with an additional increase in the rate of capital inflows. This is especially the case for Malaysia, which had a reversal in non-FDI private capital flows after 1994. The comparison for the EA5 uses mostly data up to 1996, excluding 1997 since the figures are significantly affected by the onset of the crisis.

For the comparator Southern Mediterranean countries of Portugal and Spain, the year of accession (1986) is selected as the reference year, corresponding to the beginning of a surge in capital flows. In the case of Greece, the year of accession (1981) to the EC is also used, despite the fact that there was no surge, and it continued to receive significant capital flows as it did prior to accession (in the form of private nonbank flows). Comparisons of the CE5 with the SM3 are, however, to be interpreted with care. Spain witnessed the most significant increase in capital inflows after accession between 1987 and 1992. For Portugal the period 1987-1992 saw a significant surge compared to the low levels in the preceding years 1985-86.³ Greece also witnessed an increase in capital inflows after accession, although to a lesser extent, and these flows were comprised mostly of bonds and "other" components, (that is, non-FDI and non-portfolio investment).

Capital Flows

The discussion of country experience with capital flows is based on data presented in annex 1. Standard data on total net capital flows and their decomposition for the various countries are used (annex table A1.1). We also use data on net private flows, and more important, those of private-to-private capital flows (annex table A1.2). Total private flows (from the creditor side) are total flows minus official flows. To obtain this estimation, which is subject to a number of limitations, the absolute amount of private publicly guaranteed debt is subtracted from total private flows.⁴ The non-FDI measure is also given.

The CE5, like the EA5 and SM3 countries, were major recipients of capital inflows over the last few years. The relative size (compared to GDP) was broadly comparable, despite wide inter-country variations within the CE5 and EA5 countries. The composition varies more between countries, but in most of them non-FDI flows became increasingly more significant.

However, the experience of the CE5 varies considerably from country to country. The Czech Republic and Hungary have been early recipients of considerable flows that since 1993 have reached and sometimes exceeded 15 percent of GDP (per year) until 1995.⁵ While FDI was significant and continues to be so, particularly in Hungary, non-FDI private-to-private net flows reversed in 1996 for both countries and were especially negative for Hungary. The two countries fully experienced the impact of extreme swings in private capital flows.

Estonia has experienced a steady rise in capital inflows since 1993. The volume of private-to-private inflows increased from 2.3 percent of GDP in 1993 to 17.6 percent in 1997. However, until 1995 this inflow was mainly FDI. The surge in non-FDI flows began in 1996 and reached 14.5 percent of GDP in 1997. This is the most rapid and strong surge in any of the CE5. Slovenia attracted low volumes of private flows until 1995 and, more strongly, in 1996, mostly in the form of FDI. A rapid increase of non-FDI flows started in 1996 and became significant in 1997 reaching 4.6 percent of GDP.

Among the CE5, Poland has been the country attracting the least private capital flows relative to GDP, and even lower non-FDI private-to-private flows. It was not until 1995 that

there was a significant increase in both FDI and non-FDI private flows. In contrast, portfolio and other private flows did not become truly important until the end of 1997.

The experience of the CE5 is broadly similar to that of the five East Asian countries, among which experiences have also varied somewhat. Until the crisis of 1997, the volume of private net inflows was very large in Thailand. The Philippines attracted a strong surge in FDI and non-FDI inflows from 1989 to 1990. The surge in capital flows to Korea, beginning in 1994, was mainly comprised of non-FDI. Indonesia experienced a surge beginning in 1994, which strengthened in 1995, of both FDI and non-FDI. Malaysia continued to draw significant inflows of FDI throughout, but since 1994 has experienced a sharp reversal of non-FDI, private-to-private inflows.

Both Portugal and Spain witnessed an increase of net capital inflows over the five years following accession in 1986, a reverse from net outflows to average inflows of 5.6 percent and 4.9 percent of GDP, respectively.⁶ FDI accounted for about one-half of these flows (2.5 percent of GDP) in Portugal and one-third in Spain (1.7 percent of GDP). Greece, in contrast, did not experience such a sharp rise in capital inflows after accession in 1981. Net FDI flows actually decreased on average as a share of GDP, and portfolio flows remained negligible. However, reflecting strong and growing other (nonbank) private investment, total net private capital inflows to Greece remained at relatively high, pre-accession levels (as a proportion to GDP) after it acceded to the EC. The increase in other capital flows offset the post-accession declines in FDI flows, and again increased significantly in 1983-95 as a percentage of GDP.

2. The Manifestations of Vulnerability

In this section, the evidence of manifestations of vulnerability or the presence of factors of unsustainability of external positions and the attendant risks of reversal of capital flows are reviewed. The manifestations of vulnerability discussed are those found most relevant in the analysis of currency crises and sustainability.⁷ Such manifestations are not sufficient to determine the likelihood of crisis or reversal of market sentiment. They have to be supplemented by additional analysis of the presence of fundamental weaknesses or factors of vulnerability (see page 29).

This section arrives at the following conclusions:

1. For the CE5, based on information available through the end of 1996 and part of 1997, it is clear that possibilities for vulnerabilities exist in some countries. Estonia exhibits the most signs of vulnerability, followed by the Czech Republic and Hungary. Poland and Slovenia exhibit the fewest factors of vulnerability.
2. The vulnerabilities identified in the CE5 are often similar to what was observed in East Asia in 1997, as well as Portugal and Spain in the early 1990s. They include large and deteriorating current accounts; real exchange rate appreciation and loss of competitiveness; deteriorating currency exposure and short-term indebtedness; lending booms; and weak quality of bank portfolios. These factors can lead to crisis, as they actually did in 1995 in Hungary, and in May 1997 in the Czech Republic, well before the East Asian crisis. They can also lead to near crisis, as in Estonia in September 1997, in the aftermath of the East Asia financial turmoil.

The following discussion will not focus on any of the “older” type of indicators of vulnerability such as external indebtedness, inflation and public sector deficits. These factors are less important and hardly present in the CE5 or in the comparator countries, with the exception of Greece, as can be seen from table 1. At the end of 1996, the debt-to-exports ratios were low, varying from 12 percent in Estonia to 132 percent for Hungary, and are similar to the EA5 and SM3 countries. Indonesia in 1996 and Greece in the 1980s had, however, much higher ratios (higher than 200 percent). Fiscal deficits were also lower than 2 percent in most countries in 1996 and 1997.

Only Hungary had an increased deficit in 1997, reflecting the drop-off in privatization proceeds from the high 1996 level.⁸ Fiscal deficits were higher in the SM3 countries, particularly in Greece. Inflation was falling in all countries, and by 1997 was lower than 20 percent in all countries, but higher in EA5 countries. GDP growth was increasing, reaching around 7 percent in 1997 in Estonia and Poland. It was lower in Estonia but improving. The Czech Republic has experienced a major slowdown since 1995.

This report focuses on “newer” indicators. The most important manifestations of vulnerability relate to the existence of a large or increasing current account deficits, or both; the existence of real exchange rate misalignment and a loss of competitiveness; a composition of external liabilities biased toward more volatile flows; and the presence of domestic lending booms, asset price bubbles and excessive risk-taking. This set includes the main factors of vulnerability discussed in the literature on financial crises. The empirical evidence about the significance of these factors as determinants or warning indicators, in formal statistical models of determination of probability of financial crisis or in less formal analyses of financial crises, varies. Some are more consistently found to be significant determinants than others.

First each of these factors is reviewed separately and the significance of its presence in each country is assessed. We do not use quantitative “signals” of significance such as thresholds for these indicators. The discussion will be more qualitative and based on country comparisons, without going into the details of each country. Then, an overall assessment of vulnerability for each country is made based on this set of indicators.

Large or Increasing Current Account Deficits

Current account deficits by themselves have not been helpful in predicting crisis and in determining unsustainability. While the rule that a current account deficit greater than 5 percent as an indicator of vulnerability is often used, no empirical evidence supports it. However, current account deficits remain important in assessing vulnerability, if complemented with analysis of the causal factors of the large or increasing deficit. Large and/or rapidly increasing deficits should always be monitored with concern.

Table 2 provides information about the behavior of the current account and investment and savings rates during the capital inflow episodes of the CE5 and comparator countries. The data show the changes in the different indicators compared to a base year (usually the year before the beginning of the surge in capital inflows). In all cases—except Poland and Spain—capital inflows are associated with increased averaged current account deficits over time. The CE5, except the Czech Republic, start from a position of current account surplus. The most dramatic increases are for Estonia and Hungary, where the deficit increases by an average of 10.2 and 7.2 points of GDP, respectively, over the period 1993-97.

Table 1 *Traditional Indicators of Vulnerability*

| Indicator | Country | | | | | Country | | | | | Country | | | | | | | | |
|------------------------|------------|-------|-------|-------|-------|---------|----------------|-------|-------|-------|---------|------|----------|-------|-------|-------|-------|-------|-------|
| | | | | | | | | | | | | | | | | | | | |
| Real GDP Growth (%) | CE5 | 1993 | 1994 | 1995 | 1996 | 1997 | EA5 | 1993 | 1994 | 1995 | 1996 | 1997 | SM3 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 |
| | Czech Rep. | 0.6 | 2.7 | 5.9 | 4.1 | 1.5 | Indonesia | 6.5 | 7.5 | 8.2 | 8.0 | 4.7 | Greece | 0.1 | 0.4 | 0.4 | 2.7 | 3.1 | 1.6 |
| | Estonia | -8.2 | -1.8 | 4.3 | 4.0 | 7.0 | Korea, Rep. of | 5.8 | 8.6 | 8.9 | 7.1 | 5.5 | | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 |
| | Hungary | -0.8 | 2.9 | 1.5 | 1.0 | 3.0 | Malaysia | 8.3 | 9.2 | 9.5 | 8.6 | 8.1 | Portugal | 4.1 | 5.1 | 4.0 | 4.9 | 4.1 | 2.1 |
| | Poland | 3.8 | 5.2 | 7.0 | 6.1 | 6.9 | Philippines | 2.1 | 4.4 | 4.8 | 5.7 | 5.1 | Spain | 3.2 | 5.6 | 5.1 | 4.8 | 3.7 | 2.3 |
| | Slovenia | 2.8 | 5.3 | 4.1 | 3.1 | 3.7 | Thailand | 8.4 | 8.9 | 8.8 | 5.5 | -0.4 | | | | | | | |
| Inflation (%) | CE5 | 1993 | 1994 | 1995 | 1996 | 1997 | EA5 | 1993 | 1994 | 1995 | 1996 | 1997 | SM3 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 |
| | Czech Rep. | 10.1 | 10.1 | 9.1 | 8.8 | 8.4 | Indonesia | 9.6 | 8.5 | 9.4 | 8.0 | 6.5 | Greece | 24.5 | 20.9 | 20.2 | 18.4 | 19.3 | 23.0 |
| | Estonia | 89.8 | 47.7 | 28.8 | 23.1 | 11.2 | Korea, Rep. of | 4.8 | 6.2 | 4.5 | 5.0 | 4.4 | | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 |
| | Hungary | 22.5 | 18.9 | 28.3 | 23.5 | 18.3 | Malaysia | 3.6 | 3.7 | 5.3 | 3.6 | 2.7 | Portugal | 11.7 | 9.4 | 9.6 | 12.6 | 13.4 | 11.4 |
| | Poland | 36.9 | 33.3 | 26.8 | 20.1 | 15.9 | Philippines | 7.6 | 9.1 | 8.1 | 8.4 | 5.1 | Spain | 8.8 | 5.2 | 4.8 | 6.8 | 6.7 | 5.9 |
| | Slovenia | 31.9 | 19.8 | 12.6 | 9.7 | 9.1 | Thailand | 3.4 | 5.1 | 5.8 | 5.9 | | | | | | | | |
| Debt/Export Ratio (%) | CE5 | 1993 | 1994 | 1995 | 1996 | 1997 | EA5 | 1993 | 1994 | 1995 | 1996 | 1997 | SM3 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 |
| | Czech Rep. | 47.1 | 48.7 | 55.3 | 64.7 | - | Indonesia | 212.6 | 231.8 | 234.1 | 221.4 | - | Greece | - | - | 182.5 | 195.1 | 262.7 | 262.0 |
| | Estonia | 13.1 | 9.9 | 10.2 | 12.3 | - | Korea, Rep. of | 69.9 | 76.1 | 75.1 | 91.6 | - | | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 |
| | Hungary | 212.9 | 246.2 | 175.4 | 132.1 | - | Malaysia | 47.8 | 42.7 | 40.0 | 42.4 | - | Portugal | 132.4 | 113.2 | 97.8 | 97.7 | 89.4 | 103.4 |
| | Poland | 246.0 | 162.7 | 112.8 | 103.2 | - | Philippines | 187.3 | 163.4 | 118.5 | 97.6 | - | Spain | - | - | 90.1 | 78.8 | 79.2 | 70.7 |
| | Slovenia | 25.0 | 25.2 | 28.4 | 36.8 | - | Thailand | 106.2 | 111.7 | 112.2 | 120.5 | - | | | | | | | |
| Fiscal Bal. (% of GDP) | CE5 | 1993 | 1994 | 1995 | 1996 | 1997 | EA5 | 1993 | 1994 | 1995 | 1996 | 1997 | SM3 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 |
| | Czech Rep. | 1.3 | 0.4 | -0.7 | -1.0 | -1.7 | Indonesia | 0.6 | 0.9 | 2.2 | 1.2 | -0.3 | Greece | -8.6 | -6.8 | -9.2 | -9.2 | -12.7 | -9.4 |
| | Estonia | -0.6 | 1.3 | -1.2 | -1.5 | -0.6 | Korea, Rep. of | 0.6 | 0.3 | 0.3 | 0.1 | 0.6 | | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 |
| | Hungary | -7.6 | -6.4 | -3.7 | -0.2 | -4.5 | Malaysia | 0.2 | 2.3 | 0.9 | 0.7 | 2.7 | Portugal | -10.7 | -9.1 | -7.5 | -3.5 | -4.7 | -6.0 |
| | Poland | -2.9 | -2.5 | -2.3 | -2.5 | -1.7 | Philippines | -1.5 | 1.1 | 0.6 | 0.3 | 0.1 | Spain | -6.0 | -4.5 | -0.4 | -3.3 | -3.3 | -3.2 |
| | Slovenia | 0.3 | -0.2 | 0.0 | -0.3 | -1.5 | Thailand | 2.1 | 1.9 | 2.9 | 2.3 | 1.6 | | | | | | | |

Note: Debt/export ratio is defined as total external debt to exports of goods and services (including workers' remittances).

Sources: IMF (1998), and for Debt/Export ratio, World Bank (1998a).

More telling than the growth in the current account deficit is the decomposition of the change in the deficit into changes in the rates of investment and savings. The data show that in all cases—excluding Estonia and Greece—the deterioration of the current account deficit was associated with a significant increase in the rate of investment. Usually, the increase in investment was equal to or larger than the deterioration of the current account deficit, because the savings rate did not change (or changed little, as in Thailand) or even increased.⁹ Slovenia, like Portugal, had a decline in savings and an increase in investment. Two remarkable cases are Estonia and Greece.

In Estonia, most of the increase in the current account deficit was associated with a decline in savings and little change in investment. Even more striking are the trends of both the increase in the current account deficit and decline in the savings rate, reaching -15.7 percent and -16.2 percent of GDP, respectively, in 1997 (compared to the base year 1992). Korea shows similar behavior, but to a much lesser extent. For Greece, however, the small deterioration in the current balance was associated with a large decline of both investment and savings.

As discussed above, the decline in savings rates in the CE5 may be a temporary phenomenon reflecting adjustment of present consumption to desired levels of permanent consumption (consumption in line with increased permanent incomes due to higher productivity and efficiency). This factor implies that less weight should be given to reduced rates of savings. However, the extent of this decline in some cases, such as Estonia, is difficult to interpret in these terms. There may be overoptimistic growth expectations or easing of financial constraints on consumers, making the increase in consumption unsustainable.

Table 2 Private to Private Capital Inflows, Current Account, Savings, and Investment
(Percentage of GDP)

| Country | Period | Capital Inflow | | Account Balance | | Investment Rate | | Savings Rate | | Fiscal Rate | |
|----------------|---------|----------------|-------------|-----------------|-------------|-----------------|-------------|--------------|--------------|-------------|--|
| | | Average | Base | Avg. Change | Base | Avg. Change | Base | Avg. Change | Base | Avg. Change | |
| Czech Rep. | 1993-97 | 10.4 | -1.6 | -2.92 | 26.7 | 3.90 | 25.1 | 0.98 | -3.3 | 2.96 | |
| Estonia | 1993-97 | 8.1 | 3.5 | -10.2 | 26.0 | 1.38 | 29.5 | -9.32 | -0.2 | -0.32 | |
| Hungary | 1993-97 | 10.2 | 0.9 | -7.22 | 16.1 | 7.14 | 15.3 | 2.94 | -6.5 | 2.02 | |
| Poland | 1995-97 | 1.5 | 2.5 | 1.43 | 15.9 | 4.53 | 16.9 | 3.23 | -2.5 | 0.33 | |
| Slovenia | 1995-97 | 3.9 | 4.0 | -3.93 | 19.7 | 2.90 | 24.5 | -1.20 | -0.2 | -0.40 | |
| Indonesia | 1994-96 | 3.8 | -1.3 | -1.5 | 26.2 | 2.3 | 24.9 | 0.9 | 0.6 | 0.8 | |
| Korea, Rep. of | 1994-96 | 3.8 | 0.3 | -2.8 | 36.0 | 0.3 | 36.3 | -2.5 | 0.6 | -0.4 | |
| Malaysia | 1993-96 | 10.1 | -4.7 | -2.5 | 34.3 | 7.5 | 30.6 | 4.7 | -0.8 | 2.1 | |
| Philippines | 1993-96 | 7.0 | -1.9 | -2.1 | 20.9 | 2.1 | 19.0 | 0.0 | -1.2 | 1.8 | |
| Thailand | 1993-96 | 9.2 | -5.7 | -1.6 | 39.2 | 1.5 | 33.6 | -0.1 | 2.8 | -0.5 | |
| Greece | 1982-86 | ... | -6.5 | -0.52 | 22.3 | -3.04 | 15.8 | -2.68 | -8.6 | -0.86 | |
| Portugal | 1987-91 | 5.8 | 3.4 | -3.82 | 24.2 | 2.8 | 27.7 | -1.12 | -10.7 | 4.54 | |
| Spain | 1987-92 | ... | 1.7 | 0.32 | 19.5 | 3.66 | 13.0 | 4.02 | -6.0 | 3.06 | |

Note: The "Base" corresponds to the year preceding the years indicated in the table under "Period," for which levels are bolded. "Average Change" corresponds to average change with respect to the base year for the inflow period.

Source: IMF (1998).

The East Asian crisis has also shown that increases in investment associated with surges in capital inflows may be a source of vulnerability. There is evidence that the increased investment was directed more toward nontradables and was associated with a decline in productivity of capital.¹⁰ This factor may not be as relevant in the case of the CE5 countries because of their particular stages of transition and recovery, and because of the generally lower rates of investment than in the EA5. But it may be present, nevertheless, in some cases. This issue may require further investigation.

Real Exchange Rate Misalignment and Competitiveness

Real exchange rate appreciation is consistently found in almost all studies to be one of the most significant indicators of vulnerability leading to currency crisis. The CPI-based real effective exchange rate (REER) has appreciated considerably in all CE5 countries during the inflow period (table 3). The extent of REER appreciation is strongly related to the exchange rate arrangement. The largest rate of appreciation is in the Czech Republic and Estonia,

Table 3 Real Exchange Rates and Export Growth
(Average Yearly Percentage Rate of Change during Inflow Period)

| Country | Period | REER (CPI based) | REER (ULC based) | Export Volume Growth | Export Volume Growth-World Export Growth |
|----------------|---------|---------------------|---------------------|-------------------------|--|
| CE5 | | | | | |
| Czech Republic | 1993-97 | 8.72 | 6.94 | 9.48 | 1.67 |
| Estonia | 1993-97 | 7.54 | ... | 18.10 | 10.29 |
| Hungary | 1993-97 | 1.91 | ... | 5.84* | -1.97 |
| Poland | 1995-97 | 6.03 | 2.23 | 15.10 | 6.82 |
| Slovenia | 1995-97 | 2.00 | 2.80 | -1.77 | -10.05 |
| EA5 | | | | | |
| Indonesia | 1994-95 | -1.40 | ... | 8.8 | -1.15 |
| Korea, Rep. of | 1994-95 | -0.15 | ... | 20.25 | 10.30 |
| Malaysia | 1993-95 | -0.10 | ... | 19.10 | 7.93 |
| Philippines | 1993-95 | -0.06 | ... | 12.66 | 4.63 |
| Thailand | 1993-95 | -0.33 | ... | 13.90 | 5.86 |
| Indonesia | 1996 | 4.60 | ... | 7.60 | 1.8 |
| Korea, Rep. of | 1996 | 2.80 | ... | 14.10 | 8.3 |
| Malaysia | 1996 | 4.60 | ... | 7.20 | 1.4 |
| Philippines | 1996 | 10.70 | ... | 20.30 | 14.5 |
| Thailand | 1996 | 7.00 | ... | 2.40 | -3.4 |
| SM3 | | | | | |
| Greece | 1982-86 | -3.28 | ... | 10.50 | 6.29 |
| Portugal | 1987-92 | -1.64 | -0.40 | 10.82 | 4.36 |
| Spain | 1987-92 | 4.48 | 5.12 | 8.58 | 2.12 |

Note: *Export volume growth for Hungary was negative in 1993, and reaches 10.6 if data for 1993 is excluded.
... = negligible amount.

Sources: IMF(1998), World Bank databases and DECPG (1998).

which have both followed a fixed exchange rate (with a currency board in the case of Estonia).¹¹ Poland, which had a crawling peg, witnessed a lower rate of appreciation, while in Hungary and Slovenia, which both had more flexible exchange rate arrangements, the rate of appreciation was much lower. While the extent of real appreciation of the exchange rate is smaller when the ULC-based REER is used (available for a few cases only), the basic fact is the persistence of real exchange rate appreciation. This contrasts with the experience of the EA5, which did not experience significant movement in the REER before 1996. A major change for them occurred, however, in 1996, when the REER appreciated in all cases, sometimes by a significant amount. For the SM3 we observe appreciation in the case of Spain, but real exchange rate depreciation for Portugal and Greece.

The significance of real exchange rate appreciation has been subject to some controversy in the context of the transition economies. Some have argued that these changes in the real exchange rates reflect price adjustments in response to fundamental factors. They may reflect any or all of the following fundamentals: shifts and gains in productivity as the economies move to more market-oriented, more efficient economy; correction of earlier excessive depreciation; increased levels of consumption to equilibrium levels consistent with higher permanent income (and need to incur current account deficits); and “bunching” of FDI at the early stage of transition, which is non-tradable goods intensive.¹² Others argue that REER appreciation reflects a misalignment of exchange rates due to the exchange rate peg or speculative unsustainable levels of capital flows or both, which result in higher nominal exchange rates or higher inflation or both, depending on the monetary policy pursued.

Regardless of the cause of the appreciation, it is striking that the movements of the REER are not a good indicator of the behavior of exports and competitiveness (table 3). Among the CE5, export volume also increased significantly in Estonia and Poland, where the REER appreciated considerably. In contrast, Slovenia and Hungary, with the lowest rates of REER appreciation, had low export growth, even negative when adjusted by world trade growth, implying loss of market share. The same observation can also be made for EA5 and SM3 countries. The extent of REER appreciation in 1996 does not explain the change in the rate of growth of exports between the previous period and 1996. The Philippines, which had the highest rate of appreciation, had the highest rate of growth of exports that consistently increased. In contrast, Thailand, with a large appreciation, experienced a dramatic drop in export growth.¹³

Size and Composition of External Liabilities

The size and composition of a country's external liabilities, both of the corporate sector and the banking sector (including the government), may also constitute a major source of vulnerability to a currency crisis. Maturity mismatches may be a factor when short term and, more generally, more volatile or liquid liabilities, constitute a significant share of total liabilities. Currency mismatches (and their change) between the liabilities and assets (or expected revenue) of firms and banks constitute another source of vulnerability, making the country more prone to currency crises.

Some indicators of size and composition of foreign liabilities *at the aggregate level* are given in table 4. At the end of 1996, the CE5, like the EA5, (except Indonesia), had relatively low debt to exports ratios. Some of them, such as Estonia, Slovenia, and Malaysia, had extremely

Table 4 Size and Composition of Foreign Liabilities

| <i>Cumulative private net capital flows for period as % of GDP at end-period</i> | <i>Czech Republic 1993-96</i> | <i>Estonia 1993-96</i> | <i>Hungary 1993-95</i> | <i>Poland 1995-96</i> | <i>Slovenia 1995-96</i> |
|--|-------------------------------|-------------------------------|-------------------------|----------------------------|-------------------------|
| FDI | 9.4 | 15.6 | 17.7 | 2.9 | 1.9 |
| Non-FDI private-to-private | 14.4 | 5.2 | 15.4 | 3.6 | 1.5 |
| Debt ratios at end of 1996 (%) | <i>end-1996</i> | <i>end-1996</i> | <i>end-1996</i> | <i>end-1996</i> | <i>end-1996</i> |
| Total debt to exports | 64.7 | 12.3 | 132.1 | 103.2 | 36.8 |
| Short-term debt to GNP | 11.0 | 2.5 | 7.7 | 0.1 | 0.3 |
| Short-term debt to total debt | 29.6 | 26.4 | 12.5 | 0.2 | 1.4 |
| Short-term debt to total debt (BIS) | 49.3 | 45.8 | 39.2 | 33.2 | 17.7 |
| Short-term debt to reserves | 45.3 | 16.7 | 34.1 | 0.4 | 2.5 |
| <i>Cumulative private capital flows for period as % of GDP at end of period</i> | <i>Indonesia 1990-96</i> | <i>Korea, Rep. of 1991-96</i> | <i>Malaysia 1989-96</i> | <i>Philippines 1989-96</i> | <i>Thailand 1988-96</i> |
| FDI | 8.4 | -1.5 | 33.6 | 8.0 | 7.5 |
| Non-FDI private to private | 3.6 | 14.1 | 6.8 | 20.1 | 45.9 |
| Debt ratios at end of 1996 (%) | <i>end-1996</i> | <i>end-1996</i> | <i>end-1996</i> | <i>end-1996</i> | <i>end-1996</i> |
| Debt ratios at end of 1996 (%) | | | | | |
| Total debt to exports | 221.4 | 91.6 | 42.4 | 97.6 | 120.5 |
| Short-term debt to GNP | 14.9 | 13.9 | 11.7 | 9.1 | 20.8 |
| Short-term debt to total debt | 25.0 | 47.5 | 27.8 | 19.3 | 41.4 |
| Short-term debt to total debt (BIS) | 61.7 | 67.5 | 50.3 | 58.2 | 65.2 |
| Short-term debt to reserves | 165.7 | 198.3 | 39.7 | 68.0 | 97.4 |

Notes: Short-term debt proxy from BIS (1998), table 1; Korean total external debt from J. P. Morgan (1998c).
Sources: World Bank (1998a), DECPG database, BIS (1998) ; and J. P. Morgan.

low ratios. It is the composition of debt, however, which has more significance for vulnerability to currency attacks. The East Asian countries of Thailand, Indonesia, and Korea were the most vulnerable, in view of the fact that more than 2/3 of debt to BIS (Bank of International Settlement) reporting banks was short term and the ratio of short-term debt to reserves ranged from 100 to 200 percent. Thailand, in particular, saw the most dramatic accumulation of non-FDI private-to-private capital flows (to a large extent probably short-term and volatile capital) over the last 8 years, representing 46 percent of GDP.

The CE5 were in a better position with lower short-term debt indicators. Only the Czech Republic and Estonia have been accumulating short-term liabilities at a fast rate, thereby creating some vulnerability; but the short-term debt to reserves ratios are still low.

As for the banking system, because of lack of data on the composition of assets and liabilities in terms of maturity and currency exposure, only one indicator is used in table 5: the ratio of foreign assets to foreign liabilities, as a (very rough) proxy measure of foreign currency exposure of the banking system or of international liquidity. It may overestimate currency exposure if banks lend to the domestic non-financial sector in foreign currency. This, however, often shifts the currency risk to credit risk, since domestic firms would carry the currency risk and become more vulnerable. The overestimation may also result if banks pass

the exchange rate risk to their creditors, but this is unlikely for most developing countries' banks. In terms of liquidity the maturity structure of these assets and liabilities is not taken into account.

The CE5 are overall in a better position with regard to foreign currency exposure of the banks. The ratios of foreign assets to liabilities are generally higher than those of the EA5. However, the CE5 differ significantly in terms of the recent changes of this ratio. Hungary and the Czech Republic were the first to witness a rapid deterioration leading to ratios smaller than unity in 1994-95. This is clearly related to the problems they encountered in 1995 and 1997, respectively. Estonia presents the case of a more recent, but most rapid, deterioration, as the ratio fell below unity in 1997 from a much higher multiple in the previous years. Poland and Slovenia present less vulnerability.

Comparing the CE5 experience to that of the EA5 for the period of the run-up to the recent crisis, we observe that Thailand saw the most dramatic deterioration in currency exposure from an already very low ratio of foreign assets to liabilities. The Philippines also witnessed a similar deterioration leading to high vulnerability. Malaysia and Korea also experienced a deterioration, but to a far lesser extent. The SM3 countries had a lower foreign asset to liability ratio (particularly Greece and Portugal), but there was no significant deterioration during the periods considered.

The foreign currency exposure in non-bank, financial, and non-financial institutions may also play a significant role. For instance, in Thailand and the Philippines, non-bank financial

Table 5 Foreign Currency Exposure of Banks
(Foreign Assets/Foreign Liabilities of Banks, Percentages)

| | 1993 | 1994 | 1995 | 1996 | 1997 | |
|----------------|------|------|------|------|------|------|
| | | | | | June | Dec. |
| CE5 | | | | | | |
| Czech Republic | 224 | 147 | 64 | 73 | 90 | 126 |
| Estonia | 719 | 436 | 229 | 106 | 105 | 61 |
| Hungary | 148 | 85 | 66 | ... | ... | ... |
| Poland | 403 | 502 | 346 | 228 | 166 | 171 |
| Slovenia | 135 | 183 | 161 | 171 | 169 | 153 |
| EA5 | | | | | | |
| Indonesia | 55 | 52 | 63 | 70 | 54 | 66 |
| Korea, Rep. of | 110 | 99 | 88 | 79 | 77 | 117 |
| Malaysia | 33 | 62 | 65 | 47 | 36 | 49 |
| Philippines | 164 | 130 | 100 | 57 | 53 | 58 |
| Thailand | 45 | 22 | 20 | 14 | 17 | 25 |
| SM3 | | | | | | |
| | 1982 | 1983 | 1984 | 1985 | 1986 | |
| Greece | 29 | 28 | 32 | 35 | 27 | |
| | 1987 | 1988 | 1989 | 1990 | 1991 | |
| Portugal | 19 | 28 | 26 | 34 | 38 | |
| Spain | 77 | 66 | 62 | 59 | 61 | |

Note: ... = negligible amount.

Source: IMF (1998).

institutions increased their foreign currency exposure by significant amounts, contributing to the fragility of the financial system.

Another related indicator, which has proved very useful in assessing a country's vulnerability to attacks against its currency, is the ratio of monetary assets to foreign reserves (M2 to Reserves). Considering the M2 to Reserves ratio, only Estonia shows a significant deterioration of the indicator in the 1996-97 period (table 6). It increased also for the Czech Republic in 1996 and again in the second half of 1997. For the other countries, it was stable or improving. Similarly, for the East Asian countries, only Malaysia experienced some deterioration in the 1995-96 period. The ratios were also considerably improved in Greece and Portugal, but deteriorated in Spain.

Lending Booms, Asset Bubbles, and Excessive Risk Taking

Lending booms have been found to be significant indicators of vulnerability. Fast credit growth, often financed through external borrowing, can cause a deterioration in the portfolio quality of banks. It leads to excessive risk taking, including increased exposure to sectors susceptible to asset price bubbles, such as real estate and the stock market. During the lending boom, profitability of banks may even improve in the short run, hiding the implied risks that would appear when growth slows or negative shocks occur. The assessment of these sources of vulnerability would require more detailed analysis of the various factors. Table 7 provides only some macro indicators about lending booms during the periods of surge in capital inflows.

Table 6 M2/Reserves

| | 1993 | 1994 | 1995 | 1996 | 1997 | |
|----------------|--------|--------|--------|--------|--------|------|
| | | | | | June | Dec. |
| CE5 | | | | | | |
| Czech Republic | ... | 4.75 | 2.95 | 3.45 | 3.17 | 3.48 |
| Estonia | ... | 1.45 | 1.56 | 1.79 | 1.97 | 1.80 |
| Hungary | ... | 2.78 | 1.55 | ... | ... | ... |
| Poland | ... | 5.82 | 2.91 | 2.81 | 2.38 | 2.46 |
| Slovenia | ... | 3.19 | 3.68 | 3.12 | 2.39 | 2.20 |
| EA5 | | | | | | |
| Indonesia | ... | 6.43 | 6.90 | 6.39 | 6.15 | 4.51 |
| Korea, Rep. of | ... | 6.58 | 6.08 | 6.21 | 6.20 | 5.90 |
| Malaysia | ... | 2.54 | 3.28 | 3.51 | 3.68 | 3.40 |
| Philippines | ... | 5.26 | 5.75 | 4.49 | 4.86 | 5.13 |
| Thailand | ... | 3.84 | 3.65 | 3.86 | 4.89 | 3.50 |
| SM3 | | | | | | |
| | 1982 | 1983 | 1984 | 1985 | 1986 | |
| Greece | 25.02 | 24.81 | 20.27 | 21.52 | 13.16 | |
| | 1987 | 1988 | 1989 | 1990 | 1991 | |
| Portugal | 9.80 | 6.64 | 3.82 | 3.22 | 2.80 | |
| Spain | 142.29 | 146.14 | 184.31 | 229.70 | 320.14 | |

Note: ... = negligible amount.

Sources: IMF (1998), and DECPG forecasts for East Asia 1997 data.

Table 7 Lending and Money Growth

| <i>Country</i> | <i>Period</i> | <i>Real Credit Growth, Average</i> | <i>Loan/GDP Ratio Change</i> | <i>Loan/Deposit Ratio Change</i> | <i>Money Multiplier Growth, Average</i> |
|----------------|---------------|------------------------------------|------------------------------|----------------------------------|---|
| CE5 | | | | | |
| Czech Republic | 1994-97 | 5.9 | -12.7 | -10.3 | 1.1 |
| Estonia | 1993-97 | 26.5 | 19.8 | 79.9 | 7.4 |
| Hungary | 1993-96 | -7.4 | -18.8 | -18.7 | -7.8 |
| Poland | 1995-97 | 2.1 | -3.8 | -2.0 | 2.0 |
| Slovenia | 1995-96 | 12.4 | 3.9 | -8.9 | 3.5 |
| EA5 | | | | | |
| Indonesia | 1994-96 | 12.7 | 7.3 | -9.2 | -8.2 |
| Korea, Rep. of | 1994-96 | 11.7 | 6.1 | -1.1 | 7.1 |
| Malaysia | 1993-96 | 16.3 | 15.3 | -36.3 | -2.8 |
| Philippines | 1993-96 | 43.8 | 45.2 | 68.4 | 4.3 |
| Thailand | 1993-96 | 16.4 | 25.6 | 28.2 | -2.1 |
| SM3 | | | | | |
| Greece | 1982-86 | 1.52 | -0.5 | -28.8 | 4.54 |
| Portugal | 1987-91 | 2.48 | -15.6 | -24.0 | -8.38 |
| Spain | 1987-91 | 4.54 | 1.0 | 1.7 | 10.58 |

Note: Average is for indicated 'Period.' Change is difference between ratio for last year and year just before 'Period.'

Source: IMF (1998).

Among the CE5, Estonia shows a dramatic lending boom with real credit growth averaging 26.5 percent per year over five years and 63 percent over the 1996-97 period. The loan to GDP ratio and loan to deposit ratios also increased dramatically. The stock market experienced a dramatic boom and increased by 157 percent from January to August 1997. The other countries have not experienced any boom in credit. The stock markets of the Czech Republic and Slovenia did not experience any significant increases throughout the period. In Poland there was a large upsurge in 1996 but the market has since been on a downward trend. In Hungary also the stock market increased significantly in 1996 and early 1997. Two Asian countries, Thailand and the Philippines, also experienced credit booms in the period 1993-96. For the period 1993-96 in the Philippines, real credit growth was 43 percent per year, and loan to GDP and loan to deposit ratios increased by 45 and 68 points, respectively. In Thailand, the loan to GDP and loan to deposit rates increased by 25.6 and 28.2 points, respectively, between 1992 and 1996.

Direct information about indicators of quality of bank portfolios is limited. Some data about the CE5 is provided in table 8. Based on two indicators, loan-loss provisions and rate of nonperforming loans, and subject to comparability of data, the Czech Republic appears to have the most vulnerable banking system, while Estonia's financial system improved. Poland and Slovenia also continue to experience difficulties in their banking systems. While comparison with East Asian countries is difficult, it is worth noting that for the period leading to the crisis, the EA5 countries saw an increase in the rate of non-performing loans. By the end of 1997 (which includes already some effect of the crisis), they reached 11 percent of total

Table 8 Quality of Bank Portfolios

| <i>Indicator/Country</i> | | | | | |
|--|-------------|-------------|-------------|-------------|-------------|
| <i>Non-performing loans/total loans</i> | <i>1993</i> | <i>1994</i> | <i>1995</i> | <i>1996</i> | <i>1997</i> |
| Czech Republic | ... | 22.7 | 22.3 | 18.4 | ... |
| Estonia | ... | 1.6 | 2.9 | 2.4 | 1.2 |
| Hungary | ... | 15.3 | 4.0 | 4.4 | ... |
| Poland | ... | 16.2 | 9.9 | 6.9 | 5.7 * |
| Slovenia | ... | 10.9 | 7.3 | 9.5 | ... |
| <i>Provisions (percent of total loans)</i> | <i>1993</i> | <i>1994</i> | <i>1995</i> | <i>1996</i> | <i>1997</i> |
| Czech Republic | ... | 82.6 | 35.2 | 3.2 | ... |
| Estonia | ... | ... | ... | 2.0 | 2.1 |
| Hungary | ... | 4.5 | 4.4 | 3.8 | ... |
| Poland | ... | 8.3 | 4.6 | 2.1 | ... |
| Slovenia | ... | 6.7 | 6.7 | 5.8 | ... |

Note: ... = negligible amount.

Sources: ECA databases and IMF. * = September 1997, from Moody's Investor Service, Poland Banking Sector Outlook.

assets in Indonesia, 16 percent in Korea, 7.5 percent in Malaysia, 5.5 percent in the Philippines, and 15 percent in Thailand.¹⁴ Among the factors contributing to the deterioration of portfolio quality is the increased exposure to the real estate and stock market. This exposure was particularly important for some countries, particularly Thailand, Indonesia, and to a lesser extent, the Philippines.¹⁵

Overall Assessment of Vulnerability

This subsection draws together the results of analysis of the various factors of vulnerability in order to give an overall assessment by country. For each indicator a qualitative assessment is made about the degree to which it contributes to increased (+) or reduced (-) vulnerability or unsustainability. The results are summarized in Table 3.9 at the end of this section.

A number of considerations have to be borne in mind in order to make this overall comparison of the experiences of the CE5 to the EA5 and SM3, and to draw lessons from it. Specific conditions of the CE5 have to be taken into account to assess their vulnerabilities, which are mainly related to their stage in the transition process. Some of these conditions may imply *higher risks*. The CE5 have only recently been introduced to market institutions, which are still in the process of being built. For instance, corporations have just begun to emerge and business creditworthiness is difficult to assess. The informational problems facing the banking system are therefore more acute. The banking system is itself in the early stages of development, particularly the private part. The capacity of banks to assess risk and to deal with uncertainty is constantly put to test in view of their inexperience. Systems of property rights and their enforcement are also being continuously improved, but still constitute a weakness in most countries.

Some other factors imply *lower risks*. The recent emergence of private corporations could imply that there are reduced risks of excessive foreign currency exposure of private sector

firms, since they do not yet have the capacity to access external finance directly. Rapid credit growth may not represent large risks, if the initial condition is low financial development and the credit expansion accommodates the growing private sector. Increased rates of consumption could reflect a temporary adjustment to an increase in expected permanent income and does not constitute a source of higher vulnerability. The prospects of EU accession and convergence to EU norms also has important implications, which include providing greater credibility to reforms and “the promise” of improved financial systems, corporate governance, and macroeconomic stability.

Taking these considerations into account, along with the initial conditions and differences among the groups of countries, a number of conclusions emerge that are depicted in table 3.9. Based on information available through end of 1996, or at most through part of 1997, it is clear that among the CE5 Estonia exhibits the most signs of vulnerability, followed by the Czech Republic and Hungary. Poland and Slovenia exhibit the fewest factors of vulnerability.

Hungary

Hungary was the first country to experience problems associated with capital inflows between 1994 and 1995. The assessment of vulnerability in table 9 is based on the situation at the end of 1996 through early 1997, and shows a number of vulnerabilities in Hungary. A similar analysis based on information at the end of 1994-early 1995 would show higher risks. Total private-to-private inflows reached 12.7 percent, 7.3 percent and 15.3 percent of GDP in 1993, 1994 and 1995, respectively. While FDI was a major component, non-FDI was as also important: 6.7 percent, 4.7 percent, and 5.3 percent of GDP, respectively. The current account deteriorated dramatically in the period 1993-1995, by 9 percentage points of GDP, on average. The investment rate increased also, but savings declined in 1993-1994. The real exchange rate appreciated over the period 1992-1993 and export performance deteriorated. But, the situation reversed in 1994. The indicators of international liquidity deteriorated dramatically in 1994; the ratio of foreign assets to liabilities of banks declined from 148 percent in 1993 to 85 percent in 1994, the M2 to reserves ratio increased. However, there was no domestic lending boom.

By the second half of 1994, Hungary started experiencing capital outflows and repeated attacks on the currency. The currency peg system was no longer sustainable and a stabilization package was undertaken in March 1995. It included fiscal adjustment measures, a devaluation of the currency, and the introduction of a crawling band exchange rate mechanism.

Hungary experienced a reversal in capital inflows in 1996. Private-to-private flows dropped from 15.3 percent of GDP in 1995 to -2.9 percent in 1996, with non-FDI falling from 5.3 percent to -7.3 percent of GDP. The policy measures undertaken prevented a worsening of the crisis, and prepared the stage for some recovery, while capital inflows slowed considerably. Growth recovered in the 1997-98 period, despite some financial instability following Russia's collapse, as manifested in a large fall in the stock market which has since recovered. Vulnerability indicators improved somewhat, but remain present.¹⁶

The Czech Republic

The Czech Republic may present less vulnerability in terms of its current account deficit, investment and savings rates, and the lack of a credit boom. However, the foreign currency exposure of banks deteriorated rapidly, and the ratio of foreign assets to liabilities of banks

Table 9 Overall Assessment of Vulnerability

| | <i>Czech Republic</i> | <i>Estonia</i> | <i>Hungary</i> | <i>Poland</i> | <i>Slovenia</i> |
|------------------------------------|-----------------------|-----------------------|-----------------|--------------------|-----------------|
| Current account deficit | ++ | +++ | +++ | - | ++ |
| Investment rate | - | ++ | — | - | - |
| Savings rate | - | +++ | - | - | + |
| REER appreciation | +++ | +++ | + | + | + |
| Loss of competitiveness | - | — | + | — | ++ |
| Size of foreign liabilities | - | — | + | - | — |
| Composition of foreign liabilities | + | + | - | - | — |
| Foreign currency exposure of banks | ++ | +++ | ++ | + | - |
| M2/Reserves ratio | - | ++ | - | — | - |
| Lending boom | - | +++ | - | - | - |
| Quality of portfolio | ++ | — | - | + | + |
| | <i>Indonesia</i> | <i>Korea, Rep. of</i> | <i>Malaysia</i> | <i>Philippines</i> | <i>Thailand</i> |
| Current account deficit | + | ++ | +++ | ++ | ++ |
| Investment rate | - | - | — | - | - |
| Savings rate | - | + | — | - | - |
| REER appreciation | + | + | + | ++ | ++ |
| Loss of competitiveness | + | — | + | — | ++ |
| Size of foreign liabilities | +++ | - | - | - | + |
| Composition of foreign liabilities | +++ | +++ | - | + | +++ |
| Foreign currency exposure of banks | - | + | ++ | +++ | +++ |
| M2/Reserves ratio | - | - | + | - | - |
| Lending boom | - | - | + | +++ | +++ |
| | <i>Greece</i> | <i>Portugal</i> | <i>Spain</i> | | |
| Current account deficit | - | + | - | | |
| Investment rate | ++ | - | - | | |
| Savings rate | ++ | - | - | | |
| REER appreciation | — | - | + | | |
| Loss of competitiveness | - | - | - | | |
| Foreign currency exposure of banks | - | - | - | | |
| M2/Reserves | - | - | + | | |
| Lending boom | — | - | + | | |

Note: Increased vulnerability indicated by + and reduced by -.

Source: Author's computations.

has been significantly below 1 since 1995. Its short-term debt to reserves ratio were the highest among the CE5, as were other short-term debt indicators. At the same time, the banking sector was weak and the quality of the portfolio has not been improving.

These factors alone are insufficient to determine that a possible crisis was in the making, but they indicate increased vulnerability and a riskier environment. It is the management of the exchange rate that led to the full crisis in the spring of 1997, well before the East Asia crisis. As discussed below in the context of causes of vulnerability, there is support for the argument that the situation was unsustainable. Since 1995 the authorities had been attempting to stem an appreciation of the Koruna using a variety of measures: imposition of restrictions on net open positions of banks, open market operations, and widening of the fluctuation band of the exchange rate in 1996. In addition, the current account increased considerably in 1996. The government, however, relaxed its fiscal policy stance in 1996. Non-FDI private-to-private inflows turned negative in 1996 (-1 percent of GDP) from a record level of

9.8 percent of GDP in 1995. In the spring of 1997, attacks on the currency increased in frequency and intensity, in response to which the Central Bank spent \$2 billion from its reserves, but the peg was finally abandoned in May and the currency allowed to float. This led to a 10 percent depreciation, but the currency recovered afterwards. Growth prospects have since been worsening and significant vulnerabilities remain, including a weak banking system

Estonia

Estonia presents a high degree of vulnerability because of the size and rate of increase of its current account deficit, low investment and declining savings rates, REER appreciation, a lending boom, and large foreign currency exposure of banks. Among reduced factors of vulnerability is the small size of Estonia's foreign liabilities. In addition, the real appreciation of the exchange rate and the Estonian banking system appear to be relatively robust.

Estonia actually experienced a "quasi" or "mini" crisis in the immediate aftermath of the Asian crisis, in the fall of 1997. After a stock market crash, with a 58 percent decline from September to November 1997 and difficulties in rolling over short-term foreign credit, the banking system experienced a squeeze in liquidity. Credit growth was considerably slowed down, interest rates increased, and capital inflows were slowed if not reversed. Some of these effects were also the result of policies announced and pursued by the authorities from the first half of 1997, aimed at reducing credit expansion and cooling down the economy. Measures in the context of the currency board include increased reserve requirements, capital adequacy ratios for banks, and withdrawal of government deposits with the banking system. The mini-crisis showed clearly the extent of vulnerability, even though it did not turn into a full-blown crisis. The banking sector was negatively hit (weaker asset quality and lower profitability) by the decline in the stock market, and further weakened by the fallout from the Russia collapse. This has induced more bank consolidation, which should lead to a better outlook with strict regulations and supervision. Growth slowed in 1998 (8 percent) compared to the high rate of 1997 (11.4 percent), and inflation and the current account deficit fell, reducing vulnerability somewhat.

Poland

Poland presents few signs of vulnerability, as of end 1996 and early 1997. Despite the real exchange rate appreciation, there is no evidence of loss of competitiveness, the current account deficit is not worsening, and growth performance is improving. The foreign currency exposure of banks has worsened somewhat, but the ratio of foreign assets to liabilities remains well above unity and the short-term debt to reserves ratio is very low. However, since the surge in capital inflows is a much more recent phenomenon, close monitoring of vulnerabilities is necessary, especially because there is some evidence of surge in non-FDI flows, which may be more volatile. Despite the fallout from the Russia crisis and the following fall in the stock market, Poland did not experience significant adverse effects, even though growth slowed in 1998.

Slovenia

Like Poland, Slovenia does not present major signs of vulnerability to reversals of capital flows at this stage. It has a more recent experience with significant inflows, and most indicators

of vulnerability are insignificant. However, a number of problems exist which may, in the medium term, prove important. It has experienced the most significant loss of competitiveness among the CE5, associated with real exchange rate appreciation and a deteriorating current account balance. GDP growth improved between 1997 and 1998, inflation declined, and the current account deficit remained small.

Comparison with Other Countries

Comparison with East Asian countries is also very informative. Thailand clearly shows the most worrisome signs of vulnerability on most indicators. The Philippines and Indonesia also show many signs of vulnerability. For Indonesia the size and composition of foreign liabilities are the most significant. In the Philippines, the bank lending boom and foreign currency exposure are most important. Korea shows the greatest weakness, in terms of the short-term composition of its liabilities. While Malaysia has many vulnerabilities, they are generally milder.

After accession to the EC, the Southern Mediterranean countries showed some signs of vulnerability, but these did not appear to be significant. The case of Greece is interesting, in that it has mostly sound indicators except for declining investment and savings rates. It is noteworthy that the other two countries which showed few signs of vulnerability ran into problems by 1992, with a currency crisis in Spain and strong pressures in Portugal which led to reimposition of capital controls.

3. Interpretation, Implications, and Near-to-Medium Term Prospects

Interpreting the manifestations of vulnerability discussed in the previous section and drawing lessons and policy implications for Central European countries requires a careful examination of their similarities and differences with the other regions' experience as well as a closer assessment of the presence of *causal factors* of crisis. The *initial conditions* at the time of surge in capital flows are particularly important. The *international environment* and external shocks are also crucial for near-to-medium term prospects.

Initial Conditions

The main lessons of the comparison of initial conditions in the different groups of countries are as follows:

1. Many features of the CE5 and the other two groups of countries make the comparison useful, including a high level of trade and financial integration and a comparable range of income and human development indicators.
2. There are possibly as many differences among the CE5 as there are between them individually and the other comparator countries in terms of extent of surge in capital inflows, exchange rate regimes, and quality and health of financial systems.
3. The specific stage of transition in the CE5 gives reason to be careful in drawing direct conclusions from the comparisons. Many aspects are highlighted: the factors affecting the volume and composition of capital flows; the stage of development of market institutions; the potential gains from the reform process as well as the con-

straints inherited from the previous centrally planned system; the kinds of macro-economic adjustments taking place in terms of investment, savings and consumption; history of financial crises and the quality and changes taking place in the financial systems; initial conditions in terms of indebtedness; and the international environment for the groups of countries.

A first general comparison of the three groups of countries shows that the experience of the EA5 and SM3 is relevant and useful for the CE5, since they share the common characteristics of *fast trade and financial integration*, and a similar range of income levels and human capital development (table 10). They also show a similar robust performance with regard to the level of integration in the last decade. Indicators for trade and capital flows for the CE5 are high compared to high income and developing countries, and even in comparison to the East Asian and SM3 countries (table 11).

The *triggering factors* in the surge in capital flows in the CE5 are the extensive privatization programs and the improved economic prospects following the first stage of transition reforms and the resumption of growth.¹⁷ The granting of an investment grade rating by the major international agencies seems to have played a significant role, since it coincides in most cases with the surge in non-FDI flows.¹⁸ These factors are clearly specific to the CE5 and

Table 10 Comparison of Initial Conditions upon Rapid Growth Acceleration
(Selected Central European, East Asian and Southern Mediterranean Economies)

| | Hungary | Poland | Malaysia | Thailand | Portugal | Spain | Greece |
|-------------------------------|-------------|--------|-------------|----------|-------------|-------|--------|
| | Early 1990s | | Early 1980s | | Early 1980s | | |
| <i>Key supply indicators</i> | | | | | | | |
| GDP in PPP dollars, bn | 60 | 180 | 50 | 100 | 50 | 260 | 52 |
| PPP GDP per capita | 5,000 | 3,900 | 4,150 | 2,100 | 4,350 | 6,000 | 5,450 |
| Average schooling of pop. | 10.8 | 8.4 | 4.8 | 4.2 | 3.2 | 5.2 | 6.6 |
| <i>As % of GDP</i> | | | | | | | |
| Investment | 19.5 | 17.7 | 34.3 | 28.0 | 31.6 | 21.0 | 21.0 |
| Private investment | 16.4 | 14.2 | 18.4 | 18.3 | 20.8 | 18.7 | 14.6 |
| Private savings | ... | ... | 22.7 | 15.8 | ... | ... | ... |
| Foreign debt | 57.1 | 56.5 | 37.4 | 22.0 | 34.2 | 5.8 | 18.3 |
| <i>Macro and trade policy</i> | | | | | | | |
| PSBR (% of GDP) | -2.8 | -4.1 | -13.2 | -4.6 | -10.5 | -5.5 | -11.0 |
| CPI inflation (%) | 22.7 | 135 | 5.7 | 7.0 | 23.2 | 13.8 | 20.2 |
| REER (% change) | 6.7 | 3.7 | -3.4 | -3.1 | -7.9 | -11.0 | -9.4 |
| Avg. tariffs, unwgtd. | 10.0 | 11.8 | 13.0 | 11.5 | 9.0 | 9.8 | 9.8 |
| NTM coverage ^a | 6.8 | 17.1 | 3.7 | 12.4 | 4.2 | 10.1 | 5.9 |
| <i>Integration variables</i> | | | | | | | |
| Trade ratio, (X+M)/GDP | 84.2 | 60.7 | 104.1 | 50.0 | 60.8 | 32.0 | 40.4 |
| Mfg. xport share (%) | 65.1 | 57.7 | 20.7 | 27.7 | 72.6 | 71.3 | 50.3 |
| II Credit rating (index) | 44.0 | 26.6 | 68.0 | 52.0 | 49.6 | 63.3 | 53.2 |
| FDI (% of PPP GDP) | 2.89 | 0.49 | 2.58 | 0.28 | 0.31 | 0.65 | 0.89 |

Note: a. Non-Tariff Measure (NTM) coverage is the percentage of products within a category that is affected by an NTM—QRs, price measures, customs and other entry control processes, and so forth (UNCTAD/GATT).

... = negligible amount. Pop. = population. Avg. = average. Bn = billions.

Source: Development Prospects Group, World Bank.

Table 11 Integration with the Global Economy
(Central Eastern European, Southern Mediterranean and East Asian Countries)

| | Trade | | Trade in Goods | | Gross Private Capital Flows | | Gross FDI | |
|-------------------------|--------------|------|--------------------|-------|--------------------------------|------|--------------|------|
| | % of GDP PPP | | % of Goods GDP PPP | | % of GDP PPP | | % of GDP PPP | |
| | 1986 | 1996 | 1986 | 1996 | 1986 | 1996 | 1986 | 1996 |
| CE5 | | | | | | | | |
| Czech Republic | ... | 46.3 | ... | 187.2 | ... | 10.9 | ... | 1.3 |
| Estonia | ... | 77.4 | ... | 280.4 | ... | 13.7 | ... | 3.2 |
| Hungary | 34.5 | 41.4 | 126.9 | 137.1 | 5.4 | 14.0 | 0.0 | 2.8 |
| Poland | 15.9 | 26.5 | 50.6 | 107.2 | 3.8 | 9.3 | 0.0 | 2.0 |
| Slovenia | ... | 74.0 | ... | 184.5 | ... | 9.5 | ... | 0.8 |
| S. Mediterranean | | | | | | | | |
| Greece | 21.2 | 27.9 | 58.6 | 50.4 | 4.3 | 10.9 | 0.6 | 0.8 |
| Portugal | 23.2 | 43.1 | 106.1 | ... | 4.5 | 19.0 | 0.4 | 1.0 |
| Spain | 18.4 | 36.8 | 64.8 | ... | 4.6 | 10.3 | 1.1 | 1.9 |
| East Asia | | | | | | | | |
| Indonesia | 10.7 | 13.6 | 55.0 | 69.7 | 2.0 | 2.1 | 0.1 | 0.8 |
| Korea, Rep. of | 33.6 | 46.7 | 115.0 | 118.0 | 3.5 | 11.1 | 0.8 | 1.1 |
| Malaysia | 33.6 | 70.2 | 163.5 | 269.0 | 2.8 | 4.6 | 0.7 | 2.0 |
| Philippines | 8.0 | 21.3 | 57.4 | 98.8 | 2.3 | 4.8 | 0.1 | 0.8 |
| Thailand | 14.7 | 31.3 | 85.8 | 138.2 | 1.6 | 5.0 | 0.2 | 0.8 |
| By income group | | | | | | | | |
| Low | 7.1 | 7.9 | 33.8 | 56.9 | 2.0 | 2.1 | 0.2 | 1.0 |
| Middle | 12.5 | 21.8 | 53.3 | 81.1 | 4.0 | 5.8 | 0.3 | 0.9 |
| High | 26.5 | 38.9 | 70.4 | 178.8 | 11.4 | 19.3 | 1.6 | 2.7 |

Note: ... = negligible amount.

Source: World Bank (1998b).

their stage of financial integration. The EA5 and SM3 countries have been receiving significant amounts of private capital inflows for a longer time period, and the recent surge reflects varying combinations of domestic-pull and external-push factors. In the case of the Philippines, domestic reforms and resumption of growth factors are more similar to the CE5. For the other East Asian countries, it is interesting to note that three of them received investment grade ratings (new or up-grade) during this period: Indonesia in March 1994, Thailand in October 1995, Malaysia in March 1993, and Korea in April 1990. For the SM3 countries, accession to the EC was the most significant factor, and for Portugal and Spain coincided with receiving investment grade ratings (1986 for Portugal and 1988 for Spain).

The differences in these triggering factors indicate that the surge of capital inflows in the CE5 has a large *temporary* component linked to transition and the initial stock adjustment of portfolios, as well as to increases in present (and future) levels of consumption based on higher expected future incomes. As measured by total indebtedness as a share of GDP, at the beginning of the surge in capital flows there is no consistent pattern in the CE5 or the EA5 countries. Indebtedness in both groups varies from very low percentage shares, in Estonia and Korea, to quite high percentages, for example, in Hungary and the Philippines (table 12). However, considering the *breakdown of total debt*, the Central European countries all had

low levels of private nonguaranteed debt (PNG, measured as a share of GDP) compared to the EA5. The highest ratio of PNG debt to GDP among the CE5, in Slovenia, is comparable to the lowest among the EA5, specifically in Korea and the Philippines. These differences show the scope for private portfolio adjustments for both foreign and domestic investors through cross-border asset transactions. Notwithstanding, FDI stock liability to GDP ratios indicate that the CE5 had already accumulated a significant volume comparable to, if not exceeding, that of EA5 countries, with the exception of Malaysia with the highest ratio of 31.6 percent.

Compared to the EA5 countries, the CE5 had lower *rates of savings and investment*, excluding the Philippines (table 13). Aside from the Czech Republic where investment recovered from low levels of the early transition period, the other Central European countries still had low rates of investment at the time of the surge in non-FDI flows. Until 1993, the CE5 had witnessed a higher rate of increase (or lower rate of decline) in consumption than investment.¹⁹ This shows that these countries were still adjusting their consumption levels, as well as investment, in relation to permanent income increases expected from the reform process and the implied productivity increases with low GDP growth rates at this stage since they were just recovering from recession.

It is also important to consider the *history of financial crisis* at the time of surge in capital flows. All of the CE5 went through major bank distress and restructuring episodes during the early transition phase and were still in the process of dealing with them at the beginning of the private capital inflows. Four of the EA5 had significant or major banking problems in the mid-1980s, most of which were resolved by the early 1990s. Indonesia, however, was experiencing a banking crisis in 1994, comparable to the situation in the CE5. Among the SM3,

Table 12 Initial Conditions: Foreign Liabilities

| | <i>Year</i> | <i>Total Debt (% GDP)</i> | <i>PNG Debt (% GDP)</i> | <i>Share of Private Creditors (%)</i> | <i>FDI Liabilities (% GDP)</i> |
|----------------|-------------|-------------------------------|-----------------------------|---|------------------------------------|
| CE5 | | | | | |
| Czech Republic | 1993 | 29.4 | 1.0 | 79.3 | 6.9 |
| Estonia | 1992 | 5.7 | 1.7 | 67.3 | ... |
| Hungary | 1992 | 59.3 | 2.1 | 78.3 | ... |
| Poland | 1994 | 46.0 | 1.0 | 21.4 | 4.1 |
| Slovenia | 1994 | 15.8 | 5.8 | 45.1 | 9.3 |
| EA5 | | | | | |
| Indonesia | 1993 | 56.4 | 11.1 | 22.5 | ... |
| Korea, Rep. of | 1993 | 14.2 | 4.2 | 61.6 | 2.1 |
| Malaysia | 1993 | 40.7 | 12.2 | 66.7 | 32.1 |
| Philippines | 1993 | 66.1 | 4.9 | 23.0 | ... |
| Thailand | 1993 | 42.1 | 21.5 | 36.4 | 2.7 |
| SM5 | | | | | |
| Greece | 1981 | 21.3 | ... | ... | ... |
| Portugal | 1986 | 48.1 | 1.9 | 82.7 | ... |
| Spain | 1986 | 10.6 | ... | ... | ... |

Note: ... = negligible amount.

Sources: World Bank (1998a) and IMF (1997a).

Table 13 Initial Conditions: Growth, Openness, Savings, and Investment

| Country | Year | Real GDP Growth (%) | Trade Openness (X+M)/GDP | Savings Rate (% GDP) | Investment Rate (% GDP) |
|----------------|------|---------------------|--------------------------|----------------------|-------------------------|
| CE5 | | | | | |
| Czech Republic | 1993 | 0.6 | 0.92 | 29.6 | 28.0 |
| Estonia | 1992 | ... | 0.99 | ... | ... |
| Hungary | 1993 | -0.8 | 0.52 | 10.6 | 20.0 |
| Poland | 1994 | 5.2 | 0.40 | 16.9 | 15.9 |
| Slovenia | 1994 | 5.3 | 0.97 | 24.5 | 19.7 |
| EA5 | | | | | |
| Indonesia | 1993 | 6.5 | 0.41 | 24.9 | 26.2 |
| Korea, Rep. of | 1993 | 5.8 | 0.48 | 36.3 | 36.0 |
| Malaysia | 1993 | 8.4 | 1.39 | 33.7 | 38.3 |
| Philippines | 1993 | 2.1 | 0.53 | 18.2 | 23.7 |
| Thailand | 1993 | 8.3 | 0.62 | 34.4 | 39.5 |
| SM3 | | | | | |
| Greece | 1981 | 0.1 | 0.40 | 15.8 | 22.3 |
| Portugal | 1986 | 4.1 | 0.54 | 27.7 | 24.2 |
| Spain | 1986 | 3.2 | 0.26 | 13.0 | 19.5 |

Note: ... = negligible amount.

Source: IMF (1998).

Spain had a major banking crisis during the period between 1977 and 1985 (preceding accession), while Portugal and Greece were able to avoid any major banking crises. Unlike most of the comparator countries, excluding Indonesia, the CE5 were having significant banking problems at the time of the surge in capital flows. These problems created additional and specific vulnerabilities, particularly since the CE5 had no experience in dealing with banking sector distress and insolvency. While some East Asian countries did experience balance-of-payment crises in the past (Indonesia, Thailand and Philippines at the end of the 1970s and during the 1980s, Malaysia in 1975) the CE5 did not have experience with significant currency crises.

The CE5 varied considerably in terms of their *capital account openness* and *exchange rate management* at the beginning—and during most of the period until 1997—of the surge in capital inflows. They all had current account convertibility, accepting IMF Article VIII over the period 1994-96. Estonia established a currency board, with a peg of the exchange rate to the deutsche mark, and had full capital account convertibility. At the other extreme Slovenia followed a managed float of the exchange rate and continued to have a restrictive capital account regime. It maintained controls on portfolio flows, credit, real estate investment, and even some controls on FDI. The EBRD index of capital account liberalization was 40 (out of a maximum of 100) at the end of 1997.²⁰ The Czech Republic had a pegged exchange rate policy, had no controls on foreign direct investment, but maintained some restrictions on other capital account transactions. Hungary and Poland pursued a more flexible exchange rate policy, had no controls on foreign direct investment, but also maintained more restrictions on the capital account by the end of 1997 than the Czech Republic.²¹ Hungary, Poland, and the Czech Republic are committed to abolishing the remaining capital controls within

the next few years (with Poland by the end of 1999) in the context of their OECD membership. The same variation in conditions were also to be found in the EA5, with Thailand having the most stable exchange rate and openness of the capital account.

The “Causal” Factors or Sources of Vulnerability

As the discussion of the overall assessment of vulnerability for the various countries shows, the presence of vulnerabilities may be used as warning indicators of increased probability of crises and not a predictor of a crisis happening. What appears to be a vulnerability, such as an appreciation in the real exchange rate or decline in the savings rate, may be just a normal economic adjustment taking place.

A central issue for the CE5 is to determine the extent to which the surge and magnitude of capital flows is a response to “fundamentals”—that is, improved prospects for growth and higher rates of return on capital—or whether at least some of these inflows are responses to distorted incentives, creating vulnerability, and, therefore are temporary and much more subject to reversals. However, even if most of the capital inflows are in response to fundamentals, the presence of some causal factors of vulnerability at the same time as these possible vulnerabilities are observed should be taken into account.

It is difficult to arrive at a clear and definite conclusion about this issue. However, one way to shed some light is to complement the analysis of vulnerabilities by looking at some possible causes, such as inappropriate policies, the existence of distorted incentives, or inadequate institutions. This would give more significance to the manifestations of vulnerability and may point to corrective actions and policies.

The main conclusions are as follows:

1. The analysis of causes, which are associated with the presence of vulnerability, highlights some possible areas of concern for each country. The major concerns are the existence of large interest rate differentials which may induce excessive foreign borrowing; the systems of fixed or quasi-fixed rates which appear to be associated with larger real exchange rate appreciation; under-estimation of exchange risk that increases incentives for foreign borrowing; and the quality of the financial system, which helps mitigate the risks created from other sources of vulnerability in some cases, but may also aggravate them in others.
2. Some CE5 countries did benefit from low initial levels of indebtedness and from an initial surge in FDI linked to privatization. This reduced the risks of the rapid surge in capital inflows during this stage. As their debt and liabilities ratios rise and the possibilities of attracting FDI through privatization are reduced, the CE5 are likely to see increased vulnerability associated with the same level of capital inflows, since more short-term and volatile flows shares will increase.

Macro-policies and Distorted Incentives for Excessive External Borrowing

The experience of the East Asian countries was that the response to increased capital inflows to the region created, along with their macro-policies, incentives for excessive borrowing abroad by financial institutions and/or non-financial enterprises. While fiscal policy was mostly conservative, even contractionary, and the fiscal balances were strong during the period leading

to crisis, fiscal policy was not and could not be used to compensate for the increased demand pressures from the private sector. In many cases the fiscal impulse even turned positive (table 14).

The authorities had to rely almost exclusively on monetary policy to deal with the effects of the capital inflow. It took the form of sterilized intervention, which induced higher domestic interest rates and increased differentials with foreign rates. This incentive was largest and most consistently strong in Thailand and Indonesia for the whole 1994-96 period, up to July 1997 (table 14). It also became significant and positive in the Philippines from 1994 until the crisis. Consequently, foreign borrowing and increased capital inflows were fostered and were further enhanced through implicit or explicit government guarantees.

At the same time, the exchange rate policies, which succeeded in achieving pegged rates or low variability with a managed float, reduced perceptions of risk. This induced economic agents to underestimate exchange risk and accumulate unhedged foreign currency liabilities. As a very crude measure of exchange risk, the standard deviation of the monthly rate of change of the nominal exchange rate (against the \$US for EA5) for the period 1994-96 is presented in table 14. Again, this reduced perception of risk is most evident for Thailand and Indonesia as indicated by their low standard deviation, the lowest among the EA5.

The combined effect of these policies was strongest in Thailand and Indonesia, both of which had fairly constant or very predictable exchange rates and large interest rate differentials or both. Korea and Malaysia also had positive but lower interest differentials, although exchange rates were more variable and unpredictable, reducing the incentives for external borrowing. The Philippines experienced a decline in interest differentials from the period

Table 14 Incentives to Borrow Abroad

| Country | Interest Rate Differentials | | | | | S.D. ^a of rate of change of exchange rate |
|----------------|--|-------|-------|-------|----------|--|
| | <i>Difference between the domestic inter-bank rate and LIBOR, adjusted by ex post actual depreciation of domestic currency</i> | | | | | |
| | 1993 | 1994 | 1995 | 1996 | mid-1997 | |
| CE5 | | | | | | |
| Czech Republic | 3.69 | 2.53 | 0.60 | 9.67 | -8.96 | 0.8 |
| Estonia | -0.65 | -0.07 | -0.15 | 0.29 | -0.04 | 0.0 |
| Hungary | 5.11 | 3.15 | -11.9 | 4.32 | 10.64 | 2.2 |
| Poland | ... | -5.35 | 0.33 | 9.52 | 16.78 | 1.5 |
| Slovenia | ... | 16.85 | -0.19 | 6.69 | 6.28 | 0.7 |
| EA5 | | | | | | |
| Indonesia | 2.37 | 3.32 | 3.72 | 2.83 | 8.4 | 0.3 |
| Korea, Rep. of | -1.46 | -0.70 | 2.80 | -5.10 | ... | 0.8 |
| Malaysia | 0.56 | -3.03 | 4.83 | 1.02 | ... | 1.3 |
| Philippines | -0.54 | 5.29 | 7.29 | 3.95 | 7.91 | 1.5 |
| Thailand | 5.67 | 4.57 | 5.23 | 2.99 | 5.1 | 0.4 |

Note: Table depicts yearly interest rate differentials and variability of nominal monthly exchange rates over the period 1994-96. The DM exchange rate is used for the CE5, and the \$US rate is used for the EA5.

a. The Standard Deviation is based on the monthly rate of change of the exchange rate.

... = negligible amount.

Source: IMF (1998).

1992-93 to the period 1994-96 and reduced incentives for external borrowing, even though the exchange rate was stable.

Turning to the CE5, fiscal policy in these countries was also primarily contractionary during the inflow period (see table 1). These official figures, however, do not account for many contingent liabilities, such as those arising from the restructuring of banking sectors. The Czech Republic, Hungary, and Poland went from large deficits to budget surpluses. Estonia and Slovenia were realizing low fiscal deficits. Nevertheless, in all cases, the fiscal stance did not compensate for the expansionary effects of the large volumes of capital inflows.

Monetary policy was the main instrument of adjustment. In each of the CE5, the governments intervened in the exchange market to prevent appreciation and accumulated large amounts of foreign reserves. This reserve accumulation not only corrected for the large losses of reserves during the previous early transition period, but went well beyond. The exchange market intervention was often accompanied by sterilization, which consequently prevented domestic interest rates from either falling or falling further.

During the early years of the inflow period, 1993-94, the incentives to borrow abroad were strongest in the Czech Republic and Hungary. This is consistent with the early surge of capital inflows into the two countries. While the process continued for the Czech Republic until 1997, it reversed in Hungary in 1995 following the crisis, after which it recovered and increased significantly again in 1996 and 1997. The incentives to borrow abroad became clearly positive and significant in Poland and Slovenia in 1996 and 1997, consistent with the surge of non-FDI inflows to these countries during that period. The numbers in table 13 for Estonia show no significant interest differentials. The differentials are misleading, however, since the inter-bank interest rate was very close to the LIBOR DM rate due to complete capital account convertibility and the currency board with a fixed peg to the DM. If time deposit or lending rates are used instead, the differential in interest rates is very large and positive.

The exchange rate risk, as measured by the standard deviation of the nominal exchange rate (relative to the DM), is related to the exchange rate arrangement system. It is lowest in Estonia and Czech Republic, both of which had pegged exchange rates during the periods considered. In contrast, the standard deviations are much larger in Hungary and Poland, where more flexible exchange rate regimes are pursued.

Similar to the EA countries, monetary policies and exchange rate arrangements seem to have created, to varying degrees and at different periods, distorted incentives to borrow abroad. These distortions can also be associated with the volume of capital inflows. This seems to have been the case for the Czech Republic until the crisis of 1997, and for Hungary until the crisis of 1995. Presence of such incentives are also evident in Estonia, probably more so since 1996. The more recent experiences in Poland and Slovenia point to the same set of circumstances and warrant closer scrutiny.

The East Asia experience has also shown that "supply" factors of external finance played a role. Foreign banks in particular seem to have exercised less than adequate risk analysis, and tended to lend too easily to domestic banks and companies. The CE5 do benefit from similar or better credit ratings than the EA5 countries. There may be reasons to suppose that such a predisposition to lend to CE5 banks and companies exists also. Given that European banks were more active and exposed than U.S banks in East Asia, and that they are also the most active in the CE5, such a view would be supported.

Fragility of the Financial Systems

Weak and increased fragility of banking systems are now commonly understood to be the single most important contributing factor to vulnerability in the Asian economies leading to crisis.²² As discussed above, lending booms and a deterioration in the quality of the portfolio of the banking system are manifestations of this increased vulnerability. Surges in capital flows, especially if “push” driven, can contribute to the appearance of these lending booms. More important is the fact that these weaknesses can be linked in most cases to increased competition following liberalization, while the regulatory and supervisory frameworks did not adapt fast enough. The combined effect of these factors for East Asian countries was very large, with increased fragility most notably in Korea, Thailand, and Indonesia.²³

Initial Conditions, Capability and Incentives. Any comparison of the banking systems in the CE5 with the East Asian countries should take into consideration the initial conditions. All of the CE5 banking systems can be considered as nascent and, as of the mid-1990s, emerging from the crises and restructuring following the first stage of transition. They all experienced banking problems, leading to recapitalization, closure of banks, and the state assuming most, if not all, of the non-performing loans. However, countries varied as to the extent of resolution of their problems. Estonia seems to be the most successful in restructuring its banking system, achieving relative health by 1995. Banks in Poland and Hungary have also considerably improved the quality of their portfolios, as has Slovenia, albeit to a lesser extent. There was, however, less success and even a worsening of the situation in the Czech Republic.

In addition, banking systems in the CE5 continue to face the implications of the ongoing transition, particularly with respect to the burden of state-owned enterprises. They also need to improve their capability in view of the scarcity of skills and know-how.

Liberalization and Competition. Domestic and external liberalization, which induces more competition in the banking system, may lead to increased risk taking and a deterioration in the quality of portfolios, even in the absence of lending booms. The presence of the latter increases the risks. Following liberalization, competition in the domestic banking sector may increase through the following channels: among domestic banks, following the lifting of restrictions on interest rates and direct central bank controls; from newly developed non-bank financial institutions, the expansion of capital markets providing alternative sources of finance to firms; access of the corporate sector (especially by the most creditworthy) to external finance;²⁴ and entry of foreign banks. In the case of the East Asian countries, the importance of these factors varied considerably from one country to another, but most contributed to increased fragility of the financial system.

The banking systems of the CE5 have also been subject to increased competition from all of these sources. All of the countries, with the exception of Slovenia, had achieved fairly liberalized domestic financial systems. The market share of foreign banks increased considerably. The share increased from 7 percent in 1993 to 19 percent in 1997 in the Czech Republic; 40 percent of equity in Estonia was held by non-residents in April 1997; and the share of banking assets in full or majority foreign ownership was expected to reach 70 percent by the end of 1997 in Hungary. Non-bank financial institutions as well as capital markets developed rapidly in all countries. As a result a very strong competitive banking sector has developed in both Estonia and Poland. Competition has also been increasing in the Czech Repub-

lic, and to a more limited degree in Hungary and Slovenia. There does not, however, appear to be a clear correlation between liberalization, competition, and soundness of the banking systems in the CE5.

Regulation and Supervision. In the EA countries, as liberalization deepened and competition increased, the regulatory and supervisory frameworks did not adapt fast enough in most countries, or was late in becoming effective. This contributed to the build up of vulnerability in the banking system. The following is a brief discussion of some of the main regulatory issues and of supervision in the CE5 countries compared to the EA5 countries.

- Capital adequacy requirements. By end of 1996 four of the EA5 had adopted the Basel Committee on Bank Supervision rule on capital adequacy, requiring an 8 percent ratio of capital to risk-weighted assets.²⁵ The Philippines use a different ratio of net worth to risk-weighted assets of 10 percent. The actual ratios are generally higher than 8 percent, but Korea and Thailand were insufficiently capitalized.²⁶
The CE5 have also adopted the Basel Committee regulations: Poland since 1993,²⁷ Hungary since mid-1993, Slovenia since August 1994, Estonia since 1994 (and increased to 10 percent in 1997), and the Czech Republic since December 1996. However, on average the actual risk-based capital ratios are much higher: 18.7 percent (end-1996) for Hungary, 15.6 percent (1995) in Poland, 13.5 percent (1997) in Estonia, 22 percent (end-1995) in Slovenia, and 10.3 percent (end-1996) in the Czech Republic. Hence, like the EA countries, the banking sectors of the CE5 are well capitalized overall, but it is important to note these averages hide the fact that many banks do not meet the 8 percent requirement—especially the smaller and the state-owned banks.
- Foreign currency exposure. While the Basel Committee on Banking Supervision does not have rules on foreign currency exposure, some countries do have such rules to limit risks for the banking systems. Except for Estonia, the CE5 have some kind of rules on the net foreign liability of banks.
- Connected lending. Like the EA5, all CE5 countries have regulations on single large exposures, lending per client (or per group of closely connected borrowers), participation in non-bank financial institutions, and interconnected lending. They are mostly in line with the Basel Committee requirements. Despite the regulations, close connections between lenders and borrowers often result in less than adequate screening of projects, which has been the case in East Asian countries.
- Lending to volatile sectors. The EA5 did not have restrictions on lending to the highly volatile sectors—real estate and the stock market. In some cases the existing restrictions were relaxed in the process of liberalization. This led to the increased exposure to these sectors and increased fragility.²⁸ The limited information available on the CE5 countries seems to indicate that either there are no regulatory limits on lending to the more volatile sectors, or that the limits are weak.
- Accounting standards and transparency. The CE5 countries have in general adopted international accounting standards for their banks. Estonia even requires that banks be audited by one of the big five international accounting firms. But, the implementation of international standards may be slower or weaker in some countries, such as

the Czech Republic. The EA countries have also developed domestic standards largely in conformity with international standards. Nevertheless, they rank poorly in terms of overall transparency disclosure.²⁹

- Supervision. Most CE5 countries developed fairly adequate supervisory institutions, particularly Estonia, Poland and Slovenia, despite limitations on resources and capability. Until more recent measures were introduced, supervision was weak in the Czech Republic and Hungary.

Corporate Governance Factors

Corporate governance and transparency also played a role in the build up of vulnerabilities in the East Asian crisis. Corporate governance and disclosure systems were weak, and capital markets lacked transparency. This has been explained by resistance of issuers to better disclosure and sharing of corporate control, weak incentives and lack of market discipline, weak regulatory framework and enforcement on disclosure, weak enforcement of the legal and regulatory framework for protection of minority shareholders, and inadequate and weak implementation of accounting standards.³⁰

The assessment of the situation in the CE5 countries requires an in-depth analysis beyond the scope of this report. However, these countries do present some additional specific problems. The continuing presence of a large state-owned enterprise sector, sometimes with links to state-owned banks, despite the extent of the privatization programs, is one factor. Another, alluded to above, is the still early and ongoing process of development of the private corporate sector.

External Environment and Near-to-Medium Term Prospects

The international environment and external shocks often play a significant role in currency crises. Many studies find that increases in international interest rates can cause a reversal of capital inflows (as decreases imply surges in capital inflows). Also, external demand conditions and terms of trade may affect GDP growth and export revenue. If the impact is sufficiently large and negative, it may increase the perceived risk of the country and lead to reversals of capital inflows. The recent Asia crisis has also highlighted the risks of contagion, not only through traditional trade and real linkages, but also from financial markets and assimilation of countries sharing similar conditions that are subject to loss of confidence.

The global economic environment is projected in the medium to long run to be broadly favorable for the CE5, as for low- and middle-income countries in general. (Annex 3 discusses these issues in more detail). In particular, there is expected to be a low-inflation recovery in industrial countries, with a solid, though unspectacular, resumption of growth in Europe, and strong advances in world trade. World output growth over the next three years is forecast close to 3 percent, representing a significant acceleration over the 1991-97 period. Growth in developing countries (excluding those in Central and Eastern Europe and the Former Soviet Union) over the next three years is forecast in the range of 4 to 5 percent, broadly in line with outcomes since 1991. FSU and Central and Eastern European countries are expected to consolidate their recovery further, and grow at rates approaching those of the other developing countries by 2000. The projections assume that the worst effects of the crisis remain contained within Asia. They also assume that confidence and stability are rees-

established in the first half of 1998, following a large turnaround in the trade balance of the most affected countries. Some of these conditions are already evident in Korea and Thailand.

In this generally favorable context, this section focuses on two main factors of possible risks in the near-to-medium term prospects: the East Asia crisis and the introduction of the Euro. The following conclusions are reached:

1. There is significant overlap in the export structures of the CE5 and EA5 economies, and the CE5 can expect strong price competition and may lose market share. The five transition economies, however, are partially shielded from these potential negative developments by their preferential trade arrangements with the EU and the expected recovery in the EU, their main trading partner. They have also achieved significant diversification of their exports and are much less dependent on primary commodities.
2. One major risk facing the CE5 is contagion effects from the spread of the financial crisis to other transition or developing economies, the reassessment of emerging markets by international investors, and increased interest rates of emerging market debt. A possible global retrenchment from emerging markets may negatively effect their access to foreign capital, but their close links to the EU may shield them and allow them continued, but perhaps reduced, access.
3. The introduction of the Euro will present additional challenges to the CE5 countries, given the need to preserve their relative attractiveness (in terms of perceived risks) in relation to EMU and, more generally, EU countries. It will make their success in stabilizing their exchange rates in relation to the Euro more crucial for their trade and financial integration with the EU. However, this task is likely to be more difficult if EU accession results in an additional surge in capital inflows.

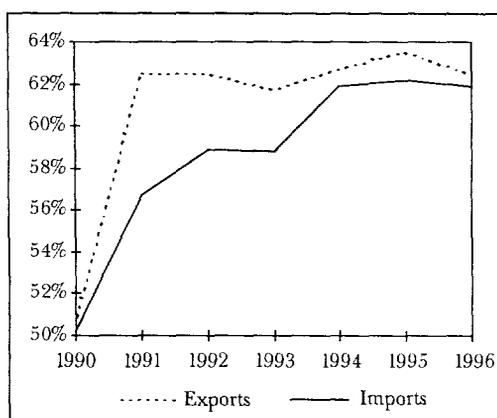
East Asian Crisis

The ongoing crisis in East Asia presents a number of risks to CE5 near-term growth prospects and the countries are likely to experience some effects, primarily indirect, in both the current and capital accounts.

With regard to current account flows, risks are mostly associated with sharply lower demand in Asia, and stiffer competition in third markets because of devaluation of East Asian currencies. The main export markets for the CE5 are Western Europe and the ECA region (figures 2 and 3). East Asia doesn't comprise a significant share of any of the CE5 exports markets. While growth in the industrial countries of Western Europe may not be significantly dampened by the crisis, demand for CE5 products there may dampen as cheaper products become available from East Asia.

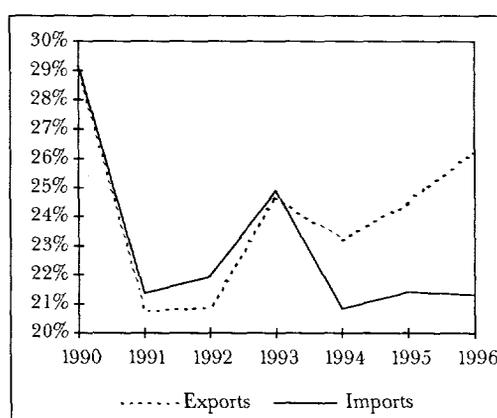
Given the real depreciation of their currencies, the East Asian exporters may be able to gain new access or expand market share at the expense of CE5 exports, to the extent that East Asian countries' export products overlap with those of the CE5. While the general structure of exports from the CE5 and East Asian countries are broadly similar, data limitations prevent detailed and conclusive analysis. Nevertheless, comparing the structure of trade for the two regions at an aggregate level provides some indicative information. Correlation coefficients of SITC categories at the single digit level of countries in the two regions point

Figure 2 CE5 Trade with EU
(Percentage Share of Total Trade)



Source: World Bank databases.

Figure 3 CE5 Trade with Central Europe
(Percentage Share of Total Trade)



Source: World Bank databases.

to significant overlaps, particularly with the higher income countries (and less with Indonesia). However, as the categories are very broad they probably overstate correlation (table 15).

Comparison of SITC trade data at the two digit level shows that while the economies have broadly similar export structures, the degree of correlation appears less strong for the two regions overall—0.38 versus 0.77 (table 16). The highest correlation coefficient at the two digit level is for the miscellaneous manufactured articles category, and hence is the most relevant category of the two regions' exports. Again, these numbers probably overstate correlation because the coverage of the categories is still quite broad. Despite the limitations of this data, one may conclude that there is significant overlap in the export structures of the CE5 and EA5 economies, and the CE5 can expect strong price competition and may face losing market share. The five transition economies, however, are probably partially shielded from these potential negative developments by their preferential trade arrangements with the EU.

Table 15 Comparative Export Structures of Selected CE5 and EA5 Countries
(Correlation Coefficients, SITC Categories)

| | Czech | Hungary | Poland | Malaysia | Indonesia | Thailand | Korea |
|-----------------------|-------|---------|--------|----------|-----------|----------|-------|
| Czech | 1.0 | | | | | | |
| Hungary | 0.87 | 1.0 | | | | | |
| Poland | 0.92 | 0.92 | 1.0 | | | | |
| Malaysia | 0.76 | 0.67 | 0.58 | 1.0 | | | |
| Indonesia | 0.46 | 0.37 | 0.60 | 0.17 | 1.0 | | |
| Thailand | 0.82 | 0.91 | 0.79 | 0.83 | 0.24 | 1.0 | |
| Korea, Rep. of | 0.81 | 0.70 | 0.67 | 0.92 | 0.43 | 0.79 | 1.0 |

Source: J. P. Morgan, Economic Research, January 1998.

Table 16 Comparative Export Structures at 2-Digit Level for CEEs and DAEs:*
(Correlation Coefficients, SITC Categories)

| | |
|--|-------------|
| All categories at 2 digit level | 0.38 |
| Chemical products | 0.57 |
| Manufactured goods classified by material | 0.37 |
| Machinery and transport equipment | 0.10 |
| Miscellaneous manufactured articles | 0.74 |
| Memo: All categories at 1 digit level | 0.77 |

Note: *Eurostat Categories: CEEs, Central and Eastern Europe = the Baltics, Czech Republic, Hungary, Poland, Slovak Republic, Bulgaria, Romania, Albania, and the former Yugoslavia; DAEs, (Dynamic Asian Economies) = Thailand, Malaysia, Rep. of Korea, Singapore, Hong Kong (China), and Taiwan (China).

Source: J. P. Morgan, Economic Research, January 1998.

Considering ECA intra-regional demand for CE5 goods and services, slower growth could evolve in other ECA countries through their own reduced trading volumes or, perhaps more important, if they experience financial crises, as witnessed recently in Russia and the Ukraine.

With regard to imports, it should be noted that the CE5 will benefit, as many other countries, from the lower commodity import prices, particularly for petroleum. The World Bank crude oil price benchmark (a simple average of prices for Brent, WTI and Dubai crude oil) is forecast to decline by 20 percent in real terms in 1998 over 1997 levels, due to weaker Asian demand and higher world supply.³¹ This will translate into substantial savings for the CE5, all net oil importers. For example, we estimate that Poland will save close to \$400 million in 1998, relative to outlays in 1997 for crude imports, or 0.3 percent of estimated 1997 GDP. Similarly, the Czech Republic and Hungary are estimated to save close to \$200 million and \$150 million respectively in 1998 compared to 1997, or 0.4 percent of estimated 1997 GDP in both cases.³² Conversely, commodity exports of the CE5 will also experience downward price pressures, and while the share of primary goods exports from the CE5 have declined significantly in recent years, they still comprise close to 22 percent of GDP, on average. However, the five transition countries may be partially shielded from these potential negative developments by their preferential trade agreements with the EU and the positive growth prospects in the EU.

The five transition countries' capital accounts are perhaps more exposed to international capital market shocks, as they are dependent on foreign savings to finance their current account deficits. The extent to which foreign capital flows to the region dry up depends largely on investor demand for emerging market placements in general; also, the relative attraction of the CE5 compared to other emerging market economies will determine their ability to tap foreign capital. Barring a possible global retrenchment from emerging markets, the CE5 pre-East Asia crisis performance implies that, if they maintain the momentum they have achieved in pursuing market reforms, they will do well. There is also the possibility that with the likely portfolio reallocation within the asset class of emerging markets, that Eastern European countries will be sought above other countries to provide diversification, despite the potential contraction in the pool of capital available to emerging markets. In this case, the CE5 would likely be favored among other countries in the region due to their fast-track accession path to the EU.

Perhaps the greatest risk with respect to the capital account is a generalized retrenchment from emerging markets and increased interest rates on emerging market debt as experienced in the wake of the Russian moratorium. This would have a negative impact on new borrowing and size of capital inflows, but the CE5 may be at least partially shielded given their close ties with the EU and their improving track record.

Implications of European Monetary Union

On January 1, 1999, the Euro was introduced and the European Monetary Union (EMU) formally created. The Euro will fully replace member country currencies beginning in 2002. The new currency and operation of the EMU are likely to have a significant effect on European and international interest rates, exchange rates, and macroeconomic policy in general. The single currency is expected to bring substantial productivity and growth benefits to the EU, through decreased transaction costs, increased allocative efficiency, elimination of exchange risk premia in interest rates, and improved investment demand. To the extent that it also serves as a catalyst for fiscal consolidation and structural reforms, growth prospects and the investment climate will be boosted further, with a considerable deepening of European capital markets. Due to their close and expanding links through trade and capital flows, currency arrangements, and geographical proximity, a number of developing countries will be more directly exposed to potential impacts of the Euro.

In particular, the acceding Central and Eastern European countries will be affected by the advent of the Euro for two main reasons. First, the members of the EU set to participate in the EMU (Germany, France, Austria, and the Benelux) are the major trading partners of the CE5. Second, since the late 1980s, most of the CE5 have become highly integrated with the EU market; trade is practically liberalized and remaining restrictions on capital flows are not significant constraints to cross-border capital mobility. Consequently, the introduction of the Euro will affect CE5 countries via trade effects (due to EMU-induced changes in Euro-area growth and changes in the Euro exchange rate), financial linkages (such as on changes in Euro-area interest and exchange rates), and institutional consequences (most obviously linked to satisfying the Maastricht criteria before they can join the EU and the Euro-zone).³³ Overall, the improved growth prospects for the EU associated with the introduction of the Euro are expected to translate into stronger growth, greater trade and capital flow integration with the EU, and acceleration of financial system modernization for the CE5. The actual outcome will greatly depend on whether the EMU is well managed by its member countries and on CE5 policies.

It is expected that the Euro will become the anchor currency and an essential reserve asset for the five acceding countries. The countries which have pegged their exchange rates will have to adjust the baskets to which their currencies are pegged. In the Czech Republic, Estonia, Hungary and Poland, this will require replacing the DM and, in the case of Poland, also replacing the French franc (table 17). Apart from exchange rate considerations, the Euro will influence the management of official reserves held by the CE5 monetary authorities as well as foreign debt management. Such adjustments could also offer an occasion for adjusting currency baskets and will be influenced by whether or not the Euro will serve as an invoicing currency for the CE5's trade with other countries, both within and outside of the Euro zone.

Table 17 Exchange Rate Regimes of the CE5

| <i>Country</i> | <i>Regime</i> |
|----------------|---|
| Czech Republic | Managed float: Since May 27, 1997, the koruna has been allowed to float. The CB manages the float with a view to maintaining a stable relationship against the deutsche mark. The CB may intervene in the foreign exchange market and may signal a desired exchange rate band. |
| Estonia | Currency board: 8 kroon = 1 DM |
| Hungary | Managed float: The CB adjusts the forint in accordance with a preannounced rate of crawl effected against a currency basket comprising the deutsche mark (70%) and the U.S. dollar (30%). |
| Poland | Managed float: The zloty is pegged to a basket of five currencies comprising U.S. dollar (45%), the deutsche mark (35%), the pound sterling (10%), the French franc (5%), and the Swiss franc (5%). The central rate is adjusted under a crawling peg policy at a pre-announced rate. |
| Slovenia | Managed float: The external value of the tolar is determined in the interbank exchange market, where the CB may participate. |

Source: IMF (1997b).

With respect to more global issues that will also influence the CE5 countries, there are a number of questions regarding the introduction of the Euro. Of these, perhaps the most important question for the CE5 countries is whether or not the EMU will create greater exchange rate stability. More specifically, will the Euro be more or less stable than the DM in relation to non-participating EU member country currencies? In addition, will the Euro exchange rate against the U.S. dollar and yen be more stable than that of the DM?

Most arguments suggest that the Euro will bring about greater exchange rate stability internally to the EU. It is expected that the non-zone EU countries ("outs") will seek to coordinate their intervention policies within the European Central Bank (ECB), since they have indicated that they want to join in the future. Moreover, the Euro will eliminate the individual exchange rate risks in relation to the zone countries ("ins"), replacing them with a single exchange rate risk against the Euro for the CE5. Similarly, transaction costs will be reduced.

Outside of the EU, one question is whether the strength of DM will be diluted with the creation of the currency area, a dilution that would impact countries with large DM and dollar holdings in their central bank reserves and currencies tied to the Euro. If the Euro is perceived to be stronger than the DM, there will be a shift into the Euro. Correspondingly, if the Euro is perceived weaker than the DM, there will be a shift into other currencies. If the Euro appreciates against the dollar and yen (compared to DM to \$ and DM to yen rates), the CE5 countries will need to determine whether or not they want to allow their currencies to appreciate along with it.

There is also an argument (separate from the issue of the relative strength of the Euro compared to the DM) that with the advent of the new currency, European central banks will require lower U.S. dollar foreign exchange reserves than previously, and hence will become

sellers of dollars. If such a scenario transpires, it could bring about some depreciation of the dollar, easing the transition countries' external debt burden. This will also imply currency appreciation and, consequently, weaker price competitiveness for CE5 exporters in non-EU markets.

Risk perceptions may also shift as a consequence of the introduction of the Euro. As the Euro-zone members will be backed by a strong central bank, the ECB—which is expected to be judged as less risky than some of the national institutions of EMU members—the perceived relative riskiness of the “in” countries and their financial institutions is expected to decrease while that of the “outs” (and other non-Euro zone countries such as the CE5) is expected to increase. The new Euro zone members may benefit from narrowing spreads.

Another relevant implication of the EMU is the creation of a deeper and more integrated financial market in Europe. For the CE5 countries this would mean greater opportunities for finance with lower costs.

From discussion of these various effects of the EMU it would appear that the net impact on the CE5 countries would depend essentially on the exchange rate and macro-management policies they adopt. Stability of their exchange rates in relation to the Euro is crucial given their degree of integration with the EMU zone. If the CE5 countries succeed in adopting and implementing fiscal and monetary policies that lead them to stabilize their exchange rates with the Euro, the negative effects of less relative stability (with EU countries) and more perceived risk for the “out” countries will be minimized. The benefits of more overall stability brought about by the Euro would dominate in terms of both trade and capital inflows. But their accession to the EU is likely to induce larger capital inflows, which will make macro-management more complex and difficult, thereby augmenting the risks engendered by the introduction of the Euro for them.

4. EU Accession and Experience of the Southern Mediterranean Countries

This section explores the prospects of the impact of EU accession of the CE5 countries on capital flows and sustainability. The experience of the three Southern Mediterranean countries that joined the EC during the 1980s is used to draw some lessons for the CE5.

The main conclusions are as follows:

1. As they prepare for EU membership, the five CE countries have already experienced greater opening of their economies and substantial capital inflows. Partly reflecting the huge increase in global investment capital, FDI and portfolio flows as a percentage share of GDP, for example, are at similar levels to that of Portugal and Spain in their *post-accession* period.
2. Barring a total collapse of capital flows to emerging markets, the CE5 countries are likely to experience increased capital inflows during the run-up to accession, and thereafter. Given that levels are already high, the size of these inflows is likely to exceed that experienced by the SM3 at the time of their accession.
3. The composition is likely to differ from the recent inflows that the CE5 experienced, as are investor motives. As foreign capital flows become less tied to privatization

(which created “lumpy” inflows connected with privatization offerings) and more linked to output and market performance, FDI flows will become steadier, at least that component of non-privatization-related FDI. The links to trade integration, intra-industry trade effects, and more technology-intensive exports are likely to become more important.

4. As the experience of the SM3 demonstrates, success in obtaining the benefits of the capital inflows depends crucially on the capacity of the CE5 at managing associated macro effects and the speed at which the required institutional reforms are implemented compared to the speed of increased capital inflows. The relevant institutions include the financial sector, public administration, the system of enforcement of property rights, corporate governance, and so on. It is, therefore, important to work today on the conditions for successful integration.

Policy Lessons from Portugal, Greece, and Spain

On balance, the relative experiences of the SM3 countries upon integration with the EU—positive for Portugal, generally favorable for Spain and poor for Greece—suggest that efforts at integration will yield benefits to the degree that domestic macroeconomic conditions are stable, and that reforms which support a flexible response by the private sector are undertaken to complement the liberalization of trade. The differing outcomes can be clearly ascribed to wide differences in domestic policy. With respect to fostering increased FDI and portfolio inflows, the lesson of the SM3 countries' experiences is that, if the macroeconomic and institutional environment is not right, inflows will not take place, regardless of other policies which have been instated to encourage it (table 18).

More specifically, a number of lessons may be drawn from the experiences of the three countries. First, in areas where they failed to pursue structural reforms, impediments to growth lingered, muting the stimulative effects of opening to the EU. In the case of Spain, substan-

Table 18 *The Possible Macro Effects of Integration into the EU*

| <i>Selected economic indicators</i> | <i>Portugal^a</i> | | <i>Spain^a</i> | | <i>Greece^b</i> | |
|--|-----------------------------|--------------|--------------------------|--------------|---------------------------|--------------|
| | <i>Before</i> | <i>After</i> | <i>Before</i> | <i>After</i> | <i>Before</i> | <i>After</i> |
| Real GDP growth (percent per annum) | 0.7 | 3.3 | 2.0 | 2.8 | 3.9 | 1.8 |
| Real GDP/Capita (percent of EU avg.) | 31.3 | 33.8 | 55.6 | 59.5 | 37.5 | 36.0 |
| Unemployment rate | 8.0 | 4.8 | 18.1 | 17.6 | 2.0 | 7.7 |
| (Exports+imports)/GDP | 49.4 | 81.0 | 29.6 | 45.4 | 42.6 | 43.4 |
| Export volume growth | 14.0 | 9.7 | 6.1 | 7.4 | 3.7 | 7.6 |
| Import volume growth | -7.0 | 10.6 | 1.5 | 11.7 | 2.6 | 6.6 |
| Foreign direct investment/GDP | 0.8 | 2.9 | 1.1 | 2.1 | 1.5 | 1.3 |
| Current account deficit/GDP | -7.5 | -0.7 | -0.8 | -2.8 | -4.3 | -5.7 |
| <i>Memo items: EU GDP growth</i> | 1.8 | 2.3 | 1.8 | 2.3 | 2.7 | 2.6 |
| <i>EU Export volume growth</i> | 3.7 | 4.1 | 3.7 | 4.1 | 4.6 | 5.8 |
| <i>EU Import volume growth</i> | 2.6 | 5.3 | 2.6 | 5.3 | 4.2 | 7.5 |

a. Before = 1981-85, After = 1988-92

b. Before = 1976-80, After = 1983-88

Source: Development Prospects Group.

tial labor market rigidities continue, and expose the country to high unemployment rates. And, the weak performance in employment creation in Greece may also be traced to poor fiscal and monetary management, as the public sector's role in the economy actually expanded following accession.

Second, within an appropriate policy environment, private capital flows can help to finance the costs of adjustment. As anticipated, the new members experienced deteriorating trade deficits once EU imports were allowed to enter freely and exports responded with some lag to liberalization. But stronger perceived accomplishments in stabilization and reform in Portugal and Spain helped to bolster their attractiveness for FDI, for which the act of entering the EU had already provided some upward impetus. The two countries benefited from improved ratings from institutional investors. In addition, strong growth in both FDI and portfolio inflows, constituting some 3 percent of GDP, facilitated job creation, improvements in productivity, and technology transfer. Greece derived little benefit from private inflows, in part due to macro instability and the continued dominance of the public sector in economic activity.

Third, theory postulates that there is a link between openness of an economy and growth, and that income levels will begin to display converging trends following trade liberalization (see, for instance, Sachs and Warner (1995)). Overall, Portugal and Spain's openness and economic performance following accession to the EU improved markedly, while in Greece little additional openness occurred and the economy remained burdened by chronic stagflation. Evidence of convergence also appeared in Spain and Portugal, while Greece failed to reap such gains.

Finally, developments since accession have highlighted some potential costs and benefits of integration as EU members, and the continuing effects of policy decisions of the 1980s. On the negative side, tighter trade and financial linkage has increased exposure to the effects of European activity (such as the positive and negative impacts of German unification) and to recession such as in 1993. Moreover, as the Iberian countries experienced large foreign private FDI and portfolio investment inflows during the growth years of the late 1980s, both were then exposed to the effects of foreign investors pulling their cash out in the early 1990s.³⁴ But, despite a somewhat looser tie to the European "Big-4" economies, Greece was not sheltered from the downswing and recession of the early 1990s. On the positive side, the benefits of joining the EU and gaining access to large consumer markets are apparent from both Portugal and Spain's recent recoveries led by robust export growth. Greece's economy also recently emerged from recession, but the upswing was not as robust as previous recoveries, nor did exports play as significant a role in bolstering the expansion as in Portugal and Spain.

Microeconomic policy reforms also play a critical role. In the case of Portugal, ongoing commitment to progress in structural reforms targeted at enhancing private sector activity (including institution building) has been a key factor in its successful process of accession. Trade liberalization has helped to boost imports of capital goods, increase exports of manufactures, and to attract significant amounts of FDI. Investment has been further facilitated by harmonization with EU norms in rights of establishment, EU technical assistance and incentive programs, and easing of restrictions and streamlining of the project-approval process. Privatization has been among the most aggressive in the OECD, and has been complemented by financial reforms that have increased the availability of funds for private investment. From

among the most restrictive in the EC, labor market regulations have been eased, and reform of the civil service has helped to improve the professional qualifications of staff and to bring about greater comparability with private sector wages.³⁵

Implications and Prospects for the CE5

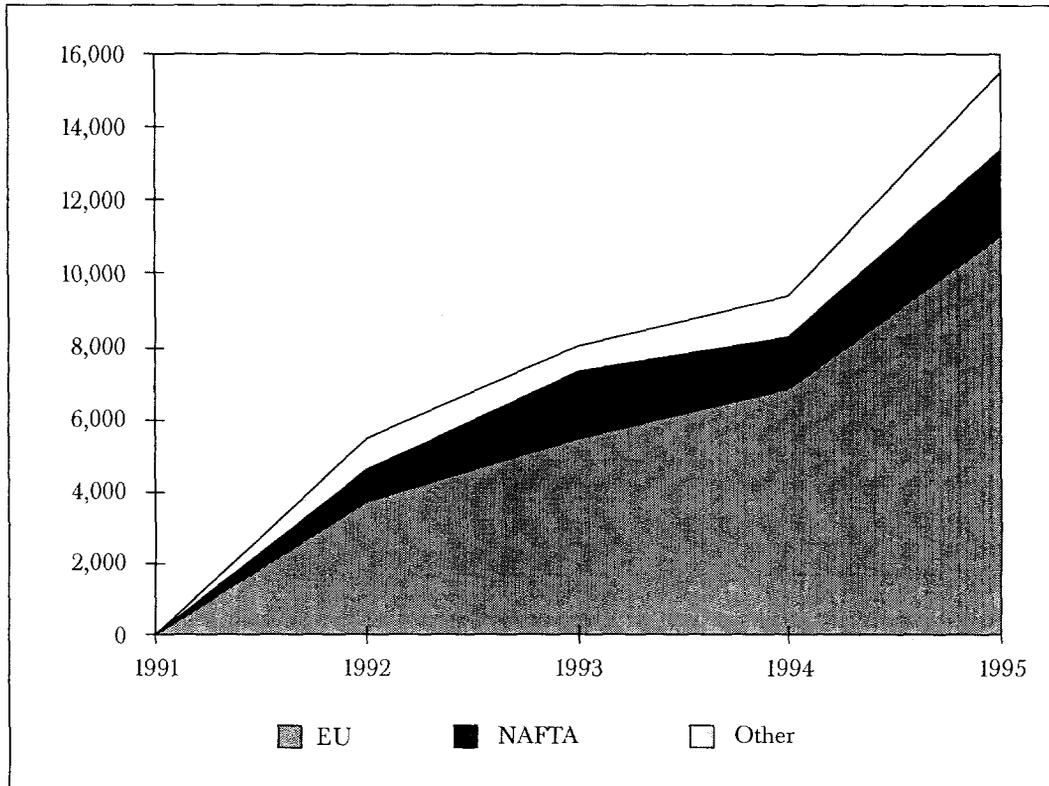
Broadly speaking, initial conditions in the CE5 economies are comparable to those of the SM3 countries upon seeking EU membership (see tables 10 and 11). Considering supply side indicators, investment in human capital, in particular, is very high relative to the position of SM3. In the early 1990s, for example, average years of schooling in Hungary and Poland were 10.8 and 8.4, respectively, compared to far fewer years in Portugal, Spain, and Greece in the early 1980s of 3.2, 5.2 and 6.6, respectively. With regard to macro-economic indicators, the CE5 initial conditions are also broadly comparable. Inflationary pressures are currently similar and the burden of the public sector, reflected by the PSBR (Public Sector Borrowing Requirements) as a share of GDP, is notably lower. Nontariff barriers are somewhat higher, indicating somewhat relatively weaker trade liberalization.

Nevertheless, the CE5 have achieved a greater degree of openness with respect to trade as a share of GDP compared to the SM3 during the early 1980s. Remarkably, the five transition countries have achieved far higher net inflows of FDI as a share of GDP in comparison to Portugal, Greece, and Spain during the pre-accession period, levels which the two Iberian countries were unable to attain until after accession and which Greece has yet to achieve (through 1996). These higher levels in part reflect a larger pool of capital in the world today relative to the 1980s.

There is general consensus in economic literature that economic integration tends to increase FDI into and within integrating regions, that is FDI and trade are complementary, as firms integrate their operations across borders by trading intermediate goods and services.³⁶ Considering the CE5, this is evident from the patterns of FDI and international trade. As the EU has become the most important trading partner for all five of the countries (figure 2, above), reflecting the importance of the region as a production base for exports to the EU, FDI flows have come to originate from the Union. For example, EU inflows comprise 70 percent of the total inflows to Poland, Hungary, and the Czech Republic during the period 1992-95, on average. The share of total net FDI inflows from the EU also represents an increasing component of total direct investment flows to the three countries, up from 69 percent in 1992 to 71 percent in 1995 (figure 4).

This conclusion is reinforced by the broader experience of EU member countries. There have been a number of beneficial effects of the single market program (SMP) with regard to capital flows, which the CE5 should be able to benefit from as well, as integration with the EU advances. SMP-associated gains in efficiency and increased competition in European industry are mainly attributed to cost reductions related to size. This exploitation of scale economies has been primarily linked to fixed investments in marketing, brand development, R&D spending, and development of new products and production processes, and less to improvements in efficiency as a consequence of exploitation of purely technical efficiency gains associated with size. The restructuring appears to have taken place mostly through the capital market via mergers and acquisitions, with a more limited role for entry, exit and the internal growth or decline of existing firms.³⁷

Figure 4 Foreign Direct Investment to Czech Republic, Hungary and Poland by Source (In \$US Million)



Source: OECD (1997).

There is evidence that Portugal, Spain, and Greece were able to benefit in other ways from improved access to EU-consumer markets. Specifically, intra-industry trade (ITT) as a percentage of intra-EC trade increased for all three following entry into the Union. Both Spain and Greece experienced a 7 percentage point expansion of ITT by 1987, to 31 percent and 64 percent, respectively, from 1980 levels of 24 percent and 57 percent, respectively. ITT in Portugal represented 37 percent of Portugal's intra-EU trade in 1987, up 5 percentage points from 32 percent in 1980.³⁸ ITT includes trade in modern production lines in high tech industries, and typically in industries characterized by increasing returns to scale. Expansion of ITT indicates that the three countries might have been able to take advantage of scale economies following accession. While it is not necessarily the case, expanded ITT also suggests greater likelihood of technology transfer and skill enhancement for the labor force. ITT is attractive in that it can act as a conduit to new markets, as well as improving diversification. Further, costs associated with adaptation are higher for inter-industrial specialization than for intra-industrial specialization.³⁹

Similar to the pattern of markedly high FDI inflows, the CE5 countries already in the preaccession phase have been experiencing strong growth in ITT to levels commensurate with the SM3's postaccession experience. Driven by the opening of their economies and

associated changes in managerial incentives, market structure, and flows of technology, the potential growth in ITT in the CECs was very high at the end of the 1980s. Indeed, studies show that ITT in the Central and Eastern European countries has been rising rapidly since the late 1980s.⁴⁰ As of 1995, most of the CEEC countries had levels of IIT comparable (or higher) to those of Portugal, Greece, and Israel. Three countries, the Czech Republic, Hungary, and Slovenia, were among the top ten countries in terms of share of IIT in total trade with the EU. Geographical proximity with EU countries and significantly lower real wages are likely contributors to this expansion as well.

The experience of the Southern Mediterranean countries suggests that, following EU accession, the CE5 can expect continued export-led growth and inflows of foreign private capital—that is, fostering of greater convergence of per capita income toward EU levels. Sustained high levels of foreign private capital inflows for the CE5 can be expected, perhaps not so much tied to privatization as has been largely the case with FDI inflows to date, but more due to the enhanced market environment for investors associated with accession and improved growth prospects. Indeed, as foreign capital flows become less tied to privatization (which created “lumpy” inflows connected with privatization offerings) and more linked to output and market performance, FDI flows will become steadier, at least the component of non-privatization-related FDI.

More broadly, the CE5 can perhaps expect even higher levels of foreign capital inflows than the SM3 did when they joined in the 1980s for two main reasons. First, both capital mobility and the pool of capital for investing in emerging markets have both increased dramatically since the 1980s. But this is tempered now by the reassessment of emerging markets and the tendency for retrenchment since the Russian moratorium. Second, the degree of integration in many respects (for example, trade, finance, and institutional) with which the CE5 will accede to the EU is likely to be greater than that attained by the SM3 at accession (table 4.2). The extent to which the five transition countries can translate these developments into stronger capital inflows depends on their overall performance. Indeed, their ability to tap into a larger emerging market capital pool is significantly linked to integration performance, particularly with respect to trade, finance, and institutional convergence.

This provides the CE5 with both a strong incentive and confidence to continue to prepare for accession—that is, to continue the process of liberalization and complementary institution building. As the experience of the SM3 demonstrates, success in obtaining the benefits of capital inflows depends crucially on the capacity of the CE5 for managing their macro implications and the speed at which the required institutional reforms are implemented compared to the speed of increased capital inflows. The relevant institutions include the financial sector, public administration, the system of enforcement of property rights, corporate governance, and so on. It is therefore important to work today on the conditions for successful integration.

5. Concluding Remarks and Recommendations

A number of lessons and recommendations emerge from the study of the CE5 countries' experience with capital inflows, their management and effects thereof, and comparisons with the East Asian countries most affected by the recent crisis and the Southern Mediterra-

near countries at the time of accession to the EU. These lessons and recommendations are summarized in Section 1 above. We emphasize below some policy recommendations:

1. The CE5 countries will have to walk a very tight rope over the period of their run-up to accession in terms of macro-policies. They should aim at stabilizing their exchange rates in view of the increased exchange rate stability within the EU (for EMU and non-EMU members). However, managing the effects of capital inflows and providing the right incentives for external finance may call for more exchange rate flexibility. The latter objective may have to dominate in order to reduce the risks of financial instability.
2. Over the medium term fiscal policy should play a crucial role in obtaining convergence of inflation to EU levels and eliminating excessive interest rate differentials which may cause excessive borrowing and attractiveness to more volatile capital inflows. More focus on the fiscal position and the role and importance of contingent liabilities is therefore warranted.
3. The speed of implementation of institutional reforms during the preaccession period is critical. Putting in place the adequate institutional infrastructure to deal and benefit from capital inflows is central to the success of accession. Of particular importance is the health of the financial system, including the adequate regulatory and supervisory environment.
4. Introducing or improving prudential regulations of foreign currency exposure of banks is an aspect of this regulatory environment that warrants special attention.

A number of aspects and issues were discussed in the report in a summary and approximate fashion due to data and information limitations. Some of these areas warrant more detailed analysis:

1. Monetary and exchange rate policy in each country and its implications in terms of interest rate differentials and incentives for external borrowing.
2. The actual fiscal stance and contingent liabilities as well as the role of implicit and explicit guarantees.
3. The role of real exchange rate appreciation and its implications for competitiveness. Factors affecting competitiveness seem to vary according to countries. Are they related to different performances in productivity, in wage and labor market developments, or other factors?
4. The banking system and quality of portfolio, the legal framework supporting the financial system (enforcement of contracts and property rights), and the supervisory framework.
5. The interactions between health of the financial system and external borrowing. The links go both ways. A low level of financial intermediation and a weak financial system may induce creditworthy firms to exit and obtain finance abroad. This in turn will concentrate the banking system portfolio on the more risky business, making the system more fragile.
6. The development and quality of capital markets, and the role and risks played by capital inflows.

7. Corporate governance, and the role of state-owned enterprises, and connected lending and implications for the financial system health and performance.
8. Restrictions on capital account transactions in the CE5 countries, excluding Estonia. It would be useful to analyze in more detail these restrictions and whatever role they may have played in affecting the size and composition of capital inflows. An important issue is to study how appropriate these restrictions are to deal with the risks, particularly as many of the countries (including Hungary, the Czech Republic, and Poland) move towards total convertibility, in the context of OECD membership.

**Table A1.1 Net Total Capital Inflows to Three Groups of Countries
(Percentage of GDP)**

| Indicator | Country | 1993 | 1994 | 1995 | 1996 | 1997e | Country | 1993 | 1994 | 1995 | 1996 | 1997e | Country | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 |
|---|------------|-------|------|------|------|-------|----------------|------|------|------|------|-------|----------|------|------|------|------|------|------|
| <i>Total flows (% of GDP)</i> | Czech Rep. | 10.0 | 8.7 | 19.7 | 6.2 | 5.3 | Indonesia | 1.7 | 2.0 | 4.3 | 6.2 | 2.7 | Portugal | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 |
| | Estonia | 4.9 | 4.8 | 6.3 | 12.5 | 19.1 | Korea | 0.7 | 2.3 | 3.5 | 5.1 | -1.4 | Spain | -3.8 | 2.6 | 3 | 8.7 | 5.5 | 8.3 |
| | Hungary | 17.8 | 8.2 | 15.9 | 0.2 | 3.5 | Malaysia | 23.0 | 2.0 | 6.7 | 7.8 | -1.5 | Greece | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 |
| | Poland | 0.5 | -0.6 | 3.0 | 3.3 | 5.3 | Philippines | 6.4 | 7.9 | 3.8 | 9.8 | 1.9 | | 5.9 | 4.6 | 5.7 | 6.7 | 9.4 | 4.9 |
| | Slovenia | -0.6 | 0.7 | 1.5 | 2.9 | 6.7 | Thailand | 8.2 | 8.6 | 12.5 | 9.1 | -5.2 | | | | | | | |
| <i>FDI (% of GDP)</i> | Czech Rep. | 1.8 | 2.1 | 5.7 | 2.5 | 2.3 | Indonesia | 1.0 | 0.9 | 1.9 | 3.0 | 1.5 | Portugal | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 |
| | Estonia | 4.0 | 5.5 | 4.5 | 2.5 | 6.1 | Korea | -0.2 | -0.5 | -0.4 | -0.4 | -0.6 | Spain | 0.7 | 1.1 | 1.8 | 3.2 | 3.6 | 2.6 |
| | Hungary | 6.1 | 2.6 | 10.0 | 4.4 | 6.6 | Malaysia | 8.0 | 6.1 | 4.9 | 5.4 | 5.9 | Greece | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 |
| | Poland | 0.7 | 0.6 | 1.0 | 2.0 | 2.1 | Philippines | 1.6 | 2.0 | 1.5 | 1.7 | 1.4 | | 1.4 | 1.1 | 1.3 | 1.4 | 1.3 | 1.2 |
| | Slovenia | 0.9 | 0.9 | 0.9 | 1.0 | 1.6 | Thailand | 1.3 | 0.6 | 0.7 | 0.8 | 1.5 | | | | | | | |
| <i>Portfolio investment (% of GDP)</i> | Czech Rep. | 5.2 | 2.4 | 3.1 | 1.3 | 1.8 | Indonesia | 1.1 | 2.2 | 2.1 | 0.8 | -1.0 | Portugal | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 |
| | Estonia | -0.01 | -0.4 | -0.5 | 3.3 | 0.4 | Korea | 3.2 | 1.8 | 2.4 | 2.9 | 2.4 | Spain | 1.2 | 2.0 | 3.8 | 2.0 | 1.4 | 2.4 |
| | Hungary | 10.2 | 6.0 | 4.9 | -1.9 | -3.5 | Malaysia | -1.1 | -2.3 | -0.5 | 0.0 | 0.0 | Greece | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 |
| | Poland | 0.0 | -0.7 | 1.0 | 0.1 | 1.7 | Philippines | -0.1 | 0.4 | 1.6 | -0.2 | -5.6 | | 0.5 | 1.3 | 0.7 | 2.1 | 1.8 | 3.8 |
| | Slovenia | 0.02 | -0.4 | -0.1 | 3.4 | 1.3 | Thailand | 4.4 | 1.7 | 2.5 | 1.9 | 1.8 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| <i>Other investment (% of GDP)</i> | Czech Rep. | 2.8 | 4.9 | 9.7 | 3.9 | 0.6 | Indonesia | 1.4 | -0.9 | 1.3 | 4.2 | 3.5 | Portugal | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 |
| | Estonia | 2.1 | -0.8 | 1.9 | 7.4 | 7.2 | Korea, Rep. of | -2.0 | 1.4 | 1.8 | 2.4 | -2.9 | Spain | -6.2 | -2.1 | -6.0 | 2.5 | -1.3 | 0.8 |
| | Hungary | -0.4 | -0.9 | -2.0 | -6.5 | -1.6 | Malaysia | 10.4 | -2.0 | 4.4 | 4.7 | -0.2 | Greece | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 |
| | Poland | -0.2 | -0.5 | 1.0 | 1.1 | 1.6 | Philippines | 4.7 | 5.2 | 3.6 | 8.8 | 5.8 | | 3.3 | 3.3 | 5.3 | 6.0 | 8.2 | 4.0 |
| | Slovenia | -1.5 | -0.9 | 1.2 | -1.4 | 4.4 | Thailand | 2.8 | 6.2 | 10.0 | 7.8 | -8.4 | | | | | | | |
| <i>Other investment, of which by banks (% of GDP)</i> | Czech Rep. | 0.2 | 1.9 | 6.9 | 1.0 | -2.0 | Indonesia | 0.9 | 0.3 | 1.0 | 0.2 | 0.4 | Portugal | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 |
| | Estonia | -1.0 | -1.7 | 0.9 | 4.5 | 4.2 | Korea | -1.0 | 0.4 | 0.3 | 0.6 | 0.1 | Spain | -0.2 | -1.0 | -2.1 | 1.3 | -0.7 | 1.5 |
| | Hungary | -0.5 | 1.3 | 1.0 | -1.6 | 2.2 | Malaysia | 6.7 | -7.2 | 0.1 | -0.3 | 0.5 | Greece | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 |
| | Poland | ... | ... | ... | ... | ... | Philippines | -0.4 | 2.6 | 2.2 | 1.3 | 1.5 | | 1.0 | 0.3 | 0.9 | 0.7 | 0.7 | 0.5 |
| | Slovenia | -4.1 | -1.7 | -0.2 | -1.8 | 2.7 | Thailand | -2.6 | -0.7 | -1.6 | 1.5 | -0.5 | | | | | | | |
| <i>Net errors omissions (% of GDP)</i> | Czech Rep. | 0.2 | -0.7 | 1.3 | -1.5 | 0.7 | Indonesia | -1.9 | -0.1 | -0.9 | -1.9 | -1.3 | Portugal | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 |
| | Estonia | -1.2 | 0.4 | 0.4 | -0.8 | 5.4 | Korea | -0.2 | -0.4 | -0.3 | 0.2 | -0.2 | Spain | 0.5 | 1.6 | 3.4 | 1.0 | 1.7 | 2.4 |
| | Hungary | 1.9 | 0.5 | 2.9 | 4.2 | 1.9 | Malaysia | 5.8 | 0.2 | -2.0 | -2.2 | -7.2 | Greece | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 |
| | Poland | ... | ... | ... | ... | ... | Philippines | 0.2 | 0.2 | -2.8 | -0.4 | 0.2 | | 1.2 | 0.1 | -0.9 | 0.7 | -0.1 | -0.2 |
| | Slovenia | -0.02 | 1.1 | -0.6 | -0.1 | -0.7 | Thailand | -0.2 | 0.1 | -0.7 | -1.4 | 0.0 | | | | | | | |

Sources: IMF (1997a) and World Bank (1998a).

Table A1.2 Net Private Capital Inflows to Three Groups of Countries

| Indicator | Country | 1993 | 1994 | 1995 | 1996 | 1997 | Country | 1993 | 1994 | 1995 | 1996 | 1997 | Country | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 |
|------------|------------|------|------|------|------|------|----------------|------|------|------|------|------|----------|------|------|------|------|------|------|
| Total | Czech Rep. | 9.4 | 11.7 | 19.6 | 6.2 | 5.2 | Indonesia | 0.2 | 1.1 | 3.8 | 6.6 | 2.1 | Portugal | -3.7 | 3.3 | 3.9 | 7.9 | 5.4 | 8.4 |
| private | Estonia | 2.4 | 4.0 | 4.6 | 11.5 | 18.1 | Korea | 1.1 | 2.5 | 3.6 | 5.2 | -1.9 | | | | | | | |
| flows | Hungary | 17.5 | 8.4 | 17.9 | 2.2 | 5.0 | Malaysia | 23.6 | 1.8 | 6.2 | 8.6 | -1.4 | | | | | | | |
| (% of GDP) | Poland | 0.3 | -0.8 | 1.7 | 1.2 | 1.6 | Philippines | 4.4 | 7.9 | 5.2 | 10.6 | 2.2 | | | | | | | |
| | Slovenia | 0.0 | 1.0 | 1.8 | 3.1 | 6.9 | Thailand | 7.7 | 8.3 | 12.1 | 8.8 | -7.5 | | | | | | | |
| Private to | Czech Rep. | 5.7 | 10.4 | 15.5 | 1.5 | 4.1 | Indonesia | -0.5 | 0.9 | 3.7 | 6.4 | 2.0 | Portugal | -4.3 | 0.7 | 3.2 | 6.5 | 4.2 | 6.4 |
| private | Estonia | 2.3 | 3.8 | 4.6 | 10.7 | 17.6 | Korea, Rep. of | 1.1 | 2.1 | 3.3 | 4.9 | -2.2 | | | | | | | |
| (% of GDP) | Hungary | 12.8 | 7.3 | 15.3 | -2.9 | 3.8 | Malaysia | 22.3 | 1.6 | 3.8 | 7.5 | -2.5 | | | | | | | |
| | Poland | 0.2 | -1.3 | 1.6 | 1.1 | 1.5 | Philippines | 3.9 | 6.5 | 4.8 | 10.1 | 1.6 | | | | | | | |
| | Slovenia | -0.7 | 0.6 | 1.0 | 2.4 | 6.2 | Thailand | 7.7 | 8.3 | 11.9 | 8.4 | -7.7 | | | | | | | |
| Non-FDI | Czech Rep. | 3.9 | 8.3 | 9.8 | -1.0 | 1.9 | Indonesia | -1.5 | 0.0 | 1.8 | 3.43 | 0.5 | Portugal | -5.0 | -0.5 | 1.4 | 3.3 | 0.6 | 3.9 |
| private to | Estonia | -1.7 | -1.7 | 0.1 | 8.2 | 11.6 | Korea | 1.3 | 2.5 | 3.7 | 5.4 | -1.6 | | | | | | | |
| private | Hungary | 6.7 | 4.7 | 5.3 | -7.3 | -2.8 | Malaysia | 14.3 | -4.5 | -1.0 | 2.1 | -8.4 | | | | | | | |
| (% of GDP) | Poland | -0.2 | -1.5 | 1.2 | 0.4 | 0.9 | Philippines | 2.3 | 4.5 | 3.4 | 8.5 | 0.1 | | | | | | | |
| | Slovenia | -1.6 | -0.3 | 0.1 | 1.4 | 4.6 | Thailand | 6.4 | 7.6 | 11.2 | 7.6 | -9.1 | | | | | | | |

Sources: IMF (1997a) and World Bank (1998a).

Annex 2

Capital Flows to the CE5

This Annex presents a description of the experience of CE5 in attracting foreign capital flows since the surge starting in 1993. This experience is discussed with a comparison to that of the EA5 and SM3.

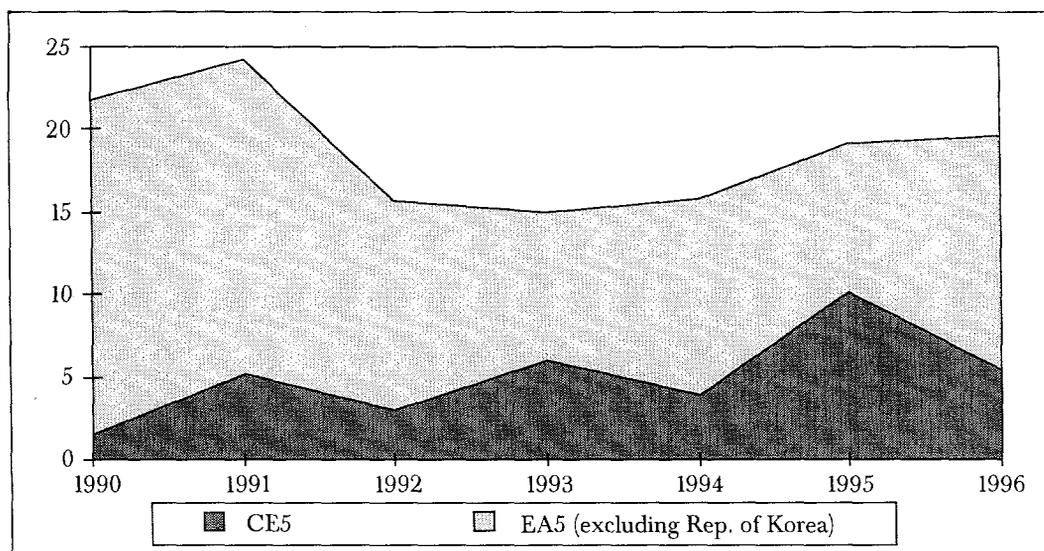
The year 1993 marked the turning point in capital flows to Central and Eastern Europe. The volume of inflows to the region jumped from \$2 to \$13 billion, most of which the CE5 received. Hungary dominated in the early years of inflows and still has the largest stock, and, more recently, Estonia and the Czech Republic became leaders in terms of the ratio of inflows to GDP. Overall during the last six years, capital inflows to CE5 countries have been in the range of 3 to 6 percent of GDP, at times in individual countries rising much higher (in Estonia in 1997, inflows totaled 19 percent of GDP).

One important overall trend in the capital flows to CE5 is a dramatic shift towards private-to-private flows. Presently, the bulk of capital inflows comes from private sources. These inflows represent an increase in the share of total net private flows to developing countries, of which the CE5 have been able to attract increasing volumes, up from 1.5 percent in 1990 to 5.4 percent in 1996, after peaking at 10 percent in 1995 (Figure A2.1). The success of stabilization policies, liberalization of restrictions on foreign exchange flows, as well as increased confidence in the political stability of the countries have all fostered these surging capital inflows. In addition, the aggressive pursuit of EU accession, which has entailed more rapid liberalization and convergence of economic policies with those of the EU, has benefited their investment environment greatly. In particular, the signing of the European Agreements and bilateral interim trade agreements contributed to the improved investment climate, for example, by reinforcing government commitment to reform and by ensuring the expansion of export markets. While in early 1990s private-to-private flows were zero in Estonia, Poland, and Slovenia and 10-15 percent in Hungary and the Czech Republic, they now account for 40-50 percent of total inflows. The EU member countries are the leading source of private-to-private flows. As accession progresses, this trend will most likely be reinforced.

Official debt flows dominated the picture only in the first years of reform. The CE5 received substantial IFI lending that supported their wide-ranging stabilization programs. In the case of Estonia, this stabilization lending was supplemented with significant G24 loans. Officially guaranteed export credits accounted for a significant proportion of inflows, particularly in the early transition years.

Significant *private debt inflows* began only in 1993, and a major surge occurred only in 1995. An important beneficial feature of private debt flows to the CE5 is—again distinguishing them from the rest of TEs—a pronounced trend toward the securitization of debt. This

**Figure A2.1 Total Private Capital Flows to Regions
(Percentage Share of Total to LDCs)**



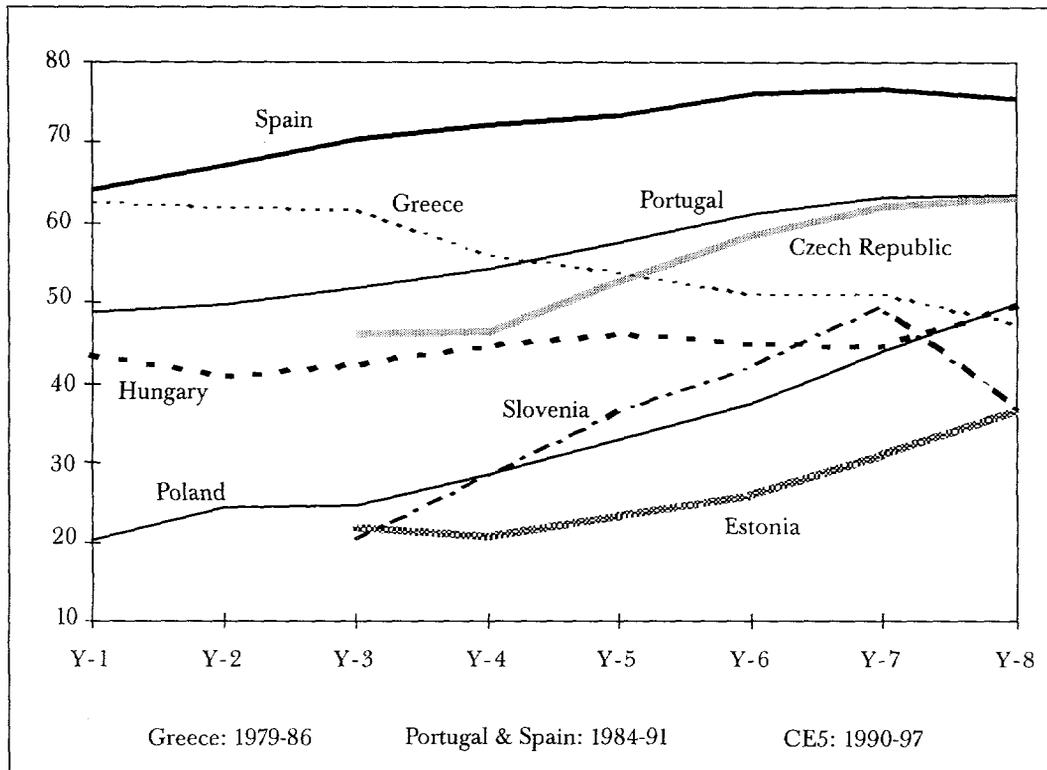
Source: World Bank (1998a).

signals their robust economic situation and declining risk levels and their ability to capture favorable market conditions. While in a broader Central and Eastern European group in 1996-97 the proportion between bonds and loans in private debt flows was approximately 50:50, the CE5 were able to shift this proportion significantly towards bonds—70:30, and in some cases even higher. Securitization offers greater stability of market access and a broader investor base, which translate into potentially lower costs of borrowing.

Securitization was assisted by the relatively high rating of the CE5 economies. The perceived risk of investing in the CE5 countries has generally declined since 1990. Not surprisingly, given the implementation of extensive economic reforms and EU accession agreements, credit ratings compiled by *Institutional Investor* (II) magazine suggest an improved market creditworthiness. As an indicator of financial integration, an II rating above 50 is considered to reflect high integration, and one below 20 is considered to reflect low integration. Of the CE5 in 1997, the Czech Republic had the highest rating of 63, the same level that Portugal attained in 1990, four years following its accession to the EU in 1986. Hungary and Poland's II ratings are at 50, while those of Slovenia and Estonia are both at 37 (figure A2.2).

Consequently, the CE5 were able to command very competitive terms on their international debt issues once they entered international markets until mid-1997, when they were affected by the spillover effect of the Asian crisis. Typically, CE5 spreads were at 10-50 bp (basis points) versus 200-300 bp for most other TE sovereign issues. Figure A2.3 shows average spreads for Poland and Hungary in comparison with the ECA and spreads on Brady bonds. A remarkable fact is that their spreads rose later in 1997, much less than those of Bradies—a reflection of investors' perception of Hungary and Poland as better risks. Polish and Hungarian issues were certainly treated as being of higher quality.

Figure A2.2 Institutional Investor Credit Rating



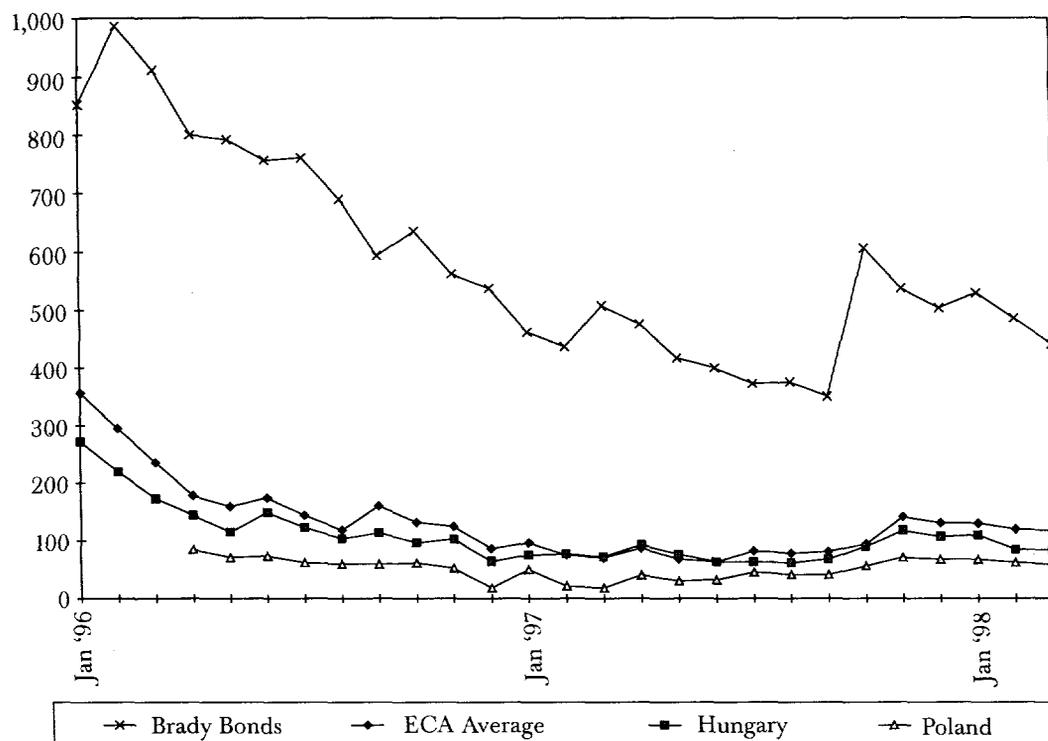
Source: Various issues of the Institutional Investor Magazine, September ratings.

At the same time, even among the CE5 countries, the experience with private debt flows was very different due to the presence of two heavily indebted countries, Poland and Hungary. Their experiences could not be more different. Poland defaulted in the 1980s, and received a MYRA in 1989. It went through one of the most complex DDSR operations in the world, completed only in October 1994. This restructuring explains the relative delay in the resumption of capital flows to Poland. Hungary—which for a short period had one of the highest levels of indebtedness in the world, on a per capita basis—had always meticulously serviced its foreign debt and was, therefore, able to preserve market access and is progressively retiring it.

Foreign Direct Investment

FDI flows to the region constitute the majority of the private capital inflows, and represent sizable levels compared to those achieved by other emerging markets. These countries, by adopting investor-friendly policies and quickly stabilizing their economies, became magnets for vast volumes of FDI. Cumulatively, from 1990 to 1997, the five Central European countries attracted \$42.7 billion in net FDI, nearly half of the \$85 billion which Indonesia, Malaysia, the Philippines and Thailand received during the same period.

**Figure A2.3 International Bond Spreads
(Hungary and Poland vs. ECA and Bradies)**



Source: J. P. Morgan.

As regards country performances in attracting FDI, there exist two clear leaders. Hungary was the first to attract a large portion of FDI inflows, and on a per capita basis accumulated a stock of foreign investments of over \$1300, almost three times the CE5 average and close to nine times the Central European average. Hungary ranked among the top ten recipient countries in the world, with inflows of \$1.5 billion. Another leader is Poland, where the surge of FDI came several years later, but was exceptionally large in 1996 and again in 1997. In the latter year, Poland was the fifth largest destination for FDI in the world, pulling in almost \$5 billion. Poland also ranked in the top ten recipient developing countries for FDI in 1994 and 1997, with inflows of \$1.9 billion and \$4.5 billion, respectively—not far below Indonesia, with \$2.1 billion and \$5.8 billion for the same years. In 1991, Estonia also performed in an outstanding fashion.

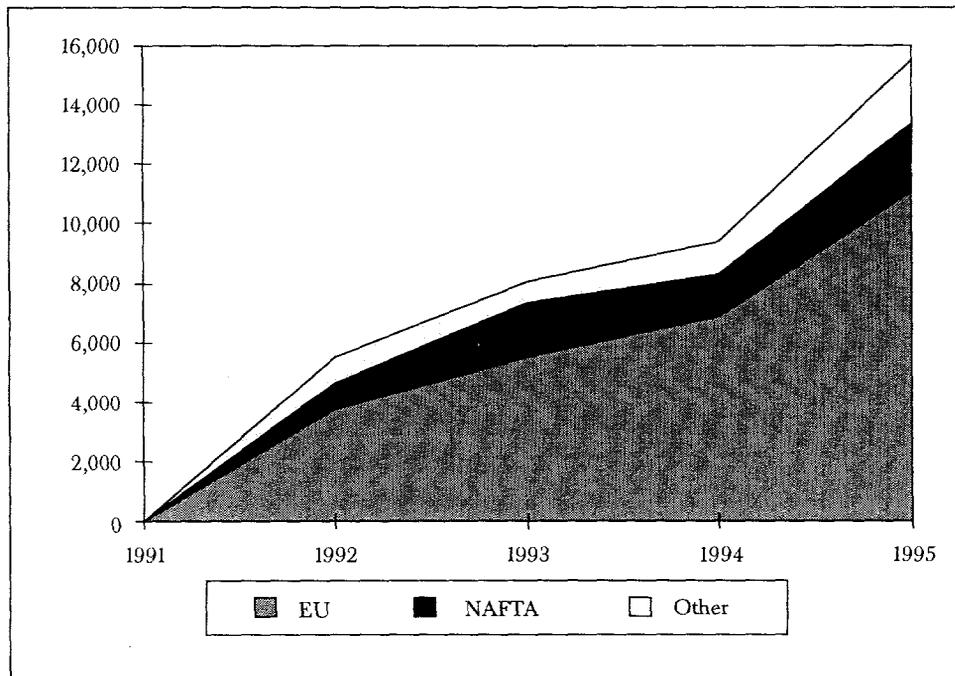
The time profile of FDI inflows is not unlike the profile of private debt flows. After the cautious start of FDI inflows in early 1990s, significant surges came in 1995 and again from 1996 to 1997, as investment prospects of the CE5 clarified and their risk profiles became clearer. The initial surge in FDI was linked to massive privatization programs that the CE5 have undertaken. Privatization programs have also attracted sizable foreign exchange, which comprised over 70 percent of cumulative privatization proceeds of \$10.4 billion in the five transition countries during the years 1990-94.

With the first stage of privatization largely over, most FDI inflows in 1996 and 1997 were greenfield. This is another sign of maturity and a stable, lower-risk investment regime, as most other TEs still pull in most of FDI via privatization schemes.

Portfolio Flows

Financial market development in the CE5, as shown by their expanding equity markets, is also fostering integration with international markets. The size of their newly formed stock markets has exploded since the beginning of the 1990s. For example, market capitalization of Hungary and Poland's stock exchanges increased 29-fold and 80-fold, respectively, in dollar terms between 1990 and 1997. Nevertheless, as a share of GDP, market capitalization is still at relatively low levels, compared to more integrated economies. The Czech Republic is a notable exception. Its market capitalization equaled a third of GDP in 1996, higher than the levels in Greece, Portugal, and Korea for the same year. Turnover ratios are relatively high, indicating low transaction costs and very liquid markets, helping to improve the allocation of capital attractive to foreign and domestic investors alike. The relatively low value traded as a share of GDP in the five transition countries, again with the exception of Czech Republic, reflects the small size of their markets.

Figure A2.4 Foreign Direct Investment to the Czech Republic, Hungary and Poland by Source (\$US Million)



Source: OECD (1997).

In all CE5 countries, only a handful of corporate stocks are traded, and the over-the-counter (OTC) market is in its infancy. A corporate bond market is also just being established. As a result, portfolio flows were heavily skewed towards Government securities. This was the vehicle of choice for foreign investors when large portfolio inflows materialized in 1996 and early 1997. The reverse side of relative underdevelopment of equity markets is their volatility. In the second half of 1997 both the Estonian (a star performer in 1996) and Hungarian markets were badly hit. Slovenia had tried to mitigate the impact of short-term portfolio movements by introducing custodial accounts for foreigners with high commissions.

Predictably, FDI inflows to the CE5 originate largely from EU-member countries. For example, EU inflows comprise 70 percent of the total inflows to Poland, Hungary, and the Czech Republic from 1992 to 1995, on average. The share of total net FDI inflows from the EU also represents an increasing component of total direct investment flows to the three countries, up from 69 percent in 1992 to 71 percent in 1995. Flows from NAFTA countries averaged \$1.6 billion during the period 1992-95, or 17 percent of total inflows, peaking at \$2.3 billion in 1995, up from \$900 million in 1992 (figure A2.4).

Annex 3

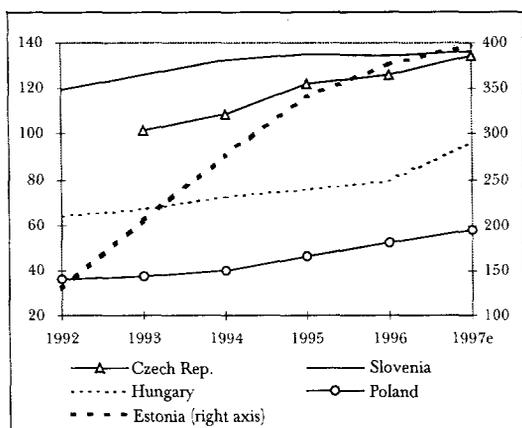
Trade Integration and Longer-term Growth Prospects

This annex is divided into two parts. The first part presents a discussion of the strong growth in the international trade integration of the CE5 countries since the breakdown of central planning and the Council of Mutual Economic Assistance (CMEA) system at the end of the 1980s. There is general consensus in economic literature that economic integration tends to increase FDI into and within integrating regions—in other words, that FDI and trade are complementary, as firms integrate their operations across borders by trading intermediate goods and services. This is evident in the CE5 countries from their patterns of expanding FDI and international trade linkages abroad. The prospects of greater integration with the Western European economies as progress toward EU accession advances, along with prospective reintegration within the ECA region, suggest strong FDI and other foreign private capital flows to the CE5 will continue. The second part of the annex provides a discussion of the broader context of longer-term world economic growth trends—which will largely determine the environment for future economic integration of the CE5—and focuses on the growth prospects for the CE5.

Trade integration

Exports of goods and services, which were greatly constrained under central planning, have played a key role in the turnaround in growth in the Central European countries. As a group, the CE5 have been very successful in achieving greater openness of their economies and in progressively reorienting their exports to Western markets. Since 1992, trade openness (measured by exports and imports of goods and services as a percentage share of GDP in real terms) increased by close to 20 percentage points in Slovenia, some 30 percentage points in Poland, and by almost 40 percentage points in Hungary, to an estimated 136 percent, 58 percent and 97 percent, respectively, in 1997 (figure A3.1). In the Czech Republic, for which data is available first in 1993, trade openness increased from 102 percent to an estimated 134 percent for 1997. Relative to countries worldwide, the degree of openness attained by the individual CE5 countries, while varying widely, is comparably high. Poland is perhaps the one exception, with the lowest ratio of openness in the group; but it could nonetheless be categorized as moderately open relative to other developing countries. In comparison to the East Asian and Southern Mediterranean countries, the range of openness in the transition countries is similar (table A3.1).

Figure A3.1 Trade Openness.*
(Export and Imports of GNFS as Percent Share of GDP (Real))



Note: *Includes re-exports, which for example comprise about 40 percent of total exports in Estonia.
Source: IMF, IFS.

Table A3.1 Trade Openness
(XGNFS+MGNFS)/GDP (Real)

| | 1992 | 1997 | 1992-97 diff. |
|------------------|------|------|------------------|
| CE5 | | | |
| Czech Rep* | 102 | 134 | 33 |
| Estonia | 130 | 397 | 267 |
| Hungary | 64 | 97 | 32 |
| Poland | 36 | 58 | 22 |
| Slovenia | 119 | 136 | 17 |
| S. Med. | | | |
| Greece | 51 | 54 | 3 |
| Portugal | 95 | 121 | 26 |
| Spain | 51 | 71 | 20 |
| East Asia | | | |
| Indonesia | 51 | 60 | 9 |
| Korea, Rep. of | 65 | 94 | 29 |
| Malaysia | 163 | 226 | 63 |
| Philippines | 74 | 123 | 49 |
| Thailand | 84 | 96 | 12 |

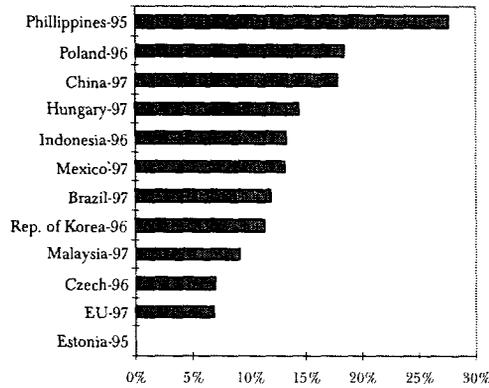
*1993-97

Source: World Bank databases.

As perhaps indicated by the different levels of openness, the tariff structures of these countries also vary. With the lowest level of openness, Poland's mean tariff level (18.4 percent in 1996) is the highest among the CE5 countries (excluding Slovenia for which tariff structure is unavailable). Similarly, Hungary's mean tariff rate of 14.4 percent in 1997 is relatively high. Corresponding to its very high level of openness, Estonia's mean tariff level is the lowest, at 0.1 percent, and well below most other countries. With a 7 percent mean tariff rate, the Czech Republic is closest to the EU average mean tariff rate of 6.8 percent (figure A3.2).

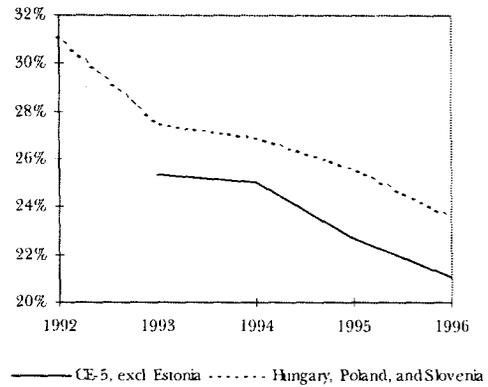
As integration has advanced, the CE5 countries have, as a group, achieved greater diversity of revenue sources on current account flows. The most marked shift in the composition of current account receipts for the CE5 has been that of services exports, which increased from 15 percent to 24 percent of the total from 1992 to 1996. This aggregated level compares favorably with that of 20 percent for middle-income countries as a group. Merchandise export revenues have increased as percentage share of total current account receipts as well for the five countries, up 5 percentage points to 67 percent in the same period. In addition, exports became more diversified, with the share of primary commodity exports declining from more than 30 percent in 1992 for Poland, Hungary, and Slovenia to less than 25 percent in 1997, and to around 21 percent when the Czech Republic is included (figure A3.3). In contrast, private transfers, despite growing worker remittance flows throughout the region, have shrunk from 20 percent of total current account receipts in 1992 to 5 percent in 1996. This largely reflects the drop-off of private transfer inflows to Poland and Hungary (figures A3.4 and A3.5).

Figure A3.2 Mean Tariffs (Unweighted)
(CE5 and Selected Countries, Latest Year Available)



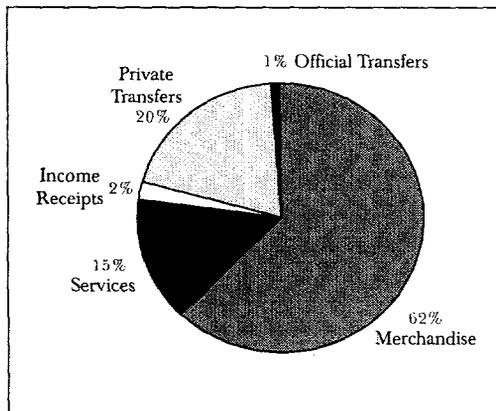
Note: Calculated as average ad valorem duty across all tariff lines.
 Source: WDI 1998, World Bank

Figure A3.3 Primary Exports
(Percentage Share of Total Merchandise Exports)



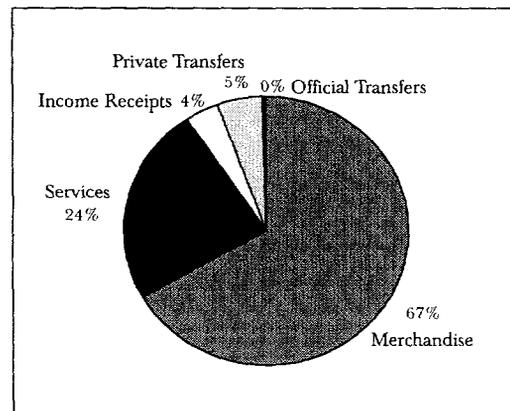
Source: World Bank databases

Figure A3.4 Composition of Current Account Revenues—1992
(Percentage Share of Total)



Source: World Bank databases.

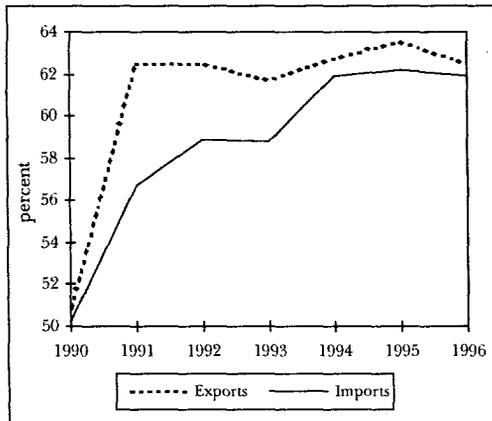
Figure A3.5 Composition of Current Account Revenues—1996
(Percentage Share of Total)



Source: World Bank databases.

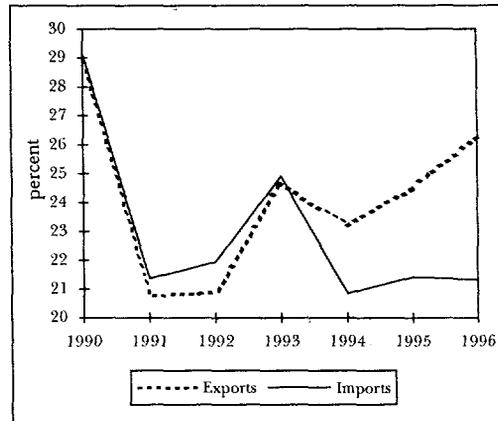
Integration with the EU has advanced at an unprecedented rate compared to the evolution of trade with other trading partners. Both merchandise exports and imports with EU countries, as a share of total CE5 merchandise exports and imports, increased from about 50 percent in 1990 to 62 percent by 1996, albeit at different rates. With the breakup of the Soviet Union and collapse of the CMEA trading bloc, the share of exports to EU countries increased sharply by 12 percentage points in 1991 to 62 percent of total CE5 exports, at which level it has since hovered. Imports from the EU increased incrementally over the same period to 1996, reaching just below 62 percent in 1994 (figure A3.6).

**Figure A3.6 CE5 Trade with EU
(Percentage Share of Total Trade)**



Source: World Bank databases.

**Figure A3.7 CE5 Trade with Central Europe
(Percentage Share of Total Trade)**



Source: World Bank databases.

Greater trade integration with EU member states, and in particular CE5 penetration into the EU consumer market, has been greatly fostered by the conclusion of interim free trade agreements and European Association Agreements (EAs) with the EU. Most of these agreements were signed by the five transition countries in the early 1990s, and came into force by the middle of the decade. These agreements are far more extensive than the European Community/EFTA agreements and aim to establish, among other things, bilateral free trade and national treatment of companies in ten years.

Another indicator of the overall level of integration is the degree to which a country's trade links with its neighbors are developed. Under the old CMEA trading system, almost exclusive intra-regional Soviet bloc trade among member countries was largely dictated via central planning. With the dissolution of the CMEA and the general failure of the payments system at the turn of the decade, intra-regional trade collapsed. In the interim period, however, as a percentage share of total CE5 exports, exports to Central European and FSU countries have increased and a degree of reintegration has been achieved. In contrast, CE5 import demand for products from the ECA region remains weak, despite a short-lived partial recovery in 1993 (figure A3.7).

The central European countries' trade with countries outside of the EU and ECA region has shifted in recent years as well. Exports and imports with non-EU industrialized countries have also increased notably from a zero base prior to the breakup of the CMEA. During the years 1993-96, the share of total CE5 merchandise exports to non-EU industrialized countries averaged 5.5 percent of their total exports, and imports averaged 9 percent of their total imports. Aside from the overall net decline in trade with regional partners since 1990, the increases in trade shares with industrialized countries have been largely offset by declining trade with countries in the rest of the world (largely unidentified in the trade statistics).

Longer Term World Economic Outlook and CE5 Prospects

Despite the current gloom, the global economic environment is projected to remain broadly favorable for low- and middle-income countries over the coming decade. Fundamentals determining the external environment—such as world import demand and interest rates in the industrial countries—have deteriorated somewhat in the wake of the financial crisis in Asia, but they continue to remain generally positive by historical standards. The main reasons for this relatively optimistic longer-term outlook are that the opportunities for faster growth will still be present. Industrial country growth is expected to regain strength, world trade is expected to show positive growth supported by a continuation of falling trade barriers and improving transport and communication links, and a more discriminatory resumption of longer-term capital flows is expected. Risks to this outlook are large, especially in the near-term, and center on intensifying contagion effects, economic slowdown in the United States or Europe, or a deeper recession in Japan, or both.

Taking into account the East Asian crisis, output growth in the CE5 countries' export markets is expected to rise on average over the forecast horizon, 1998-2007. Import volume demand across this market should also continue to grow at rates near that of world trade—from the close to 8 percent pace established during the recent period, to about 6.5 percent in the near-term, and trending toward 6 percent during the next decade. The CE5 countries' terms of trade are expected to improve modestly on average, in contrast with the variability and volatility of the early- and mid-1990s. International interest rates are anticipated to increase in the medium and long term, but to remain at lower levels compared to the 1980s.

The main contributions to growth in export market demand are expected to come from the EU and neighboring CE countries, which together currently account for close to 90 percent of CE5 exports, on average. Economic expansion in the EU is the key driving force, supported in the longer term by successful completion of the EMU and accession to the Union by the CE5 countries by 2007.

The CE5 countries' export price, on average, is likely to increase in nominal terms, albeit at modest rates of 2 percent to 2.5 percent per year. Manufactures' prices are here proxied by the G-5 unit value index (MUV), which may be representative of competitive conditions in international markets. Aside from exchange rate movements which influence this price in dollar terms, underlying cost structures of output, productivity growth, and factors such as transport and communications costs will also play a part in determining whether the CE5 will be able to export profitably at these prices.

The rise in the CE5 countries' import price, on average, is anticipated to be moderate as well, falling below the increase in export price and yielding modest terms of trade gains. In the longer term, a number of factors suggest that the advance of food prices will moderate, and that adequate supplies of crude oil will be forthcoming without any meaningful increase in real oil prices. A World Bank research publication, "The World Food Outlook", argues that, on a global basis, crop yields continue to rise faster than population. Per capita consumption has already risen to levels that are adequate for most consumers, and population growth rates are slowing. The prices of staples such as cereals are expected to decline in real terms. While the recent sharp drop in oil price, tied in part to diminished demand from Asia, is expected to moderate, the "Review and Outlook for the World Oil Market" argues that,

though the projections are subject to much risk, non-OPEC supplies will continue to increase in the aggregate, thereby lessening the opportunity for oil producers to sustain prices at much higher than current levels.

In sum, barring additional unfavorable developments in East Asia, the external environment for the CE5 through 2007 appears to be generally positive, although posing many risks. Accordingly, whether stronger market growth can be translated into stronger export performance for the CE5, terms of trade improvements to help support growth of incomes, and relatively low interest rates, will depend in large measure on policy developments in the individual countries, and whether countries draw the appropriate conclusions from the Asian crisis—to open carefully to international financial markets, at a speed commensurate with conditions in the domestic financial sector and of institutional development.

Notes

1. The ten CECs are Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, and Slovenia.
2. See The World Bank (1998c) and (1999). A similar analysis and discussion is used by Perry and Lederman (1998).
3. This was true even though Portugal witnessed very high levels of capital inflows in 1981-82.
4. World Bank, Global Development Finance data is used, which is only available from the liability side.
5. One could also argue that for Hungary, the surge began in 1991, with capital inflows of 7.3 percent of GDP (see Economic Bulletin for Europe, Vol. 49, 1997, Table 4.1.1). There was a decline to 1.2 percent in 1992, however. Hence, we take 1993 as appropriate for comparative purposes with other countries.
6. Portugal experienced another surge of capital inflows in the early 1980s reaching 18.5 percent of GDP in 1981, but which declined sharply since 1983 to reach a negative value of -3.8 percent in 1986.
7. Some of the main references are as follows: Milesi-Ferretti and Razin (1996), Kaminsky and Reinhart (1997), Goopta (1996), Honohan (1997), Sachs and Tornell (1996).
8. The reported fiscal deficits may not reflect completely the fiscal positions. There may be a concern that contingent fiscal liabilities are significant for some countries and can be a serious source of vulnerability. For the importance of contingent liabilities see Polackova (1998).
9. For Hungary the data on the current account on a settlements basis are not consistent with the investment-savings balance on national accounts basis. But the increase in investment is commensurate with the increase in the deficit.
10. See World Bank (1998a).
11. Roubini and Wachel (1997) also make this observation.
12. See Calvo, Sahay, and Vegh (1996) and Halpern and Wyplosz (1996).
13. One explanation for the absence of correlation between REER changes and export performance is that the average nature of the REER masks significant changes in real bilateral or regionally relevant exchange rates affecting competitiveness in relation to trading partners and close competitors. For instance, in Estonia there is a strong appreciation in terms of DM rates, but depreciation in relation to currencies of trading partners such as Russia and other Baltic States.
14. J.P. Morgan (1998a).
15. Asian Development Bank and World Bank (1998), Fig. II.24.
16. These statements have to be qualified because of lack of recent data for Hungary.
17. Claessens and others (1998).
18. Non-FDI flows are also significantly affected by differentials between domestic and foreign interest rates. Some evidence is also given by United Nations (1997), Chapter 4.
19. See Table 4.3.3 in United Nations (1997).
20. EBRD, 1998, Transition Report.
21. The EBRD overall index of capital account liberalization was 74 for the Czech Republic, 60 for Hungary and 55 for Poland at end-1997.
22. See Asian Development Bank and World Bank (1998), and World Bank (1998a).
23. A detailed analysis is in Asian Development Bank and World Bank (1998).
24. This factor can lead to adverse effects on the overall quality of portfolio.
25. Indonesia, Malaysia, Thailand since 1992 and Korea since 1996.
26. See Asian Development Bank and World Bank (1998), and World Bank (1998a).
27. For Poland the ratio is 15 percent for the first year of operation, 12 percent for the second, and 8 percent thereafter.
28. The Philippines and Malaysia introduced some limitations in April 1997. See ADB-WB (1998), Box II.1.
29. See Asian Development Bank and World Bank (1998), and World Bank (1998a).
30. A detailed discussion of these factors is provided in ADB-WB (1998).
31. In 1997 the World Bank oil price came to \$19.18 per barrel and is forecast to drop to \$15 per barrel in 1998, in nominal terms, or from \$17.8 to 14.28 per barrel for the same period, in 1990 prices.
32. These estimates are based on gross oil imports in volume terms times the World Bank crude oil price benchmark. 1998 and 1997 gross oil import volumes are estimated using real GDP growth and historical International Energy Agency data, assuming an elasticity of one.

33. See Russo (1998).

34. In Portugal, net portfolio flows represented a negative 3.3 percent of GDP in 1992. In the case of Spain, net portfolio flows contracted by 4.4 percent of GDP, following massive inflows equal to 10.3 percent of GDP in 1993.

35. Measurable benefits of the structural changes for Portugal include the following:

- a 10 point rise in share of manufactures exports, of which 9 points represent diversification of product mix outside textiles and clothing;
- a 10-fold rise in FDI (averaging \$1.9 billion during 1990-94); an increase in portfolio equity flows from small levels to \$600 million in recent years; and a 70 percent advance in private fixed investment over the last decade;
- privatization receipts cumulating to 9 percent of GDP by end-1995—ranking third among developed countries; proceeds earmarked for general government debt redemption and restructuring of remaining SOEs (the borrowing requirement of SOEs declined from 8 percent to 1 percent of GDP);
- the number of banks operating in Portugal more than doubled, private banks increased their market share, and number of foreign banks engaged in the market increased five-fold; capitalization of the Lisbon Stock Exchange has increased by 35 percent since 1989; at end-1994, 17 venture-capital companies were operating, with total portfolio of Esc42.4 billion and another Esc33.5 billion in uncommitted funds—the largest share directed to the expansion of existing businesses;
- composition of the civil service changed considerably—the share with higher education increased to 54 percent from 44 percent.

36. European Communities (1998).

37. "Efficiency and Competition Effects," *European Economy*, No. 4, 1996.

38. OECD (1991-92).

39. Axt, Spring, 1992.

40. Aturupane and others (1997).

41. European Communities (1998).

42. In Estonia, openness increased remarkably from 130 percent in 1992 to almost 400 percent in 1997. This reflects Estonia's particularly large trade in re-exports, which are equal to about 40 percent of total exports. Re-exports also comprise a significant but lesser share of trade in Poland and Slovenia.

43. Each of the five transition countries has signed an European Association Agreement (EAs) and established some form of interim trade agreements until the EAs can be ratified by all member country legislatures. Poland and Hungary were the first to conclude EAs in 1991 and to set up interim agreements on trade until the EAs came into force in early 1994. The Czech Republic had an interim agreement on trade in force from early 1992, and it signed an EA in 1993 which came into force at the beginning of 1995. Trade and Economic Cooperation Agreements were signed by Estonia and Slovenia in 1992 which came into force in January 1993, prior to their signing of EAs in 1995.

44. Based on preliminary DECPG Global Economic Prospects 1998 base-case forecasts.

45. Mitchell and Ingco (1993).

46. Streifel (1995).

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