

CHAPTER 1

Prelude to the crisis

The Europe and Central Asia (ECA) region, among the most integrated of emerging and developing regions, has been hit hard by the global economic and financial crisis through all three channels of integration: financial (a sudden stop in capital flows), goods and services (a sharp decline in exports), and labor (a slowdown in remittances).¹

It is the hardest hit developing region partly because of the buildup of imbalances that accompanied financial integration. But not all ECA countries—and not even all financially integrated countries in the region—are equally vulnerable.

Questions

- Was integration into the global financial system desirable?
- Does variation in country outcomes suggest that different policies could have cushioned the impact of the global economic and financial crisis?

Findings

- High rewards involve risks and integration is no exception; it brought the ECA countries above average income convergence to EU15 levels and modern banking sector systems.
- Unusually abundant global liquidity and strong demand for credit by households attempting to catch up to Western living standards stretched the usual policy toolkit to its limits. But countries could have done more on the fiscal policy side to position themselves better when the crisis struck. Several countries tried prudential measures, which lessen overheating pressures. These measures are worth pursuing even though they are eventually circumvented.

Notes

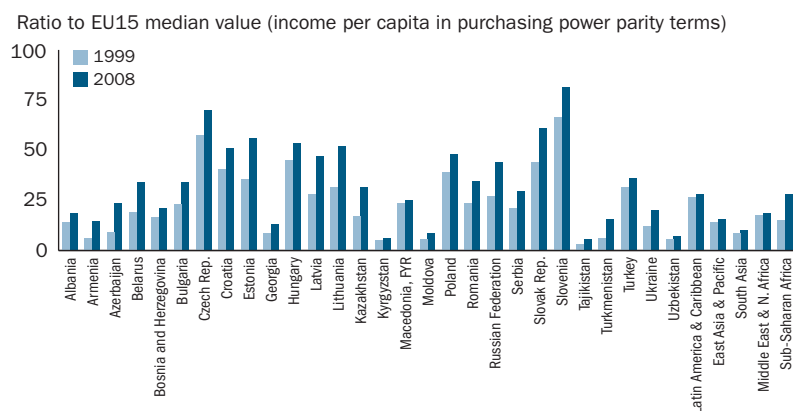
1. The ECA region comprises Central and Eastern Europe, including Turkey (CEE), and the Commonwealth of Independent States (CIS).

In the decade since the 1998 Russian financial crisis, the ECA region has become well integrated into the world economy. In the quest to converge with EU15 per capita incomes, most ECA countries outperformed other developing regions (figures 1.1–1.4). Some 55 million people were lifted out of absolute poverty between 1999 and 2006.¹

1. The poverty line used is \$2.50 a day in 2005 purchasing power parities.

FIGURE 1.1

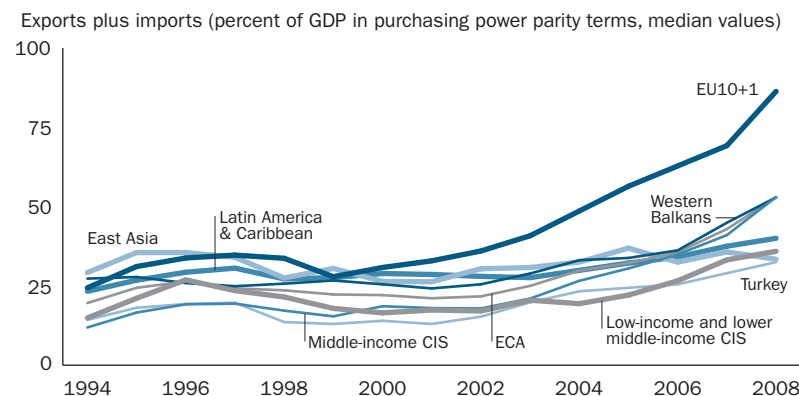
Income convergence with EU15, by country, 1999 and 2008



Source: IMF *World Economic Outlook*, World Bank *World Development Indicators*, and authors' calculations.

FIGURE 1.2

Trade integration, by region, 1994–2008

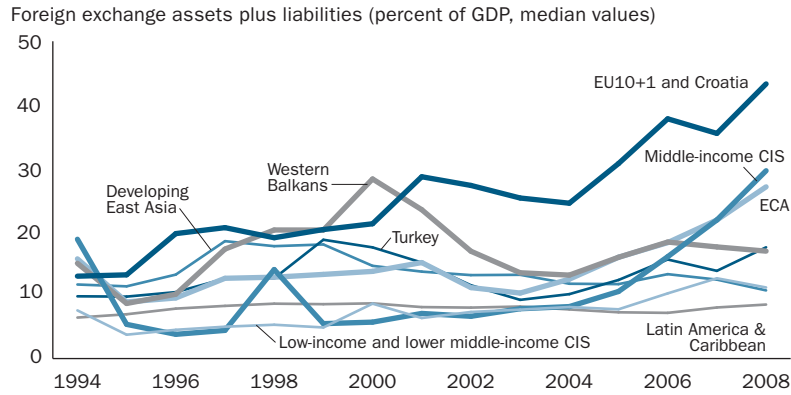


Source: IMF *World Economic Outlook*, World Bank *World Development Indicators*, and authors' calculations.

- Trade integration in ECA's transition countries (the ECA region less Turkey)—measured by the sum of exports and imports as a share of GDP in purchasing power parity—increased sharply, particularly since 2002, to reach around 50 percent of GDP in 2008 compared with 35–40 percent in developing East Asia and Latin America. The corresponding share for Turkey rose to 30 percent.²

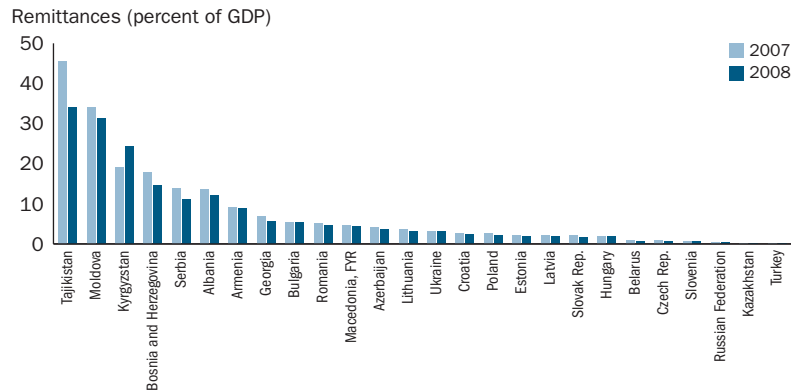
2. The country groups used to describe the transition economies of Europe and Central Asia are: EU10 and Croatia (Bulgaria, the Czech Republic, Croatia, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, the Slovak Republic, and Slovenia); the middle-income CIS (Belarus, Kazakhstan, the

FIGURE 1.3
Financial integration, by region, 1994–2008



Source: IMF World Economic Outlook, World Bank World Development Indicators, and authors' calculations.

FIGURE 1.4
Labor integration, by country, 2007 and 2008



Source: IMF World Economic Outlook, World Bank World Development Indicators, and authors' calculations.

- Financial openness in the new member states of the European Union plus Croatia—measured by the sum of foreign exchange assets and liabilities as a share of GDP—was three times the average for developing East Asia in 2008.

Russian Federation, and Ukraine); Western Balkans (Albania, Bosnia and Herzegovina, Kosovo, FYR Macedonia, Montenegro, and Serbia); and the low-income and lower middle-income CIS (Armenia, Azerbaijan, Georgia, the Kyrgyz Republic, Moldova, Tajikistan, and Uzbekistan). Georgia is not part of the CIS but is included in this group because its economy shares many features of the other countries.

- High oil prices and a raft of structural reforms in the Russian Federation in the four years after 1998 dramatically reduced poverty, particularly in the middle-income CIS countries.
- Labor and remittance flows broadly followed a biaxial pattern, with Central and Eastern Europe depending on the European Union and with the South Caucasus and many Central Asian republics depending on the resource-rich CIS countries.

So it is not surprising that the global economic and financial crisis has affected the region through all three dimensions of integration—a sudden stop in capital flows, a decline in exports in line with the weakening of the world economy, and a brake on migration and remittances following the slowdown in Western Europe and the resource-rich CIS. Among all emerging and developing regions, ECA is projected to experience the deepest downturn in 2009 (–5 percent for CEE and –6.7 percent for the CIS) and the weakest recovery in 2010 (1.8 percent for CEE and 2.1 percent for the CIS). Indeed, the degree of integration—and now vulnerability—show how far ECA countries have come since the fall of the Berlin wall two decades ago.

But not all ECA countries have been affected to the same degree through each channel. Some countries were more vulnerable to the change in market sentiment and the decline in global liquidity. Balance sheet vulnerabilities accumulated during many years of high private sector credit growth and the external imbalances associated with this growth. In Latvia, for example, current account deficits were more than 20 percent of GDP in 2006 and 2007, only to decline into the mid-teens in 2008. Countries in the Western Balkans also had double-digit external imbalances. It is thus not surprising that these differences are now being priced by markets in sovereign bond spreads—changing the ordering of countries by risk and showing marked increases in volatility (annex 1.1). Ukraine’s spread has increased sharply, but Hungary’s has not changed much since the fall of 2008, when the crisis intensified in both countries. Still others are suffering a slowdown in exports, and for many the prospects of a rapid recovery are unclear. The effect on migration and remittances is likely to be acute, particularly among the poorer countries in the region. But some of them, such as Tajikistan and Moldova, have remittances to GDP ratios of between 30–35 percent, among the highest in the world. Early estimates suggest that the region is likely to see 11 million individuals fall into absolute poverty by 2010.

With this as background, the chapter answers two questions. First, was integration—particularly into global financial systems—desirable in light of evidence showing how deeply the region is being affected by the global economic and financial crisis? Focusing on financial integration, the analysis

highlights a distinctive feature of how ECA countries—Central and Eastern Europe (including Turkey) and the former Soviet Union—have become part of the world economy and the risks and rewards that such integration has brought. Second, does the significant variability in country outcomes, even among financially integrated countries, suggest that different policies could have positioned countries better when the crisis struck?

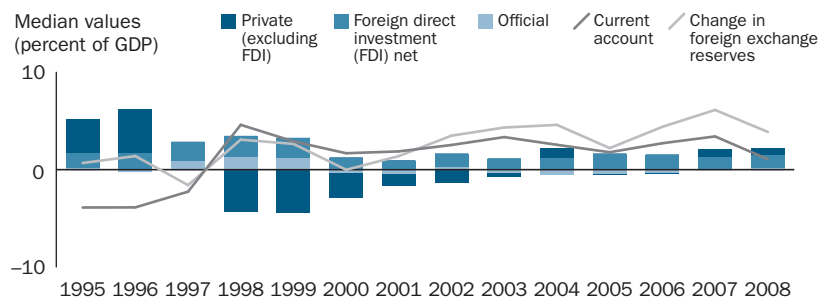
Vulnerable . . . but with variation

Compared with other emerging economy regions, all ECA countries received substantial capital inflows for much of the current decade (figures 1.5–1.8). The region received high levels of FDI flows and large amounts of debt-creating external financing, evidence of the substantial transformation of the region. Some of these flows originated in parent banks and corporates and were directed to their subsidiaries in host countries. As will be seen in chapter 2, some debt-creating flows can be as stable as FDI.

The region’s GDP growth rate outperformed all other regions until the crisis. The differences across ECA countries partly reflect progress in the transition to market (figures 1.9–1.14). Countries where transition-based output recovery had largely been accomplished by the turn of the new century grew slower than latecomers to the transition process—the Balkans and the countries of the former Soviet Union. In addition, the region as a group recently recorded a gradual pickup in inflation—in line with other developing regions.

Accompanying the strong growth was a buildup of external imbalances, which cannot be explained by a decline in terms of trade or, for the most part, by weak fiscal positions (see figures 1.9–1.14). External developments mirror an excess of private investment over private savings. Even in Hungary, Romania,

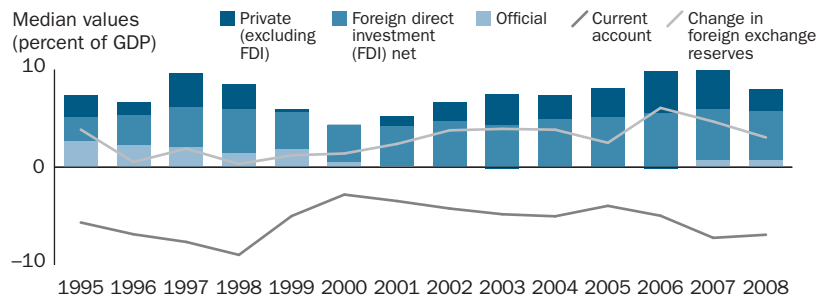
FIGURE 1.5
Capital flows in developing East Asia



Source: IMF *World Economic Outlook* and authors’ calculations.

FIGURE 1.6

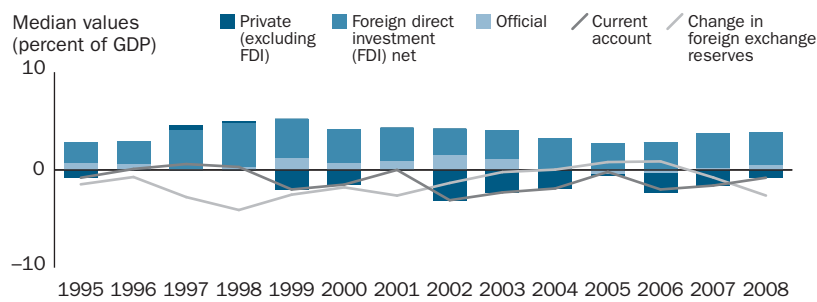
Capital flows in Europe and Central Asia



Source: IMF *World Economic Outlook* and authors' calculations.

FIGURE 1.7

Capital flows in Latin America and the Caribbean



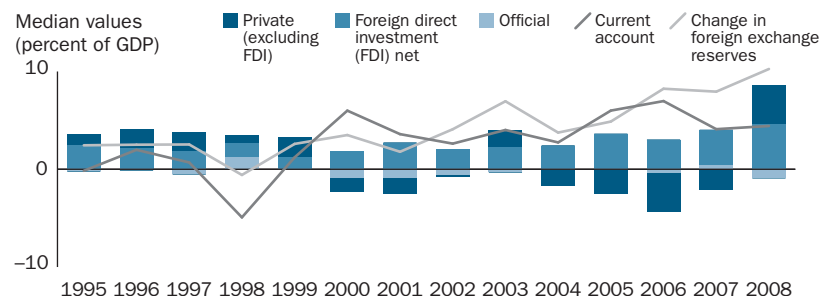
Source: IMF *World Economic Outlook* and authors' calculations.

and Ukraine, where fiscal positions are known to have been weaker, private sector imbalances were still important. While the real exchange rate appreciated in most of ECA, this was driven in some cases by higher productivity, reflecting integration with Western Europe in particular and global markets more generally. Unlike other emerging and developing regions, ECA saw no decline in external debt-to-GDP ratios (figure 1.13). And the ratio of short-term debt to foreign exchange reserves increased—a harbinger of things to come.

There is, however, substantial variability across countries in the region. That makes it instructive to contrast ECA countries with other regions, and with each other. For this, the region could be divided into countries integrating rapidly into financial markets—the emerging markets—and the low-income and lower middle-income countries. But using only two groups would not do justice to the diversity of economic experience among the region's financially integrated middle-income countries. To make these differences more evident,

FIGURE 1.8

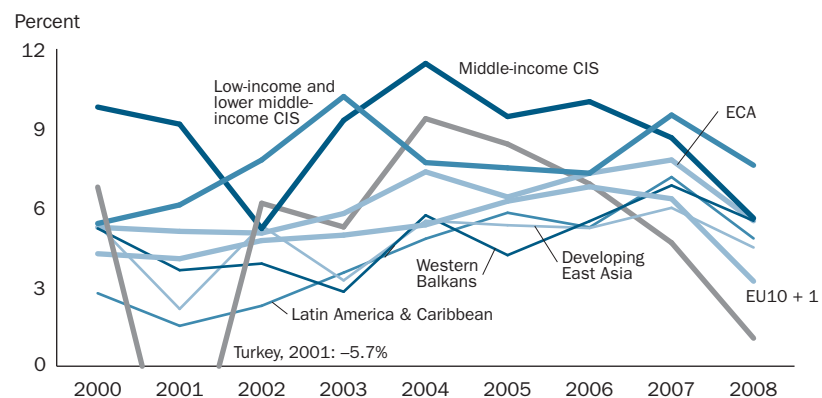
Capital flows in other emerging economies



Source: IMF *World Economic Outlook* and authors' calculations.

FIGURE 1.9

Real GDP growth, median values, 2000–08

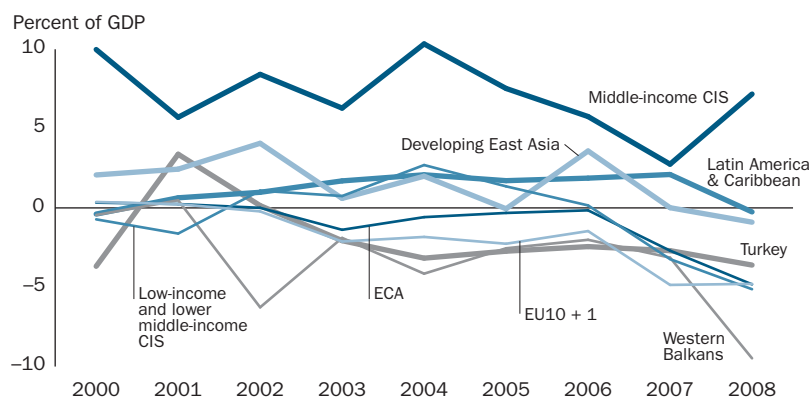


Source: IMF *World Economic Outlook* and authors' calculations.

a technique known as cluster analysis classifies countries into groups based on the sources of vulnerability that affect ECA countries. Such analysis allows differences across countries to be identified simultaneously in a number of dimensions of domestic sources of vulnerability (private sector credit growth, fiscal deficits, loan-to-deposit ratios) and external sources (short-term debt-to-foreign exchange reserves, external debt-to-GDP ratios, and exchange rate regime), without setting ad-hoc thresholds (box 1.1).

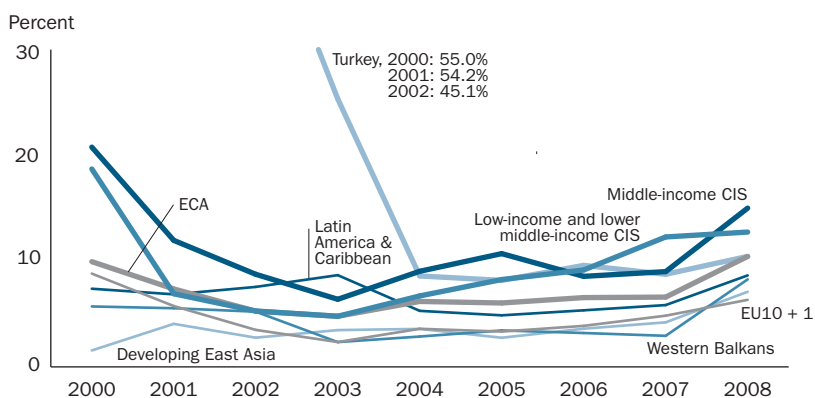
A classification of financially integrated ECA countries by the sources of vulnerability identifies five distinct groups. Ordered from groups that have the most sources of vulnerability to those that have the fewest the groupings are as follows:

FIGURE 1.10
Current account, net of FDI, median values, 2000–08



Source: IMF *World Economic Outlook* and authors' calculations.

FIGURE 1.11
Inflation, median values, 2000–08

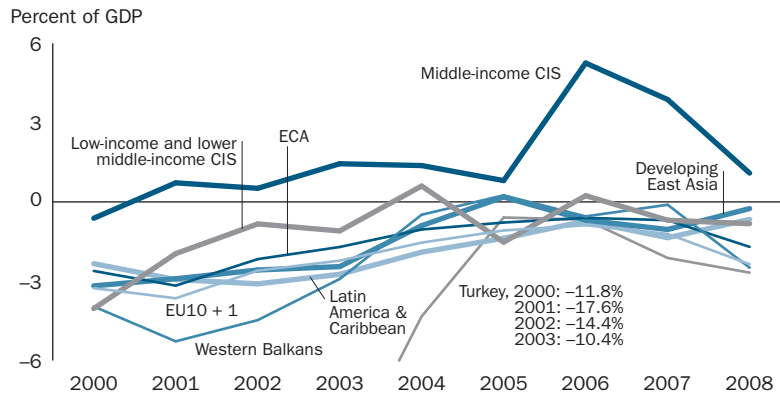


Source: IMF *World Economic Outlook* and authors' calculations.

- Group 1: Estonia and Latvia.
- Group 2: Bulgaria, Croatia, Hungary, Kazakhstan, Lithuania, and Montenegro.
- Group 3: FYR Macedonia, Poland, Romania and Serbia, and Ukraine.
- Group 4: Czech and Slovak Republics and Turkey.³

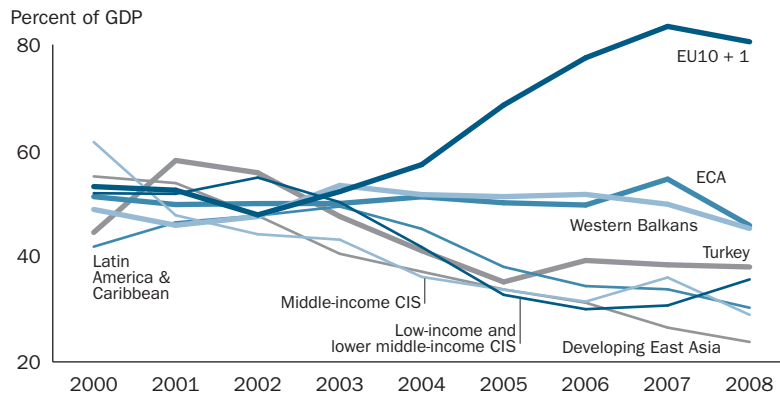
3. Slovenia in all likelihood would also belong to this group, but not all the data required to implement the cluster analysis methodology were available for this country when the exercise was conducted.

FIGURE 1.12
Fiscal balance, median values, 2000–08



Source: IMF *World Economic Outlook* and authors' calculations.

FIGURE 1.13
External debt to GDP, median values, 2000–08



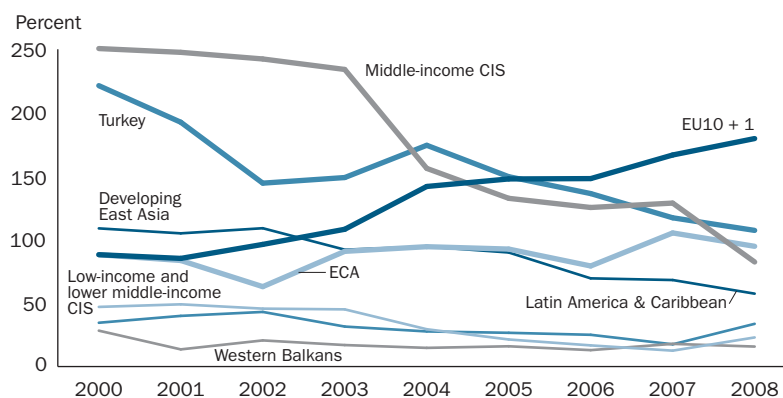
Source: IMF *World Economic Outlook* and authors' calculations.

- Group 5: Belarus and the Russian Federation.

The remaining countries in ECA are aggregated into Group 6. It is also important to recognize that the discussion in the remainder of this book reflects average characteristics within a group, but might mask intra-group differences. Still, looking at developments at the level of country groups provides policy guidance for countries that might face similar sources of vulnerability in the future.

FIGURE 1.14

Ratio of short-term debt to foreign exchange, median values, 2000–08



Source: IMF *World Economic Outlook* and authors' calculations.

The magnitude of current account imbalances varied widely across country groups (table 1.1 and figures 1.15–1.18).

- Current account imbalances as a percent of GDP during the period 2003–05 in the financially integrated country groups were in deficit amounting to double digits in Group 1 and fell monotonically across the country groups to a surplus of nearly 4 percent in Group 5.
- Current account imbalances as a percent of GDP worsened in 2006–08 in all the financially integrated country groups, but particularly sharply in Groups 1 and 2.
- Most external imbalances originated in the private sector; particularly in Groups 1, 2 and 3. Indeed, savings–investment balances in table 1.1 also reveal the change in the source of vulnerability between 2003–05 and 2006–08. While public sector imbalances were important in 2003–05, they seem to have abated for the most part during the most recent 3-year period. In contrast, private sector imbalances were not only large, but increased further during 2006–08.

External imbalances were accompanied by improvements in the fiscal balances (figure 1.16). Indeed, both domestic and external public debt ratios declined in most countries while total external debt increased in some countries. External debt ratios tripled during the decade in Group 1 and increased quite sharply in Groups 2 and 3, in contrast with the rest of the developing world. Perhaps more worrisome is the deterioration of foreign exchange

BOX 1.1

Shades of vulnerability—a cluster analysis approach to classifying countries

Classifying countries by underlying vulnerabilities is not straightforward. For instance, focusing on short-term debt-to-GDP might provide a ranking of country vulnerabilities. But how does one decide which are the relevant thresholds to divide countries into groups? The typical approach is to define them based on standard deviations—but this still is ad hoc. And a classification based only on one indicator (such as short-term debt-to-GDP) fails to compensate for large foreign currency holdings at the central bank or a flexible exchange rate—both of which should relieve market pressures but would not be captured by a classification built only on short-term debt-to-GDP ratios.

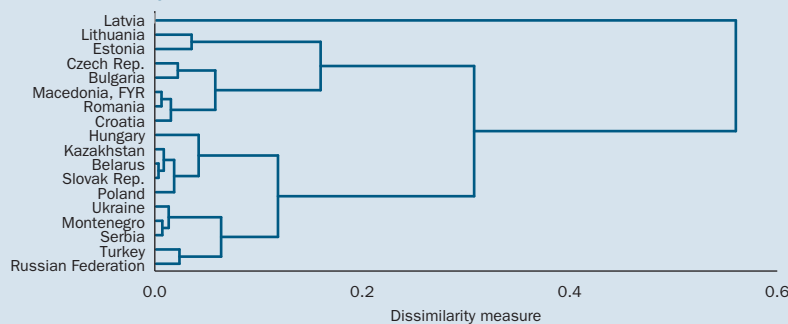
An alternative that reduces ad-hoc biases is to apply a data partition technique known as cluster analysis, which breaks the dataset into high (top) to low (bottom) risk groups, based on indices of data similarities (or dissimilarities). The iterative process begins by treating each country as a separate group and reduces the number of groups by aggregating observations that are the most similar—a process known as hierarchical agglomeration. No thresholds are needed. Instead, groups are aggregated based on Euclidean distances within and across subgroups.

When applied to short-term debt-to-GDP ratios, the data seem to be represented by numerous groups (box figure 1). The dissimilarity is represented by the length of the horizontal lines—the short horizontal lines suggest that dissimilarity is low. Some of the countries ranked at the top also are not the ones expected to be vulnerable. For instance, the Czech Republic is significantly more vulnerable than Hungary and Ukraine.

Box figure 2 goes a step further by carrying out cluster analysis on domestic (private sector credit growth, fiscal deficits, and loan-to-deposit ratios) and external (short-term debt-to-foreign exchange reserves, external debt-to-GDP ratios, and exchange rate regime—as classified in the IMF’s AREAER) sources of vulnerability.

BOX FIGURE 1

Cluster analysis



Source: IMF *World Economic Outlook*, World Bank *World Development Indicators*, and authors’ calculations.

(continued)

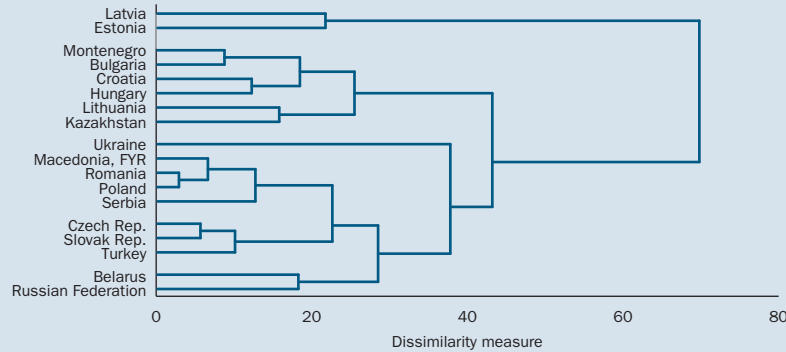
BOX 1.1 (CONTINUED)

Shades of vulnerability—a cluster analysis approach to classifying countries

The advantage of cluster analysis resides with its ability to classify countries on numerous indicators. The country groups now appear to be more representative of our priors, including recent developments in ECA countries and without imposing ad-hoc thresholds. Specifically, we group the 18 most financially integrated ECA countries into the 5 most different groups. The horizontal lines are longer than is the case when applying only one indicator, suggesting that it is important to consider the variety of country circumstances when classifying countries into groups.

BOX FIGURE 2

Cluster analysis



Source: IMF *World Economic Outlook*, World Bank *World Development Indicators*, and authors' calculations.

liquidity indicators: by 2008, all the financially integrated groups 1 through 5 had ratios above one, implying significant liquidity risks.⁴

Transition meets global finance

Nowhere is ECA's integration more striking than in the role of foreign banks. The financial sector played a historically important role in the transition from plan to market (annex 1.2). After nearly two decades of transition, two-thirds of the countries in the region have half or more of their banking sector assets in foreign hands (figure 1.19). The increase in foreign ownership of banking sector assets has gone hand in hand with increasing financial openness.

4. The Guidotti-Greenspan rule suggests that the ratio of short-term debt on a remaining maturity (short-term debt and medium- and long-term debt falling due in the next 12 months) to foreign exchange reserves should be less than one.

TABLE 1.1

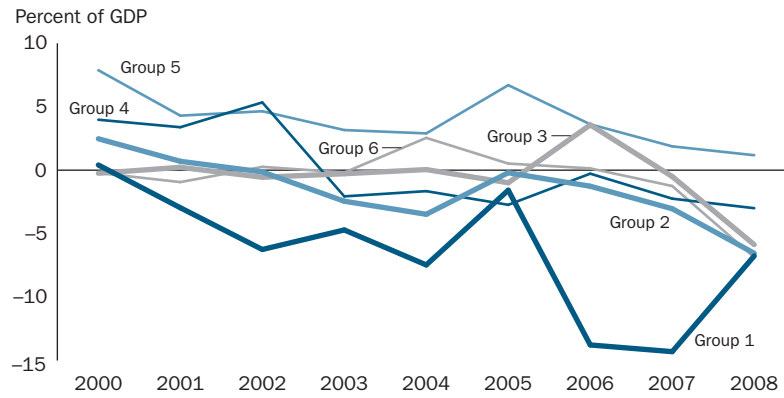
Savings–investments balance (percent of GDP, median values)

	Europe and Central Asia						Developing East Asia	Latin America and the Caribbean	Other regions
	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6			
2003–05									
National savings	21.9	17.0	16.9	19.0	27.7	21.9	27.1	19.0	23.1
Public	2.9	3.4	1.9	-0.4	7.2	3.0	6.0	3.1	3.6
Private	19.0	13.5	15.0	19.4	20.5	18.8	21.1	15.9	19.5
National investment	33.0	24.5	21.3	25.5	23.8	25.8	24.7	19.4	22.9
Public	5.2	4.5	4.0	4.5	7.4	4.3	8.1	4.7	6.4
Private	27.8	20.0	17.3	21.0	16.4	21.5	16.6	14.7	16.5
Savings–investment, public	-2.3	-1.1	-2.1	-4.9	-0.2	-1.3	-2.1	-1.5	-2.9
Savings–investment, private	-8.8	-6.5	-2.3	-1.7	4.1	-2.7	4.5	1.2	3.1
Current account	-11.1	-6.8	-5.0	-5.3	3.8	-3.6	0.2	-0.5	1.0
Total capital flows	13.0	10.0	7.8	6.8	0.9	4.2	1.3	1.9	0.4
Change in foreign exchange reserves	1.9	3.2	2.8	1.6	4.7	0.6	1.5	1.3	1.4
2006–08									
National savings	19.3	15.7	18.3	21.7	29.8	18.5	28.6	19.1	25.3
Public	3.6	3.6	2.0	2.8	10.9	3.6	6.5	4.7	6.9
Private	15.6	12.2	16.2	18.9	18.9	15.0	22.0	14.4	18.4
National investment	36.2	28.4	26.6	26.0	29.4	24.9	26.0	22.7	25.9
Public	6.7	4.5	4.4	6.6	10.4	3.2	9.4	5.5	7.0
Private	29.4	23.9	22.1	19.4	19.0	21.7	16.6	17.2	18.9
Savings–investment, public	-3.1	-0.9	-2.4	-3.8	0.5	0.3	-2.9	-0.8	-0.2
Savings–investment, private	-13.8	-11.7	-5.9	-0.5	-0.1	-6.7	5.4	-2.8	-0.4
Current account	-17.0	-10.3	-7.5	-5.7	0.4	-7.1	0.1	-1.7	-1.8
Total capital flows	18.1	14.0	9.7	5.0	3.6	6.2	1.6	2.9	3.1
Change in foreign exchange reserves	1.0	3.7	2.2	-0.8	4.0	-0.9	1.7	1.2	1.3

Note: Latin America and the Caribbean excludes island economies and International Development Association–eligible countries.

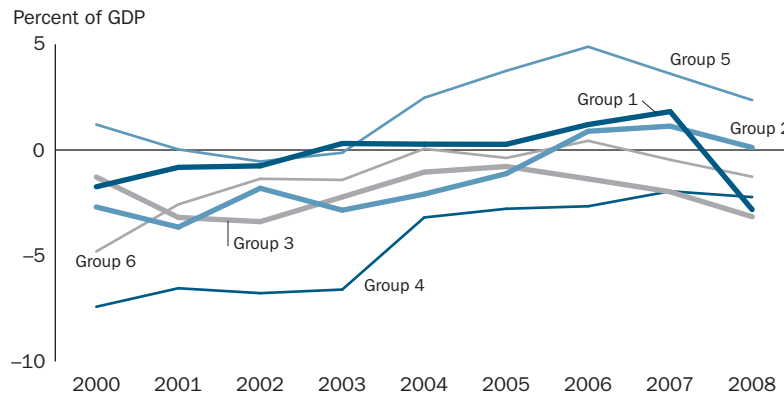
Source: IMF *World Economic Outlook*, Eurostat databases, and authors' calculations.

FIGURE 1.15
Current account, net of FDI, median per group, 2000–08



Source: IMF World Economic Outlook and authors' calculations.

FIGURE 1.16
Fiscal balance, median per group, 2000–08

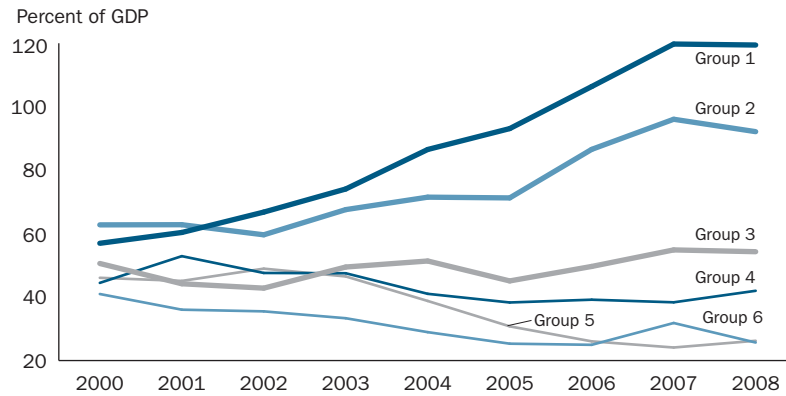


Source: IMF World Economic Outlook and authors' calculations.

Reaping the benefits . . .

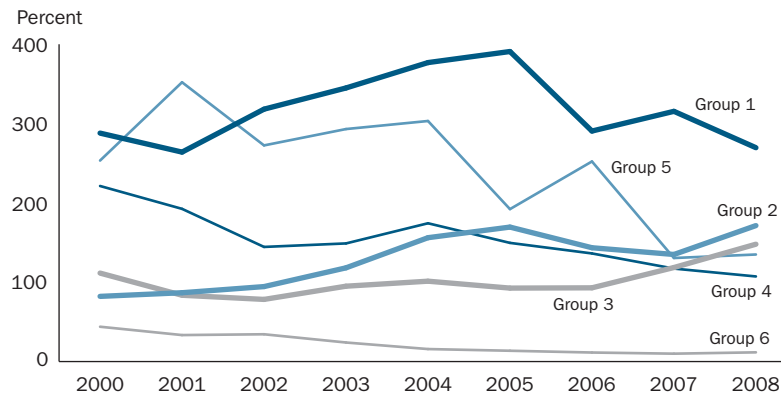
Moving to foreign-owned banking systems made possible the attainment of macroeconomic stability. Indeed, the symbiotic link between governments and state-owned enterprises and newly privatized enterprises was a threat to stability. Perhaps the most important impact of foreign bank entry was severing relationships between politically connected enterprises and the banking system.

FIGURE 1.17
External debt to GDP, median per group, 2000–08



Source: IMF World Economic Outlook and authors' calculations.

FIGURE 1.18
Short-term debt to foreign exchange reserves, median per group, 2000–08



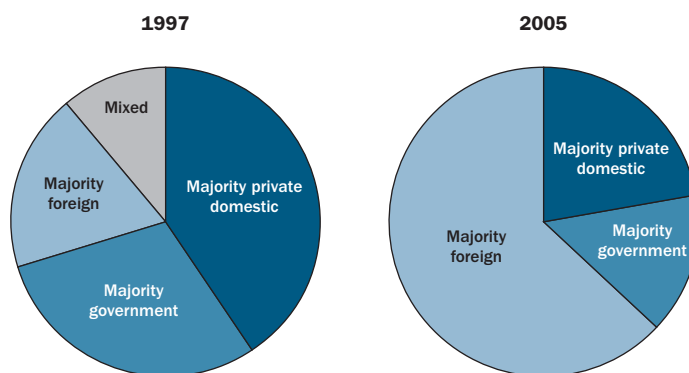
Source: IMF World Economic Outlook and authors' calculations.

Failure to do so had resulted in quasi-fiscal bailouts of incumbent state-owned enterprises and systemic banking crises during the 1990s, with banking distress reaching its peak in the mid-1990s (figure 1.20). Moreover, many foreign banks brought in long-term strategic goals and stabilized the banking systems.

Econometric evidence shows that firms with ownership links to domestic banks or the government grow less, while stronger and younger firms benefit from the

FIGURE 1.19

Bank ownership patterns in Europe and Central Asia transition economies, 1997 and 2005



Source: Barth, Caprio, and Levine 2008; EBRD (various years); and World Bank staff estimates.

entry of foreign banks. While foreign banks initially focused on large and foreign-owned firms, improvements in the contractual and information framework in the host country made lending to small and medium firms more attractive as well.⁵ Foreign strategic investors were also crucial for the development of financial services: by bringing in new technology and skills from their home countries, foreign banks had an overall positive impact on their home countries and on their host countries' financial systems. More recently, foreign banks were instrumental in providing credit to households, both mortgages and consumer finance.

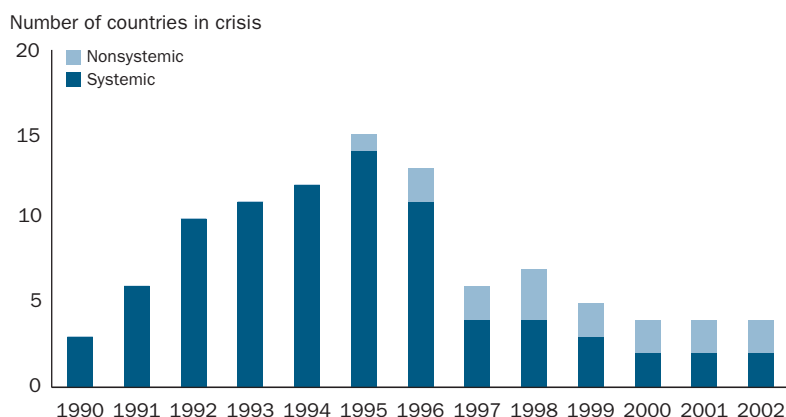
Foreign banks strengthened ECA's banking sector. Restructuring and better risk management within the banking sector sharply reduced nonperforming loans and maintained high capital adequacy ratios with significant changes between 1999 and 2007 (table 1.2). Provisions against loan losses generally increased steadily until 2007. Profitability, measured by rates of return on equity and assets, was high till 2007 but declined in 2008 to ranges seen earlier in the decade, perhaps reflecting the gradual onset of the crisis. Even so, profitability appears high enough to accommodate the substantial additional provisioning expected in 2009–10.

Parent banks that entered Central and Eastern Europe have been more profitable than their domestic competitors at home. Indeed, banks with a presence in Central and Eastern Europe had higher rates of return-on-equity

5. De Haas and Naaborg 2005.

FIGURE 1.20

Banking crises in transition economies, 1990–2002



Note: Episodes of distress are classified as systemic if emergency measures were taken to assist the banking system (such as bank holidays, deposit freezes, guarantees to depositors or other creditors) or if large-scale nationalizations took place. Episodes were also classified as systemic if nonperforming assets reached 10 percent of total assets at the peak of the crisis or if the cost of rescue operations was more than 2 percent of GDP.

Source: Honohan and Laeven 2005.

over 2004–08 than banks that have only market exposure in their home country (figures 1.21 and 1.22).⁶ Although the return on equity declines over the period in both groups, it does so more in the latter. Similar results hold for the rate of return-on-assets. Part of the reason for the higher rates of return for the internationally diversified banks is that markets perceived these as riskier, as reflected in more volatile stock prices than their domestic counterparts.⁷

... while taking on risks

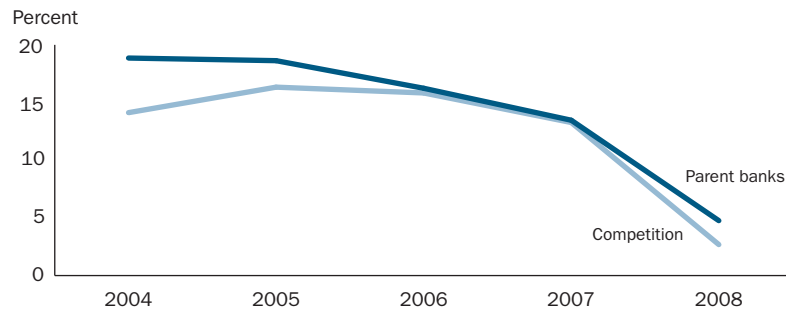
There was also a rapid increase across most groups in private sector credit-to-GDP ratios and in loan-to-deposit ratios (figures 1.23 and 1.24). Although the increase was most marked in Group 1 countries, the increase in other groups, such as Group 2 and 3, is also telling. But credit expansion in excess of the growth of deposits increased the reliance of banks on external borrowing and exposed countries to the risk of sudden stops and reversals in capital flows. Loan-to-deposit ratios increased across all groups, showing that credit to the

6. The estimates refer to the rates of return for a group of banks with exposures in the ECA region and a group of other Western European banks. The rate of return for each bank is weighted by its share of equity or assets in the group.

7. The comparison is between the beta coefficients of a bank with exposure in Central and Eastern Europe with that of its domestic counterpart; those for the former are significantly higher than those for the latter.

FIGURE 1.21

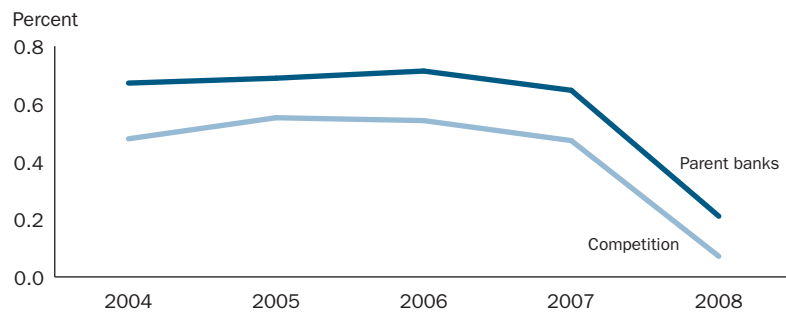
Average return on equity, parent banks and competition, 2004–08



Source: Andreeva and Branda 2009.

FIGURE 1.22

Average return on assets, parent banks and competition, 2004–08



Source: Andreeva and Branda 2009.

private sector was not financed through rising deposits (except for Group 4 where the increase was more modest).

By late 2008, foreign currency loans constituted the majority of bank loans in many new member states of the European Union—over 80 percent in Estonia and Latvia and around 60 percent in Bulgaria, Hungary, Lithuania, and Romania. But there are important exceptions to the generally high share of foreign currency-denominated lending. It stood at 10 percent in the Czech Republic, 20 percent in the Slovak Republic, and 25 percent in Poland, also the countries with the lowest loan-to-deposit ratios.⁸

8. As will be seen in chapter 2, these are also the countries where the share of international claims in total lending by parent banks and their subsidiaries are the lowest; in other words, resident deposit-taking was the primary source of funding.

TABLE 1.2
Evolution of banking sector indicators, by country, 1999–2008

Countries	Nonperforming loans (percent of total loans)			Capital adequacy (risk-weighted capital- asset ratio)			Loan-loss provisions (ratio of bank provisions for loan losses to nonperforming loans)			Return on equity (percent)			Return on assets (percent)							
	1999	2004	2007	1999	2004	2007	2000	2004	2007	1999	2004	2007	1999	2004	2007	1999	2004	2007		
Bosnia and Herzegovina	9.9 ^a	3.5	3.0	3.1	26.3 ^a	18.0	17.1	16.3	64.2	96.1	..	37.8	-5.8 ^a	5.6	8.9	4.3	-1.3 ^a	0.6	0.9	0.4
Bulgaria	29.0	7.1	1.7	2.2	43.0	16.6	13.8	14.9	65.9	49.0	46.6	7.9	20.9	20.0	23.8	20.5	20.5	2.1	2.4	2.1
Croatia	11.8	4.5	3.1	3.2	20.6	14.1	16.4	14.2	79.9	60.3	51.5	48.4	4.8	16.6	10.9	10.1	0.7	1.4	1.6	1.6
Czech Rep.	22.0	4.1	2.7	3.2	13.6	12.6	11.5	12.3	46.8	69.4	56.4	56.9	-4.3	23.4	24.5	21.7	-0.3	1.3	1.3	1.2
Estonia	1.7	0.3	0.5	1.9	16.1	13.4	14.8	18.8	..	..	..	..	9.2	13.8	30.2	13.8	1.4	1.6	2.6	1.2
Hungary	3.6	2.7	2.6	2.6	14.9	11.2	11.0	11.1	57.0	51.1	58.1	80.3	7.1	25.2	18.6	15.1	0.6	2.0	1.7	1.3
Kazakhstan	..	..	..	..	..	..	14.2	14.9	..	..	..	..	..	..	18.4	9.7	..	..	2.3	1.2
Latvia	6.0	1.1	0.4	2.2	16.0	11.7	11.1	11.8	74.1	99.1	129.8	92.6	11.2	21.4	24.2	4.6	1.0	1.7	2.0	0.3
Lithuania	12.5	2.3	0.8	1.1	17.4	12.3	10.9	12.9	34.6	21.6	73.0	..	1.1	13.4	26.0	16.1	0.5	1.3	1.7	1.2
Macedonia, FYR	41.3	13.2	7.5	6.9	28.7	23.0	17.0	15.6	..	76.2	94.1	..	3.5	6.2	15.2	19.1	0.8	1.1	1.8	2.2
Poland	13.2	15.5	5.3	5.0	13.2	15.6	12.0	10.7	40.5	58.0	..	..	12.9	17.6	24.8	20.6	0.9	1.4	1.9	1.5
Romania	35.4	8.1	9.7	9.8	17.9	18.8	12.7	11.9	..	34.3	25.7	27.8	-15.3	19.3	11.5	15.9	-1.5	2.5	1.3	1.4
Russian Federation	..	..	..	..	..	..	15.5	14.5	..	..	..	..	..	..	22.7	12.1	..	..	3.0	1.6
Serbia	21.6 ^b	22.8	3.8	5.3	25.6 ^b	27.9	27.9	21.9	..	..	..	..	-60.6 ^b	-5.3	10.2	10.6	-8.4 ^b	-1.2	1.7	2.1
Slovak Rep.	23.7	5.4	2.8	3.2	29.5	19.0	13.2	11.1	75.1	89.1	93.3	91.4	-36.5	11.9	19.6	14.1	-2.3	1.0	1.1	1.0
Slovenia	5.2	5.7	1.8	1.6	14.0	11.0	11.2	11.2	45.3	34.0	..	..	7.8	14.2	16.3	8.1	0.8	1.1	1.4	0.7
Turkey	10.5	6.0	3.5	3.2	8.2	28.8	19.0	17.7	59.8	88.1	86.8	81.1	33.1	17.4	21.3	18.8	3.3	2.5	2.7	2.2
Ukraine	..	3.2	1.3	14.5	..	..	13.9	13.6	..	26.3	26.0	..	..	..	12.7	10.9	..	1.1	1.5	1.3
Average	16.5	6.8	3.2	4.3	20.3	16.9	14.6	14.2	58.5	63.6	67.4	55.0	-0.7	14.7	18.9	13.7	-0.1	1.3	1.8	1.4
Austria	1.7	1.5	1.7	..	13.9	14.7	11.6	10.8	6.9	9.3	8.2	..	0.3	1.5	0.5	..

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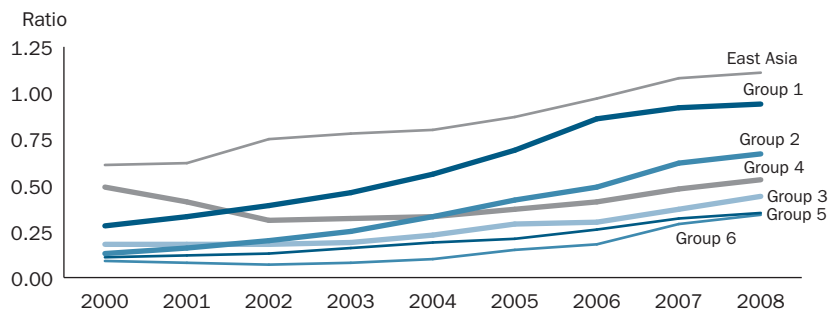
a. Data are for end-2000.

b. Data are for end-2002.

Source: Central banks (Annual Reports or Financial Stability Reports), IMF World Economic Outlook, and authors' calculations.

FIGURE 1.23

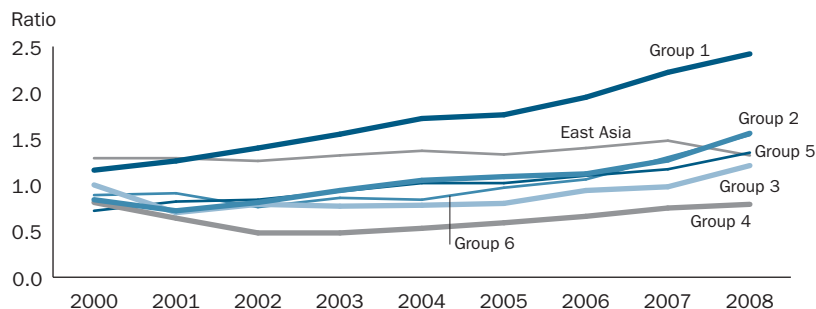
Private sector credit to GDP, median value, 2000–08



Note: East Asia denotes the median values for Indonesia, Korea, Malaysia, and Thailand for 1990–98; this data is superimposed on 2000–08 in the charts for the different groups of ECA countries. Source: IMF *World Economic Outlook*, World Bank *World Development Indicators*, and authors' calculations.

FIGURE 1.24

Loans to deposits, median value, 2000–08



Note: East Asia denotes the median values for Indonesia, Korea, Malaysia, and Thailand for 1990–98; this data is superimposed on 2000–08 in the charts for the different groups of ECA countries. Source: IMF *World Economic Outlook*, World Bank *World Development Indicators*, and authors' calculations.

Together the charts have two implications. First, there has been increasing reliance on direct borrowing from parent banks and on wholesale funding abroad. It is also worth noting that the increase among the countries of East Asia hit by the emerging market crisis of 1997–98 was not as pronounced, in line with the more limited role of parent banks in the buildup of vulnerabilities. Second, while deposits are typically the cheapest source of funding, parent bank expansion strategies relied heavily on foreign financing sources that were on-lent in foreign exchange to unhedged borrowers.

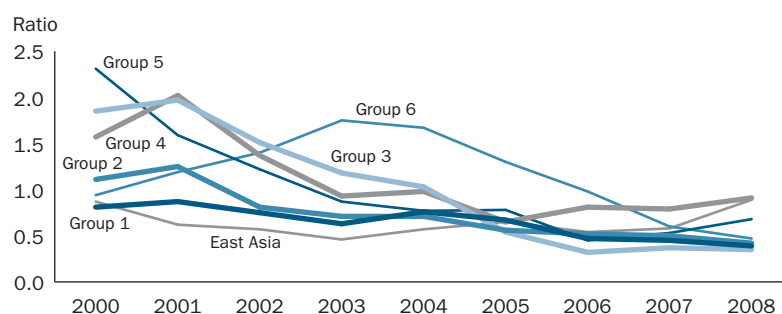
Foreign exchange liabilities and leverage (liabilities-to-equity) ratios of banks also rose among financially integrated countries. The foreign exchange exposure ratios show that foreign exchange liabilities increased across all groups, in some cases sharply, signaling growing vulnerability to a reversal in market sentiment (figure 1.25). And while leverage ratios are not high when compared with advanced economies, they increased steadily and rapidly over the past few years in the three groups (Groups 1 through 3) facing more sources of vulnerability (figure 1.26).

Financial deepening or irrational exuberance?

There is no doubt that credit to the private sector expanded very rapidly in the ECA countries, particularly since 2005. The growth of private sector credit has however been decelerating in the Baltic States since 2007 and, for the most part, elsewhere since mid-2008. But it is less clear how much of the acceleration reflects catch-up due to low initial indebtedness characteristic of late financial deepening and how much reflects excess growth. In particular, it is worth asking if credit growth was excessive in the years leading up to the crisis.

To answer that question, figure 1.27 defines excess credit growth relative to the average experience of all developing countries during 2005–08. The top two panels of figure 1.27 describe how each arrow in these charts should be interpreted. Where each arrow begins depicts private sector credit as a share of GDP in 2000 and the annual real private sector credit growth in 2001–04. The arrows end at the level of private sector credit as a share of GDP in 2004 and the annual real private sector credit growth in 2005–08. Whether credit

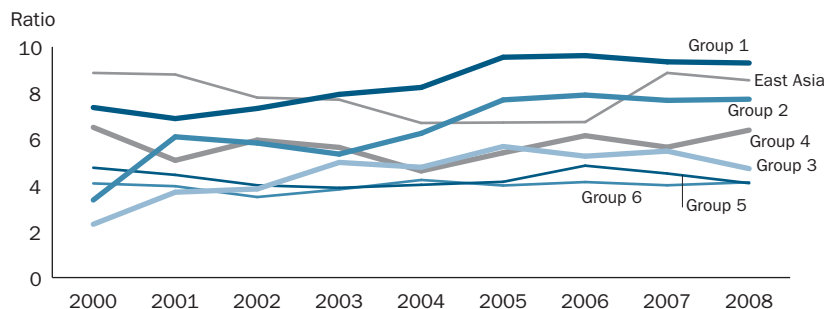
FIGURE 1.25
Foreign exchange assets to liabilities, median value, 2000–08



Note: East Asia denotes the median values for Indonesia, Korea, Malaysia, and Thailand for 1990–98; this data is superimposed on 2000–08 in the charts for the different groups of ECA countries. Source: IMF *World Economic Outlook*, World Bank *World Development Indicators*, and authors' calculations.

FIGURE 1.26

Liabilities to equity, median value, 2000–08



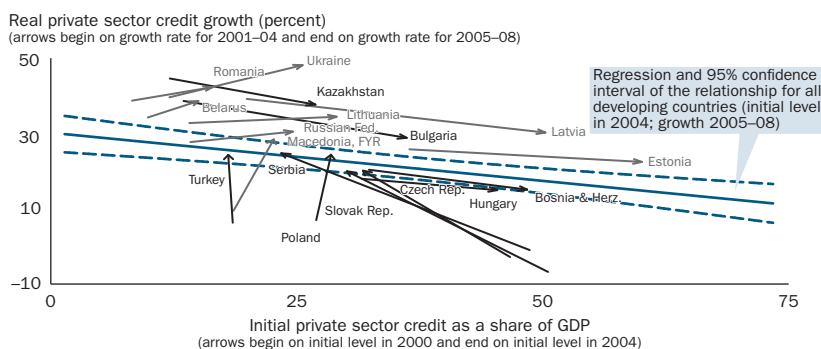
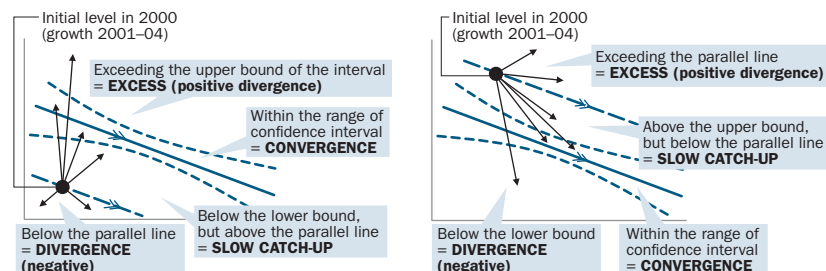
Note: East Asia denotes the median values for Indonesia, Korea, Malaysia, and Thailand for 1990–98; this data is superimposed on 2000–08 in the charts for the different groups of ECA countries. Source: IMF *World Economic Outlook*, World Bank *World Development Indicators*, and authors' calculations.

growth was convergent or excessive depends on where the arrows end relative to the confidence interval. For countries whose arrows begin below the regression line, three relevant outcomes are possible. First, if the arrow ends within the confidence interval, these countries are considered to be catching up (convergence). Second, if the arrow exceeds the upper bound confidence interval, this indicates “excess” credit growth. Third, if arrows go toward the regression line but do not reach the lower bound, countries are said to be catching up but at a slow rate. The same logic applies to countries whose arrows start above the regression line—though in this case, excess growth relates to arrows going away from the origin of these graphs.

Financially integrated countries in ECA are represented in the bottom panel of figure 1.27. The upward sloping arrows that end above the upper bound confidence interval are interpreted as cases of excess credit growth. This includes Belarus, Lithuania, Romania, the Russian Federation, and Ukraine: for all five the second subperiod’s growth was higher than the first subperiod’s—in excess of 30 percent a year except in the Russian Federation, where it was somewhat lower. Estonia already had the financial depth characteristic of Central Europe in 2000 and had far overtaken the latter by 2004 as a result of high credit growth, which continued with only slight moderation in the second subperiod. Bulgaria and Kazakhstan, however, went through a slow convergence. The Czech and Slovak Republics and Turkey experienced financial disintermediation between 2000 and 2004, but credit growth was positive between 2005 and 2008. FYR Macedonia’s growth picked up in the second subperiod—a borderline case. But the other transition countries were in line with the average developing country.

FIGURE 1.27

Private sector credit developments in 2005–08: catch-up or excess?



Note: The horizontal axis depicts the initial level of private sector credit as a share of GDP in either 2000 or 2004 in all three charts. The vertical axis depicts annual percentage changes of real private sector credit for four-year periods beginning in 2001 or in 2005. The downward sloping line reflects a negative relationship for developing countries (including nontransition countries) between the initial level of private sector credit as a share of GDP in 2004 and real private sector credit growth during 2005–08; also shown are the 95 percent confidence intervals for the relationship. Source: IMF *World Economic Outlook*, World Bank *World Development Indicators*, and authors' calculations.

In sum, the evidence suggests that financially integrated transition countries that experienced excess credit growth were those that had come late to the transition. Thus, using the share of private credit in GDP as a measure of financial deepening, it is clear that most countries of the former Soviet Union—Belarus, Kazakhstan, the Russian Federation, and Ukraine, as well as Lithuania and (to less extent) Latvia—having come later in the transition, were financially much shallower in 2000 than countries in Central Europe, such as Croatia and Serbia. So too were Bulgaria and particularly Romania, both of which had encountered severe macroeconomic difficulties in the mid-1990s and undergone a second transition recession before a durable recovery took hold. This relative lack of financial depth continued to be true for the share of private credit in GDP even in 2004 for Belarus, Kazakhstan, Romania, the Russian Federation, and Ukraine in relation to Central Europe and Croatia.

Indeed, Kazakhstan, the Russian Federation, and Ukraine had similar levels of financial depth in 2004. But that was no longer the case for Bulgaria and Latvia where financial depth, starting at CIS levels, had respectively become comparable to and exceeded that of Central and Eastern Europe by 2004.

Bringing finance home

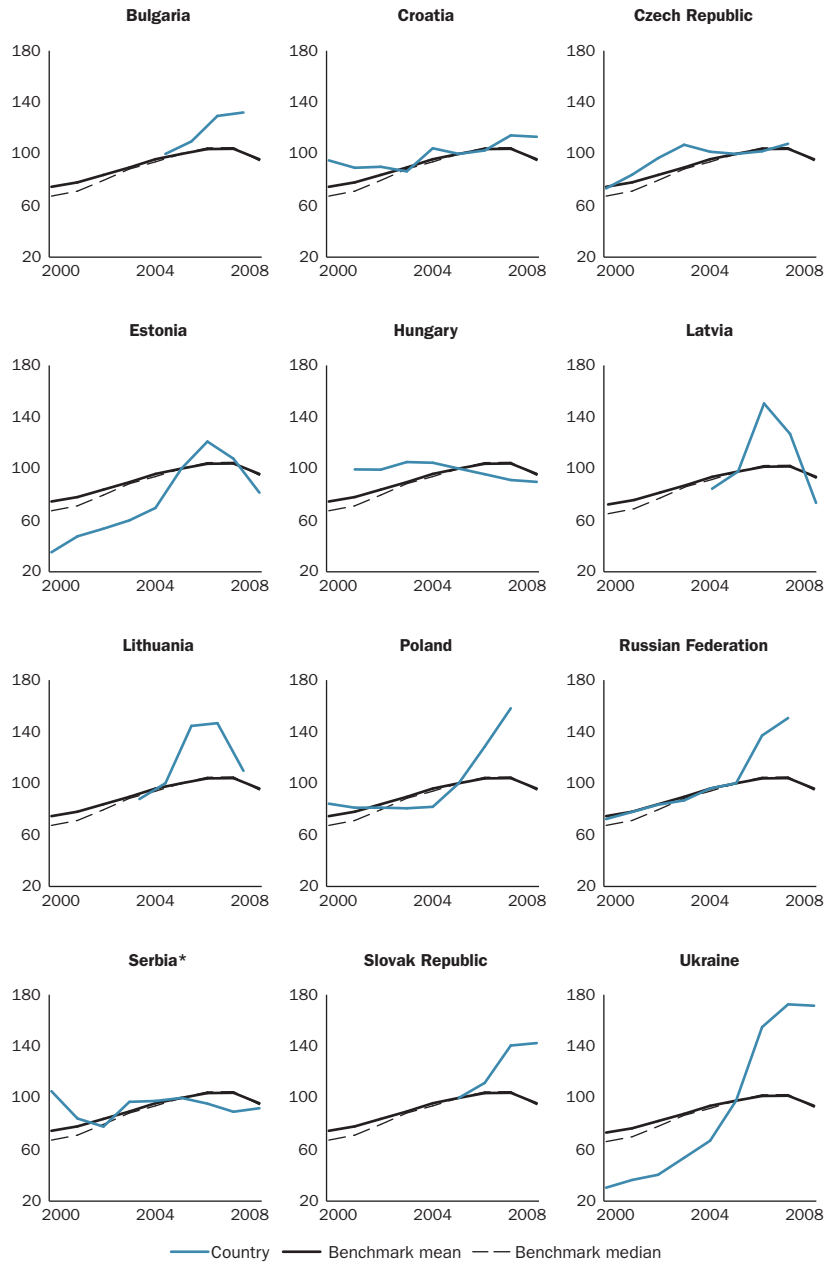
The domestic credit expansion of 2005–08 in much of ECA was driven by the household sector. As large corporates turned to cheaper cross-border lending, the share of households in bank loans to households and nonfinancial corporates rose sharply after 2003, and in 2008 stood at more than 50 percent in the Czech Republic, Estonia, Poland, and Romania; somewhat less than 50 percent in Hungary, Latvia, and the Slovak Republic; and below 40 percent in Bulgaria and Ukraine (table 1.3). Indeed, the increase in the ratio over five years was by far the highest in Kazakhstan and the Russian Federation, both of which were financially less developed and where the share of households in private sector loans was around 10 percent in 2003. It was the least in Estonia and the Czech Republic, where households already accounted for more than 40 percent of private sector loans in 2003.

With real credit growth in Kazakhstan and the Russian Federation at 30 percent or more a year in 2005–08, there was a steep rise in household lending, albeit from a very low base (figure 1.27 and table 1.3). Among households, mortgages increased in importance in many countries, particularly Croatia, Latvia, and Poland and, as a share of household lending, stood at around 80 percent in Estonia and Latvia, 70 percent in the Czech Republic and Lithuania, 50 percent in Poland and just above 40 percent in Bulgaria and Croatia and about 30 percent in Ukraine in 2008 (table 1.3). But the share of mortgages in household lending between 2003 and 2008 stayed broadly unchanged in the Slovak Republic and fell sharply in Hungary and, to much less extent in Lithuania. In Hungary, the Slovak Republic, and Slovenia, adjustable interest rate mortgages accounted for more than three-quarters of mortgage debt in 2006. Household indebtedness in the new member states of the European Union is however much lower than in the EU15. Within the corporate sector, whose share was falling, lending to previously underserved small and medium enterprises increased faster in the Czech Republic, Hungary, and Poland—a positive development.

Not surprisingly, the increase in private sector credit was accompanied by increases in asset prices. There were marked increases in real housing prices—beyond those in the Western European benchmark (figure 1.28). This is true of the countries that had excess credit growth during 2005–08 for which data on house prices are also available: Bulgaria, Estonia, Latvia, Lithuania, the

FIGURE 1.28

Real housing price developments, 2005 = 100



*For Serbia the data end in June 2008.

Source: Global Property Guide based on data from statistical offices and real estate companies. Benchmark countries are France, Germany, Ireland, Spain, and the United Kingdom.

TABLE 1.3

Growth and composition of credit to the private sector (percent)

Country	Average growth of credit to households 2003–08	Average growth of credit to corporations 2003–08	Ratios of lending to households to lending to households and corporations		Share of housing loans in total household lending	
			2003	2008	2003	2008
Bulgaria	41	57	27	37	..	43
Croatia	15	11	53	57	31	43
Czech Rep.	26	12	41	56	65	70
Estonia	39	32	45	51	78	81
Hungary	21	7	35	49	64	51
Kazakhstan	71	34	12	30	..	..
Latvia	44	28	33	47	64	79
Lithuania	59	31	22	43	76	69
Macedonia, FYR	44	20	22	40	..	..
Poland	28	13	50	65	30	52
Romania			..	51	..	21
Russian Federation	59	27	10	25	..	28
Slovak Rep.	28	10	28	46	69	68
Turkey	45	24	27	44	27	33
Ukraine	84	47	25	39	25	31

.. is not available.

Source: IMF *International Financial Statistics*, central banks, and Bank staff estimates.

Russian Federation, and Ukraine. But the timing of the peaks differs—house prices started falling in 2007 in Estonia and Latvia, but only in 2008 in Lithuania. Here too, however, there is no tight association between credit growth and housing price increases, since there were rapid increases in the latter in Poland and the Slovak Republic, both countries with convergent credit growth.⁹

Financial integration clearly brought benefits to borrowers and lenders alike. Credit became widely available to countries that had rudimentary financial sectors at the beginning of their transition. Established corporates could work with cross-border banks directly. Countries with majority foreign-owned banks saw credit extended to younger and less established firms. Households could borrow to finance housing and other durables, driving the

9. There are also significant structural breaks during the period, including in the role of private builders in a sector that was among the latest to be liberalized to market forces (both in prices and in the public sector as a supplier of housing).

credit boom in many countries. On the supply side, as already noted, Western European banks with subsidiaries in CEE earned higher returns on equity and assets than those serving only home countries (see figures 1.21 and 1.22). In a broader institutional context, modernized lending practices and strengthened risk assessment procedures led to lower nonperforming loans and higher loan loss provisions as well as high capital adequacy ratios until 2007.

But borrowing in foreign currency posed macroeconomic risks for countries that did not belong to a reserve currency area. The incentives to do so depended on whether the differentials between domestic and international lending rates were narrowing, reflecting market expectations of the credibility of disinflation efforts and the exchange rate regime. And disinflation was far from achieved in a number of countries: in 2007, Bulgaria, Estonia, and Hungary had high single-digit inflation, and Latvia had double-digit inflation. In 2008, Croatia and Romania had high single-digit inflation and Bulgaria, Estonia, Latvia, Lithuania, and FYR Macedonia had double digit inflation.

The interest rate spread in the Baltic states and Bulgaria, which have fixed exchange rates, increased after 2006, while it increased from end-2007 in Croatia, Hungary, and Romania, where the first country had an exchange rate peg and the other two were facing fiscal difficulties. The expectation that these countries, either new EU member states or close to accession, would eventually adopt the euro, and that convergence implied trend real currency appreciation, made it extremely profitable to engage in borrowing and lending in foreign currencies when the lending spread was high. Borrowers evidently perceived pegs to be credible in countries with fixed exchange rates and expected nominal appreciation in countries with flexible exchange rates on account of an expected catch-up in living standards.¹⁰

Policymakers attempted to put “sand in the wheels” during the boom years with mixed success, illustrating the difficulty of restraining macroeconomic imbalances in small, open, and integrating economies. What needed to be done about the growth of credit, particularly the foreign exchange exposure, has been a subject of widespread debate since at least 2005, and many countries in the region introduced prudential measures in an attempt to limit vulnerabilities (box 1.2). By way of example, Estonia increased the risk weight for housing loans in calculating capital adequacy from 50 percent to 100 percent. Latvia relied on monetary reserves. Bulgaria and Romania introduced tighter loan-loss provisioning, more stringent rules for classifying claims and cal-

10. This appears still to be the case in the midst of the financial crisis. Specifically, households in Hungary have largely not taken up the option—available after the onset of the crisis—of converting foreign currency mortgages into local currency.

BOX 1.2

Playing cat and mouse—staying ahead of regulation arbitrage in Southeastern Europe

High credit growth rates have been a major concern for countries in the region, in particular when accompanied by risk-taking that banking supervision authorities might regard as excessive, as when foreign exchange borrowing is undertaken by domestic entities that are not naturally hedged. But regulation is no easy task. As countries know only too well: regulate banks, and leasing activities will emerge, regulate “the system,” and cross-border lending flourishes. The trick is to strike a balance and to keep adapting regulations as means to circumvent them are developed. But behavior to circumvent regulations occurs against a broader backdrop, where a country’s macroeconomic policy mix and exogenous factors that affect global liquidity are at play.

Despite these difficulties, many banking supervision authorities have actively introduced monetary and prudential regulations to slow, at least for a while, what is perceived as high risk or excessive lending. Croatia, FYR Macedonia, Montenegro, Romania, Serbia, and Slovenia have pursued countercyclical monetary and prudential policies to pour “sand in the wheels,” and shared successes and failures. Examples of such monetary and prudential regulations include:

- *Increased risk weights for capital adequacy ratio calculations.* When growth rates in certain business lines, such as credit card and overdraft credit lines, were considered too high, the corresponding risk weights were adjusted upward. For example, in FYR Macedonia the risk weights were increased from 100 to 125 percent for consumer lending. In Serbia the risk weights also varied between local and foreign currency loans.
- *Regulations on loan classification.* Foreign currency loans are classified as higher risk; with exceptions allowed only with first class collateral, such as government bonds. The effectiveness of these exceptions depends on a well developed registry of collateralized assets, which cannot always be assumed. For instance, Latvia introduced such a registry only in early 2008, when banks realized for the first time that some of the collateral they held had been pledged multiple times.
- *Indicative credit growth thresholds.* Whenever credit growth rates exceeded a predefined threshold considered too high by the banking supervision authorities, a compulsory deposit equal to the excess above the threshold needed to be deposited with the central bank. FYR Macedonia introduced such a policy in the second quarter of 2008 for household credit, and the deposit was remunerated at a 1 percent rate. In Croatia, the deposit is remunerated at the same rate but in special central bank bills that are marketable. The regulation is intended not as a credit ceiling, but as a cost markup whenever credit growth exceeds the specified threshold. In Croatia and Montenegro, the ceiling applies to total credit as opposed to household credit alone.

(continued)

BOX 1.2 (CONTINUED)

Playing cat and mouse—staying ahead of regulation arbitrage in Southeastern Europe

In Croatia, the limits are also tied to the source of funding on which the banks depend, and in Montenegro, the ceiling growth rates are tied to the bank's own capital adequacy ratios.

- *Liquidity-asset ratios—typically distinguishing between loan currencies and maturities.* In FYR Macedonia, banks are obliged to maintain floor thresholds for liquidity-asset ratios. The thresholds are applied to 30-day and 180-day maturities, distinguish between local currency and foreign exchange exposures, and allow only low-risk highly liquid assets to be used in the calculations. Banks that do not comply with the ratios are required to make up the shortfall in phases. Concentration in lending results in the imposition of additional liquidity requirements.
- *Minimum foreign exchange liquidity requirements.* In Croatia the foreign exchange liquidity has a floor of 32 percent of the total to discourage foreign exchange liabilities as a source for funding credit operations.
- *Leverage ratio limits or special reserve requirements.* Romania introduced limits on leverage ratios or special reserve requirements.
- *Varying reserve requirements.* These have been set at different levels for local currency and foreign exchange deposits, aimed at increasing the interest rate and thus reducing credit demand.

While supervision authorities develop rules to slow credit growth, banks have looked for ways to circumvent them as they are introduced. The typical credit growth control regulation is said to have a shelf life of one to two years; and even monetary regulation can be circumvented, as with capital controls more generally. One way to circumvent controls is through establishing leasing companies, which typically operate outside the reach of banking supervision authorities. When they are closely linked to bank activities, as in FYR Macedonia, they can easily be brought within the purview of the regulatory authorities. But in the Baltic states, they have emerged as entirely separate entities that compete with banks for shorter maturity lending. In Latvia, leasing institutions make it more difficult for banks to restructure mortgage loans, as they attempt to coerce early repayment by threatening foreclosure. Since mortgage lending has a priority claim, this obliges banking institutions to foreclose on loans that they would otherwise have preferred to have restructured.

culating capital, increased risk weights, and limits to loan-to-value and loan payments-to-net income ratios. In addition to such prudential measures, Croatia introduced direct limits to credit growth whenever a specified threshold was exceeded, marginal reserve requirements on banks' foreign borrowing (as Chile had in 1992), and specific additional capital requirements related to foreign exchange exposure.

Although it might be too early to judge their effectiveness, some of these measures had unintended consequences. For example, limits on credit growth in Croatia could be circumvented by corporates directly accessing cross-border banks or capital markets, and in the end the limits constrained lending to small and medium enterprises. The Chilean-type tax in Croatia made foreign borrowing very expensive for banks and created an incentive for banks to finance expansion through equity rather than debt. Even there, however, a better capitalized banking system could have been accomplished more directly.

Would different macroeconomic policies have lessened vulnerability?

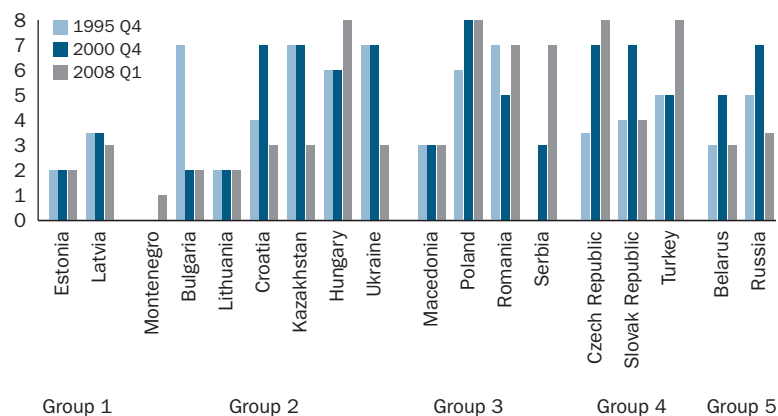
The vulnerabilities of ECA countries cannot be delinked from their pre-crisis policy choices. As an example, exchange rate regimes were evenly distributed between countries where their primary role was as a nominal anchor and those where external competitiveness was the main concern (figure 1.29). Not surprisingly, there is a concentration of less flexible regimes among countries that face more sources of vulnerability. And yet, the evidence on the role of exchange rate regimes is not conclusive. Indeed, it was only in early 2007 that overvaluation concerns emerged among small and open economies experiencing externally financed consumption booms. These were rationalized as driven by catching-up effects and the role of financial integration in a context of low private indebtedness.

But it is less clear that the buildup of vulnerabilities would have been avoided if countries had followed different policies. The magnitude of the capital inflows to these countries stretched the limits of the policy toolkits available to the authorities. More likely, the combination of initial conditions (degree of consumption catch-up effects, varying relative sizes of economies, progress in institutional reforms), exogenous factors (EU accession where applicable, high global liquidity), and policy choices made some countries more prone to balance of payments difficulties. So, even though differences in policy alone are unlikely to have averted the crisis, they might have placed countries in a better position to face the consequences when it struck.

To that end, the differences in macroeconomic conditions across groups, as well as the policy reaction of the authorities to balance of payments pressure across countries, are compared. The analysis focuses on (1) exchange rates, as reflected in measures of exchange rate flexibility and volatility, (2) fiscal policy, as measured by changes in the fiscal position vis-à-vis the cyclically-adjusted fiscal balance, and (3) monetary conditions, as measured by changes

FIGURE 1.29

Exchange rate regimes



Note: 1 no separate legal tender; 2 is a currency board; 3 conventional pegged arrangement; 3.5 conventional peg to a basket; 4 pegged exchange rate within horizontal bands; 5 equals crawling peg; 6 equals crawling band; 7 equals managed floating with no predetermined path; and 8 equals independently floating.

Source: IMF's AREAER, Bubula and Ötker-Robe, and authors' calculations.

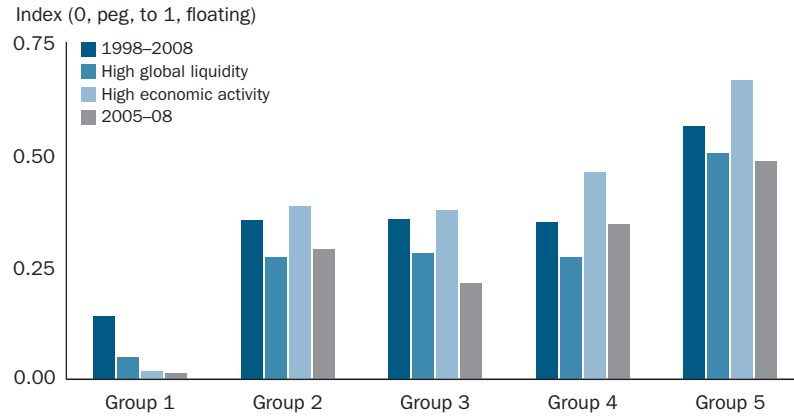
in velocity (as a proxy for demand and supply factors) and the central bank's sterilization efforts (as a proxy for a key determinant of the money supply—that is, central bank liquidity operations). The assessment distinguishes between:

- The average macroeconomic conditions in each of the five groups of financially integrated countries (figures 1.30–1.33) and across each of the policy instruments at the disposal of the authorities.
- The policy reaction functions to balance of payments pressure, i.e., the sum of the current account balance and capital flows (official and private) (figures 1.34–1.37)—and, in the case of the central bank's sterilization efforts, to changes in net foreign assets. Each policy reaction controls for other policies and initial conditions.¹¹

11. The analysis of policy reaction functions is based on econometric estimations and includes a dummy on group membership that is interacted with balance of payments pressures (that is, the sum of total capital flows—private and official—and the current account balance) corresponding to the country. For the central bank's sterilization effort, the group dummy is interacted with changes in net foreign assets. Different sample periods (1999–2008 and 2005–08) are considered, as well as episodes with high global liquidity (2003–06) and country-specific periods when economic activity is above potential. The fixed effect estimations include controls for other macroeconomic policies (lagged) as well as for country-specific initial conditions and economic characteristics, such as the output gap, inflationary pressures, external liquidity (short-term debt-to-reserves) and solvency (external debt-to-GDP) indicators, exchange rate regime (a dummy based on the IMF's AREAER), and time dummies.

FIGURE 1.30

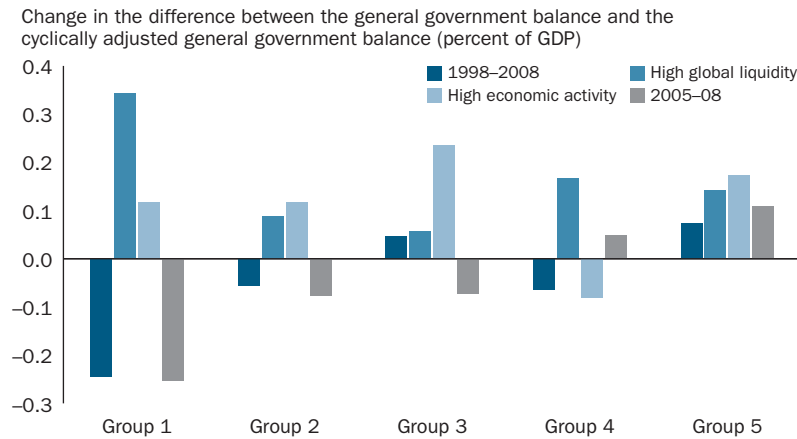
Average policy outcome/stance: exchange rate flexibility, by group and period



Source: IMF *World Economic Outlook*, World Bank DEC, and authors' calculations.

FIGURE 1.31

Average policy outcome/stance: fiscal policy, by group and period



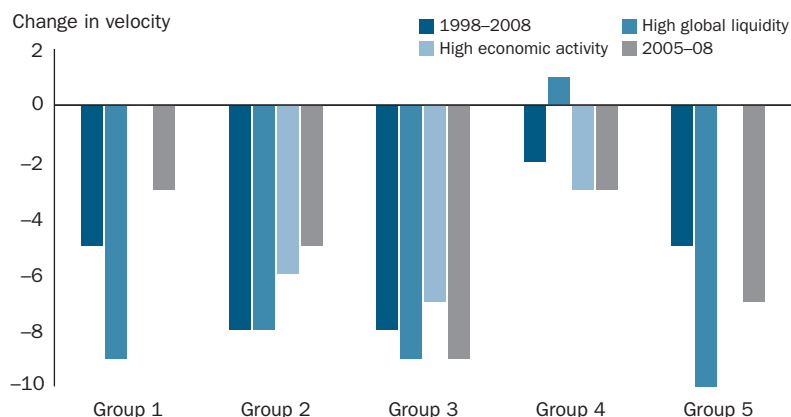
Note: A positive value implies tight fiscal conditions; a negative value, loose fiscal conditions.
Source: IMF *World Economic Outlook*, World Bank DEC, and authors' calculations.

The analysis for each individual policy instrument as well as the full portfolio of macroeconomic policies is done only for the groups of financially integrated countries.

As noted earlier, moving from Group 1 to 5 is associated with a decline in the number of sources of vulnerability. What matters in the end is whether

FIGURE 1.32

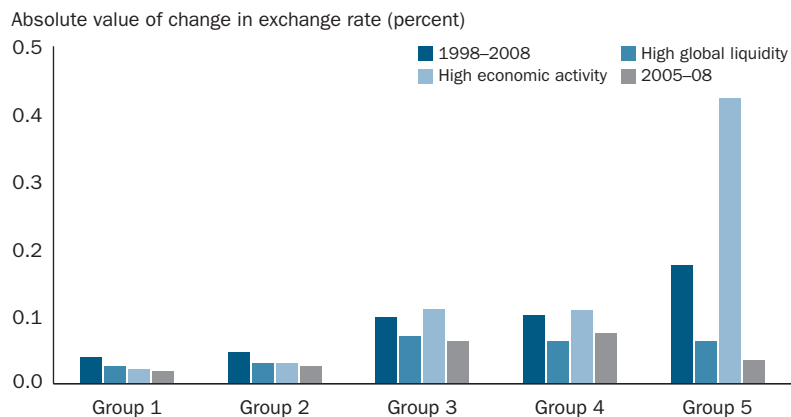
Average policy outcome/stance: monetary conditions, by group and period



Note: A positive value implies tight monetary conditions; a negative value, loose monetary conditions.
 Source: IMF *World Economic Outlook*, World Bank DEC, and authors' calculations.

FIGURE 1.33

Average policy outcome/stance: nominal exchange rate volatility, by group and period

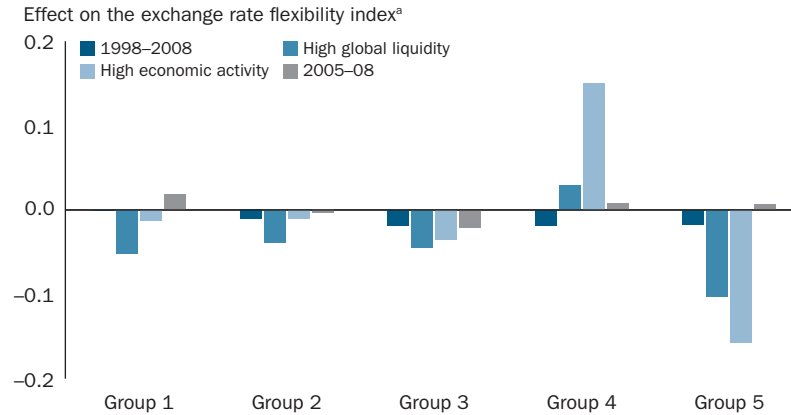


Source: IMF *World Economic Outlook*, World Bank DEC, and authors' calculations.

macroeconomic policies within each group were calibrated at the right level based on the external position affecting each group. Thus, the assessment by policy instrument is then complemented by a discussion covering the macroeconomic policies as a whole: specifically, the links between economic performance, the real exchange rate, and macroeconomic imbalances.

FIGURE 1.34

Policy response to balance-of-payment pressures: exchange rate flexibility, by group and period



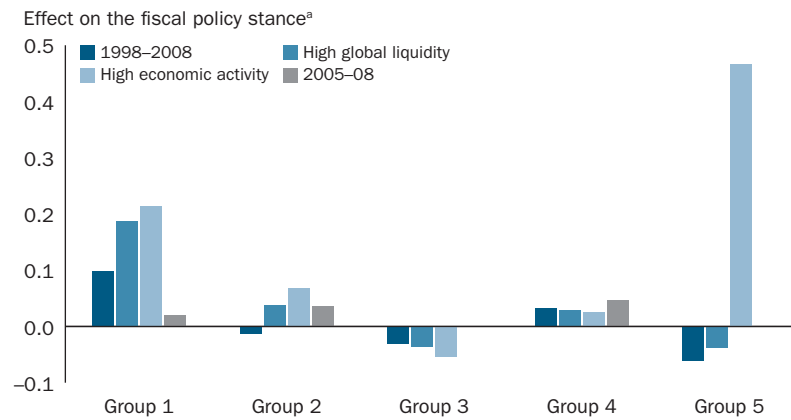
Note: The figure represents the point estimate derived from a fixed-effects ordinary least squares estimation that includes controls for lagged economic policies (fiscal and monetary policy, exchange rate flexibility, and sterilization) and for initial conditions (output gap, liquidity, solvency, and exchange rate regime) as well as dummy variables for time.

a. A positive value implies more flexibility and a negative value implies less flexibility.

Source: IMF *World Economic Outlook*, World Bank DEC, and authors' calculations.

FIGURE 1.35

Policy response to balance-of-payment pressures: fiscal policy, by group and period



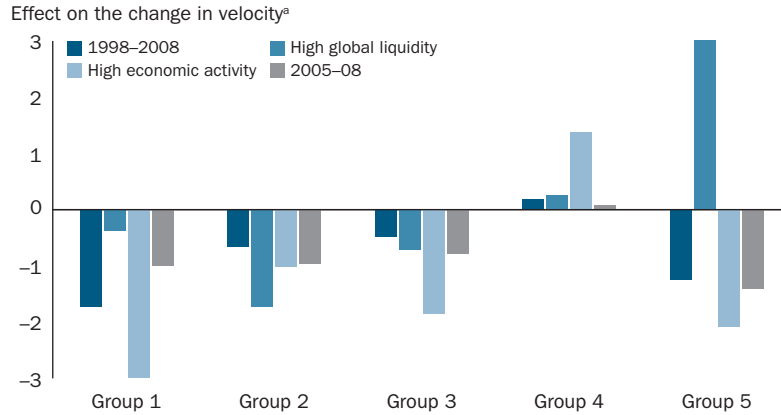
Note: The figure represents the point estimate derived from a fixed-effects ordinary least squares estimation that includes controls for lagged economic policies (fiscal and monetary policy, exchange rate flexibility, and sterilization) and for initial conditions (output gap, liquidity, solvency, and exchange rate regime) as well as dummy variables for time.

a. A positive value implies fiscal tightening and a negative value implies loosening.

Source: IMF *World Economic Outlook*, World Bank DEC, and authors' calculations.

FIGURE 1.36

Policy response to balance-of-payment pressures: monetary policy conditions, by group and period



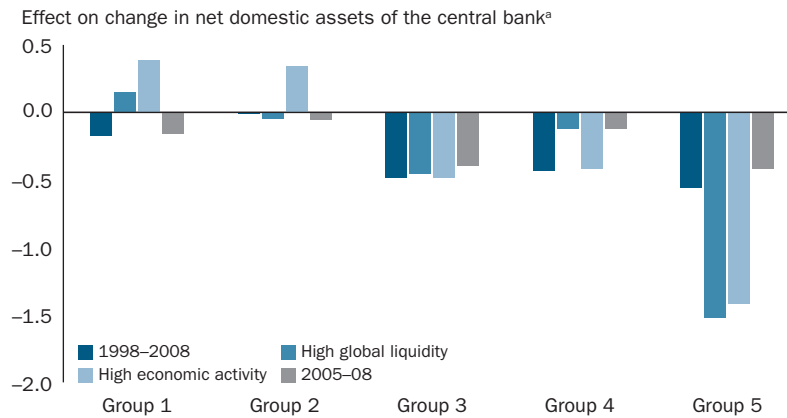
Note: The figure represents the point estimate derived from a fixed-effects ordinary least squares estimation that includes controls for lagged economic policies (fiscal and monetary policy, exchange rate flexibility, and sterilization) and for initial conditions (output gap, liquidity, solvency, and exchange rate regime) as well as dummy variables for time.

a. A positive value implies monetary tightening and a negative value implies loosening.

Source: IMF *World Economic Outlook*, World Bank DEC, and authors' calculations.

FIGURE 1.37

Policy response to changes in net foreign assets: sterilization of foreign exchange, by group and period



Note: The figure represents the point estimate derived from a fixed-effects ordinary least squares estimation that includes controls for lagged economic policies (fiscal and monetary policy, exchange rate flexibility, and sterilization) and for initial conditions (output gap, liquidity, solvency, and exchange rate regime) as well as dummy variables for time.

a. A value of zero implies no sterilization and a value of -1 implies full sterilization.

Source: IMF *World Economic Outlook*, World Bank DEC, and authors' calculations.

Before discussing each policy instrument and their role in the buildup of vulnerabilities, it is useful to provide an example of how to interpret figures 1.30–1.37. For example, Group 1 had loose fiscal policies in the period 2005–08 (figure 1.31). Yet, this group appears to have tightened fiscal policies—though only marginally—when balance of payments pressures were positive (figure 1.35). In sum, while the policy reaction is appropriate, it appears that the overall fiscal policy stance was still too loose. It is also important to recognize that the discussion reflects average policy responses in a group but might mask intragroup differences. For instance, the two countries in Group 1 had different fiscal stances before the global financial crisis. Even so, it is useful to look at developments at the level of country groups to provide policy guidance for countries that might face similar sources of vulnerability in the future.

Opening the toolkit

Nominal exchange rate policy

In general, countries in all five groups experienced lower exchange rate flexibility in 2005–08 than for the full period (figure 1.30).¹² Countries also experienced lower exchange rate flexibility during episodes of high global liquidity, 2003–06. This suggests that policymakers attempt to limit appreciation pressures originating outside the country, most likely to prevent losses in external competitiveness. Interestingly, countries appear more favorably disposed toward exchange rate flexibility when domestic activity picks up. In levels, this appears to mimic the exchange rate regime that dominates each group. In fact, the groups facing more sources of vulnerability have lower flexibility, and those with fewer sources of vulnerability have more volatile exchange rates. Still, volatility has declined overall.

Country groups with fewer sources of vulnerability appear to have reduced exchange rate flexibility in response to balance of payments pressure (figure 1.34). This was particularly true when global liquidity was high or when domestic economic activity was above potential (figure 1.33).¹³ Although there are differences across groups, they generally had lower exchange rate flexibil-

12. The index of exchange rate flexibility is defined as the absolute change in the exchange rate divided by this term plus the change—also absolute—in foreign exchange reserves. The index defined in this way is restricted to the closed interval [0, 1] with 0 a full peg and 1 a fully floating regime. Exchange rate volatility is calculated as the absolute value of the percentage change of the exchange rate over the previous 12 months (calculated using monthly nominal effective exchange rates). Volatility is defined as the 12-month average of the observations.

13. The results for Group 5 are probably dominated by the policy stance of the Russian Federation during the years of high oil prices.

ity when global liquidity was high. Note, moreover, that Group 4 was disposed toward exchange rate flexibility when output was above potential.

Fiscal policy stance

The fiscal stance was in general looser in the more vulnerable country groups, especially during the last four-year period (figure 1.31).¹⁴ Fiscal policy appears to have run counter to what policy advice would usually recommend, with more vulnerable countries, some with pegged exchange rates, also following looser fiscal policies in 2005–08. By contrast, countries appear to have tightened fiscal policies relative to the cycle during the high global liquidity period (2003–06) and when domestic economic activity was above potential. Such procyclical fiscal behavior in the period preceding the global financial crisis suggests that more could have been done by country authorities to reduce or contain overheating.

In contrast to the average fiscal stance, policy responses in the face of balance of payments pressure are more nuanced. More vulnerable countries tightened fiscal policies (figure 1.35), though this adjustment might not have been sufficient. But it is not clear whether fiscal policy alone could have brought the macroeconomic framework onto a sustainable path, given the magnitude of capital inflows and their role in exacerbating external imbalances. While fiscal policy might have lessened vulnerabilities, it is also possible that the necessary adjustment would have been too much to bear with only one policy tool. Group 1 did not tighten policies to any significant extent during 2005–08. And while Group 4 tightened fiscal policy when faced with balance of payments pressure across most subsamples, Groups 3 and 5 were looser even during high global liquidity periods.

Monetary conditions and central bank sterilization efforts

The underlying monetary conditions reflect the rapid monetization of the ECA region.¹⁵ Indeed, all country groups experienced a decline in velocity, reflecting an increase in money demand as financial deepening intensified (figure 1.32). The decline was least striking in Group 4, the group that also experienced declines in financial disintermediation during part of the decade.

14. Fiscal stance is defined as the change in the deviation between the fiscal balance and the cyclically adjusted fiscal balance (a measure of fiscal impulse). An increase represents a fiscal tightening.

15. Monetary policy is defined as the change in nominal GDP over the change in broad money: a measure of velocity. Sterilization is defined as the change in net domestic assets of the central bank. The econometric estimation links changes in central bank net foreign assets to this measure of net domestic assets; a zero implies no sterilization, a -1 implies full sterilization. The coefficient can also be positive if, for example, liquidity exceeds even what would have been justified on account of the change in net foreign assets alone. Both net domestic assets and net foreign assets are scaled by the average of reserve money in period t and period $t-1$.

But the differences between country groups across periods and events are quite revealing. Almost all groups experienced a loosening of monetary conditions during the period of high global liquidity, except again Group 4, which appears to have followed rather tight monetary policy during the past decade. While these developments might in part reflect increased money demand, they also suggest that more could have been done to slow down economic activity. A caveat is in order. Increases in interest rates as a result of tighter monetary conditions could also further stimulate capital inflows. The evidence is more varied when focusing on episodes of high domestic economic activity or on the most recent four-year period (2005–08). Groups 1 and 5 have tighter monetary conditions when economic activity picks up than at other times. Indeed, relative to other periods and events, this is the case across all groups—and it might mirror the choice of exchange rate regime that reduces the effectiveness of monetary policy. Interestingly, there seems to be more variety during the last four-year period. Group 1 appears to have experienced monetary conditions, which, while still loose, were tighter than those in Groups 2, 3, and 5.

There is also a variety of monetary policy responses when balance of payments pressures are positive (figure 1.36). Specifically, while Groups 1 through 3 (and, to some extent, Group 5) had loose monetary policy responses, the opposite was the case in the most recent four-year period among countries in Group 4.

Sterilization efforts were limited in the more vulnerable country groups (Groups 1 and 2) but more actively pursued in the less vulnerable country (Groups 3 and 5), although less so in Group 4. For the most part, Groups 1 and 2 appear to have allowed external financing and its impact on net foreign assets to be fully monetized, while Groups 3 through 5 and, to a lesser extent, Group 4 more actively sterilized the effects of the balance of payments on the monetary accounts. Although these efforts weakened across all groups in the most recent four-year period, they were important during periods of high domestic economic activity and, in some cases, also during the high global liquidity period. The limited sterilization effort might also reflect the unusually high global liquidity that characterized the period, including the effect of EU accession on capital mobility in a number of these countries. But a more active sterilization effort might have only furthered stimulate capital inflows through the interest differentials this might have created relative to the EU15 countries.

An overall policy assessment

The real exchange rate can be used as a summary statistic to assess macro-economic developments. While the real exchange rate is outside the control of

country authorities, it is affected by their policy choices and the response of the economy to those policies. Moreover, macroeconomic policies are not formulated by the authorities in a vacuum. Instead, they are informed by domestic and external developments: from a country's economic growth to the underlying inflationary pressures and buildup of external vulnerabilities. Here too the real exchange rate serves as a summary of the effects of economic policies.

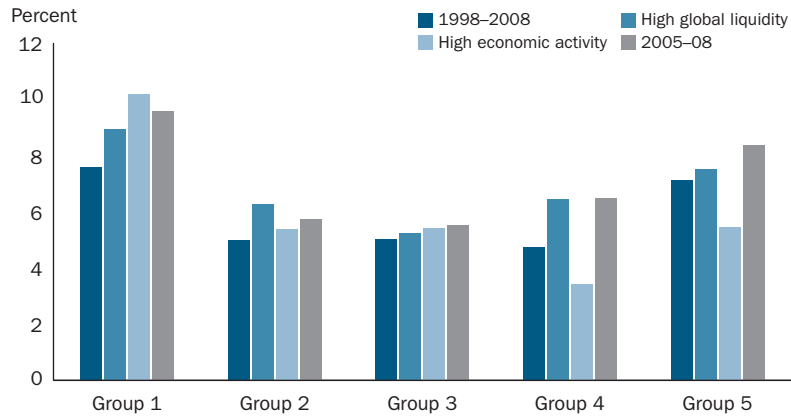
Group 1 experienced the largest current account imbalances with the smallest real exchange rate appreciation while Group 4 in contrast had moderate current account imbalances with significant real appreciation (figures 1.38–1.41). Thus, a tighter set of macroeconomic policies would have been needed to contain the deterioration in the external accounts in Group 1. In fact, fiscal policy could have played a greater role in containing the excessively rapid economic growth underpinned by large and ultimately unsustainable capital inflows. This also appears to be the case during the episodes of high global liquidity and high economic activity. Indeed, since the choice of exchange rate regime restricted the options for monetary policy—and particularly the effectiveness of sterilization efforts owing to their impact on interest rate differentials and, consequently, on capital inflows—fiscal policy should have played a greater role. In contrast, the appreciation pressures in Group 4 in all likelihood reflect productivity gains, and thus explain why external imbalances did not accumulate too rapidly or become a source of vulnerability. Countries in this group appear to have kept a balance of fiscal and monetary policies that enabled sustainable growth, as the Czech Republic shows (box 1.3).

The countries in Group 3 were successful on average but experienced policy slippages in recent years. Specifically, external imbalances accumulated in the last four-year period—the average for the period as a whole is much lower than during 2005–08 (figure 1.39). Moreover, appreciation pressures picked up (figure 1.40). While these pressures could reflect productivity gains, external imbalances cast some doubt on such an interpretation. Indeed, examining each policy instrument points to the conclusion that fiscal and monetary conditions could have been tightened more during the high global liquidity period. Still, this group appears to have reached the era of large capital inflows with a lag, and this might have helped avoid an even more difficult set of risks.

In conclusion, while the process of financial integration against the backdrop of high global liquidity reinforced the upswing features of the business cycle, not all countries exposed themselves equally to the risks of a change in market sentiment. Domestic macroeconomic policies were tightened in some countries but, quite remarkably, were loosened further in others during the

FIGURE 1.38

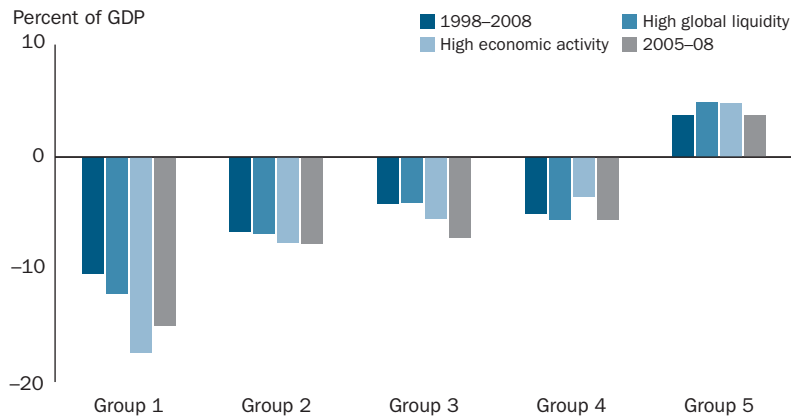
Median real GDP growth, by group and period



Source: IMF *World Economic Outlook*, World Bank *World Development Indicators*, and authors' calculations.

FIGURE 1.39

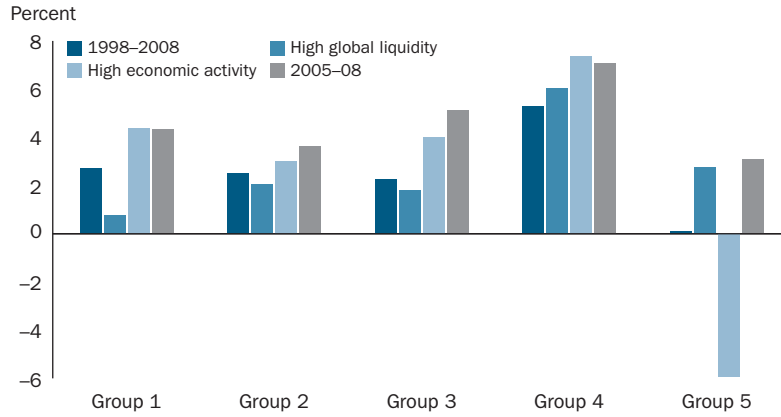
Median current account balance, by group and period



Source: IMF *World Economic Outlook*, World Bank *World Development Indicators*, and authors' calculations.

FIGURE 1.40

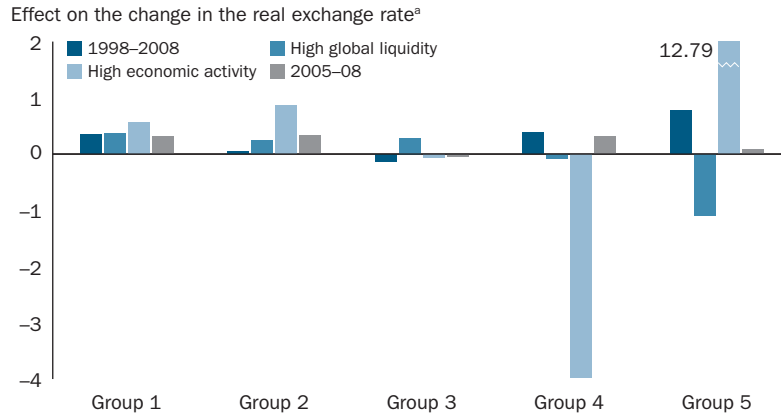
Change in real effective exchange rate, by group and period



Source: IMF *World Economic Outlook*, World Bank *World Development Indicators*, and authors' calculations.

FIGURE 1.41

Policy response to balance-of-payment pressures: real effective exchange rate, by group and period



Note: The figure represents the point estimate derived from a fixed-effects ordinary least squares estimation that includes controls for lagged economic policies (fiscal and monetary policy, exchange rate flexibility, and sterilization) and for initial conditions (output gap, liquidity, solvency, and exchange rate regime) as well as dummy variables for time.

a. A positive value implies appreciation pressures and a negative value implies depreciation pressures. Source: IMF *World Economic Outlook*, World Bank *World Development Indicators*, and authors' calculations.

BOX 1.3

Why foreign currency lending did not take off in the Czech Republic

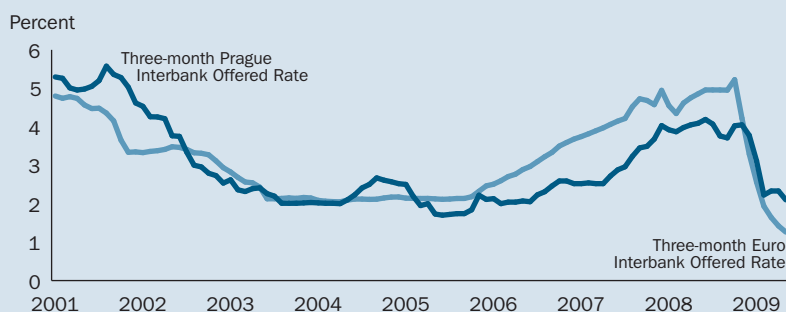
With a share of industrial production in GDP of about 30 percent—the largest in the European Union—the Czech economy has a large export-oriented manufacturing sector. Despite strong lobbying, however, the Czech National Bank (CNB) did not manipulate the exchange rate in favor of export industries, emphasizing instead that a small economy and its businesses and labor unions needed to learn how to deal with external shocks. Further, the sustained appreciation of the koruna-euro exchange rate, due to a favorable productivity growth differential vis-à-vis the eurozone, helped contain overly optimistic expectations and an excessive credit boom in the corporate sector.

The credibility earned by an independent Czech National Bank as a result of implementing conservative monetary policy within an inflation targeting framework since 1998, together with substantial fiscal consolidation since 2004, led to a negative interest rate differential between the koruna and euro interest rates since early 2005 (box figure 1).

Low interest rates, far from producing an undesirable credit boom, offered some advantages. The koruna, as a relatively low yielding currency, was not attractive for speculators. Its lower yield also removed any incentive for Czech households to borrow in foreign currency and take foreign exchange risk. The relatively low foreign currency denomination of the domestic deposit base permitted the economy to reap the benefits of currency depreciation without experiencing major balance sheet effects. Notwithstanding the absence of foreign currency borrowing by Czech households, mortgage lending grew substantially, with financial penetration in this segment reaching significantly higher levels than in other EU10 countries except the Slovak Republic, and indeed comparable to Belgium, Denmark or Luxemburg. This

BOX FIGURE 1

Koruna and euro interest rate, 2001–09



Source: Datastream.

(continued)

BOX 1.3 (CONTINUED)

Why foreign currency lending did not take off in the Czech Republic

produced housing bubbles, especially in large cities like Prague. Although this could lead to a significant deterioration of credit quality in the downturn, it is worth noting that lending practices in the past were conservative with respect to the average loan-to-value and the debt service-to-income ratios.

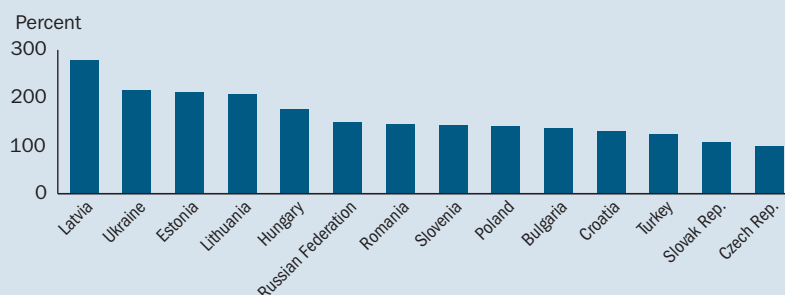
Supported by low koruna interest rates and excess liquidity in the financial system, the CNB has withdrawn liquidity from the market. In sum, a combination of confidence in the domestic currency due to credible disinflation, deep financial penetration, and more patient households, as captured by modest growth of private consumption below most of its EU10 peers, helped establish a resident deposit base.¹ The loan-to-deposit ratio stood at 78 percent by mid-2008, the lowest in the EU10 (box figure 2).

Moreover, the banking system, which had negligible exposure to toxic assets, was highly profitable. By April 2008, the return on equity stood at about 23 percent, the third highest after Poland and Bulgaria (25 percent). This helped sustain the modest external funding made available by parent banks to their Czech subsidiaries.

The institutional arrangements governing financial regulation and supervision and their links to monetary policy proved important in coping with the global financial crisis. In 2005, the Czech Republic undertook a functional reorganization of financial supervision, resulting in consolidated supervision of all segments of the financial system.² The capacity for a rapid supervisory response has been boosted by increased monitoring efforts, collection of daily information, and frequent communication between the CNB's senior management and the bank association.³

BOX FIGURE 2

Ratio of loans to deposits, by country, December 2008



Source: IMF *International Financial Statistics* and authors' calculations.

(continued)

BOX 1.3 (CONTINUED)

Why foreign currency lending did not take off in the Czech Republic

The efficiency of supervisory action was tested in the Société Générale scandal. The independence of bank subsidiaries also protected their financial standing when problems arose within financial groups such as Komerční Banka (Société Générale) or AIG Czech Republic.

In February 2008, the mandate of the CNB was expanded to include consumer protection in financial services, which effectively increased the powers of the supervisor in business conduct enforcement. This enhanced the CNB's financial prudential supervision by enabling it to curb the accumulation of indirect credit risk in the household sector. And living through a crisis in 1997–98 made the Czech Republic more agile in undertaking reforms to mitigate financial crises.

In sum, a combination of credible disinflation led by an independent central bank and fiscal discipline, underpinned by integrated supervision, shaped by an earlier crisis, can lower spreads in lending interest rates between domestic and foreign currency and make foreign currency borrowing unattractive.

Notes

1. Of adults, 80 percent have a bank account in Croatia and the Slovak Republic and 97 percent in Slovenia.
2. Nevertheless, there are still some financial sector institutions such as leasing companies or nonbank credit institutions, that the Czech National Bank does not supervise, leaving the door open to some regulatory arbitrage.
3. The decision to collect daily data was implemented on the next day, and the collected data include cash requirements, money market and government bond market, financial institutions (banks and other important financial players), liquidity stance, exposures within group, deposit levels, and fulfillment of regulatory limits.

Source: Based on background work by Martin Melecký.

period preceding the global crisis, which could have exacerbated their vulnerabilities. But private sector imbalances also accumulated owing to other factors, such as integration into European production and financing structures as well as differences in initial conditions, such as lagging consumption of housing and low levels of private debt. Thus, while differences in policy alone would not have eliminated the emerging vulnerabilities given the magnitude of capital inflows during this period, better policies might have made the impact of the global financial crisis less severe.

Annex 1.1

Separating wheat from chaff—evidence of market differentiation from EMBI spreads

Financial markets appear to be differentiating countries, particularly after the collapse of Lehman Brothers. It suffices to compare the variety of changes in spreads across emerging market economies—country spreads have increased sharply, but some have done so more than others. A formal assessment requires decomposing spreads into global, group-specific, and country-specific factors. A global factor model is well suited for this purpose; such models have looked at co-movements in output¹⁶ and stock returns.¹⁷

The global factor model is estimated using cross-sectional and constrained ordinary least squares, with daily data for forty EMEs for the period February 2008 to April 2009. Spreads for each period are regressed on a constant term (or global component) and a set of group-specific regional dummies; these two regressors are the common factors determining spreads. The residuals in the estimation are considered to be idiosyncratic and country-specific. The goal is to identify differences (if any) across countries. Note that country fundamentals need not change for markets to differentiate. It suffices for them to be perceived differently after an event such as Lehman's collapse.

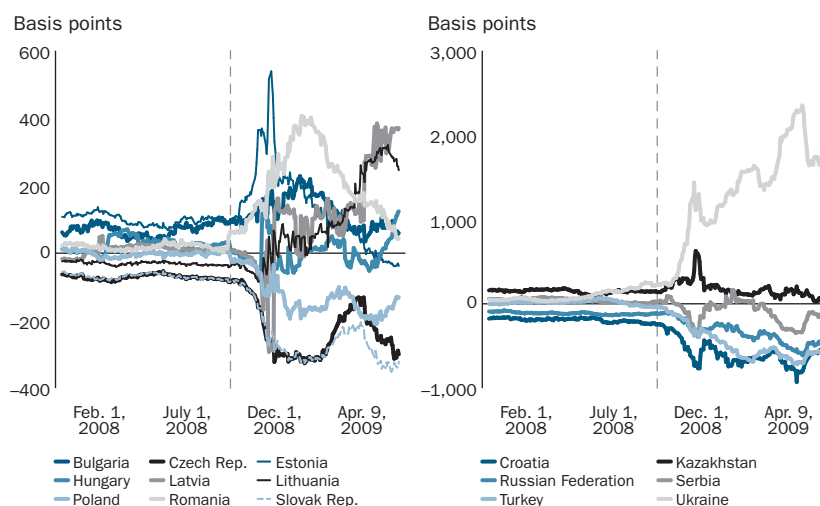
Indeed, reduced appetite for risk could lead to a reassessment of pre-existing country weaknesses, such as high current account imbalances, high private sector credit growth, excessive dependence on external financing, and balance sheet factors—from solvency concerns (debt-to-GDP ratios) to indicators of foreign exchange liquidity (short-term debt-to-reserves). In other words, the risks were present, but investors are only now starting to charge a premium for “bad” characteristics. But investors might also be incorporating in their pricing the real effects of the crisis. For instance, product and trade integration with Western Europe among new EU members might have led to a re-assessment of risk on account of the effects of the crisis on the real economy.

What is the evidence? There is both an increase in the volatility of country-specific spreads among new EU member states and a change in the risk-ordering of these country-specific spreads (annex figure 1.1.1).

16. Stockman 1998.

17. Brooks and Catão 2000.

ANNEX FIGURE 1.1.1

Country-specific components of EMBI spreads

Source: Bloomberg and authors' calculations.

Annex 1.2

Finance in transition

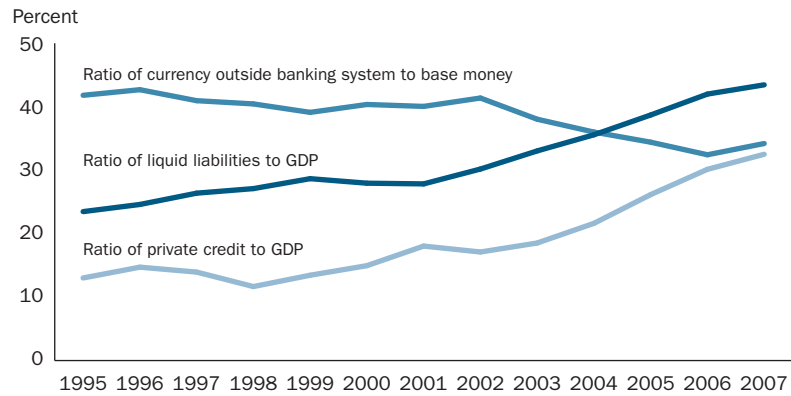
Financial systems have come a long way since the start of the transition.¹⁸ Their deepening (annex figure 1.2.1) is captured by a steady increase in standard measures of financial development, viz., liquid liabilities to GDP and private credit to GDP. Growing confidence in the financial system is illustrated by the lower ratio of base money outside the banking system. Intermediation efficiency has improved, with the loan-to-deposit ratio exceeding unity in 2006, as have traditional measures of efficiency, with net interest margins and overhead costs in 2007 falling to half their values of 1995 (annex figure 1.2.2).

Financial systems however are smaller than that predicted by GDP per capita, although the gap has become narrower between 1995 and 2007 (annex figure 1.2.3). This is the case for such EU member states as Poland, the Slovak Republic, and Slovenia—where the ratio is less than 40 percent and credit to the private sector expanded less rapidly than in some other new member states—and for such lower middle-income countries as Armenia and Georgia. While the new member states of the EU and Croatia have overhead costs to total assets similar to those of the EU15, their net interest margins are somewhat higher.

18. This annex is based on Beck 2009.

ANNEX FIGURE 1.2.1

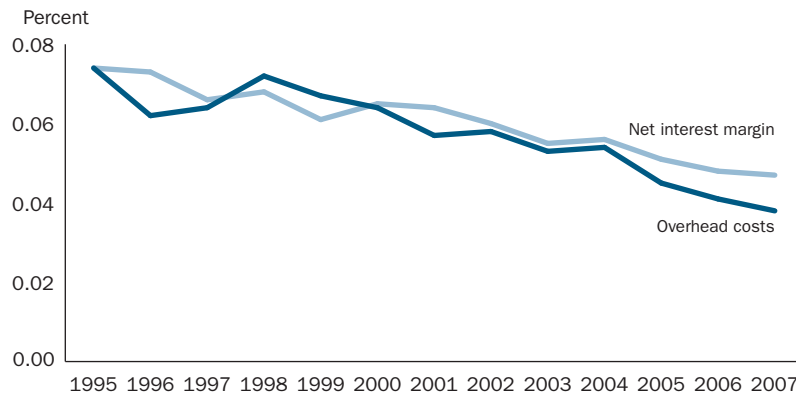
Financial deepening in ECA's transition economies, median values, 1995–2007



Note: Private credit to GDP equals claims on nonfinancial private sector by deposit money banks and other financial institutions relative to GDP. Liquid Liabilities to GDP equals liquid liabilities of the financial system (currency plus demand and interest-bearing liabilities of banks and nonbank financial intermediaries) divided by GDP. Currency outside banking system equals currency outside banking system relative to base money.
 Source: Beck and Demirguc-Kunt 2009.

ANNEX FIGURE 1.2.2

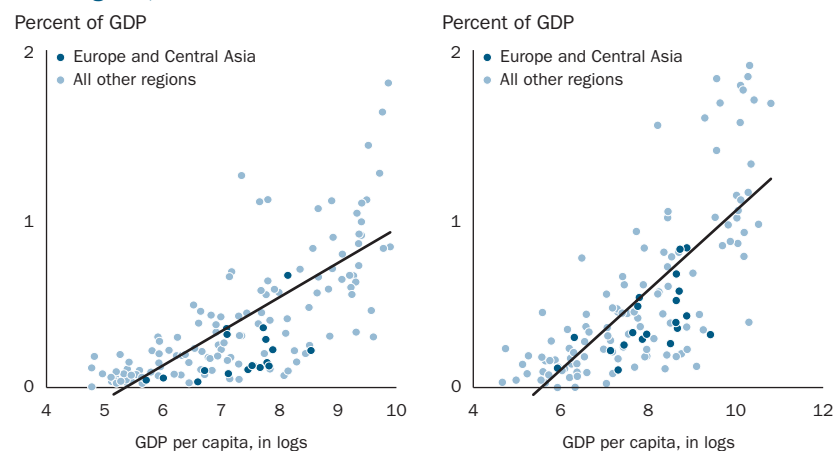
Bank efficiency in ECA's transition economies, median values, 1995–2007



Note: Net interest margin is net interest revenue relative to total earning assets averaged over all banks for each country. Overhead costs are total operating costs relative to total assets averaged over all available bank data.
 Source: Beck and Demirguc-Kunt 2009.

ANNEX FIGURE 1.2.3

Private credit to GDP versus GDP per capita, ECA's transition economies versus other regions, 1995 and 2007



Source: Beck and Demirguc-Kunt 2009.

ANNEX TABLE 1.2.1

Comparing ECA's transition economies with other regions (group medians) (percent)

	GDP per capita	Liquid liabilities to GDP	Private credit to GDP	Bank deposits to GDP	Loan-deposit ratio	Stock market capitalization to GDP	Stock market turnover	Overhead costs	Net interest margin
EU10 + Croatia	5,935	49.4	52.0	42.8	107.3	32.4	15.4	2.5	3.6
Turkey	5,045	40.4	26.0	37.6	72.1	34.3	93.0	4.1	5.7
EU15	26,511	97.5	115.7	93.1	149.7	88.0	107.4	2.4	2.3
Southern EU Accession 1989	10,952	68.2	49.7	59.3	84.0	15.4	21.5	3.0	4.9
Western Balkans	2,037	51.5	32.7	40.3	98.1	42.0	9.0	3.7	3.9
Middle-income	2,246	49.0	36.1	42.3	80.3	41.9	14.1	3.7	5.6
Large CIS	2,284	35.2	39.0	27.1	134.7	55.0	15.6	4.8	5.8
Middle-income	2,246	49.0	36.1	42.3	80.3	41.9	14.1	3.7	5.6
Smaller CIS	1,218	19.8	12.3	10.5	129.5	3.0	5.1	4.9	6.3
Low-income and lower middle-income	1,435	43.0	35.5	37.6	80.4	40.7	17.0	3.5	5.4

Note: Data are for 2007, unless otherwise specified.

Source: Beck and Demirguc-Kunt 2009.

A comparison of the EU10 plus Croatia to Greece, Portugal and Spain in 1989—that is, a few years after those countries joined the European Union—shows that the former group, despite having lower per capita incomes than the countries that joined the EU during its southern enlargement, enjoy financial development comparable to those of the latter in 1989 (annex table 1.2.1). Countries of the Western Balkans have financial markets whose liquidity and efficiency is comparable to those of countries at similar levels of per capita income. Overhead costs are similar, whereas net interest margins are lower. The middle-income CIS has financial indicators similar to those of countries at similar per capita incomes, with the exception of the share of liquid liabilities in GDP, but overhead costs and net interest margins are higher. Among all country groups, Kazakhstan, the Russian Federation and Ukraine have relatively large stock markets compared with their banking systems.

A striking exception to this pattern of broad comparability is provided by the low-income and lower middle-income CIS countries where both the liquidity and efficiency of financial markets are much lower than in countries at similar per capita incomes. The modest financial development of the low-income and lower middle-income CIS is due in part to bank restructuring having been postponed to the second decade of transition.

Furthermore, small firms rely less on external finance for new investment in the Western Balkans than in the EU10 + 1 countries, and indeed much less than in the middle-income CIS, falling to low levels in the low income CIS. But the ratio in Armenia and the Kyrgyz Republic and, to less extent, Moldova is comparable to or higher than in the middle-income CIS and some of the Western Balkans. This is consistent with evidence from the three rounds of the Business Environment and Enterprise Performance Surveys (BEEPS) in 1999, 2002, and 2005. Firms in transition economies rely more on retained earnings than external finance for new investment, but this reflects a move away from informal sources of finance rather than a decline in the institutions of formal finance, with the countries that joined the European Union in 2004 (the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, the Slovak Republic, and Slovenia) relying almost as much on external finance as the cohesion countries: Greece, Ireland, Portugal, and Spain.¹⁹

19. Mitra 2008.